

Resume of

Dr. Mohamed Mahmoud

Professor

Department of Petroleum Engineering

King Fahd University of Petroleum & Minerals

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Summary of Experience Record

Personal Data

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Educational Record

2008-2011: Doctor of Philosophy (Ph.D.) in Petroleum Engineering, Department of Petroleum Engineering, Texas A&M University, College Station, Texas, USA.
Dissertation Title: Removing of Formation Damage and Enhancement of Formation Productivity Using Environmentally Friendly Chemicals.

2003-2006: Master of Science in Petroleum Engineering, Suez Canal University, Egypt.
Thesis title: An Integrated Model for Hole Cleaning during Drilling Directional Wells.

1996 – 2001: Bachelor of Science (B.Sc.) in Petroleum Engineering (First Class with Honor), Suez Canal University, Egypt.

Specialization

- Fluid/Rock Interactions (CO₂ Storage, CO₂ Mineralization, Hydrogen Storage and Production)
- Productivity enhancement
- Advanced Petrophysics
- Enhanced Oil and Gas Recovery

Employment History

- 2/2020 – present: Professor, Petroleum Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- 2/2016 – 2/2020: Associate Professor, Petroleum Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- 9/2011 – 2/2016: Assistant Professor, Petroleum Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- 8/2008-7/2011 : Graduate Research Assistant, Department of Petroleum Engineering, Texas A&M University, College Station, Texas, USA.
- 6/2003-7/2008: Graduate Research Assistant, Department of Petroleum Engineering, Suez Canal University, Egypt.
- 9/2001-5/2003: Petroleum Engineer, Belayim Petroleum Company, Egypt.

Summary of Major Achievements in Teachings, Research, and Community Services

I joined King Fahd University of Petroleum & Minerals (KFUPM) as an Assistant Professor of Petroleum Engineering in September, 2011. In February 2016 I was promoted to the rank of associate professor, in February 2020 I was promoted to the rank of full professor. Previously, I worked as a research assistant during my PhD at Texas A&M University, and also worked as a lecturer for four years in the Petroleum Engineering Department, Suez University, Egypt. Since joining KFUPM, I have always tried to maintain an appropriate balance among the three major components of the academic profession (i.e., teaching, research, and community service).

Teaching and Learning

I have taught a wide range of core and elective Petroleum Engineering courses at both undergraduate and graduate levels, including Well Logging, Production Engineering, Natural Gas Engineering, and Advanced Petrophysics. I emphasize fundamental understanding through supplementary materials, smart board lectures uploaded to Blackboard, and integrated computer programs using C#, MATLAB, and Visual C. My consistent efforts are reflected in strong student feedback, with an average evaluation above 9/10 over 28 semesters.

My teaching achievements include the following:

- I developed a Master of Science program in Unconventional Gas Resources and designed the syllabus for eight courses, along with a project. I created this program three years ago, and the first cohort has already graduated — all of whom are now employed at Saudi Aramco in unconventional reservoir development. Out of the eight courses, I personally taught two newly introduced ones. The program is currently active and admits new students every two years.
- Developed and taught new courses for undergraduates, such as PETE 403 (Petroleum Production Engineering) and PETE 453 (Production Logging).
- Developed and taught new graduate courses such as PETE 525 (Advanced Petrophysics), PETE 524 (Advanced Well Logging), PETE521 Advanced Petrophysics and Geomechanics for Unconventional Gas Reservoirs, PETE535 Production Optimization for Unconventional Reservoirs.
- Integrated Schlumberger's TechLog software into the PETE PETE 313 and advanced well logging courses, enabling students to perform comprehensive qualitative and quantitative reservoir evaluations.
- Introduced PipeSim software in the PETE 403 production engineering course, conducting extra lab sessions to train students in production system analysis and design.
- Supervised several senior design projects and summer training reports.
- **Appendix I shows the complete list of courses, student evaluation, supervised students. Page 11**

Research and Scientific Contributions

Research holds equal importance to me as teaching in my academic career. At KFUPM, I played a key role in establishing the Stimulation Research Laboratory, the Enhanced Gas Recovery Laboratory, and the Thermochemical Applications Laboratory within the Department of Petroleum Engineering. In collaboration with my colleagues, I have developed multiple research projects focusing on CO₂ capture and sequestration, enhanced oil recovery, and the development of innovative stimulation fluids. At KFUPM, I also developed a new environmentally friendly fluid system for enhanced oil recovery from carbonate and sandstone reservoirs. Currently, I serve as the Principal Investigator on four major research projects funded by Saudi Aramco and the Government. As part of these projects. My primary research focus is on fluid–rock interactions, with extensive work in CO₂ sequestration, hydrogen production and storage, enhanced oil and gas recovery, advanced petrophysics, and well stimulation.

My research accomplishments and efforts include the following:

- I have served as the Principal Investigator on 10 Saudi Aramco–funded research projects with a total budget of USD 3 million and as Co-Principal Investigator on more than 20 Aramco-funded projects totaling USD 5 million. In addition, I have led and co-led several internally and government-funded projects with a combined budget of USD 5 million.
- Since joining KFUPM, I have established two major laboratories: the Thermochemical Fluids Laboratory, which supports a wide range of applications across the energy sector, and the Reservoir Stimulation Laboratory.
- I have introduced innovative concepts and fluid systems to the oil and gas industry, including the first applications of thermochemical fluids in tar stimulation, heavy oil recovery, and the stimulation and fracturing of tight and unconventional reservoirs. Additionally, I developed novel methodologies utilizing NMR diffusion measurements to quantify permeability anisotropy and evaluate well completions at both laboratory and field scales.
- Five years ago, I introduced the concept of enforced CO₂ mineralization in reservoir rocks. Several graduate students have completed their advanced degrees based on this idea, and now, several international universities are pursuing similar research using different chemical approaches.
- Currently, five of our research products have been fully commercialized in collaboration with industry partners. Some, such as thermochemical fluids, have become standard field practices in water injection and oil/gas production wells. Other products are being widely applied in the field, demonstrating strong commercial performance compared to existing market alternatives. In partnership with investors, we are now establishing a startup company to commercialize a new product focused on CO₂ mineralization for both surface and subsurface applications.

- I am currently collaborating with Saudi Aramco on two projects focused on unconventional reservoir development. In these projects, we are introducing nano-bubble CO₂ for stimulation and developing novel fluids designed to reduce rock breakdown pressure through the application of thermal shock.
- I introduced the use of thermochemical processes for in-situ hydrogen production from oil and gas reservoirs, employing membrane technology to separate gases—allowing hydrogen to be produced while retaining CO₂ within the reservoir.
- Have published in my areas of research excellence in internationally recognized and refereed journals. I have published in several high-quality journals such as *SPE Journal*, *SPE Production and Operation Journal*, *SPE Drilling and Completion Journal*, *SPE Canadian Journal*, *Journal of Energy Resources Technology*, *Arabian Journal of Science and Engineering*, *Journal of Petroleum Science and Engineering*, *Applied Clay Sciences*, etc.
- Have supervised 45 Master of Science theses and served as a member in more than 60 Master's thesis committees.
- (Co) Supervisor of 20 PhD student theses.
- Have attended and participated in several specialized technical conferences in my areas of research interests organized by the Society of Petroleum Engineers (SPE).
- Have attended several specialized workshops, discussion forums, and seminars organized by the Deanship of Academic Development at KFUPM to develop my research skills.
- Established the analytical fluid laboratory through a funded project. One of the major acquisitions for this laboratory is an inductively coupled plasma optical emission spectrometer (ICP-OES) for effluent fluid analysis during stimulation or enhanced oil recovery experiments.
- Have led the international collaboration partnership with the University of Western Australia in the area of "Nuclear Magnetic Resonance (NMR) Applications in Oil and Gas".
- Have taken the initiative with another faculty member in the College, to establish a state-of-the-art NMR laboratory. The NMR laboratory is expected to have high and low magnetic field NMR spectrometers with flow cells and in-situ imaging software for a range of applications in upstream oil and gas industry. This laboratory will also be equipped with a high-pressure-high-temperature wet adsorption analyzer for unconventional shale gas studies.
- Have published around 500 Journals, more than 300 conference papers, and more than 90 US issued patents. **Appendix II shows the complete list of publications.**

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H-Index	Scopus	Google Scholar
	54	62

Community Services

In addition to teaching and research, I also contributed to the community services of the Department, College, and University, and at the local, regional, and international levels. I have served as the Chairman and a member in various standing and ad-hoc committees at the Department, the College, and the University levels. I have chaired the Laboratory and Safety committee, graduate admissions committee, and I have been a member in faculty search committees. I am also a member of the University text book committee. I was a member in the College of Engineering Ad-hoc committee on the strategic plan. Also, I have contributed in the technical committees of the local and regional SPE conferences and workshops.

My contributions to the community of KFUPM include the following:

- Contributed effectively through either chairing (coordinating) or participating as a committee member in four departmental committees and one in the College.
- Served as the advisor for the Petroleum Engineering Club and SPE chapter 2012/2013.
- Founded and established the Student Chapter of the SPWLA (Society of Petrophysicists and Well Log Analysts) at KFUPM in 2017.
- Have been the SPWLA student chapter advisor since 2017.
- Conducted 6 technical seminars in the SPWLA student chapter by inviting experts from the local and international oil and gas industry.

My contributions to the professional community at large are the following:

- Appointed to the University Scientific Council
- Contributed in teaching the short courses organized by the Department.
- Served as a member of the steering committee of the applied technical formation damage workshop organized by the SPE, 2012. I chaired one session of this workshop.
- Have acted as a session chair and technical committee member in different SPE conferences.
- Have been a board member in the SPWLA Saudi Arabian Chapter (Won the best technical international chapter award in 2018).
- Arranged more than 12 local, regional, and international SPWLA workshops.
- Editor of Arabian Journal for Science and Engineering
- Editor, ACS Omega Journal
- Editorial Advisory Board Energy and Fuel Journal
- Editorial Advisory Board Unconventional Resources Journal

For more details about the community service, kindly see Appendix III, Page 109.

Training

1. TechLog Well Logging Software: 5 days training by Schlumberger at KFUPM, December 27-31, 2015.
2. Pipe Sim Production Engineering Software: 3 days training by Schlumberger at KFUPM, November 9-11, 2015
3. Petrel Reservoir Engineering Software: 5 days training by Schlumberger at KFUPM, October 11-15, 2015.
4. "Participatory Classrooms" Workshop organized by Deanship of Academic Developemnt, KFUPM, December 25, 2012.
5. "Students' Motivation" Workshop organized by Deanship of Academic Developemnt, KFUPM, March 12, 2012.
6. "Students-Centered Active Learning Environments: Design and Implementation" Workshop organized by Deanship of Academic Developemnt, KFUPM, April 30, 2012.
7. "Learning and Communication Through Graphs" Workshop organized by Deanship of Academic Developemnt, KFUPM, May 1, 2012.
8. "Learning/Learner-Centered Approach for Designing Course Assessment Plans" Workshop organized by Deanship of Academic Developemnt, KFUPM, August 26, 2012.
9. "Graduate Admission" Workshop organized by Deanship of Academic Developemnt, KFUPM, November 20, 2013.
10. "Designing an Instructional Plan Incorporating Research-based Instructional Strategies" Workshop organized by Deanship of Academic Developemnt, KFUPM, August 17, 2015.
11. "LEAN in Higher Education: Increasing the Value and Performance of University Processes". Prof. William K. Balzer, Bowling Green State University, USA. Seminar organized by Deanship of Academic Developemnt, KFUPM, August 22, 2016.
12. "Experiential Education" by Prof. Steve Lambert, University of Waterloo, Canada. Seminar organized by Deanship of Academic Developemnt, KFUPM, August 22, 2016.
13. "Risk Management- An Overview". Seminar organized by Deanship of Academic Developemnt, KFUPM, August 25, 2016.
14. "Vision 2030 in Higher Education". Seminar organized by Deanship of Academic Developemnt, KFUPM, August 25, 2016.

15. "Entrepreneurial Mindset Building: Why is it a Core Mission of Universities in the 21st Century?" Seminar organized by Deanship of Academic Development, KFUPM, August 29, 2016.
16. "Integrated Course Design", Workshop organized by Deanship of Academic Development, KFUPM, August 20, 2017.

Honors/Awards and Professional Memberships

1. 2016 University Distinguished Teaching Award.
2. 2017 University Distinguished Research Award
3. SPE Reservoir Evaluation & Engineering 2018 Technical Editor Award for outstanding service.
4. Outstanding achievement award from SPWLA SAC president 2018.
5. *Journal of Petroleum Science and Engineering*, 2018 Technical Editor Award for outstanding service.
6. *Fuel Journal*, 2018 Technical Editor Award for outstanding service.
7. *Journal of Computer and Geosciences*, 2018 Technical Editor Award for outstanding service.
8. 2020 University Distinguished Academic Advising Award
9. 2020 SPE Journal outstanding technical editor award
10. 2020 SPE drilling and completion journal outstanding technical editor award
- 11. Recipient of the 2021 SPE Regional Production and Operations Awards**
- 12. Recipient of the 2022 SPE Regional Distinguished Petroleum Engineering Faculty Award.**
13. 2022 University Best Applied Research Award
- 14. Recipient of the 2023 American Chemical Society Energy and Fuel Star Award.**
- 15. Recipient of the 2024 Sustainability and Stewardship in the Oil and Gas Industry Award.**
- 16. Recipient of the 2024 University Distinguished Professorship Award.**
17. Board member of Society of Petrophysicists and Well Log Analyst (SPWLA), Saudi Arabian Section.
- 18. Member in the international advisory board for the SPE Production and Facilities Committee 2019-2022.**
19. Member of the International Society of Petrophysicists and Well Log Analyst (SPWLA).
20. Member in the International Society of Petroleum Engineers (SPE).

21. Advisory Board Member, Energy and Fuels Journal.
22. Honors List, Suez Canal University 1997-2001.
23. Awarded a Graduate Research Assistantship, Texas A&M University, USA, 2008.
24. A Second Author for two ATCE conference papers awarded the best written paper in the stimulation sessions, 2009 and 2011.
25. Two granted patent award from the university rector, 2017.
26. Five granted patents award from the university rector, 2018.
27. Outstanding contribution award from Small & Medium Enterprises General Authority, SMEA, for the contribution in ASBAR 2017 World forum in Riyadh, Saudi Arabia.
28. Nine granted patents award from the university rector, 2019.
29. A⁺ Faculty evaluation from 2011 to 2018 for 7 academic years.
30. SPE International Production and Facilities Advisory Committee.
31. Top 2% scientists Elsevier Stanford list 2020, 2021, 2022, 2023, 2024, 2025.
32. ADIPEC 2022 AI and Digital Transformation Sub-committee
33. ADIPEC 2022 Session Chair, 93 AI AND DIGITAL TRANSFORMATION: Autonomous Operations and De-Manning—Well Digitalization.
34. 2022 president award for 10 granted patents.
35. I have arranged EXPEC ARC-PTD /CPG Workshop, 23rd June 2022.
36. 2022 Award for the best team in SDP, CPG.
37. Session chair and committee member, ADIPEC 2022.
38. Board member, Unconventional Journal
39. Guest editor, polymers journal.
40. Committee member and session chair MEOS/GEOS 2023, 2025.
41. Invited speaker for seminar, KAUST Feb 2023.
42. High Impact Journal Paper Award, 2022
43. University SDP Committee, 2022
44. University SDP EXPO Committee 2022
45. 2nd SDP project award for my team
46. 20 granted patent award form KFUPM president 2022
47. IPTC 2024 Technical Committee

Appendix I. Teaching

2.1 Courses Taught

The following table lists the courses that I taught each semester and the corresponding student evaluations:

Term	Course Load	Course No.	Level	Course Title	Student Evaluation
111	7	PETE 303	U	Well Logging	8.07
		PETE 404	U	Production Facilities	9.16
		PETE 408	U	Seminar	NA
112	7	PETE 205_1	U	Pteroleum Fluid Properties	8.46
		PETE 205_2	U	Pteroleum Fluid Properties	8.56
		PETE 303	U	Well Logging	9.22
121	6	PETE 303	U	Well Logging	9.27
		PETE 403	U	Production Engineering	8.95
122	6	PETE 412	U	Formation Damage	9.03
		PETE 403	U	Production Engineering	7.50
131	6	PETE 303	U	Well Logging	9.11
		PETE 403	U	Production Engineering	9.14
132	6	PETE 403	U	Production Engineering	9.27
		PETE 410	U	Natural Gas Engineering	9.46
141	6	PETE 303	U	Well Logging	9.46
		PETE 635	G	Well Stimulation	9.41
142	6	PETE 453	U	Production Logging	10.0
		PETE 544	G	Natural Gas Engineering	9.25
151	6	PETE 303	U	Well Logging	9.30
		PETE 635	G	Well Stimulation	9.95
152	6	PETE 403	U	Production Engineering	9.21
		PETE 453	U	Production Logging	9.07
161	6	PETE 524	G	Advanced Well Logging	9.32
		PETE 303	U	Well Logging	8.63
162	6	PETE 453	U	Production Logging	9.99
		PETE 303	U	Well Logging	9.84
171	5	PETE 592	G	Advanced Petrophysics	9.24
		PETE 303	U	Well Logging	9.86
172	6	PETE 590	G	Formation Damage	9.73
		PETE 453	U	Production Logging	9.75
181	6	PETE 303	U	Well Loing	9.72
		PETE 592	G	Advanced Petrophysics	9.00
		PETE 606	G	Independent Research	N/A
		PETE 701	G	Directed Research	N/A
182	6	PETE 453	U	Production Logging	9.92
		PETE 525	G	Advanced Petrophysics	9.44
191	6	PETE 313	U	Well Logging	9.25
		PETE 525	G	Advanced Petrophysics	9.10

Term	Course Load	Course No.	Level	Course Title	Student Evaluation
192	7	PETE 453	U	Production Logging	9.95
		PETE 517	G	Oilfield Chemistry	10
		PETE 525	G	Advanced Petrophysics	9.5
201	6	PETE 313	U	Well Logging	9.35
		PETE 525	G	Advanced Petrophysics	9.25
202	8	PETE 453	U	Production Logging	10
		CPG499	U	Integrdated Design	-
		PETE 525	G	Advanced Petrophysics	9.75
211	6	PETE 313	U	Well Logging	8.68
		PETE 525	G	Advanced Petrophysics	9.25
212	8	PETE 453	U	Production Logging	10
		PETE 522	G	Geomech & Petrophysics of UHR	9.89
		CPG499	U	Integrdated Design	--
221	6	PETE 313	U	Well Logging	9.49
		PETE 525	G	Advanced Petrophysics	9.6
222	8	PETE 535	G	Production Optimization of UHR	9.95
		CPG499	U	Integrdated Design	--
		PETE 525	G	Advanced Petrophysics	9.29
231	6	PETE 313	U	Well Logging	9.80
		PETE 525	G	Advanced Petrophysics	9.30
232	8	PETE524	G	Advanced Well Logging	9.56
		PETE313	U	Well Logging	8.12
		CPH499	U	Integrdated Design	--
241	6	PETE 313	U	Well Logging	9.12
		PETE 525	G	Advanced Petrophysics	8.46
242	8	PETE524	G	Advanced Well Logging	10
		PETE525	G	Advanced Petrophysics	9.73
		CPG499	U	Integrdated Design	--

U = Undergraduate; G = Graduate, (*Students' evaluation based on max. score of 10)

Course Development

The following table lists the courses that I have developed:

No.	Course No.	Course Title and Development Responsibilities
1	PETE 403	Petroleum Production Engineering I developed and taught this course for the first time. I have adhered to the course description, and developed updated assignments and exams. I also developed the course lectures and materials for the course and have taught it three times. The Blackboard was used for communicating class presentations to the students. In this course the students created new programs to be used in evaluating oil and gas wells deliverability using advanced programming languages such as C-Sharp. I submitted the updated course-file along with the course assessment and rubrics to the Department at the end of every semester I taught the course.
2	PETE 453	Production Logging I developed the course file and course materials for this course. I also developed the course lectures and materials for the course and have taught it six times. The Blackboard was used for communicating class presentations to the students. In this course the students were exposed to the TechLog software to analyze the production logging data.
3	PETE 525	Advanced Petrophysics (Graduate Course) I developed the syllabus and the course description. I taught the course for the first time in term 171 and I am still teaching the course every semester for MS and PhD students. I have adhered to the course description, and developed assignments and exams. I also developed the course lectures and materials for the course and have taught it three times. The Blackboard was used for communicating class presentations to the students.
4	PETE 512	Fundamentals of Oilfield Chemistry (Graduate Course) I developed the syllabus and course description in the new graduate program. I am contributing to the teaching of this course every year.
5	PETE 520	Formation Evaluation (Graduate Course) I developed the syllabus and course description for the new graduate program.
6	PETE 535	Production Optimization of UHR (Graduate Course) I developed the course syllabus, file and course materials for this course. I taught one time so far.
7	PETE 522	Geomechanics & Petrophysics of UHR (Graduate Course) I developed the course syllabus, file and course materials for this course. I taught one time so far.

Improvement to Existing Courses

The following table lists improvements that I have introduced to existing courses:

No.	Course No.	Course Title and Development Responsibilities
1	PETE 313	Well Logging I have adhered to the course description, and developed a new course-file for this course. The new course-file includes a new set of class presentations, assignments, quizzes, major exams, and final exams. WebCT Technology was used for communicating class presentations to the students. Solved field examples are posted to the students to enhance the student understanding about the subject. In this course, I assigned the students a course project using actual well log data and the students presented the complete logging analysis at the end of the semester. I submitted an updated course-file to the Department at the end of every semester I taught the course. Also, the course assessment rubrics were modified and submitted to the Department at the end of every semester I taught the course.
2	PETE 412	Formation Damage This course was previously taught by an instructor from the industry and course materials were not available in the Department. I developed all course materials, including the preparation of a power point presentation, assignments, quizzes, and exams, and the selection of a new text book. Blackboard was used for communicating class presentations to the students.
3	PETE 524	Advanced Well Logging I adhered to course description, and developed a new course-file for this course. I also developed the materials and lectures for this course. The new course-file includes a new set of class presentations, assignments, and major and final exams. Class presentations were delivered using computer presentation tools. Blackboard was used for communicating class presentations to the students. Every topic in the course was supported by examples from the field to establish a link between theory and real-life applications of the well stimulation course. The graduate students were exposed to TechLog software and they used it to complete the course project.
4	PETE 635	Well Stimulation I adhered to course description, and developed a new course-file for this course. The new course-file included a new set of class presentations, assignments, and major and final exams. Class presentations were delivered using computer presentation tools. Blackboard was used for communicating class presentations to the students. Every topic in the course was supported by examples from the field to establish a link between theory and real-life applications of the well stimulation course. In the course project every student was assigned a field problem to solve and design a complete solution based on the knowledge gained from the course.

Participation in Short Courses

- I have taught in the following short course:
“AGE 106- Introduction to Exploration, Drilling, Production, and Reservoir Engineering”, Instructor, offered through the Department of Petroleum Engineering and the Deanship of Continuing Education at KFUPM

Year	Hours Taught	Number of Participants
10/2012	4	19
11/2012	4	20
5/2013	8	50
4/2014	12	25
3/2015	12	23
11/2016	12	26
11/2017	12	25
12/2018	12	21
12/2019	12	25

- I have taught several short courses to oil and gas companies in Egypt, Qatar, UAE during summer periods.
- I am organizing and teaching a short course, "Oilfield Chemistry Challenges; Solutions and New Frontiers" in the SPE Annual Technical Symposium and Exhibition, Dammam, April 2019. Number of Participants 30.
- I am organizing a short course to be offered in the College in April 2019. The short course title is "NMR from basics to applications" will be taught jointly with members from Saudi Aramco, CPG, and University of Western Australia.

Senior Project Supervision and Coordination

I am acting as a coordinator for the college integrated design course for three programs, Petroleum Engineering, Geology, and Geophysics. I have supervised also several groups over the last 14 years.

Summer Training Report

Every Fall Semester I evaluate two to four summer training reports to assure the writing quality of the reports and also to let the student learn how to write a technical report. I evaluated groups of two or three students in the following semesters; 111, 121, 131, 141, 151, 161, 171, 181, 191, 201, 211, 221, 231, 241 and 251.

Master and PhD Student Supervision

I have served as the Committee Chairman/Co-Chairman in more than 120 MS and PhD committees.

Appendix II: Research

Research Philosophy

I believe basic and applied research and teaching are an effective way of service to the communities.

My primary focus in research is "productivity enhancement" in oil and producing wells and water and gas injection wells. This includes; sandstone and carbonate acidizing, hydraulic and acid fracturing, formation damage removal, organic and inorganic scale removal from the reservoir and well tubulars. Also, productivity enhancement research includes the development of non-damaging enhanced oil recovery fluids and non-damaging drilling fluids. Condensate and water blockage removal from tight gas sandstone reservoirs also are included under this category of research. Filter cake removal and well clean up after drilling operations is considered the first stage in productivity enhancement. I consider this is the main area of research in which I produced around 60% of my publications in productivity enhancement area.

Since joining KFUPM in 2011, I have always tried to utilize seawater and other local resources for applications in the oil and gas industry. At the beginning my research I introduced new enhanced oil recovery fluids, in which raw un-treated high-salinity seawater can be used as the base fluid. Using these kinds of fluids will eliminate the use of freshwater. Also, I am conducting research on the utilization of seawater in stimulation operations for conventional and unconventional reservoirs during the acidizing and hydraulic fracturing operations. Several patents have been filed on the new chemically enhanced oil recovery fluids I have recently introduced. I believe these fluids will be the future of enhanced oil recovery from oil reservoirs. In collaboration with colleagues from the Department of Petroleum Engineering and Department of Chemical Engineering, we have developed a treatment method using the local Saudi bentonite as a drilling fluid additive. As the Kingdom has vast reserves of bentonite that can meet the industry needs for more than thirty years, the outcome of this research can be utilized to undertake large scale treatment using local bentonite. One local Saudi company is in the process of licensing our intellectual property (IP) on bentonite to commercialize the product on a large scale and supply it to Saudi Aramco. Also, I have developed an effective method for the purification of Saudi barite to produce micro-sized barite particles of less than 5 microns. This solves the problem of barite particles settling during drilling and cementing operations of oil and gas wells. The same company which is licensing the bentonite IP is also interested in licensing the barite IP. I have also developed fracturing fluids based on seawater. Five patents have been granted in this area and several journal and conference papers have been published. A Saudi Service Company (Saudi Multi-Chem) has signed a license to commercialize the fracture fluid I have developed.

Most of my current research activities are focused on introducing environmentally friendly, cost effective, non-damaging stimulation and enhanced oil recovery fluids. The

new technologies we are introducing will save the cost of desalination and freshwater transportation, which is considered a major cost in the oil industry. Currently, I am actively involved in eight projects funded by Saudi Aramco, CPG, DSR/KFUPM, and DTVC. Out of the eight projects, I am leading four as the principal investigator. In order to conduct high quality research, I collaborate with colleagues at KFUPM from Petroleum, Mechanical, and Chemical Engineering departments. These collaborations have really improved the outcomes and quality of the research.

I have also mentored junior faculty members in the Department of Petroleum Engineering to enhance their research capabilities. I accomplished this through contribution in master's theses supervision, engaging junior faculty in funded research projects etc.

I initiated enhanced gas recovery research at KFUPM in 2016 and two students obtained their master's degrees under this program. I was able to secure a funded research project on enhanced gas recovery with a total budget of USD 700,000 jointly with several faculty members. I also established a new coreflooding laboratory to study gas-rock interactions under dynamic conditions. Several papers and conference papers have been published from this program.

I have also established a thermochemical research program with Saudi Aramco and three projects are currently funded by Saudi Aramco. I am leading two of the projects and I am the CO-PI in the third project. I also established a laboratory to study the reaction kinetics of thermochemicals (currently I supervise a group of two PhD students, one master's student, and one Post Doc). The applications of thermochemical fluids are extended to condensate removal and water blockage removal in tight gas reservoirs. I am conducting a project in pulse fracturing with thermochemicals funded by Saudi Aramco. I am leading another project funded by Saudi Aramco on condensate and water blockage removal using thermochemicals. Three patents were filed in collaboration with Saudi Aramco and one of these patents has been commercialized by Halliburton. I am leading a third project on the stimulation of wells by water injection employing thermochemical fluids, which is also funded by Saudi Aramco.

Since joining KFUPM, I have established, developed, or contributed to the development of the following laboratories:

1. I established the enhanced gas recovery research laboratory. One project is funded in this area.
2. I established the analytical fluid laboratory supported by a funded project. An ICP-OES was acquired for this laboratory, which is used for effluent fluid analysis during stimulation or enhanced oil recovery experiments.
3. I established the thermochemical research laboratory to study the reaction kinetics and phase behavior of thermochemicals. Also, this laboratory is used to study a range of applications of thermochemicals in oil and gas industry, such as

- condensate removal from gas condensate reservoirs, water blockage removal from tight gas reservoirs, heavy oil recovery, stimulation of sandstone rocks, emulsion removal from reservoirs, etc.
4. In collaboration with another faculty member in the College, we are building a state-of-the-art NMR laboratory. The NMR laboratory will have high and low magnetic field NMR with flow cells and in-situ imaging software for different applications in the upstream oil and gas industry. This laboratory also is equipped with a high-pressure high temperature wet adsorption analyzer for unconventional shale gas studies.
 5. In collaboration with another faculty member in the Department, we established the stimulation reaction kinetics laboratory.

Currently, I am leading the international collaboration partnership with the University of Western Australia (UWA) in "NMR Advanced Petrophysics". I am leading a team of ten members at KFUPM. Through this partnership we are establishing a state-of-the-art NMR laboratory at KFUPM by acquiring advanced NMR instrumentation that can be used to conduct advanced NMR research. Under this program I currently supervise three master's students and one PhD student. We have established new techniques and methods to characterize reservoir rock samples under this program.

Currently, I am actively engaged in patent commercialization projects with the Dhahran Techno Valley Company (DTVC). I have four licensed patents with different companies and three more patents that were signed as optional licenses. I am working with the companies to introduce our technologies to the field. One of the inventions was applied and the process of commercialization has reached a very advanced stage. Also, I received funding from DTVC for potential commercialization of three more patents to meet the needs of the industry. **The list of commercialized/licensed patents are the following:**

1. Removal of Oil-based barite filter cake, licensed to SAS Environmental, Houston, TX, USA.
2. Removal of Water-based barite filter cake, licensed to SAS Environmental, Houston, TX, USA.
3. Combined Calcium Carbonate/Iron Sulfide Scale Removal. Licensed by Saudi Petrogestix.
4. A New H₂S Scavenger During Matrix Acid Treatment. Licensed by Saudi Petrogestix.
5. Seawater-based fracturing fluid system. Licensed by Saudi Multi-Chem.
6. Process to convert calcium bentonite to sodium bentonite. In the process by Black Gold.
7. Process of producing micronized Saudi barite. In the process by Black Gold.
8. Method of gas condensate removal. This patent was jointly developed with Saudi Aramco through one of my research projects and Halliburton is the process to license this patent.

Research Interests

- Productivity enhancement
 - Acidizing,
 - Acid Fracturing,
 - Hydraulic Fracturing,
 - Formation damage during various well operations and processes
 - Organic and inorganic scale removal
 - Condensate and water blockage removal
 - Non-damaging EOR and drilling fluids and well clean up
- Carbon Dioxide Sequestration
- Enhanced Oil and Gas Recovery
- Advanced Petrophysics
 - Fluid Rock Interactions
 - Special core analysis
 - Routine core analysis
 - Advanced NMR petrophysics
 - Well logging
 - Production logging

Projects

Research Projects

I contributed to the following research projects:

R1	Mahmoud. M.A. , Sultan, A.S., et al., “Investigation of Newly Green and Environmentally Friendly Fluids to Remove the Damage from Sandstone and Carbonate Reservoirs”, King Abdul-Aziz City for Science and Technology (KACST), the National Science, Technology & Innovation Plan (NSTIP), (May 2014-May 2016), Project # 13-OIL151-04, 24 months, Completed.
R2	Sultan, A.S, Mahmoud. M.A. , and Muhammadain, A.M., “Evaluation of Potential Chemical EOR Methods for Wafra-Ratawi Reservoir”, King Abdul-Aziz City for Science and Technology (KACST), the National Science, Technology & Innovation Plan (NSTIP), (2015), Project # 14-OIL611-04, 24 months, Completed.
R3	Abdulraheem, A., Mahmoud, M.A. , et al., “Model Implementation of Dynamic Array Saturation for Khuff and Pre-Khuff”, Saudi Aramco, CPM 2306, (2013), 24 months, Completed.
R4	Zaki, A., Mahmoud, M.A. , et al., “Derivation of Geomechanical Parameters to Determine in Situ Stress in Arab-D, Hanifa, and Khuff Reservoirs of the Abqaiq Field”, Saudi Aramco, CPM 2303, (2014), 36 months, Completed.
R5	Mahmoud. M.A. , Al-Youssef, H.Y., Abdulraheem, A., “Impact of CO ₂ Sequestration on Petrophysical and Mineralogical Characteristics of Potential Formations and Cap-Rock” King Abdul-Aziz City for Science and Technology

	(KACST), Project # KACST-TIC-CCS-6, (Mar 2013-Mar 2015), 24 months, Completed.
R6	Mahmoud, M.A. , “New Model to Predict Formation Damage due to Sulfur Deposition in Sour Gas Wells”, Deanship of Scientific Research, KFUPM, (2011), Project # JF111002, 12 months, Completed.
R7	Zaki, A., Mahmoud, M.A. , et al., “Petrophysical Analyses on Multiple Wells in QATIF Arab-C”, Saudi Aramco, CPM02312, (2016), 24 months, completed.
R8	Abdulrahim, A., Mahmoud, M.A. , et al. "Application Of Thermochemicals To Enhance Stimulated Reservoir Volume", Saudi Aramco, CIPR 2316, 30 month, ongoing.
R9	Mahmoud, M.A. , et al. " Application Of Thermochemicals For Condensate Removal In Tight Gas Reservoirs", Saudi Aramco, CIPR 2317, 24 month, ongoing.
R10	Mahmoud, M.A. , et al. " Mitigation of Tarmat Using Thermochemicals", Saudi Aramco, CIPR 2330, 24 months, Ongoing, Sep. 2019 to Sep. 2021. Budget 1,200,000 SAR.
R11	Elkhatatny, S.M., Mahmoud, M.A. , et al., "Optimizing Hole Cleaning Efficiency Using Artificial Intelligence Techniques", Saudi Aramco, CIPR2320, 24 month, ongoing.
R12	Elkhatatny, S.M., Mahmoud, M.A. , et al., " Rate of Penetration Optimization Using Artificial Intelligence Technique ", Saudi Aramco, CIPR2321, 24 month, ongoing.
R13	Elkhatatny, S.M., Mahmoud, M.A. , et al., " A New Approach to Tackle Lost Circulation Events ", Saudi Aramco, CIPR2322, 24 month, ongoing.
R14	Sultan, A.S., Hussein, I.A., Mahmoud, M.A. , et al. "Study of Polymer-Surfactant Interaction for Chemical EOR in Carbonate Reservoirs, (CPM 2297), funded by Saudi Aramco, (SAR6,375,000, July 2012-2015) [role, CO-PI]. Completed.
R15	Mahmoud, M.A. , Kandil, M., et al. "Rock Physics: Resistivity Measurement with Carbon Dioxide (CO ₂). Role: COI. Source of Funding: Aramco. CPM 2293. Budget: 85,000 USD. Completed
R16	Mahmoud, M.A. and Abdallah, W., "Evaluation of Wettability Alteration in Sandstone Rocks by Dielectric Measurements. Joint Project Schlumberger/KFUPM. Joint fund. Role, PI. Completed.
R17	Hussein, I.A., Mahmoud, M.A. , et al., "Removal of Iron Sulfide Scale from Oil and Gas Wells Using H ₂ S-free Formulations. Funded by Qatar National Foundation for Research, NPRP9-084-2-04, Role: PI . Budget: \$745,000. 9-Sept. 2016- Sept. 2019. Ongoing.
R18	Hussein, I.A., Mahmoud, M.A. , et al., "Enhanced Gas Recovery in Carbonate Reservoirs. Funded by Qatar National Foundation for Research, NPRP9-084-2-04, Role: PI . Budget: \$555,000. 9-Sept. 2017- Sept. 2020. Ongoing.
R19	Mokheimer, E., Mahmoud, M.A. , et al., "Development of Carbon-Free Solar-Assisted ITM Oxy-Combustion EOR System. Funded by KFUPM-DSR, IN151010, Role: COI , Budget 63,000 USD. March 2016-Sep-2018
R20	Mahmoud, M.A. , Al-Nasser, M., et al., "GOSP Optimization Using Hybrid Models. Project SE2384, Funded by Yokogawa Saudi Arabia, 200,000 SAR. Role PI .

R21	Mahmoud, M.A. , Elkatatny, S.M., et al., "New Formulation to Remove the Filter Cake Formed by Oil-Based Barite Drilling Fluid. Investment fund for technology development, DTVC, 120,000 SAR. Role PI.
R22	Mahmoud, M.A. , Elkatatny, S.M., et al., "Zero Fluid Loss Hydraulic Fracturing Fluid for Conventional and Unconventional Reservoirs. Investment fund for technology development, DTVC, 120,000 SAR. Role PI.
R23	Mahmoud, M.A. , Elkatatny, S.M., et al., "Removal of Combined Iron sulfide/calcium carbonate scale. Investment fund for technology development, DTVC, 112,000 SAR. Role PI.
R24	Mahmoud, M.A. , "Development of Smart Fracturing Fluid System for Tight and Unconventional Reservoirs. CPG/KFUPM, 300,000 SAR. Role PI.
R25	Abu-Khamsin, S., Mahmoud, M.A. , Al-Gawad, M., and Arif, M. 2019 . Sand Production Control by Accelerated Low-Temperature Oxidation. Funded by KFUPM-DSR, Role: COI , March 2019-March-2020.
R26	Mokheimer, E., Mahmoud, M.A. , et al., "Development of Carbon-Free Solar-Assisted ITM Oxy-Combustion EOR System. Funded by KFUPM-DSR, DF181017, Role: COI , Budget 63,000 USD. April 2019-Oct.-2021.
R27	Sagheer Onaizi and Mohamed Mahmoud . 2019. Biosurfactant Effectiveness in Stabilizing Saudi Arabian Crude Oil-in-Water Nanoemulsions under Reservoir-Like Conditions for EOR Applications. Funded by KFUPM-DSR, SB181040, Role: COI , Budget 110,000 SAR. Sep. 2019-Feb.-2021.
R28	Mahmoud, M. , Kamal, M., and Tinku, S. 2020. Evaluation of Potential Chemical EOR Methods for Wafra-Ratawi Reservoir. Role: PI , Budget 749420 SAR. March 2020 to March 2022. NSTIP.
R29	El-Husseiny, A., Mahmoud, M. , et al. 2020 . Evaluation of Rock Tortuosity Using NMR. Role: COI , Budget 700,000 SAR. May 2020 to May 2022. Saudi Aramco.
R30	Mahmoud, M., El-Husseiny, A., Adebayo, A. 2020. Application of Machine Learning to Predict Pore throats from NMR. Role: PI , Budget 750,000 SAR. May 2020 to Nov. 2021. Saudi Aramco.
R31	Mahmoud, M., et al. 2021. Sand Consolidation. Role: PI , Budget 750,000 SAR. Dec 2021 to Dec. 2023. Saudi Aramco.
R32	Mahmoud, M., et al. 2021. Filter Cake Removal Using Thermochemicals. Role: PI , Budget 750,000 SAR. July 2021 to July. 2023. Saudi Aramco.
R33	Mahmoud, M., et al. 2021. Efficient Acid Diversion For Carbonate Formations Using In-Situ Gas And Foam Generation. PI , Budget 750,000 SAR. Start September 2021, ends September 2023.
R34	Development Of New Environmentally -Friendly Fracturing Fluids Based On Produced Water. COI , Budget 750,000 SAR. Start September 2021, ends September 2023.
R35	Reduction of breakdown pressure using endothermic fluids. PI , Saudi Aramco, Budget 750,000 SAR, ends Feb 2026
R36	Nano bubble CO2 for oilfield remediations. PI , Saudi Aramco, Budget 750,000 SAR, ends Nov 2026
R37	Thermochemical Steam Engine. PI , Saudi Aramco, Budget 750,000 SAR, ends May 2026

R38	Enabling Underground Hydrogen Storage to Meet Net-Zero Targets in Saudi Arabia. PI, RDIA, Budget 6,500,000 SAR
R39	Minimizing Carbon Emissions. COI, 700,000 Saudi Aramco
R40	Investigation of Chelating Agents in Oilfield Operations. COI, 700,000 Saudi Aramco

Service Projects

I conducted and contributed to the following service projects (SP):

SP 1	Mahmoud, M.A. , “Evaluation of IMSC Barite Remover”, IMSC, CPM 4901 (2015), Completed. Role PI.
SP 2	Mahmoud, M.A. , “Evaluation of 15 wt. % GLDA Prepared in Qurayyah Seawater for Stimulating Water Injection Wells in Carbonate Formations”, IMSC, CPM 4901 (2014), Completed. Role PI.
SP 3	Mahmoud, M.A. , “Measurement and Evaluation of SANJEL Matrix and Fracture Acidizing Fluids”, Sanjel, CPM 4901 (2015), Completed. Role PI.
SP 4	Mahmoud, M.A. , and Elkatatny, S.E., “Corrosion, stability and solubility Tests for Well Flow Products”, Well Flow, CPM 4901 (2016), Completed. Role PI.
SP 5	Sultan, A.S., Elkatatny, S.E., and Mahmoud, M.A. , "Evaluation of EK-2012A for a possible application for stimulation in carbonate and sandstone reservoirs, Maeen-EPDI Company, April-September 2018, PI. Role CO-PI.
SP 6	Elkatatny, S.E., and Mahmoud, M.A. , and Sultan, A.S., "Filter Cake removal using EK-2012A. Maeen-EPDI Company, April-September 2018, CO-PI

Publications

All publications are available on google scholar

Google Scholar Link: H-Index 62

<https://scholar.google.com/citations?user=nxoOLSIAAAAJ&hl=en>

Scopus Link: H-Index 54

<https://www.scopus.com/authid/detail.uri?authorId=35792348900>

Refereed Journals

J1	Mahmoud, M.A.* , H.A. Nasr-El-Din, C.A. DeWolf, C.A., et al., “Evaluation of a New Environmentally Friendly Chelating Agent for High Temperature Applications”, <i>SPE Journal</i> , 16 (3), 559-574, 2011 . (IF = 3.275). Q1 Journal .
J2	Mahmoud, M.A.* , H.A. Nasr-El-Din, C.A. De Wolf, C.A., and J.N. LePage, “Optimum Injection Rate of a New Chelate That Can Be Used to Stimulate Carbonate Reservoirs”, <i>SPE Journal</i> , 16 (4), 968-980, 2011 . (IF = 3.275). Q1 Journal .
J3	Mahmoud, M.A.* , Nasr El-Din, H.A., and De Wolf, C.A., “High-Temperature Laboratory Testing of Illitic Sandstone Outcrop Cores with HCl-Alternative Fluids”, <i>SPE Production and Operations Journal</i> , 30 (1), 43-51, 2015 . (IF = 1.595). Q2 Journal .
J4	Yu, M., Mahmoud, M.A.* , and Nasr-El-Din, A.H., “Propagation and Retention of Viscoelastic Surfactants Following Matrix-Acidizing Treatments in Carbonate Cores” <i>SPE Journal</i> , 16(4), 993-1001, 2011 . (IF = 3.275). Q1 Journal .
J5	Pournik, M., Mahmoud, M.A. , and Nasr-El-Din, H.A., “A Novel Application of Closed-Fracture Acidizing”, <i>SPE Production and Operations Journal</i> , 26 (1), 18-29, 2011 . (IF = 1.595). Q2 Journal .
J6	Gomaa, A.M., Mahmoud, M.A. , and Nasr-El-Din, H.A., “Laboratory Study of Diversion Using Polymer-Based In-Situ-Gelled Acids”, <i>SPE Production and Operations Journal</i> , 26 (3), 278-290, 2011 . (IF = 1.595). Q2 Journal .
J7	Gomaa, A.M., Mahmoud, M.A. , and Nasr-El-Din, H.A., “Effect of Shear Rate on the Polymer-Based In-Situ-Gelled Acids inside Carbonate Cores”, <i>SPE Production and Operations Journal</i> , 26 (1), 41-54, 2011 . (IF = 1.595). Q2 Journal .
J8	Elkatatny, S., Mahmoud, M.A. , Nasr-El-Din, H.A., “Characterization of Filter Cake Generated by Water-Based Drilling Fluids Using CT Scan”, <i>SPE Drilling and Completion Journal</i> , 27 (2), 282-293, 2012 . IF = 1.327, Q2 Journal .

J9	Elkhatatny, S., Mahmoud, M.A. , and Nasr-El-Din, H.A., “Filter Cake Properties of Water-Based Drilling Fluids under Static and Dynamic Conditions Using CT Scan”, <i>Journal of Energy Resources and Technology</i> , 135 (4), 042201-042209, 2013 . IF = 2.759. Q1 Journal .
J10	Mahmoud, M.A.* , “Development of a New Correlation of Gas Compressibility Factor (Z-Factor) for High Pressure Gas Reservoirs”, <i>Journal of Energy Resources and Technology</i> , 136 (1), 012903-012913, 2014 . IF = 2.759.
J11	Mahmoud, M.A.* , “Effect of Elemental Sulfur Deposition on the Rock Petrophysical Properties in Sour Gas Reservoirs”, <i>SPE Journal</i> 19, (4), 703-715, 2014 . IF = 3.275. Q1 Journal .
J12	Adebayo, A.R. and Mahmoud, M.A. , “An Experimental Study of the Effect of Rock/Fluid Interaction on Resistivity Logs during CO ₂ Sequestration in Carbonate Rocks”, <i>Journal of Geoscience and Environment Protection</i> , 2, 1-7, 2014 .
J13	Mahmoud, M.A.* , “Evaluating the Damage due to Calcium Sulfate Scale Precipitation during Low and High Salinity Water Injection”, <i>Journal of Canadian Petroleum Technology</i> , 53 (3), 141-150, 2014 . IF = 0.947. Q2 Journal .
J14	Al-Ghamdi, A., Mahmoud, M.A. , A, Wang, G., Hill, A.D., and Nasr-El-Din, H.A., “Acid Diversion Using Viscoelastic Surfactants: The Effects of Flow Rate and Initial Permeability Contrast”, <i>SPE Journal</i> , 19 (6), 1203 – 1216, 2014 . IF = 3.275. Q1 Journal .
J15	Mahmoud, M.A.* and Nasr El-Din, H.A., “Modeling Flow of Chelating Agents during Stimulation of Carbonate Reservoirs” <i>Arabian Journal of Science and Engineering</i> , 39 (12), 9239-9248, 2014 . IF = 1.518. Q2 Journal .
J16	Adebayo, A., Mahmoud, M.A. , and Al-Youssef, H.Y., “An Experimental Investigation of the Use of Combined Resistivity and Temperature Logs for Scale Monitoring in Carbonate Formations during CO ₂ Sequestration”, <i>Journal of Energy Resources Technology</i> , 137 (3), 032202-1 -032202-11, 2015 . IF = 2.759, Q1 Journal .
J17	Mahmoud, M.A.* and Nasr El-Din, H.A., “Challenges during Shallow and Deep Carbonate Reservoirs Stimulation”, <i>Journal of Energy Resources Technology</i> , 137(1), 012902-1: 012902-8, 2015 . IF = 2.759. Q1 Journal .
J18	Mahmoud, M.A.* and Abdelgawad, K.Z., “Chelating Agent EOR Method for Sandstone and Carbonate Reservoirs”, <i>SPE Journal</i> , 20 (3), 483 – 495, 2015 . IF = 3.275. Q1 Journal .
J19	Adebayo, A., Al-Youssef, H.Y., and Mahmoud, M.A. , “An Investigation of the Effect of CO ₂ -Brine-Rock Interaction on the Determination of Archie’s Saturation Exponent for Carbon Dioxide Evaluation in Carbonate Reservoirs”,

	<i>Journal of Petroleum Science and Engineering</i> , 133, 665-676, 2015 . IF = 3.157. Q1 Journal .
J20	Al-Ameri, W.A., Abdulraheem, A., and Mahmoud, M.A. , “Aquifer Selection for CO ₂ Sequestration Based on Mechanical Properties Evaluation”, <i>Journal of Energy Resources Technology</i> , 138 (1), 012201-9, 2016 . IF = 2.759. Q1 Journal
J21	Mahmoud, M.A.* , Abdelgawad, K.Z., Elkatatny, S. et al. 2016 . Stimulation of Seawater Injectors by GLDA. <i>SPE Drilling and Completion Journal</i> 31(3): 178-187. DOI: http://dx.doi.org/10.2118/172572-PA . IF 1.595, Q2 Journal .
J22	Mahmoud, M.A.* , et al. 2016 . NMR as A Characterization Tool for Wormholes. <i>SPE Production and Operations Journal</i> 31 (4): 362 – 373. DOI: http://dx.doi.org/10.2118/171699-PA . IF 1.327, Q2 Journal .
J23	Mahmoud, M.A.* , Elkatatny, S., Ramadan, E., and Abdulraheem, A. 2016 . Development of Lithology-Based Static Young's Modulus Correlations from Log Data Based on Data Clustering Technique. <i>Journal of Petroleum Science and Engineering</i> 146 (2016) 10–20. https://doi.org/10.1016/j.petrol.2016.04.011 . IF 3.157, Q1 Journal .
J24	Elkatatny, S., Mahmoud, M.A. , and Tariq, Z. 2016 . Real Time Prediction of Drilling Fluid Rheological Properties Using Artificial Neural Networks Visible Mathematical Model (White Box). <i>Journal of Petroleum Science and Engineering</i> , 146 (2016) 1202–1210. https://doi.org/10.1016/j.petrol.2016.08.021 . IF 3.157, Q1 Journal .
J25	Ba Geri, B.S., Mahmoud, M.A.* , and Al-Mutairi, S. 2016 . Effect of Sand Content on the Filter Cake Properties and Removal during Drilling maximum reservoir contact wells in Sandstone Reservoir. <i>Journal of Energy Resources Technology</i> , 138 (3), 032901. doi: 10.1115/1.4032121. IF 2.759, Q1 Journal .
J26	Barri, A.A., Mahmoud, M.A.* , and Elkatatny, S. 2016 . Evaluation of Rock Mechanical Properties Alteration during Matrix Stimulation with Chelating Agents. <i>Journal of Energy Resources Technology</i> , 138 (3), 032907. doi: 10.1115/1.4032546. IF 2.759, Q1 Journal .
J27	Abdelgawad, KZ and Mahmoud, M.A. 2017 . In-situ Generation of CO ₂ to Eliminate the Problem of Gravity Override in EOR of Carbonate Reservoirs. <i>Petroleum & Petrochemical Engineering Journal</i> 1 (1).
J28	Elkatatny, S., Zidan, K., and Mahmoud, M.A. 2017 . Determination of the Rheological Parameters of Invert Emulsion Drilling Fluid in Real Time using Non-Linear Regression Technique. <i>Petroleum & Petrochemical Engineering Journal</i> 1 (1).
J29	Mahmoud, M.A. and Elkatatny, S.M. 2017 . Dual Benefit of CO ₂ Sequestration: Storage and Enhanced Oil Recovery. <i>Petroleum & Petrochemical Engineering Journal</i> 1 (2): 000109.
J30	Mahmoud, M.A.* , Abdelgawad, K.Z., Elkatatny, S. 2017 . Using High and Low Salinity Seawater Injection to Maintain the Oil Reservoir Pressure without

	Damage. <i>J Petrol Explor Prod Technol</i> (2017) 7:589–596. DOI 10.1007/s13202-016-0279-x. IF = 1.38, Q2 Journal.
J31	Elkatatny, S.M., Mahmoud, M.A. , Zeeshan, T., and Abdulrahim, A. 2017 . New Insights into the Prediction of Heterogeneous Carbonate Reservoir Permeability from Well Logs Using Artificial Intelligence Network. <i>Journal of Neural Computing and Applications</i> . doi:10.1007/s00521-017-2850-x. IF 4.66, Q1 Journal.
J32	Mahmoud, M.A.* , Ba Geri, B.S., Elkatatny, S.M., and Al-Mutairi, S. 2017 . Modeling of Filter Cake Composition in Maximum Reservoir Contact and Extended Reach Horizontal Wells in Sandstone Reservoirs. <i>Journal of Energy Resources Technology</i> 139 (3): 032904. doi: 10.1115/1.4035022. IF 2.759, Q1 Journal.
J33	Mahmoud, M.A.* 2017 . New Formulation for Sandstone Acidizing that Eliminates Sand Production Problems in Oil and Gas Sandstone Reservoirs. <i>J. Energy Resour. Technol</i> 139 (4), 042902. doi: 10.1115/1.4036251. IF 2.759, Q1 Journal.
J34	Abdelgawad, K.Z. and Mahmoud, M.A.* 2017 . Modified seawater EOR fluid for carbonate reservoirs. <i>International Journal of Oil, Gas, and Coal Technology</i> (IJOGCT), 15(4). DOI: 10.1504/IJOGCT.2017.084832. IF 0.753, Q2 Journal.
J35	Abdulhamid, A., Elkatatny, S.M., Mahmoud, M.A. et al. 2017 . Determination of the Total Organic Carbon (TOC) Based on Conventional Well Logs Using Artificial Neural Network. <i>International Journal of Coal Geology</i> 179 (2017) 72–80. https://doi.org/10.1016/j.coal.2017.05.012 . IF 5.832, Q1 Journal.
J36	Ba-Geri, B., Mahmoud, M.A.* , Shawabkeh, R.A., Al-Mutairi, S.H., Abdulrahim, A. 2017 . Towards a Complete Removal of Barite (Barium Sulfate BaSO ₄) Scale Using Chelating Agents and Catalysts. <i>Arab J Sci Eng</i> (2017) 42:1667–1674. DOI 10.1007/s13369-017-2417-2. IF 1.518, Q2 Journal.
J37	Al-Amri, M., Mahmoud, M.A.* , Elkatatny, S., Al-Yousef, H., and Al-Ghamdi, T. 2017 . Integrated Petrophysical and Reservoir Characterization Workflow to Enhance Permeability and Water Saturation Prediction. <i>Journal of African Earth Science</i> 131: 105:116. http://dx.doi.org/10.1016/j.jafrearsci.2017.04.014 . IF 1.855, Q2 Journal.
J38	Magzoub, M., Nasser, M., Hussein, I., Benamor, A., Onaizi, S., Sultan, A., Mahmoud, M. 2017 . Effects of Sodium Carbonate Addition, Heat and Agitation on Swelling and Rheological Behavior of Ca-Bentonite Colloidal Dispersions. <i>Journal of Applied Clay Sciences</i> 147 (2017) 176–183. https://doi.org/10.1016/j.clay.2017.07.032 . IF 3.931, Q1 Journal.
J39	Faqir, N.M., Elkatatny, S.M., Mahmoud, M. , and Shawabkeh, R.A. 2017 . Fabrication of Kaolin-Based Geopolymers Cement Plug for CO ₂ Storage Wells. <i>Journal of Applied Clay Sciences</i> . Volume 141, 1 June 2017, Pages 81–87. https://doi.org/10.1016/j.clay.2017.02.011 . IF 3.931, Q1 Journal.
J40	Bageri, B., Mahmoud, M.A.* , Abdulrahim, A., Shawabkeh, R., and Al-Mutairi, S. 2017 . Single Stage Filter Cake Removal of Barite Weighted Water Based

	Drilling Fluid. <i>Journal of Petroleum Science and Engineering</i> , Volume 149, 20 January 2017, Pages 476–484. https://doi.org/10.1016/j.petrol.2016.10.059 . IF 3.157, Q1 Journal.
J41	Ba Geri, B.S., Mahmoud, M.A. , Shawabkeh, R.A., and Abdulraheem, A. 2017 . Evaluation of Barium Sulfate (Barite) Solubility Using Different Chelating Agents – Different Bases - at High Temperature. <i>Journal of Petroleum Science and Technology</i> , 7 (1): 42-56.
J42	Mahmoud, M.A.* 2017 . Determination of the optimum wormholing conditions in carbonate acidizing using NMR. <i>Journal of Petroleum Science and Engineering</i> , 159 (2017) 952–969. DOI: 10.1016/j.petrol.2017.10.004. IF 3.157, Q1 Journal.
J43	Mahmoud, M.A.* , Attia, M., and Al-Hashim, H.S. 2017 . EDTA Chelating Agent/Seawater Solution as Enhanced Oil Recovery Fluid for Sandstone Reservoirs. <i>Journal of Petroleum Science and Engineering</i> , Volume 152, April 2017, Pages 275–283. https://doi.org/10.1016/j.petrol.2017.03.019 . IF 3.157, Q1 Journal.
J44	Mahmoud, M.A.* , Barri, A., and Elkatatny, S.M. 2017 . Mixing Chelating Agents with Seawater for Acid Stimulation Treatments in Carbonate Reservoirs. <i>Journal of Petroleum Science and Engineering</i> , Volume 152, April 2017, Pages 9–20. https://doi.org/10.1016/j.petrol.2017.02.005 . IF 3.157, Q1 Journal.
J45	Ba Geri, B., Elkatatny, S., Mahmoud, M.* , and Al-Majed, A. 2018 . Impact of sand content on filter cake and invert emulsion drilling fluid properties in extended reach horizontal wells. <i>Int. J. Oil, Gas and Coal Technology</i> , Vol. 19, No. 2, 2018. DOI: 10.1504/IJOGCT.2018.094540. IF 0.753, Q2 Journal.
J46	Elkatatny, S., Tareq, Z., Mahmoud, M.A. , and Abdulraheem, A. 2018 . New insights into porosity determination using artificial intelligence techniques for carbonate reservoirs. <i>Journal of Petroleum</i> . https://doi.org/10.1016/j.petlm.2018.04.002 .
J47	Elkatatny, S.M. and Mahmoud, M.A.* 2018 . Development of New Correlations for the Oil Formation Volume Factor in Oil Reservoirs Using Artificial Intelligent White Box Technique. <i>Petroleum</i> 4 (2018) 178-186.
J48	Al-Hajri, N.M. Al-Ajmi, M.D., and Mahmoud, M.* 2018 . A Numerical Method to Predict Crossflow Rate Resulted from Downhole Leaks. <i>Journal of Petroleum Exploration and Production Technology</i> . https://doi.org/10.1007/s13202-018-0506-8 . IF = 1.38, Q2 Journal.
J49	Kamal, M., Mahmoud, M.* , Hanfi, M., Elkatatny, S., and Hussein, I. 2018 . Clay Minerals Damage Quantification in Sandstone Rocks Using Coreflooding and NMR. <i>Journal of Petroleum Exploration and Production Technology</i> . https://doi.org/10.1007/s13202-018-0507-7 . IF = 1.38, Q2 Journal.
J50	Elkatatny, S., Tareq, Z., Mahmoud, M.A. , Abdulraheem, A., and Mohamed, I. 2018 . An Integrated Approach for Estimating Static Young's Modulus Using Artificial Intelligence Tools. <i>J Petrol Explor Prod Technol</i> (2018) 8:17–30. https://doi.org/10.1007/s13202-017-0316-4 . IF = 1.38, Q2 Journal.

J51	Elkhatatny, S., Mahmoud, M.* , and Bageri, B. 2018 . Evaluation of using HEDTA chelating agent to clean up long horizontal heterogeneous sandstone wells without divergent. <i>J Petrol Explor Prod Technol</i> (2018) 8:165–173. https://doi.org/10.1007/s13202-017-0319-1 . IF = 1.38, Q2 Journal.
J52	Elkhatatny, S., Tareq, Z., Mahmoud, M.A. , Abdulraheem, A., and Mohamed, I. 2018 . An Integrated Approach for Estimating Static Young's Modulus Using Artificial Intelligence Tools. <i>Journal of Neural Computing and Applications</i> , https://doi.org/10.1007/s00521-018-3344-1 . IF 4.66, Q1 Journal.
J53	Kamal, M., Mahmoud, M. , Hanfi, M. 2018 . Effect of Rheological Behavior of Viscoelastic Surfactant on the Formation Damage in Carbonate Rocks. <i>Journal of Surfactant and Detergent</i> . DOI 10.1002/jsde.12185. IF 1.672, Q2 Journal.
J54	Kamal, M., Hussein, I., Mahmoud, M.* , Sultan, A., Saad, M. 2018 . Oilfield Scale Formation and Chemical Removal: A Review. <i>Journal of Petroleum Science and Engineering</i> , 171 (2018) 127–139. https://doi.org/10.1016/j.petrol.2018.07.037 . IF 3.157, Q1 Journal.
J55	Eliebid, M., Mahmoud, M.A.* , Shawabkeh, R., Elkhatatny, S.M., and Hussein, I.A. 2018 . Effect of CO ₂ adsorption on Enhanced Natural Gas Recovery and Sequestration in Carbonate Reservoirs. <i>Journal of Natural Gas and Engineering</i> , 55 (2018) 575-584. https://doi.org/10.1016/j.jngse.2017.04.019 . IF 3.909, Q1 Journal.
J56	Abdelgawad, K.Z., Mahmoud, M.A.* , and Hussein, I.A. 2018 . Stimulation of High Temperature Carbonate Reservoirs Using Seawater and Chelating Agents: Reaction Kinetics. <i>Journal of Natural Gas Science and Engineering</i> , 55 (2018) 595-605. https://doi.org/10.1016/j.jngse.2017.06.020 . IF 3.909, Q1 Journal.
J57	Moussa, T., Elkhatatny, S., Mahmoud, M.A. , and Abdulraheem, A. 2018 . Development of New Permeability Formulation From Well Log Data Using Artificial Intelligence Approaches. <i>Journal of Energy Resources Technology</i> , JULY 2018, Vol. 140 / 072903-1. doi: 10.1115/1.4039270. IF 2.759, Q1 Journal.
J58	Al-Ajmi, M., Al-Shehri, D.A., Mahmoud, M.A. , and Al-Hajri, N., 2018 . Risk Based Approach to Prevent Aquifer Contamination in Upstream Oil and Gas Wells. <i>Journal of Energy Resources Technology</i> , DECEMBER 2018, Vol. 140 / 122901-1. doi: 10.1115/1.4040237. IF 2.759, Q1 Journal.
J59	Buijs, W., Hussein, I.A., Mahmoud, M.A. , Onawole, A.T., Saad, M.A., Golibjon R. Berdiyrov, G.R. 2018 . A Molecular Modelling Study towards the Development of H ₂ S-free Removal of Iron Sulphide Scale from Oil and Gas Wells. <i>Ind. Eng. Chem. Res.</i> , 2018, 57 (31), pp 10095–10104. DOI: 10.1021/acs.iecr.8b01928. IF 3.448, Q1 Journal.
J60	Alarif, S., Mahmoud, M.* , and Kamal, M. 2018 . Interactions of DTPA chelating agent with sand stone rocks during EOR: Rock surface charge study. <i>Fuel</i> 232 (2018) 684–692. https://doi.org/10.1016/j.fuel.2018.06.003 . IF 5.223, Q1 Journal.

J61	Eliebid, M., Mahmoud, M.* , Hussein, I.; Elkatatny, S., Shawabkeh, R., Sultan, A., Al-Marri, M. 2018 . Impact of Surfactant on the Retention of CO ₂ and Methane in Carbonate Reservoirs. <i>Energy&Fuels</i> 2018, 32, 5355–5363. DOI: 10.1021/acs.energyfuels.8b00213. IF 3.554, Q1 Journal.
J62	Elkatatny, S., Tariq, Z., Mahmoud, M. , Mohamed, I., and Abdulrahim, A. 2018 . Development of New Mathematical Model for Compressional and Shear Sonic Times from Wireline Log Data Using Artificial Intelligence Neural Networks (White Box). <i>Arabian Journal for Science and Engineering</i> . https://doi.org/10.1007/s13369-018-3278-z . IF 1.518, Q2 Journal.
J63	Elkatatny, S., Abdelgawad, K., and Mahmoud, M. 2018 . Reaction of Chelating Agents with Guar Gum Polymer for Completion Fluid. <i>Arabian Journal for Science and Engineering</i> . https://doi.org/10.1007/s13369-018-3278-z . IF 1.518, Q2 Journal.
J64	Elkatatny, S. and Mahmoud, M. 2018 . Development of a New Correlation for Bubble Point Pressure in Oil Reservoirs Using Artificial Intelligent Technique. <i>Arab J Sci Eng</i> (2018) 43:2491–2500. DOI: https://doi.org/10.1007/s13369-017-2589-9 . IF 1.518, Q2 Journal.
J65	Elkatatny, S. and Mahmoud, M. 2018 . Investigating the Compatibility of Enzyme with Chelating Agents for Calcium Carbonate Filter Cake Removal. <i>Arab J Sci Eng</i> (2018) 43:2309–2318. DOI: https://doi.org/10.1007/s13369-017-2727-4 . IF 1.518, Q2 Journal.
J66	Kamal, M., Mohammed, M., Mahmoud, M. , and Elkatatny, S. 2018 . Development of Chelating Agent-Based Polymeric Gel System for Hydraulic Fracturing. <i>Energies</i> 2018 , 11(7), 1663; https://doi.org/10.3390/en11071663 . IF 2.99, Q1 Journal.
J67	Mahmoud, M.A.* , Hussein, I.A., Sultan, A.S., Saleh, M.A., Buijs, W., and Vlugt, T.J.H. 2018 . Development of Efficient Formulation for the Removal of Iron Sulfide Scale in Sour Production Wells. <i>The Canadian Journal of Chemical Engineering</i> 96(12): 2526-2533. https://doi.org/10.1002/cjce.23241 . IF 1.61, Q2 Journal.
J68	Mohamed, A., Elkatatny, S., Mahmoud, M. , Shawabkeh, R., and Al-Majed, A. 2018 . Evaluating the Effect of Using Micronized Barite on the Properties of Water-Based Drilling Fluids. Accepted, <i>International Journal of Oil, Gas, and Coal Technology</i> . IF 0.753, Q2 Journal.
J69	Elkatatny, S., Moussa, T., Abdulrahim, A., and Mahmoud, M. 2018 . A Self-Adaptive Artificial Intelligence Technique to Predict Oil PVT Properties. <i>Energies</i> 2018, 11(12), 3490; https://doi.org/10.3390/en11123490 . IF 2.99, Q1 Journal.

J70	Mahmoud, M.A*. 2018. Reaction of Chelating Agents and Catalyst with Sandstone Minerals During Matrix Acid Treatment. <i>Arab J Sci Eng</i> 43 (11): 5745–5756. https://doi.org/10.1007/s13369-017-2962-8 . IF 1.518, Q2 Journal.
J71	Tareq, Zeeshan, Abdulrahim, A., Mahmoud, M.* , and Ahmed, A. 2018. A Rigorous Data-Driven Approach to Predict Poisson's Ratio of the rock using Functional Network. <i>Petrophysics Journal</i> 59 (6): 761 - 777. SPWLA-2018-v59n6a2. IF 1.164, Q2 (JCR).
J72	Abdelgawad, K., Elzenary, M., Elkatatny, S. M., Mahmoud, M. , Abdulaheem, A. and Patil, S. 2018. New Approach to Evaluate the Equivalent Circulating Density (ECD) Using Artificial Intelligence Techniques. <i>Journal of Petroleum Exploration and Production Technology</i> . DOI: https://doi.org/10.1007/s13202-018-0572-y . IF = 1.38, Q2 Journal.
J73	Onawole, A.T., Hussein, I.A., Sultan, A., Abdel-Azeim, S., Mahmoud, M.A. , and Saad, M.A. 2018. Molecular and Electronic Structure Elucidation of Fe ²⁺ /Fe ³⁺ Complexed Chelators used in Iron Sulfides Scale Removal. Accepted, <i>The Canadian Journal of Chemical Engineering</i> . https://doi.org/10.1002/cjce.23463 . IF 1.61, Q2 Journal.
J74	Ahmed, A., Elkatatny, S., Zaki, A., Mahmoud, M. , Abdulrahim, A. 2018. New Model for Pore Pressure Prediction While Drilling Using Artificial Neural Networks. Accepted, <i>Arabian Journal of Science and Engineering</i> . DOI: https://doi.org/10.1007/s13369-018-3574-7 . IF 1.518, Q2 Journal.
J75	Elkatatny, S., Kamal, M., Alakbri, F., and Mahmoud, M. 2018. Optimizing the Gel Strength of Water-based Drilling Fluid Using Clays and Nanoparticles for Drilling Horizontal and Multi-Lateral Wells. <i>Applied Rheology Journal</i> . Appl. Rheol. 28 (2018) 43606. DOI: 10.3933/ApplRheol-28-43606. IF 1.023, Q3 Journal.
J76	Al-Hajri, N., Mahmoud, M.* , Taq, A., Al-Ajmi, M. 2018. Development of Emulsified System to Remove Organic Scales from Water Injection Wells: Laboratory Analysis and Field Treatment. Accepted, <i>Arabian Journal for Science and Engineering</i> . IF 1.518, Q2 Journal.
J77	Hassan, A.M., Mahmoud, M.A*. , Al-Majed, A.A., Elkatatny, S., Al-Nakhli, A.R., and Bataweel, M.A. 2018. A Novel Technique to Eliminate Gas Condensation in Gas Condensate Reservoirs Using Thermochemical Fluids. <i>Energy Fuels</i> 2018, 32 (12): 12843-12850. DOI: 10.1021/acs.energyfuels.8b03604. IF 3.554, Q1 Journal.
J78	Mahmoud, M.* and Elkatatny, S. 2018. Removal of Barite Scale and Barite Weighted Water- or Oil-Based Drilling Fluid Residue in one Single Stage. <i>SPE Drilling and Completion</i> . DOI- https://doi.org/10.2118/187122-PA . IF 1.595, Q2 Journal.

J79	Mahmoud, M.* , Ba Geri, B., Abdelgawad, K., Kamal, M., Hussein, I., Elkatatny, S., and Shawabkeh, R. 2018 . Evaluation of the Reaction Kinetics of DTPA Chelating Agent and Converter with Barium Sulfate (Barite) Using Rotating Disk Apparatus. <i>Energy & Fuels</i> 32 (9): 9813–9821. DOI: 10.1021/acs.energyfuels.8b02332. IF 3.554, Q1 Journal .
J80	Mahmoud, M.A.* . 2018 . Effect of Chlorite Clay Mineral Dissolution on the Improved Oil Recovery from Sandstone Rocks During DTPA Chelating Agent Flooding. <i>SPE Journal</i> 23 (5): 1,880 - 1,898. https://doi.org/10.2118/189988-PA . IF 3.275, Q1 Journal .
J81	Mokheimer, E.M., Hamdy, M., Abubakar, Z., Shakeel, M.R., Habib, M.A., Mahmoud, M. 2019 . A Comprehensive Review of Thermal Enhanced Oil Recovery: Techniques Evaluation. <i>J. Energy Resour. Technol.</i> ;141(3): 030801-030801-18. doi:10.1115/1.4041096. IF 2.759, Q1 Journal .
J82	Moussa, T., Mahmoud, M.* , Mokheimer, E., Habib, M., and Elkatatny, S. 2019 . Well-Placement Optimization in Heavy Oil Reservoirs Using a Novel Method of In-Situ Steam Generation. <i>J. Energy Resour. Technol.</i> ;141(3):032906-032906-10. doi:10.1115/1.4041613. IF 2.759, Q1 Journal .
J83	Abdelgawad, K., M., Elkatatny, S. M., Patil, S., Mahmoud, M. , Moussa, T. S. 2019 . Real Time Determination of Rheological Properties of Spud Drilling Fluids Using a Hybrid Artificial Intelligence Technique. <i>J. Energy Resour. Technol</i> 141(3), 032908. doi: 10.1115/1.4042233. IF 2.759, Q1 Journal .
J84	Al-AbdulJabbar, A., Elkatatny, S., Mahmoud, M. , A., Abdelgawad, K., and Al-Majed, A. 2019 . A Robust Rate of Penetration Model for Carbonate Formation. <i>J. Energy Resour. Technol.</i> ;141 (4): 042903-042903-9. doi:10.1115/1.4041840. IF 2.759, Q1 Journal .
J85	Magzoub, M., Mahmoud, M.* , Nasser, M., Hussein, I., Elkatatny, S., and Sultan, A. 2019 . Thermochemical Upgrading of Calcium-Bentonite for Drilling Fluid Applications. <i>J. Energy Resour. Technol.</i> ;141 (4):042902-042902-9. https://doi.org/10.1115/1.4041843 . IF 2.759, Q1 Journal .
J86	Connolly, P.R.J., Yan, W., Zhang, D., Mahmoud, M. , Verrall, M., Lebedev, M., Iglauer, S., Metaxas, P., May, E.F., Johns, M.L. 2019 . Simulation and Experimental Measurements of Internal Magnetic Field Gradients and NMR Transverse Relaxation Times (T2) in Sandstone Rocks. <i>Journal of Petroleum Science and Engineering</i> , Volume 175, April 2019, Pages 985-997. https://doi.org/10.1016/j.petrol.2019.01.036 . IF 3.157, Q1 Journal .
J87	Mahmoud, M.* , Eliebid, M., Kamal, M.S., M., Al-Yousef, H., Elkatatny, S. M., Al-Garadi, K. 2019 . Impact of Methane Adsorption on Tight Rock Permeability Measurements Using Pulse-Decay. Accepted, <i>Petroleum Journal</i> . https://doi.org/10.1016/j.petlm.2019.01.002 .
J88	Radwan, A.E., Abudeif, A.M., Attia, M.M., and Mahmoud, M. 2019 . Development of Formation Damage Diagnosis Workflow, Application on Hammam Faraun Reservoir: A Case Study, Gulf of Suez, Egypt. <i>African Journal of Earth Sciences</i> , Volume 153, May 2019, Pages 42-53, https://doi.org/10.1016/j.jafrearsci.2019.02.012 . IF 1.855, Q2 Journal .

J89	Alade, O.S., Al-Shehri, D.A., and Mahmoud, M.A.* 2019 . Investigation of Effect of Silica Nanoparticles on the Rheological Characteristics of Water-in-Heavy Oil Emulsion. Accepted, Journal Petroleum Science, IF 1.62, Q2 Journal .
J90	Tareq, Zeeshan, Mahmoud, M. , and Abdulrahim, A. 2019 . Core Log Integration: A Hybrid Intelligent Data-Driven Solution to Improve Elastic Parameter Prediction. Journal of Neural Computing and Applications, NCAA-D-18-01479, https://doi.org/10.1007/s00521-019-04101-3 . IF 4.66, Q1 Journal .
J91	Hassan, A.M., Mahmoud, M.A*. , Al-Majed, A.A., Elkatatny, Ba-Alawi, M., S., Al-Nakhli, A.R., and Bataweel, M.A. 2019 . Gas Condensate Treatment: A Critical Review of Materials, Methods, Field Applications, and New Solutions. <i>Journal of Petroleum Science and Engineering</i> , Volume 177, June 2019, Pages 602-613, https://doi.org/10.1016/j.petrol.2019.02.089 . IF 3.157, Q1 Journal .
J92	Tareq, Zeeshan and Mahmoud, M.* . 2019 . A New Correlation for Gas Deviation Factor for High Temperature and High-Pressure Gas Reservoirs using Neural Networks. Energy and Fuels Journal, Energy Fuels, 2019, 33 (3), pp 2426–2436, DOI: 10.1021/acs.energyfuels.9b00171. IF 3.554, Q1 Journal .
J93	Tareq, Zeeshan, Mahmoud, M.* , Al-Youssef, H., and Khan, M. 2019 . Carbonate Rocks Resistivity Determination using Dual and Triple Porosity Conductivity Models. Accepted, Petroleum Journal.
J94	Hassan, A.M., Mahmoud, M.A*. , Al-Majed, A.A., Al-Nakhli, A.R., Bataweel, M.A., and Elkatatny, S. 2019 . Mitigation of Condensate Banking Using Thermochemical Treatment: Experimental and Analytical Study. Energies Journal, Energies 2019, 12(5), 800; https://doi.org/10.3390/en12050800 . IF 2.99, Q1 Journal .
J95	Ahmed, Musa; Saad, Mohammed; Hussein, Ibnelwaleed; Onawole, Abdulmujeeb; Mahmoud, Mohamed . 2019 . Pyrite Scale Removal using Green Formulations for Oil and Gas Applications: Reaction Kinetics. Energy and Fuels Journal, DOI: 10.1021/acs.energyfuels.9b00444. IF 3.554, Q1 Journal .
J96	Mahmoud, M. 2019 . Effect of Gas Adsorption on the Estimation of Gas in Place (GIP) in Conventional and Unconventional Reservoirs. Accepted, Arabian Journal for Science and Engineering, https://doi.org/10.1007/s13369-019-03815-9 . IF 1.518, Q2 Journal .
J97	Ba geri, B., Banaafi, M., Mahmoud, M. , Patil, S., Mohamed, A., and Elkatatny, S.M. 2019 . Effect of Arenite, Calcareous, Argillaceous, and Ferruginous Sandstone Cuttings on Filter Cake and Drilling Fluid Properties in Horizontal Wells. Geofluids, Volume 2019, Article ID 1956715, 10 pages https://doi.org/10.1155/2019/1956715 . IF 2.026, Q1 Journal .
J98	Magzoub, M., Hussein, I., Nasser, M., Mahmoud, M. , Sultan, A., and Benamor, A. 2019 . An Investigation of the Swelling Kinetics of Bentonite Systems using Particle Size Analysis. Accepted, Journal of Dispersion Science & Technology. IF 1.479, Q2 Journal (polymers and plastics) .
J99	Ahmad, H. M., Kamal, M. S., Mahmoud, M. , Hussain, S. M., Mohamed Abouelresh, M., Al-Harthi, M.A. 2019 . Organophilic Clay-Based Drilling Fluids for Mitigation of Unconventional Shale Reservoirs Instability and Formation

	Damage. J. Energy Resour. Technol 141(9), 093102, doi: 10.1115/1.4043248. IF = 2.759. Q1 Journal.
J100	Onawole, A.T., Hussein, I.A., Saad, M.A., Mahmoud, M. , Musa E.M. Ahmed, M.E., and Nimir, H.I. 2019 . Effect of pH on Acidic and Basic Chelating Agents used in the Removal of Iron Sulfide Scales: A Computational Study. Journal of Petroleum Science and Engineering, Volume 178, July 2019, Pages 649-654, https://doi.org/10.1016/j.petrol.2019.03.075 . IF 3.157, Q1 Journal.
J101	Alade, O.S., Mahmoud, M. , Al-Asheri1, D., Sasaki, K. and Sugai, Y. 2019 . Evaluation of Laminar Flow of Surfactant-Stabilized Bitumen-in-Water Emulsion in Pipe using Computational Fluid Dynamics: Effects of Water content and Salinity. Accepted, Journal of Dispersion Science & Technology. IF 1.479, Q2 Journal (polymers and plastics).
J102	Mahmoud, M. 2019 . Well Clean-up Using a Combined Thermochemical/Chelating Agent Fluids. Accepted, Journal of Energy Resources Technology. IF = 2.759. Q1 Journal. doi: 10.1115/1.4043612.
J103	Elkhatatny, S., Jafarov, T., Al-Majed, A., and Mahmoud, M. 2019 . Formation Damage Avoidance by Reducing Invasion with Sodium Silicate Modified Water-Based Drilling Fluid. Energies 2019, 12(8), 1485; https://doi.org/10.3390/en12081485 . IF 2.99, Q1 Journal.
J104	Tariq, Z., Abdulraheem, A., Mahmoud, M. , Elkhatatny, S., Ali1, Z., Al-Shehri, D., Belayneh, M.W. 2019 . A New Look into the prediction of Static Young's Modulus and Unconfined Compressive Strength of the Carbonate using Artificial Intelligence Tools. Accepted, Petroleum Geoscience. IF 1.958, Q2 Journal.
J105	Alade, O.; Mahmoud, M.* ; Hasan, A.; Al-Shehri, D.; Al-Nakhli, A.; BaTaweel, M. 2019 . Evaluation of kinetics and Energetics of Thermochemical Fluids for Enhanced Recovery of Heavy Oil and Liquid Condensate. Accepted, Energy and Fuels. IF 3.554, Q1 Journal.
J106	Amjed Hassan, Mohamed Mahmoud * , Abdulaziz Al-Majed, Dhafer Al-Shehri, Ayman Al-Nakhli, Mohammed Bataweel. 2019 . Sustaining the Gas Production from Gas Condensate Reservoirs Using Environmentally Friendly Chemicals. Sustainability, 11(10), 2838; https://doi.org/10.3390/su11102838 . IF 2.801, Q2 Journal.
J107	Moussa, T., Mahmoud, M.* , Mokheimer, E., Al-Shehri, D., and Patil, S. 2019 . Heavy oil recovery using in-situ steam generated by thermochemicals: A Feasibility Study. Accepted, Journal of Energy Resources Technology. IF = 2.759, Q2 Journal.
J108	Elkhatatny, S., Basfer, S., Shawabkeh, R., Bahgat, M., Mahmoud, M. , 2019 . Assessment of Using Copper Nitrate for Scavenging Hydrogen Sulfide While Drilling Sour Horizontal Wells. Accepted, Journal of Energy Resources Technology. IF = 2.759, Q2 Journal.
J109	Mahmoud, M.* , Tariq, Z., Kamal, M., and Al-Nasser, M. 2019 . Intelligent Prediction of Optimum Separation Parameters in the Multistage Crude Oil Production Facilities. Accepted, Journal of Petroleum Exploration and Production Technology. IF = 1.38, Q2 Journal.

J110	Al-Jawad, M., Al-Julaih, H., Desouky, M. and Mahmoud, M. 2019 . Integration of Field, Laboratory, and Modeling Aspects of Acid Fracturing: A Comprehensive Review. Accepted, Journal of Petroleum Science and Engineering. IF = 3.157, Q1 Journal.
J111	Lawal, L., Mahmoud, M.* , Alade, O., and Abdulrahim, A. 2019 . Total Organic Carbon Characterization Using Neural Network Analysis of XRF Data. Accepted, Petrophysics Journal, Society of Petrophysicists & Well Log Analysts, SPWLA-D-19-00014. IF = 1.164, Q2 Journal.
J112	Alade, O., Al-Shehri, D., Mahmoud, M.* , and Saski, k. 2019 . Viscosity-Temperature-Pressure Relationship of Extra-Heavy Oil (Bitumen): Empirical Modelling versus Artificial Neural Network (ANN). Energies 2019. IF 2.99, Q2 Journal.
J113	Tariq, Z., Mahmoud, M. , and Abdulrahim, A. 2019 . Real Time Prognosis of Flowing Bottom-Hole Pressure in a Vertical Well for a Multiphase Flow Using Computational Intelligence Techniques. Accepted, Journal of Petroleum Exploration and Production Technology. IF = 1.38, Q2 Journal.
J114	Amjed Hassan, Mohamed Mahmoud* , Abdulaziz Al-Majed, Ayman Al-Nakhli, Mohammed Bataweel. 2019 . Water Blockage Removal and Productivity Index Enhancement by Injecting Thermochemical Fluids in Tight Sandstone Formations. Accepted, Journal of Petroleum Science and Engineering. IF 3.157, Q1 Journal.
J115	Tareq, Z., Mahmoud, M.* , Abdulrahim, A., Al-Nakhli, A., and BaTaweel, M. 2019 . An Experimental Study to Reduce the Fracture Pressure of High Strength Rocks Using a Novel Thermochemical Fracturing Approach. Accepted, Geofluids. IF 2.026, Q2 Journal.
J116	Abdelgawad, K., Mahmoud, M.* , Elkatatny, S., Abdulrahim, A., and Patil, S. 2019 . Reaction Kinetics and Coreflooding Study of Stimulation of High-Temperature Carbonate Reservoirs using GLDA in Seawater. Accepted, Energies. IF 2.99, Q1 Journal.
J117	Alade, O., Mahmoud, M.* , Al-Shehri, D., Ganiyu, S., Al-Nakhli, A., Bataweel, M. 2019 . Kinetics of Thermal Decomposition of Tar in the Presence of Air and Nitrogen Gas. Accepted, Energy and Fuels. IF 3.02, Q1 journal.
J118	Mahmoud, M.* , Alade, O.S., Hamdy, M., Patil, S., Mokheimer, E.M. 2019 . In Situ Steam and Nitrogen Gas Generation by Thermochemical Fluid Injection: A New Approach for heavy Oil Recovery. Accepted, Energy Conversion and Management. IF 7.18 Q1 Journal.
J119	Yang, K., Li, M., Ling, N., May, E., Connolly, P., Esteban, L., Clennell, M., Mahmoud, M. , Elhusseiny, A., Adebayo, A., Elsayed, M., Johns, M. 2019 . Quantitative Tortuosity Measurements of Carbonate Rocks using Pulsed Field Gradient NMR. Accepted, Transport in Porous Media. IF 2.219 Q1 Journal.
J120	Mustafa, A., Mahmoud, M.* , Abdulaheem, a., Furquan, s., Al-Nakhli, A., BaTaweel, M. 2019 . Comparative Analysis of Static and Dynamic Mechanical Behavior for Dry and Saturated Porous Concrete. Materials Journal. IF 3.532 Q1 Journal.

J121	Mahmoud, M.* , Carchini, G., Hussein, I., Shawabkeh, R., Eliebid, M., Al-Marri, M. 2019 . Effect of Rock Mineralogy on Hot-CO ₂ Injection for Enhanced Gas Recovery. Journal of Natural Gas Science and Engineering, Volume 72, December 2019, 103030. IF 3.9, Q1 Journal .
J122	Mahmoud, M.* , Mohamed, A., Kamal, M.S., Sultan, A., Hussein, I. 2019 . Upgrading Calcium-Bentonite to Sodium-Bentonite Using Seawater and Soda Ash. Energy Fuels 2019, 33, 11, 10888-10894.
J123	Tariq, Z., Mahmoud, M.* , Abdulraheem, A., Al-Shehri, D., and Murtaza, M. 2019 . An Environment Friendly Approach to Reduce the Breakdown Pressure of High Strength Unconventional Rocks by Cyclic Hydraulic Fracturing. Accepted, Journal of Energy Resources Technology. ASME.
J124	Connolly, p., Vogt, S., Mahmoud, M. , Christopher Ng, May, E., Johns, M. 2019 . Capillary trapping of carbon dioxide, NMR transverse relaxation times, Mineral dissolution from carbonic acid exposure, CO ₂ wettability. Accepted, Water Resources Research Journal. IF 4.142, Q1.
J125	Amjed Hassan, Mohamed Mahmoud* , Abdulaziz Al-Majed, and Ayman Al-Nakhli. 2019 . A New Chemical Treatment for Permanent Removal of Condensate Banking from Different Gas Reservoirs. Accepted, ACS OMEGA. IF 2.584, Q2 Journal .
J126	Carchini, G., Hussein, I., Aparicio, S., Shawabkeh, R., Mahmoud, M. , Al-Marri, M. 2020 . A theoretical study of gas adsorption on calcite for CO ₂ enhanced natural gas recovery. Applied Surface Science, 504 (2020):144575. IF 5.155, Q1 Journal .
J127	Tariq, Z., Mahmoud, M. , Abdulraheem, A. 2020 . An Intelligent data-driven Model for Dean-Stark Water Saturation Prediction in Carbonate Rocks. Accepted, NCAA-D-19-01467, in Neural Computing and Applications. IF 4.66, Q1 Journal .
J128	Tariq, Z., Mahmoud, M.* , Abdulraheem, A., Al-Nakhli, A., and BaTaweel, M. 2020 . An Experimental Study to Reduce the Breakdown Pressure of the Unconventional Carbonate Rock by Cyclic Injection of Thermochemicals Fluids. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.
J129	Gomaa, I., Mahmoud, M.* , Kamal, M. 2020 . A Novel Approach for Sandstone Acidizing Using In-Situ Generated HF Acid with the Aid of Thermochemicals. Accepted, ACS OMEGA. IF 2.584, Q2 Journal .
J130	Mahmoud, M.* , Aleid, A., Ali., A., and Kamal, M. 2020 . An Integrated Workflow to Perform Reservoir and Completion Parametric Study on a Shale Gas Reservoir. Accepted, Journal of Petroleum Exploration and Production Technology.
J131	Alade, A.S., Hamdy, M., Mahmoud, M.* , Al Shehri, D., Mokheimer, E., Patil, S., Al-Nakhli, A. 2020 . A Preliminary Assessment of Thermochemical Fluid for Heavy Oil Recovery. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.

J132	Lawal, L., Olayiwola, T., Abdel-Azeim, S., Mahmoud, M.* , Onawole, A., Kamal, M. 2020 . Molecular Simulation of Kerogen-Water Interaction: Theoretical Insights into Maturity. Accepted, Journal of Molecular Liquids, IF 4.561, Q1.
J133	Mahmoud, M. , Hamza, A., Hussein, I., Eliebid, M., Kamal, M., Aboulresh, M., Shawabkeh, R., Al-Marri, M. 2020 . Carbon Dioxide EGR and Sequestration in Mature and Immature Shale: Adsorption Study. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.
J134	Elsayed, M., Mahmoud, M.* , El-Husseiny, A., Kamal, M.S., Al-Garadi, K. 2020 . A New Method to Evaluate Reaction Kinetics of Acids with Carbonate Rocks Using NMR Diffusion Measurements. Accepted, Energy and Fuels. IF 3.02, Q1 journal.
J135	Alade, O., Hassan, A., Mahmoud, M.* , Al-Shehri, D., and Al-Majed, A. 2020 . A Novel Approach for Improving Flow of Waxy Crude Oil Using Thermochemical Fluids: Experimental and Simulation Study. Accepted, ACS OMEGA, IF 2.584, Q2 Journal.
J136	Gomaa, I. and Mahmoud, M.* 2020 . A Novel Approach for Stimulating Illitic Sandstone Using In-Situ Generated HF with the Aid of Thermochemicals. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.
J137	Ba geri, b., Benaafi, M., Mahmoud, M. , Mohamed, A., Patil, S., and Elkatatny, S. 2020 . Effect of Formation Cutting's Mechanical Properties on Drilling Fluid Properties during Drilling Operations. Accepted, Arabian Journal for Science and Engineering.
J138	Elsayed, M., Glatz, G., El-Husseiny, A., Alqubalee, A., Adebayo, A., Al-Garadi, K., Mahmoud, M. 2020 . The effect of clay content on the spin-spin NMR relaxation time measured in porous media. Accepted, ACS OMEGA, IF 2.584, Q2 Journal.
J139	Zeeshan, T., Kamal, M.S., Mahmoud, M. , Hussain, S., Abdulrahim, A., and Zhou, X. 2020 . Polyoxyethylene Quaternary Ammonium Gemini Surfactants as a Completion Fluid Additive to Mitigate Formation Damage. Accepted, SPE Drilling and Completion. SPE-201207-PA. IF 1.595, Q2 Journal.
J140	Abdulazeem, A., Mahmoud, M. , et al. 2020 . Enhanced Gas Recovery and CO ₂ Sequestration in Depleted Gas Reservoirs: A Review. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.
J142	Adebayo, A., Isah, A., Mahmoud, M. 2020 . Electrical Resistivity and Capillary Pressure Measurements for Evaluating Fluid Saturation in Foam Flooded Reservoirs. Accepted, Journal of Petroleum Science and Engineering. IF. 3.1, Q1.
J143	Hassan, A., Mahmoud, M. , Al-Majed, A., et al. 2020 . Performance Analysis of Thermochemical Fluids in Removing the Gas Condensate from Different Gas Formations. Accepted, Journal of Natural Gas Science and Engineering. IF 3.909, Q1 Journal.

J144	Murtaza, M., Kamal, M., Mahmoud, M. , Hussain, S., and Syed, N. 2020 . Quaternary Ammonium Gemini Surfactants having Different Spacer Length as Clay Swelling Inhibitors: Mechanism and Performance Evaluation. Accepted, Journal of Molecular Liquids, IF 4.561, Q1 .
J145	Carchini, G., Hussein, I., Shawabkeh, R., Mahmoud, M. , and Aparicio, S., 2020 . A theoretical study of gas adsorption on α -quartz (001) for CO ₂ enhanced natural gas recovery. Accepted, Applied Surface Science, IF 5.155, Q1 Journal .
J146	Tariq, Z., Mahmoud, M. , and Abdulrahim, A. 2020 . Real Time Prognosis of Flowing Bottom-Hole Pressure in a Vertical Well for a Multiphase Flow Using Computational Intelligence Techniques. Journal of Petroleum Exploration and Production Technology volume 10, pages1411–1428(2020). https://doi.org/10.1007/s13202-019-0728-4 .
J147	Tariq, Z., Mahmoud, M.* , Abdulraheem, A., Al-Shehri, D., and Murtaza, M. 2020 . An Environment Friendly Approach to Reduce the Breakdown Pressure of High Strength Unconventional Rocks by Cyclic Hydraulic Fracturing. J. Energy Resour. Technol. Apr 2020, 142(4): 043002. https://doi.org/10.1115/1.4045317 .
J148	Connolly, P., Vogt, S., Mahmoud, M. , Christopher Ng, May, E., Johns, M. 2020 . Capillary trapping of carbon dioxide, NMR transverse relaxation times, Mineral dissolution from carbonic acid exposure, CO ₂ wettability. Accepted, Water Resources Research Journal. IF 4.142, Q1.
J149	Carchini, G., Hussein, I., Aparicio, S., Shawabkeh, R., Mahmoud, M. , Al-Marri, M. 2020 . A theoretical study of gas adsorption on calcite for CO ₂ enhanced natural gas recovery. Applied Surface Science, 504 (2020):144575. IF 5.155, Q1 Journal .
J150	Tariq, Z., Mahmoud, M. , Abdulraheem, A. 2020 . An Intelligent data-driven Model for Dean-Stark Water Saturation Prediction in Carbonate Rocks. Accepted, NCAAD-19-01467, in Neural Computing and Applications, 32, pages11919–11935(2020). IF 4.66, Q1 Journal .
J151	Tariq, Z., Mahmoud, M.* , Abdulraheem, A., Al-Nakhli, A., and BaTaweel, M. 2020 . An Experimental Study to Reduce the Breakdown Pressure of the Unconventional Carbonate Rock by Cyclic Injection of Thermochemicals Fluids. Journal of Petroleum Science and Engineering Volume 187, April 2020, 106859. https://doi.org/10.1016/j.petrol.2019.106859 .
J152	Gomaa, I., Mahmoud, M.* , Kamal, M. 2020 . A Novel Approach for Sandstone Acidizing Using In-Situ Generated HF Acid with the Aid of Thermochemicals. ACS Omega 2020, 5, 2, 1188–1197. https://doi.org/10.1021/acsomega.9b03526 .
J153	Mahmoud, M.* , Aleid, A., Ali., A., and Kamal, M. 2020 . An Integrated Workflow to Perform Reservoir and Completion Parametric Study on a Shale Gas Reservoir. Journal of Petroleum Exploration and Production Technology volume 10, pages1497–1510(2020). https://doi.org/10.1007/s13202-019-00829-9 .
J154	Alade, A.S., Hamdy, M., Mahmoud, M.* , Al Shehri, D., Mokheimer, E., Patil, S., Al-Nakhli, A. 2020 . A Preliminary Assessment of Thermochemical Fluid for

	Heavy Oil Recovery. Journal of Petroleum Science and Engineering Volume 186, March 2020, 106702. https://doi.org/10.1016/j.petrol.2019.106702 .
J155	Lawal, L., Olayiwola, T., Abdel-Azeim, S., Mahmoud, M.* , Onawole, A., Kamal, M. 2020 . Molecular Simulation of Kerogen-Water Interaction: Theoretical Insights into Maturity. Journal of Molecular Liquids Volume 299, 1 February 2020, 112224. https://doi.org/10.1016/j.molliq.2019.112224
J156	Mahmoud, M. , Hamza, A., Hussein, I., Eliebid, M., Kamal, M., Aboulresh, M., Shawabkeh, R., Al-Marri, M. 2020 . Carbon Dioxide EGR and Sequestration in Mature and Immature Shale: Adsorption Study. Journal of Petroleum Science and Engineering Volume 188, May 2020, 106923. https://doi.org/10.1016/j.petrol.2020.106923 .
J157	Elsayed, M., Mahmoud, M.* , El-Husseiny, A., Kamal, M.S., Al-Garadi, K. 2020 . A New Method to Evaluate Reaction Kinetics of Acids with Carbonate Rocks Using NMR Diffusion Measurements. Energy Fuels 2020, 34, 1, 787–797. https://doi.org/10.1021/acs.energyfuels.9b03784 .
J158	Alade, O., Hassan, A., Mahmoud, M.* , Al-Shehri, D., and Al-Majed, A. 2020 . A Novel Approach for Improving Flow of Waxy Crude Oil Using Thermochemical Fluids: Experimental and Simulation Study. ACS Omega 2020, 5, 8, 4313–4321. https://doi.org/10.1021/acsomega.9b04268 .
J159	Gomaa, I. and Mahmoud, M.* 2020 . Stimulating illitic sandstone reservoirs using in-situ generated HF with the aid of thermochemicals. Journal of Petroleum Science and Engineering Volume 190, July 2020, 107089. https://doi.org/10.1016/j.petrol.2020.107089 .
J160	Ba geri, b., Benaafi, M., Mahmoud, M. , Mohamed, A., Patil, S., and Elkatatny, S. 2020 . Effect of Formation Cutting's Mechanical Properties on Drilling Fluid Properties during Drilling Operations. Accepted, Arabian Journal for Science and Engineering.
J161	Elsayed, M., Glatz, G., El-Husseiny, A., Alqubalee, A., Adebayo, A., Al-Garadi, K., Mahmoud, M. 2020 . The effect of clay content on the spin-spin NMR relaxation time measured in porous media. ACS Omega 2020, 5, 12, 6545–6555. https://doi.org/10.1021/acsomega.9b04228 .
J162	Zeeshan, T., Kamal, M.S., Mahmoud, M. , Hussain, S., Abdulrahim, A., and Zhou, X. 2020 . Polyoxyethylene Quaternary Ammonium Gemini Surfactants as a Completion Fluid Additive to Mitigate Formation Damage. Accepted, SPE Drilling and Completion. SPE-201207-PA. IF 1.595, Q2 Journal .
J163	Murtaza, M., Kamal, M.S., Shakil, M.S., Mahmoud, M.* , and Syed, N. 2020 . Quaternary Ammonium Gemini Surfactants Having Different Spacer Length as Clay Swelling Inhibitors: Mechanism and Performance Evaluation. Journal of Molecular Liquids Volume 308, 15 June 2020, 113054. https://doi.org/10.1016/j.molliq.2020.113054 .
J164	Carchini, G., Hussein, I., Al-Marri, M., Mahmoud, M. , Shawabkeh, R., and MARTINEZ, S.A. 2020 . A theoretical study of gas adsorption on α -quartz (001) for CO ₂ enhanced natural gas recovery. Applied Surface Science Volume 525, 30 September 2020, 146472. https://doi.org/10.1016/j.apsusc.2020.146472 .

J165	Gomaa, I., Mahmoud, M.* , and Kamal, M.S. 2020 . Sandstone Acidizing Using A Low-Reaction Acid System. J. Energy Resour. Technol. Oct 2020, 142(10): 103008. https://doi.org/10.1115/1.4047317 .
J166	Kamal, M.S., Shakil, M.S., Mahmoud, M.* , and Syed, N. 2020 . Clay Swelling Inhibition using Novel Cationic Gemini Surfactants with Different Spacers. Accepted, Journal of Surfactant and Detergents.
J167	Hamdy, M., Mahmoud, M. , Mokheimer, E., Alade, O. 2020 . Numerical study of Enhanced Oil Recovery using in situ Oxy-combustion in a porous combustion tube. J. Energy Resour. Technol. Dec 2020, 142(12): 122305.
J168	Alade, O., Hamdy, M., Mahmoud, M.* , Al-Shehri, D., Mokheimer, E., Al-Nakhli, A. 2020 . Experimental and Numerical Analysis of Using Thermochemical Injection for Preheating to Improve In-situ Combustion of Bitumen. Fuel Volume 275, 1 September 2020, 117894. https://doi.org/10.1016/j.fuel.2020.117894 .
J169	Al-Jawad, M., Schwalbert, M., Mahmoud, M. , and Sultan, A. 2020 . Impacts of Natural Fractures on Acid Fracture Design: A Modeling Study. Energy Reports Volume 6, November 2020, Pages 1073-1082. https://doi.org/10.1016/j.egyr.2020.04.030 .
J170	Mokheimer, E., Shakeel, M., Sanusi, S. Mahmoud, M. 2020 . Thermo-Economic Comparative Analysis of Solar-Assisted and Carbon Capture Integrated Conventional Cogeneration Plant of Power and Process Steam. Accepted, International Journal of Energy Research.
J171	Tariq, Z., Murtaza, M., and Mahmoud, M.*. 2020 . Effects of Nanoclay and Silica Flour on the Mechanical Properties of Class G Cement. ACS Omega 2020, 5, 20, 11643–11654. https://doi.org/10.1021/acsomega.0c00943 .
J172	Hassan, A., Mahmoud, M.* , Al-Majed, A., El-Sayed, M., Al-Nakhli, A., and BaTaweel, M. 2020 . Performance Analysis of Thermochemical Fluids in Removing the Gas Condensate from Different Gas Formations. Journal of Natural Gas Science and Engineering Volume 78, June 2020, 103333. https://doi.org/10.1016/j.jngse.2020.103333 .
J173	Alade, O., Mahmoud, M. , Al-Shehri, D., Gang, L., Iddris, A. 2020 . Investigation into the Effect of Water Fraction on the Single-Phase Flow of Water-in-Oil Emulsion in a Porous Medium using CFD. Accepted, Arabian Journal for Science and Engineering. AJSE-D-19-04121.
J174	Al-Hajri, N., Al-Ghamdi, A., Tariq, Z., and Mahmoud, M.* 2020 . Scale Prediction and Inhibition Design Using Machine Learning Techniques and Probabilistic Approach. SPE Prod & Oper 35 (04): 0987–1009.
J175	Murtaza, M., Mahmoud, M.* , and Tariq, Z. 2020 . Experimental Investigation of a Novel, Efficient, and Sustainable Hybrid Silicate System in Oil and Gas Well Cementing. Accepted, Energy and Fuels. https://doi.org/10.1021/acs.energyfuels.0c01001 .
J176	Mustafa, A., Mahmoud, M.* , Abdulrahim, A., Tariq, Z., Al-Nakhli, A. 2020 . Improvement of Petrophysical Properties of Tight Sandstone and Limestone Reservoirs Using Thermochemical Fluids. Accepted, Petrophysics Journal.

J177	Mahmoud, M. , Al-Jawad, M., Kamal, M.S., and Hussain, S. 2020 . Sandstone Acidizing Using A New Retarded Acid System Based on Gemini Surfactants. Journal of Petroleum Science and Engineering, Volume 194, November 2020, 107459. https://doi.org/10.1016/j.petrol.2020.107459 .
J178	Alade, O., Abdel-Azeim, S., Mahmoud, M. , Hamdy, M., Al-Shehri, D., and , Mokheimer, E. 2020 . Studies of Interaction between Bitumen and Thermochemical Fluid (TCF): Insights from experiment and Molecular Dynamics Simulations. Applied Surface Science Volume 527, 15 October 2020, 146942. https://doi.org/10.1016/j.apsusc.2020.146942 .
J179	Magzoub, M., Hussein, I., Nasser, M., Mahmoud, M. , Sultan, A., and Benamor, A. 2020 . An Investigation of the Swelling Kinetics of Bentonite Systems using Particle Size Analysis. Journal of Dispersion Science & Technology, 41(6): 817-827. https://doi.org/10.1080/01932691.2019.1612758 .
J180	Mohamed, A., Elkatatny, S., Mahmoud, M. , Shawabkeh, R., and Al-Majed, A. 2020 . Evaluating the Effect of Using Micronized Barite on the Properties of Water-Based Drilling Fluids. International Journal of Oil, Gas, and Coal Technology 25(1):1-18. DOI: 10.1504/IJOGCT.2019.10023631.
J181	Desouky, M., Tariq, Z., Aljawad, M., Alhoori, H., Mahmoud, M. , Al-Shehri, D. 2020 . Data-Driven Acid Fracture Conductivity Correlations Honoring Different Mineralogy and Etching Patterns. Accepted, ACS Omega.
J182	Hassan, A., Abdalla, M., Mahmoud, M. , Glatz, G., Al-Majed, A., Al-Nakhli, A. 2020 . Condensate Banking Removal and Gas Production Enhancement Using Thermochemical Injection: A Field Scale Simulation. Processes 2020, 8(6), 727; https://doi.org/10.3390/pr8060727 .
J183	Tariq, Z., Murtaza, M., and Mahmoud, M.* 2020 . Development of New Rheological Models for Class G Cement with Nanoclay as an additive using Machine Learning Techniques. Accepted, ACS Omega.
J184	Murtaza, M., Kamal, M.S., and Mahmoud, M.* 2020 . Application of A Novel and Sustainable Silicate Solution as an Alternative to Sodium Silicate for Clay Swelling Inhibition. Accepted, ACS Omega.
J185	Ba Alawi, M., Hassan, A., Aljawad*, M.S., Kamal, M.S., Mahmoud, M.* , and Al-Nakhli, A. 2020 . A Novel Approach to Improve Acid Diversion in Carbonate Rocks Using Thermochemical Fluids: Experimental and Numerical Study. Accepted, Molecules Journal.
J186	Hassan, A., Mahmoud, M.* , Kamal, M.S., Hussain, S.M., and Patil, S. 2020 . Novel Treatment for Mitigating Condensate Bank Using A Newly Synthesized Gemini Surfactant. Accepted, Molecules Journal.
J187	Mahmoud, M. , Al-Jawad, M., Kamal, M.S., Zaki, A.A., and Al-Nakhli, A. 2020 . Two-stage Stimulation of Gas Carbonate Reservoirs with High Anhydrite Content: Experimental and Modeling Study. Accepted, Energy and Fuels.
J188	Adebayo, A., Isah, A., Mahmoud, M. , and Al Shehri, D. 2020 . Effects of Foam Microbubbles on Electrical Resistivity and Capillary Pressure of Partially Saturated Porous Media. Accepted, Molecules.

J189	Alafnan, S., Solling, T., Mahmoud, M. <u>2020</u> . Effect of Kerogen Thermal Maturity on Methane Adsorption Capacity: A Molecular Modeling Approach. Accepted, Molecules.
J190	Murtaza, M., Khan, R., Kamal, M., Hussain, S., and Mahmoud, M.* <u>2020</u> . Sandstone Acidizing Using Amidoamine Based Gemini Cationic Surfactants with Hydrophilic Spacers as Clay Stabilizers. Accepted, Energy and Fuels.
J191	Yang, K., Connolly, P., Li, M., J Seltzer, S., McCarty, D.K., Mahmoud, M. , El-Husseiny, A., May, E., Johns, M.L. <u>2020</u> . Shale Rock Core Analysis using NMR: Effect of bitumen and water Content. Accepted, Journal of Petroleum Science and Engineering.
J192	Li, M., Yang, X., Connolly, P., Robinson, N., May, E., Mahmoud, M. , El-Husseiny, A., May, E., Johns, M.L. <u>2020</u> . Miscible Fluid Displacement in Rock Cores Evaluated with NMR T2 Relaxation Time Measurements. Accepted, Industrial & Engineering Chemistry Research.
J193	Kadafur, I., Aljawad, M., Mahmoud, M. <u>2020</u> . Review of Acid Diffusion Measurements in Porous Media. Energy Fuels 2020, 34, 10, 11916–11941. https://doi.org/10.1021/acs.energyfuels.0c02457 .
J194	Ba Geri, B., Gomaa, I., Mahmoud, M. , Patil, S., and Al-Nakhli, A. <u>2020</u> . Complex Barite Filter Cake Removal Using In-Situ Generated Acids by Thermochemicals. Accepted, Scientific Reports.
J195	Tariq, Z. Al- Jawad, M., Mahmoud, M. , Abdulraheem, A., Al-Nakhli, A. <u>2020</u> . Thermochemical Acid Fracturing of Tight and Unconventional Rocks: Experimental and Modeling Investigations. Journal of Natural Gas Science and Engineering.
J196	Tariq, Z., Kamal, M., Mahmoud, M. , Hussain, S., and Hussaini, S. <u>2020</u> . Novel Gemini Surfactant as a Clay Stabilizing Additive in Fracturing Fluids for Unconventional Tight Sandstones: Mechanism and Performance. Accepted, Journal of Petroleum Science and Engineering.
J197	Al- Jawad, M., Mahmoud, M. , Abu-Khamsin, S. <u>2020</u> . Mass and Heat Transfer of Thermochemical Fluids in a Fractured Porous Media. Accepted, Molecules Journal.
J198	Tariq, Z., Mahmoud, M. , Abouelresh, M., and Abdulraheem, A. <u>2020</u> . A Data-Driven Approach to Predict Thermal Maturity Indices of Organic Matter using Artificial Neural Networks. Accepted, ACS Omega.
J199	Murtaza, M., Ahmad, H., Kamal, M., Mahmoud, M. , Hussain, S., and Patil, S. <u>2020</u> . Evaluation of Clay Hydration and Swelling Inhibition Using Quaternary Ammonium Dicationic Surfactant with Phenyl Linker. Accepted, Molecules.
J200	Khan, R.A., Murtaza, M., Abdulraheem, A., Kamal, M.S, and Mahmoud, M. <u>2020</u> . Imidazolium-Based Ionic Liquids as Clay Swelling Inhibitors: Mechanism, Performance Evaluation, and Effect of Different Anions. Accepted, ACS Omega. ACS Omega 2020, 5, 41, 26682–26696.

J201	Ahmed, M., Hussein, I., Onawole, A., Saad, M., and Mahmoud, M. 2020 . Dissolution Kinetics of Different Inorganic Oilfield Scales in Green Formulations. Accepted, ACS Omega. ACS Omega 2020, 5, 46, 29963–29970.
J202	Onaizi, S., Gawish, M., Murtaza, M., Gomaa, I., Tariq, T., Mahmoud, M. 2020 . H ₂ S Scavenging Capacity and Rheological Properties of Water-Based Drilling Muds. Accepted, ACS Omega.
J203	Hassan, A., Mahmoud, M. , Bageri, B., Aljawad, M., Kamal, M., Barri, A., Hussein, I. 2020 . Applications of Chelating Agents in the Upstream Oil and Gas Industry: A review. Energy & Fuels 2020, 34, 12, 15593-15613.
J204	Lawal, L., Adebayo, A., Mahmoud, M. , Dia, Ben Mansour, D., and Sultan, A. 2021 . A Novel NMR Surface Relaxivity Measurements on Rock Cuttings for Conventional and Unconventional Reservoirs. Accepted, International Journal of Coal Geology.
J205	Ahmed, M., Hussein, I., Onawole, A., Mahmoud, M. and Saad, M. 2021 . Pyrite Scale Removal using Glutamic Diacetic Acid (GLDA): A Theoretical and Experimental Investigation. Accepted, SPE Production and Operations.
J206	Isah, A., Adebayo, A., Mahmoud, M. , ElHusseiny, A., and Babalola, L. 2021 . Drainage Mechanisms in Gas Reservoirs with Bimodal Pores - A Core and Pore Scale Study. Accepted, Journal of Natural Gas Science and Engineering. Volume 86, February 2021, 103652.
J207	Arif, M., Mahmoud, M. , Zhang, Y., and Iglauer, S. 2020 . X-ray tomography imaging of shale microstructures : a review in the context of multiscale correlative imaging. Accepted, International Journal of Coal Geology.
J208	Hassan, A., Mahmoud, M. , Al-Majed, A., Alade, O., Mokheimer, E., Al-Nakhli, A. 2021 . New Treatment for Improving the Productivity of Shale Reservoirs Using Thermochemical Fluids. Accepted, Journal of Energy Resources Technology.
J209	Mohammed, I., Mahmoud, M. , Al Shehri, D., El-Husseiny, A., and Alade, O. 2021 . Asphaltene Precipitation and Deposition: A Critical Review. Accepted, Journal of Petroleum Science and Engineering.
J210	Tariq, Z., Kamal, M., Mahmoud, M. , Alade, O., and Al-Nakhli, A. 2021 . Self-Destructive Barite Filter Cake in Water-Based and Oil-based Drilling Fluids. Accepted, Journal of Petroleum Science and Engineering.
J211	Alade, O, Al Shehri, D, Mahmoud, M. , Al Hamad, J., Kamal, M., Mokheimer, E., Al-Nakhli, A., Sasaki, K. 2021 . A Novel Technique for Heavy Oil Recovery using Poly Vinyl Alcohol (PVA) and PVA-NaOH with ethanol additive. Fuel Journal.
J212	Mahmoud, M. , Al-Jawad, M., Kamal, M.S., Zaki, A.A., and Al-Nakhli, A. 2021 . Single-Stage Stimulation of Anhydrite Rich Carbonate Rocks Using Chelating Agent: An Experimental and Modeling Investigation. Accepted, SPE Journal.
J213	Hamza, A., Hussein, I., AlMarri, M., Mahmoud, M. , Shawabkeh, R., Aparicio, S. 2021 . CO ₂ Enhanced Gas Recovery and Sequestration in Depleted Gas Reservoirs: A Review. Accepted, Journal of Petroleum Science and Engineering.

J214	Tariq, Z., Mahmoud, M.* , Alade, O., Abdulrahim, A., Mustafa, A., Mokheimer, E., Al-Jawad, M., and Al-Nakhli, A. 2021 . Productivity Enhancement in Multi-Layered Unconventional Rocks Using Thermochemicals. Accepted, Journal of Energy Resources Technology.
J215	Murtaza, M., Tariq, Z., Mahmoud, M.* , Kamal, M.S., and Al-Shehri, D. 2021 . Anhydrite (Calcium Sulfate) Mineral as a Novel Weighting Material in Drilling Fluids. Accepted, Journal of Energy Resources Technology. JERT-20-1487.
J216	Talley, L., Kamal, M.S., and Mahmoud, M. 2020 . Development of Novel Viscous Acid-Surfactant Solutions for Oilfield Applications: Rheological Properties. Accepted, Journal of Energy Resources Technology, Transaction of ASME. JERT-19-1859.
J217	Alade, O., Mahmoud, M.* , Hassan, A., Murtaza, M., Al-Shehri, Al-Nakhli, A., BaTaweel, M. 2021 . A Novel Method of Removing Emulsion Blockage after Drilling Operations Using Thermochemical Fluid. Accepted, SPE Drilling and Completion Journal.
J218	Janjua, A., Sultan, A., Saikia, T., Kamal, M., and Mahmoud, M. 2021 . Experimental Investigation of Noble Viscoelastic Surfactant and Chelating Agent for Heavy Oil Enhanced Oil Recovery in High-Pressure–High-Temperature Carbonate Reservoirs. Journal of Surfactant Detergent. https://doi.org/10.1002/jsde.12469 .
J219	Onaizi1, S., Alsulaimani, M., Al-Sakkaf, M., Bahadi, S., Mahmoud, M. , and Alshami, A. 2021 . Crude Oil/Water Nanoemulsions Stabilized by Biosurfactant: Stability and 2 pH-Switchability. Accepted, Journal of Petroleum Science and Engineering.
J220	Ahmad, H., Murtaza, M., Kamal, M.S., Hussain, S., and Mahmoud, M. 2020 . Cationic gemini surfactants containing biphenyl spacer as shale swelling inhibitor. Accepted, Journal of Molecular Liquids.
J221	Deng, X., Tariq, Z., Murtaza, M., Patil, S., Kamal, M.S., and Mahmoud, M. 2020 . Relative Contribution of Wettability Alteration and Interfacial Tension Reduction in EOR: A Critical Review. Accepted, Journal of Molecular Liquids.
J222	Lawal, L., Mahmoud, M.* , Adebayo, A., and Sultan, A. 2021 . Brittleness and Microcracks: A New Approach of Brittleness Characterization for Shale Fracking. Accepted, Journal of Natural Gas Science and Engineering.
J223	Husain, A., Adewunmi, A., Mahmoud, M.* , Kamal, M., and Al-Harhi, M. 2021 . Stability of Diesel/Water Emulsions: Experimental and Modeling Investigations. Accepted, Journal of Energy Resources Technology.
J224	Tariq, Z., Al-Jawad, M., Hassan, A., Mahmoud, M. , and Al-Ramadan, A. 2021 . Chelating Agents as Acid Fracturing Fluids: Experimental and Modeling Studies. Energy Fuels 2021, 35, 3, 2602–2618.
J225	Mohammed, I., Al Shehri, D., Mahmoud, M.* , Kamal, M., Alade, O. 2021 . Impact of Iron Minerals in Promoting Wettability Alterations in Reservoir Formations. Accepted, ACS Omega.

J226	Isah, A., Hiba, M., Al-Azani, K., Aljawad, M., and Mahmoud, M. .2021 . A Comprehensive Review of Proppant Transport in Fractured Reservoirs: Experimental, Numerical, and Field Aspects. Accepted, Journal of Natural Gas Science and Engineering.
J227	Alade, O., Mahmoud, M. , Al Shehri, D., Lawale, L., Kamal, M., and Al-Nakhli, A. 2021 . Viscosity Models for Bitumen-Solvent Mixtures. Accepted, Journal of Petroleum Exploration and Production Technology.
J228	Murtaza, M., Tariq, Z., Kalimur Rahman, M., Kamal, M., and Mahmoud, M.*. 2021 . A Novel Expandable Cement System for Prevention of Sustained Casing Pressure and Minimize Lost Circulation. Accepted, ACS Omega.
J229	Al-Azani, K., ElHusseiny, A., Mahmoud, M.* , Al-Youssef, H., and El-Sayed, M. 2021 . Numerical and Experimental Study to Determine the Permeability Anisotropy in Porous Rocks from Probe Permeameter Measurements. Arabian Journal for Science and Engineering, 46(7), 7019-7030. DOI: 10.1007/s13369-021-05433-w
J230	Tariq, Z., Mahmoud, M.* , and Abdulrahim, A. 2021 . Machine Learning based Improved Pressure-Volume-Temperature Correlations for Black Oil Reservoirs. Accepted, JERT-21-1031, Journal of ENERGY Resources Technology.
J231	Alade, O., Mahmoud, M. , Al-Shehri, D., and Sultan, A. 2021 . Rapid Determination of Emulsion Stability using Turbidity Measurement incorporating Artificial Neural Network (ANN): Experimental Validation using Video/Optical Microscopy and Kinetic modeling. Accepted, ACS Omega.
J232	Hamza, A., Hussein, I., Al-Marri, M., Mahmoud, M. , Shawabkeh, R. 2021 . Impact of Clays on CO ₂ Adsorption and Enhanced Gas Recovery in Sandstone Reservoirs. Accepted, International Journal of Greenhouse Gas Control.
J233	Youssef, A., Alassar, R., Mahmoud, M. , Elsayed, M., and Al-Dweik, A. 2021 . A Novel Approach for Measuring Plane Anisotropic Permeability through Steady-State Flow between Two Concentric Cylinders. Accepted, Advances in Water Resources.
J234	Alade, O., Mahmoud, M.* , Al Shehri, D., Sultan, A., Gang, L., Tariq, Z., Al-Ramadhan, A., and Mokheimer, E. 2021 . Kinetic and Thermodynamic Modeling of Thermal Decomposition of Bitumen under high Pressure enhanced with Simulated Annealing and Artificial Intelligence. Accepted, Canadian Journal of Chemical Engineering.
J235	Mohammed, I., Al-Shehri, D., Mahmoud, M.* , Kamal, M., Alade, O. 2021 . Surface Charge Investigation of Reservoir Rock Minerals. Accepted, Energy and Fuels.
J236	Barri, A., Hassan, A., Al-Jawad, M., and Mahmoud, M.* 2021 . Effect of Treatment Conditions on Matrix Stimulation of Carbonate Rocks with Chelating Agents. Accepted, AJSE.
J237	Murtaza, M., Tariq, Z., Zhou, X., Al-Shehri, D., Mahmoud, M.* , and Kamal, M.S. 20201 . Okra as an Environment-Friendly Fluid Loss Control Additive for

	Drilling Fluids: Experimental & Modeling Studies. Accepted, Journal of Petroleum Science and Engineering.
J238	Elsayed, M., El-Husseiny, A., Hussaini, S., Kwak, H., and Mahmoud, M. 2021 . A New Technique for Evaluating Fracture Geometry and Preferential Orientation Using Pulsed Field Gradient Nuclear Magnetic Resonance. Accepted, SPE Journal.
J239	Elsayed, M., El-Husseiny, A., Kadafur, I., Mahmoud, M. , Aljawad, M.S., and Al-Qubalee, A. 2021 . An Experimental Study on the Effect of Magnetic Field Strength and Internal Gradient on NMR-Derived Petrophysical Properties of Sandstones. Accepted, Journal of Petroleum Science and Engineering.
J240	Mohammed, I., Al-Shehri, D., Mahmoud, M.* , Kamal, M., and Alade, O. 2021 . A Surface Charge Approach to investigate the Influence of Oil Contacting Clay minerals on Wettability Alteration. Accepted ACS Omega.
J241	Lawal, L., Adebayo, A., Mahmoud, M.* , Sultan, A., and Patil, S. 2021 . Thermal maturation, mineral catalysis, and gas generation kinetics of carbonate source rock. Accepted Journal of Natural GAS Science and Engineering.
J242	Hassan, A., Al-Jawad, M., and Mahmoud, M. 2021 . Artificial Intelligence Based Model for Performance Prediction of Acid Fracturing in Naturally Fractured Reservoirs. Accepted, ACS Omega.
J243	Carchini, G., Hussein, I., Al-Marri, M., Mahmoud, M. , Shawabkeh, R., and Aparicio, S. 2021 . Ab-Initio Molecular Dynamics investigation of gas adsorption α -quartz (001) for CO ₂ Enhanced Natural Gas Recovery. Accepted, Journal of Petroleum Science and Engineering.
J244	Tariq, Z., Hassan, A., Bin Waheed, U., Mahmoud, M.* , Al-Shehri, D., Abdulraheem, A., and Mokheimer, E. 2021 . A Data-Driven Machine Learning Approach to Predict the Natural Gas Density of Pure and Mixed Hydrocarbons. Accepted, Journal of Energy Resources Technology.
J245	Aljawad, M., Aboluhom, H., Al-Mubarak, A., Schwalbert, M., Alafnan, S., Mahmoud, M. 2021 . Temperature Impact on Linear and Radial Wormhole Propagation in Limestone, Dolomite, and Mixed Mineralogy. Accepted, Journal of Natural Gas Science and Engineering.
J246	Tariq, Z., Kamal, M.S., Mahmoud, M.* , Murtaza, M., Abdulraheem, A., and Zhou, X. 2021 . Dicationic Surfactants as an additive in fracturing fluids to Mitigate Clay Swelling: A Petrophysical and Rock Mechanical Assessment. Accepted, ACS Omega.
J247	Afagwu, C., Al-Afnan, S., Mahmoud, M. , and Patil, S. 2021 . apparent gas permeability; shale gas; tight formation; pore structure tortuosity; adsorption behavior. Accepted, Energy Reports.
J248	Afagwu, C., Al-Afnan, S., Aljaberi, J., Patil, S., Mahmoud, M. , and Li, J. 2021. The Impact of Pore Structure and Adsorption Behavior on Kerogen Tortuosity. Accepted, Fuel.

J249	Othman, A., Aljawad, M., Mahmoud, M. , Kamal, M., Patil, S., and Bataweel, M. 2021 . Chelating Agents Usage in Optimization of Fracturing Fluid Rheology Prepared from Seawater. Accepted, polymer Journal.
J250	Tariq, Z., Olayiwola, T., Abdulraheem, A., and Mahmoud, M. 2021 . Evolving strategies for shear wave velocity estimation: Smart and Ensemble Modeling approach. Accepted, Neural Computing and Applications.
J251	Desouky, M., Tariq, Z., Aljawad, M., Alhoori, H., Mahmoud, M. , and Abdulraheem, A. 2021 . Machine Learning-Based Propped Fracture Conductivity Correlations of Several Shale Formations. Accepted, ACS Omega.
J252	Mohammed, I., Mahmoud, M.* , El-Husseiny, A., Al Shehri, D., Al-Garadi, K., Kamal, M., and Alade, O. 2021 . The Impact of Asphaltene Precipitation and Deposition on Wettability and Permeability. Accepted, ACS Omega.
J253	Radwan, A., Wood, D., Abudeif, A., Attia, M., Mahmoud, M. , and Kassem, A. 2021 . Reservoir Formation Damage; Reasons and Mitigation: A Case Study of the Cambrian–Ordovician Nubian ‘C’ Sandstone Oil and Gas Reservoir from the Gulf of Suez Rift Basin. Accepted, Arabian Journal for Science and Engineering.
J254	Tariq, Z., Aljawad, M., Mahmoud, M.* , Alade, O., Kamal, M., Al-Nakhli, A. 2021 . Reduction of Breakdown Pressure by Filter Cake Removal Using Thermochemical fluids and Solvents: Experimental and Numerical Studies. Accepted, molecules.
J255	Hassan, A., Mahmoud, M.* , and Patil, S. 2021 . Impact of Chelating Agent Salt Type On the Enhanced Oil Recovery from Carbonate and Sandstone Reservoirs. Accepted, Applied Sciences.
J256	Murtaza, M., Tariq, Z., Mahmoud, M.* , Kamal, M.S., and Al-Shehri, D. 2021 . Application of Anhydrous Calcium Sulfate as a Weighting Agent in Oil-Based Drilling Fluids. Accepted, ACS Omega
J257	Murtaza, M., Alarifi, S., Kamal, M.S., Onaizi, S., Al-Ajmi, M., and Mahmoud, M. 2021 . Experimental Investigation of the Rheological Behavior of Oil-based Drilling Fluid with Rheology Modifier and Oil Wetter Additives. Accepted, Molecules.
J258	Hamza, A., Hussein, I., Jalab, R., Mohammed, S., Mahmoud, M. 2021 . Review of Iron Sulfide Scale Removal and Inhibition in Oil and Gas Wells: Current Status and Perspectives. Accepted, Energy and Fuels.
J259	Afagwu, C., Al-Jaberi, G., Tariq, Z., Mutrif, S., Kalam, S., Abdulrahim, Abdulazeez, Mahmoud, M. 2021 . A Review on non-Aqueous Fracturing Techniques in Unconventional Reservoirs. Accepted, Journal of Natural Gas Science and Engineering, Volume 95, November 2021, 104223.
J260	Murtaza, M., Alarifi, S., Abozuhairah, A., Mahmoud, M. , Onaizi, S., and Al-Ajmi, M. 2021 . Optimum Selection of H ₂ S Scavenger in Light Weight and Heavy Weight Water-Based Drilling Fluids. Accepted, ACS Omega.
J261	Husain , A., Adewunmi, A., Kamal, M., Mahmoud, M. , Al-Harthi, M. 2021 . Demulsification of heavy petroleum emulsion using pyridinium ionic liquids with distinct anions branching. Accepted, Energy and Fuels.

J262	Tariq, T., Aljawad, M., Hasan, A., Murtaza, M., Mohammed, M., El-Husseiny, A., Alarifi, S., Mahmoud, M. & Abdulraheem, A. 2021 . A systematic review of data science and machine learning applications to the oil and gas industry. Accepted, Journal of Petroleum Exploration and Production Technology.
J263	Deng, X., Patil, S., Hussain, S., Zhou, X., and Mahmoud, M. 2021 . Wettability Alteration of Novel Cationic Gemini Surfactants on Carbonate Rock. Journal of Molecular Liquids, Volume 344, 15 December 2021, 117817.
J264	Zeeshan, T., Hassan, A., Al-Abdrabalnabi, R., Aljawad, M., and Mahmoud, M. 2021 . A Comparative Study of Fracture Conductivity in Various Carbonate Rocks Treated with GLDA Chelating Agent and HCl Acid. Energy Fuels 2021, 35, 23, 19641–19654.
J265	AlKhowaildi, M., Tawabini, B., Kamal *, M., Mahmoud, M.* , Aljawad, M., and Bataweel, M. 2021 . Development of Oil and Gas Stimulation Fluids Based on Polymers and Recycled Produced Water. Accepted, Polymers.
J266	Said, M., Haq , B., Al Shehri, D., Rahman ,M., Muhammed, M., and Mahmoud, M. 2021 . Modification of Xanthan Gum for High Temperature and Salinity Reservoir. Polymers 2021, 13(23), 4212; https://doi.org/10.3390/polym13234212 .
J268	Carchini, G., Hussein, I., Al-Marri, M., Shawabkeh, R., and Mahmoud, M. 2021 . Molecular Dynamics of CH ₄ /CO ₂ on calcite for Enhancing Gas Recovery. Accepted, Canadian Journal of Chemical Engineering.
J269	Alade, O., Mahmoud, M.* , Al Shehri, D., Mokheimer, E., Sasaki, K., Ohashi, R., Kamal, M., Muhammad, I., Al-Nakhli, A. 2021 . Experimental and Numerical Studies on Production Scheme to Improve Energy Efficiency of Bitumen Production through Insitu Oil in-Water (O/W) Emulsion. Accepted, Energy Journal.
J270	Mustafa, A., Tariq, Z., Mahmoud, M.* , Radwan, A., Abdulraheem, A., and Abouelresh. 2021 . Data-Driven Machine Learning Approach to Predict Mineralogy of Organic-Rich Shales: An Example from Qusaiba Shale, Rub' al Khali Basin, Saudi Arabia. Accepted, Marine and Petroleum Geology.
J271	Mustafa, A., Tariq, Z., Kalam, S., Khan, R.A., Mahmoud, M. , and Abdulraheem, A. 2021 . Shale Brittleness Prediction using Machine Learning – A Middle East Basin Case Study. Accepted, AAPG BULLETIN.
J272	Tariq, Z., Mahmoud, M.* , Alahmari, M., BaTaweel, M., and Alumam, A. 2021 . Lost Circulation Mitigation using Modified Enzyme Induced Calcite Precipitation Technique. Journal of Petroleum Science and Engineering, Volume 210, March 2022, 110043.
J273	Hassan, A., Chan, S., Mahmoud, M. , Al-Jawad, M., Humphrey, J., Abdulraheem, A. 2021 . Artificial Intelligence Based Model of Mineralogical Brittleness Index Based on Rock Elemental Compositions. Accepted, Arabian Journal for Science and Engineering.

J274	Ahmed, M., Hassan, A., Sultan, A., and Mahmoud, M*. 2021 . Enhancing the Oil Recovery from Naturally Fractured Reservoirs Using Viscoelastic Surfactant (VES) Flooding: A Field-Scale Simulation. Accepted, ACS Omega.
J275	Afagwu, C., Mahmoud, M.* , Alafnan, S., and Patil, S. 2021 . Multiscale Storage and Transport Modeling in unconventional Shale Gas: A Review. Journal of Petroleum Science and Engineering, Volume 208, Part C, January 2022, 109518.
J276	Al-Garadi, K., El-Husseiny, A., Elsayed, M., Connolly, P., Mahmoud, M. , Johns, M., Adebayo, A. 2021 . A Rock Core Wettability Index Using NMR T2 Measurements. Journal of Petroleum Science and Engineering, Volume 208, Part A, January 2022, 109386.
J277	Kadafur, I., Bin Ghanim, A., Al-Jawad, M., Kamal, M., Mahmoud, M. , and Alyousef, Z. 2021 . Rheological Study of CO2 Foamed Chelating Stimulation Fluids Under Harsh Reservoir Conditions. Journal of Petroleum Science and Engineering, Volume 208, Part B, January 2022, 109201.
J278	Mohammed, I., Mahmoud, M.* , Al Shehri, D., Kamal, M., and Alade, O. 2022 . Effect of Reservoir Environment and Oilfield Operations on The Iron Mineral Surface Charge Development: An Insight into Their Role in Wettability Alteration. Accepted, Energy and Fuels.
J279	AlGharbi, S., Al Majed, A., Abdulraheem, A., Tariq, Z., and Mahmoud, M.* 2022 . Statistical Methods to Improve the Quality of Real-Time Drilling Data using Artificial Intelligence. Accepted, JERT-21-20, Journal of Energy Resources Technology.
J280	Carchini, G., Al-Marri, M., Hussein, I., Shawabkeh, R., Mahmoud, M. , and Aparicio, S. 2022 . Molecular Dynamics of CH ₄ /CO ₂ on calcite for Enhancing Gas Recovery. Accepted, The Canadian Journal of Chemical Engineering.
J281	Tariq, Z., Murtaza, M., Mahmoud, M. , Aljawad, M., Kamal, M. 2022 . Machine Learning Approach to Predict the Dynamic Linear Swelling of Shales Treated with Different Water Based Drilling Fluids. Accepted, Fuel.
J282	Mohammed, I., Mahmoud, M.* , Al Shehri, D., Kamal, M., and Alade, O. 2022 . Feature Ranking and Modeling of Mineral Effects on Reservoir Rock Surface Chemistry Using Smart Algorithms. Accepted, ACS Omega.
J283	Naeem, M., Khalil, A., Tariq, Z., and Mahmoud, M*. 2022 . A Review of Advanced Molecular Engineering Approaches to Enhance the Thermostability of Enzyme Breakers: From Prospective of Upstream Oil and Gas Industry. International Journal of Molecular Science.
J284	Adeyemi, A., Awotunde, A., Patil, S., Mahmoud, M. , Sultan, A., and Mohanty, K. 2022 . Triple Mesh Methods and Their Application to Two-Phase Flow in Porous Media. Accepted, Journal of Petroleum Science and Engineering
J285	Alade, A., Mahmoud, M.* , Al Shehri, D., Patil, S., and Al Nakhli, A. 2022 . Tar Mitigation Using Insitu Heat Generation Chemicals (Part I): A comparative study. Accepted, Journal of Petroleum Science and Engineering.

J286	Aslanov, E., Alafnan, S., Mahmoud, M. , Abdurraheem, A., and Aljawad, M. 2022 . A Study of the Mechanical Behavior of Organic Matters Contained in Source Rocks: New Insights into the Role of Bitumen. Accepted, ACS Omega.
J287	Xiao Deng, Xianmin Zhou, Muhammad Shahzad Kamal, Syed Muhammad Shakil Hussain, Mohamed Mahmoud , Shirish Patil. 2022 . A Modified Contact Angle Measurement Process to Suppress Oil Drop Spreading and Improve Precision. Accepted Molecules.
J288	Isah Mohammed, Dhafer Al Shehri*, Mohamed Mahmoud* , Muhammad Kamal, Olalekan Alade, Muhammad Arif, Shirish Patil. 2022 . Effect of Native Reservoir State and Oilfield Operations on Clay Mineral Surface Chemistry. Accepted Molecules.
J289	Barri, A., Hassan, A., and Mahmoud, M* . 2022 . Carbonate Stimulation Using Chelating Agents: Improving the Treatment Performance by Optimizing the Fluid Properties. Accepted, ACS Omega.
J290	Murtaza, M., Rana, A., Saleh, T., Kamal, M., and Mahmoud, M. 2022 . An efficient, cost-effective, and green natural extract in water-based drilling muds for clay swelling inhibition. Accepted, Journal of Petroleum Science and Engineering.
J291	Afagwu, C., Mahmoud, M.* , Al Afnan, S., Alqubalee, A., ElHusseiny, A., and Patil, S. 2022 . Pore Volume Characteristics of Clay-rich Shale: critical insight into the role of Clay types, Aluminum and Silicon oxides compositions. Accepted, Arabian Journal for Science and Engineering.
J292	Ling, N., Hussaini, S., Elsayed, M., Connolly, P., El-Husseiny, A., Mahmoud, M. , May, E., Johns, M. 2022 . Model Synthetic Samples for Validation of NMR Signal Simulations. Accepted, Transport in Porous Media.
J293	Khan, R., Kalam, S. Norrman, K., Kamal, M., Mahmoud, M. , Abdurraheem, A. 2022 . Ionic liquids as Clay Swelling Inhibitors: Adsorption Study. Accepted, Energy and Fuels.
J294	Othman, A., AlSulaimani, M., Aljawad, M., Sangaru, S., Kamal, M., and Mahmoud, M. 2022 . The synergetic Impact of Anionic, Cationic, and Neutral Polymers on VES Rheology at High-Temperature Environment. Accepted, Polymers.
J295	Murtaza, M., Ahmad, H., Zhou, X., Al-Shehri, D., Mahmoud, M.* , and Kamal, M. 2022 . Okra Mucilage as Environment Friendly and Non-Toxic Shale Swelling Inhibitor in Water Based Drilling Fluids. Accepted, Fuel.
J296	Aljawad, M., Alade, O., Hassan, A., Mahmoud, M.* , Kamal, M. 2022 . Application of Nanoparticles in Stimulation: A Review. Accepted, Energy and Fuels.
J297	Tariq, Z., BinGhanim, A., Aljawad, M., Kamal, M., Mahmoud, M. , and Al-Yousef, Z. 2022 . AI-Driven Foam Rheological Model Based on HPHT Foam Rheometer Experiments. Accepted, Journal of Petroleum Science and Engineering.

J298	Isah, A., Arif, m., Hassan, A., Mahmoud, M.* , and Iglauer, S. 2022 . A Systematic Review of Anhydrite-Bearing Reservoirs: EOR Perspective, CO ₂ -Geo-storage. Accepted, Fuel.
J299	Alam, M., Hassan, A., Mahmoud, M.* , Sibaweihi, N., and Patil, S. 2022 . Dual Benefits of Enhanced Oil Recovery and CO ₂ Sequestration: The Impact of CO ₂ Injection Approach on the Oil Recovery. Accepted, Frontiers in Energy Research.
J300	Isah Mohammed, Dhafer Al Shehri*, Mohamed Mahmoud* , Muhammad Kamal, Olalekan Alade, Muhammad Arif, Shirish Patil. 2022 . Investigation of surface charge at the mineral/brine interface: Implications for wettability alteration. Frontiers in Materials, section Colloidal Materials and Interfaces.
J301	Al-Gharbi, S., Almajed, A., Mahmoud, M.* , and Abdulraheem, A. 2022 . A Game-Theoretic Approach to Improve Energy-Related Data. Accepted, ACS Omega.
J302	Ahmed, M., Sultan, A., Mahmoud, M. , Singh, K., Kamal, M., Patil, S., and Kanj, M. 2022 . Evaluation of the dynamic interfacial tension between visco-elastic surfactant solutions and oil using porous micromodels. Accepted, Langmuir.
J303	Khan, R., Tariq, Z., Murtaza, M., Kamal, M., Mahmoud, M. , and Abdulraheem, A. 2022 . Ionic Liquids as Completion Fluids to Mitigate Formation Damage. Accepted, Journal of Petroleum Science and Engineering.
J304	Gowida, A., Abu-Khamsin, S., Mahmoud, M. , Aljawad, M., and Alafnan, S. 2022 . Accelerated Low-Temperature Oxidation for Sand Consolidation and Production Control. Accepted, Journal of Petroleum Science and Engineering.
J305	Raza, A., Glatz, G., Gholami, R., Mahmoud, M. , and Alafnan, S. 2022 . Carbon Mineralization and Geological Storage of CO ₂ in Basalt: Mechanisms and Technical Challenges. Accepted, Earth-Science Reviews.
J306	Jaber Al Jaberi, Abdulmalek Ahmed, Badr Bageri, Mahmoud Elsayed, Mohamed Mahmoud , Shirish Patil, Kareem Al-Garadi, Assad Barri. 2022 . Minimizing the Barite Scale in Carbonate Formation during the Filter Cake Removal Process. Accepted, ACS Omega.
J307	Isah, A., Arif, M., Hassan, A., Mahmoud, M.* , and Iglauer, S. 2022 . Fluid-Rock Interactions and its Implications on EOR: Critical Analysis, Experimental Techniques and Knowledge Gaps. Accepted, Energy Reports.
J308	Sohail, G., Radwan, A., and Mahmoud, M.* . 2022 . A Review of Pakistani Shales for Shale Gas Exploration and Comparison to North American Shale Plays. Accepted, Energy Reports.
J309	AL-Dogail, A., Gajbhiye, R., Al Naser, M., Al Najim, A., and Mahmoud, M. 2022 . Intelligent Approach For GOSP Oil Recovery Enhancement. Accepted, SPE Production and Operations.
J310	Alarifi, s., Mustafa, A., Omarov, K., Baig, A., Tariq, Z., and Mahmoud, M. 2022 . A Review of Enzyme-Induced Calcium Carbonate Precipitation Applicability in the Oil and Gas Industry. Frontiers in Bioengineering and Biotechnology, section Bioprocess Engineering.

J311	Kalam, Shams; Abu-Khamsin, Sidqi; Kamal, Muhammad Shahzad; Hussain, Syed Muhammad Shakil; Norrman, Kion ; Mahmoud, Mohamed ; Patil, Shirish. 2022 . Adsorption mechanisms of a novel cationic gemini surfactant onto different rocks. Accepted, Energy and Fuels.
J312	Al-Yaseri, A., Yekeen, N., Mahmoud, M. , Kakatie, A., Xief, Q., and Giwellig, A. 2022 . Thermodynamic Characterization of H ₂ - Brine-Shale Wettability: Implications for Hydrogen Storage at Subsurface. Accepted, International Journal of Hydrogen Energy.
J313	Murtaza, m., Alarifi, S., Rasm, M., Kamal, M., Mahmoud, M. , and Al-Ajmi, M. 2022 . Single Step Calcium Sulfate Scale Removal at High Temperature Using Tetra potassium Ethylene di amine tetra acetate With Potassium Carbonate. Accepted, Scientific Reports.
J314	Al-Ghamdi, a., Haq, B., Al-Shehri, D., Muhammed, N., and Mahmoud, M. 2022 . Surfactant Formulation for Green Enhanced Oil Recovery. Accepted, Energy Reports
J315	Alameedy, U., Al-Yaseri, A., Isah, A., Alhaleem A., Mahmoud, M. , and Salih I. 2022 . Effect of Acid Treatment on The Geomechanical Properties of Rocks: An Experimental and Numerical Investigations in Ahdeb Oil Field. Accepted, Journal of Petroleum Exploration and Production Technology.
J316	Raza, A., Glatz, G., Al Afnan, S., and Mahmoud, M. 2022 . Multi-component gas adsorption behavior of kerogen: A molecular investigation. Accepted, Energy and Fuels
J317	DENG, X., Patil, S., Kamal, M., Mahmoud, M. , Sultan, A., Saikia, T. 2022 . Wettability alteration of carbonate rock by chelating agents and viscoelastic surfactants: synergetic impact. Accepted, Energy and Fuels.
J318	Nijat Gasimli, Mohamed Mahmoud* , Muhammad Shahzad Kamal, Shirish Patil, Hamad Alsaiani, Ibnelwaleed Hussein. 2022 . Iron Sulfide Scale Inhibition in Carbonate Reservoirs. Accepted, ACS Omega.
J319	Guenther Glatz; Saad Alafnan; Raoof Gholami; Arshad Raza; Mohamed Mahmoud ; Khaled Alazani; Abeeb Awotunde. 2022 . Effect of Kerogen Maturity on the Adsorption Capacity of CO ₂ and CH ₄ : A Molecular Investigation. Accepted, Fuel.
J320	Al-Mukainah, H., Al Yaseri, A., Yekeen, N., Al Hamad, J., and Mahmoud, M. 2022 . Wettability of shale-brine-H ₂ system and H ₂ -brine interfacial tension for assessment of the sealing capacities of shale formations during underground hydrogen storage. Accepted, Energy Reports
J321	Mohammed, Isah; Isah, Abubakar; Al Shehri, Dhafer; Mahmoud, Mohamed ; Arif, Muhammad; Kamal, Muhammad Shahzad; Alade, Olalekan; Patil, Shirish. 2022 . Effect of Sulfate-based Scales on Calcite Mineral Surface Chemistry: Insights from Zeta-Potential Experiments and Its Implications on Wettability. Accepted, ACS Omega
J322	Predicting dynamic shear wave slowness from well logs using machine learning methods in Mishrif reservoir, Iraq. Accepted, AAPG

J323	Hassan, Amjed; Kamounah, Fadhil; Pittelkow, Michael; Solling, Theis; Mahmoud, Mohamed. 2022. Barite Removal Using Macropa: Simulation and Solubility Investigations. Accepted, Energy and Fuels.
J324	A., Mohamed, Sultan, A., Hassan, A., Abdulraheem, A., and Mahmoud, M. 2022 . Predicting the Performance of Constant Volume Depletion Tests for Gas Condensate Reservoirs Using Artificial Intelligence Techniques. Accepted, Neural Computing and Applications.
J325	Amro Othman, Murtada Aljawad, Muhammad Shahzad Kamal, Mohamed Mahmoud , Shirish Patil, Mustafa Alkhowaili. 2022 . A Rheological Study of Seawater-Based Fracturing Fluid Containing Polymer, Crosslinker, and Chelating Agent. Accepted, ACS Omega
J326	Arshad Raza; Muhammad Arif; Guenther Glatz; Mohamed Mahmoud ; Mohammed Al Kobaisi; Saad Alafnan; Stefan Iglauer. 2022 . A holistic overview of underground hydrogen storage: Influencing factors, current understanding, and outlook. Accepted, Fuel Journal.
J327	Afagwu, C., Al-Afnan, S., Mahmoud, M. , I. Yucel Akkutlu. 2022 . Modeling of Natural Gas Self-Diffusion in the Micro-Pores of Organic-Rich Shales Coupling Sorption and Geomechanical Effects. Accepted, Journal of Natural Gas Science and Engineering
J328	Aslanov, Elshad; Alafnan, Saad; Mahmoud, Mohamed ; Abdulraheem, Abdulazeez. 2022 . The Geomechanics of Organic Matters Contained in Shales: A Molecular – Level Investigation. Accepted, ACS Omega.
J329	Olalekan S. Alade1, Adeniyi S. Ogunlaja, Amjed H. Mohamed, Mohamed Mahmoud* , Dhafer Al Shehri, Ayman Al-Nakhli, Ronald Nguele, and Isah Mohammed. 2022 . Prospects of Co-Injecting Ionic Liquid and Thermochemical Fluid for Recovery of Extra-Heavy Oil. Accepted, Fuel.
J331	Mohammed, Isah; Abdel-Azeim, Safwat; Al Shehri, Dhafer; Mahmoud, Mohamed* ; Kamal, Muhammad Shahzad; Alade, Olalekan; Patil, Shirish. 2022 . Calcite-Brine Interface and Its Implications in Oilfield Applications: Insights from Zeta-Potential Experiments and Molecular Dynamics Simulations. Accepted, Energy and Fuels.
J332	Mahmoud Elsayed, Ammar El-Husseiny, Syed Rizwanullah Hussaini, Hani Al Mukainah, and Mohamed Mahmoud. 2022 . Experimental Study on the Impact of Clay Distribution and Mineralogy on NMR T2 and Internal Gradient: Insights from Well-Controlled Physical Samples. Accepted, SPE Reservoir Engineering and Formation Evaluation.
J333	Abouelresh, M., Mahmoud, M. , Radwan, A., Dodd, T., Kong, L. 2022 . Characterization and classification of the microporosity in the unconventional carbonate reservoirs: A case study from Hanifa Formation, Jafurah Basin, Saudi Arabia. Marine and Petroleum Geology.
J334	Arif, M., Wulling, W., Adila, A., Raza, A., Mahmoud, M. , and Iglauer, S. 2022 . Shale wettability and influencing factors: A statistical investigation. Energy and Fuels.

J335	Khan, R., Murtaza, M., Mustafa, A., Abdulraheem, A., Mahmoud, M. , and Kamal, M. 2022 . Ionic Liquids as Clay Stabilizer Additive in Fracturing Fluid. Accepted, Fuel.
J336	Hassan, A., Azad, M., and Mahmoud, M.* 2022 . An analysis of nitrogen EOR screening criteria parameters based on the up-to-date review. Journal of Petroleum Science and Engineering.
J337	DENG, X., Kamal, M., Patil, S., Hussain, S., Mahmoud, M. , Al Shehri, D., Abu-Khamsin, S., and Mohanty, K. 2022 . Wettability alteration on carbonate rock by the mixture of Gemini surfactant and chelating agent. Energy and Fuels.
J338	Raza, A., Mahmoud, M.* , Alafnan, S., Arif, M., Glatz, G. 2022 . H ₂ , CO ₂ and CH ₄ adsorption potential of kerogen as a function of pressure, temperature, and maturity. International Journal of Molecular Science.
J339	Tariq, Z., Yan, B., Sun, S., Gudala, M., Aljawad, M., Murtaza, M., and Mahmoud, M. 2022 . Machine Learning Based Accelerated Approaches to Infer Breakdown Pressure of Several Unconventional Rock Types. ACS Omega.
J340	Abbasi, G., Arif, M., Isah, A., Ali, M., Mahmoud, M. , Hoteit, H., Keshavarz, A., and Iglauer, S. 2022 . Gas hydrate characterization in sediments via x-ray microcomputed tomography. Earth Science Reviews.
J341	Mohammed, I., Al Shehri, D., Mahmoud, M.* , Kamal, M., Alade, O., Sultan, A., and Patil, S. 2022 . Effect of Reservoir Mineralogy on Asphaltene Structure and Remediation Strategy Efficiency. Energy and Fuels.
J342	Oshaish, A., Hassan, A., Mahmoud, M.* , El-Husseiny, A., Al Ofi, S., and Al Yaseri, A. 2022 . Evaluating the Rock Wettability Using Multi-Frequency Dielectric Measurements: A Review on The Fundamental Concept and Experimental Approach. Journal Of Petroleum Science and Engineering.
J343	Alade, A., Mahmoud, M.* , and Al Nakhli, A. 2022 . Rheological Studies and Numerical Investigation of Barite Sag Potential of Drilling Fluids with Thermochemical Additive using Computational Fluid Dynamics (CFD). Journal Of Petroleum Science and Engineering.
J344	Al Darwish, J., Al Jawad, M., Al Youssef, Z., Bin Ghanim, A., Kamal, M., and Mahmoud, M. 2022 . The Impact of Green Chelating Agent and Corrosion Inhibitor on Foam Rheology and Stability at High Temperature, Pressure, and Salinity. SPE Journal.
J345	Raza, A., Glatz, G., Alafnan, S., Mahmoud, M. , and Gholami, R. 2022 . Depleted Shale Gas Formations as Naturally-Occurring Storage Compartments for Hydrogen: A Molecular-Level Assessment. Fuel.
J346	Al Arifi, S., Mahmoud, M. , and Al Ofi, S. 2022 . Laboratory Dielectric Measurements To Evaluate the Conductivity Change in the Presence of Chelating Agent with Different Brines. Scientific Reports.
J347	Elsayed, M., Bin Ghanim, A., Alabdrabalnabi, R., Al Jawad, M., El-Husseiny, A., and Mahmoud, M. 2022 . Quantifying Acid Diversion Efficiency through NMR Tortuosity Measurements. Journal of Petroleum Exploration and Production Technology.

J348	Alshahrani, F., Tawabini, B., Saleh, T., Alrayaan, M., Alaama, S., Nasser, R., Soupios, P., Kirmizakis, P., Mahmoud, M. , Oyehan, T., Safi, E. 2022 . Removal of Benzene, MTBE and Toluene from Contaminated Waters Using Biochar-Based Liquid Activated Carbon. Scientific Reports.
J349	Carchini, G., Hamza, A., Hussein, I., Saad, M., Mahmoud, M. 2022 . Hydrogen Storage in Gas Reservoirs: a Molecular Modeling and Experimental Investigation. International Journal of Hydrogen Energy.
J350	Abdelaal, A., Gajbhiye, R., AlShehri, D., Mahmoud, M. , Patil, S., Zhou, X. 2022 . Improvement of supercritical carbon dioxide foam performance for EOR in sandstone reservoirs: An experimental and optimization study. Journal of Natural Gas Science and Engineering.
J351	Yang, K., Conolly, P., Liu, L., Yang, X., Robinson, N., Li, M., Mahmoud, M. , El-Husseiny, A., Verrall, M., May, E., and Johns, M. 2022 . Quantitative characterization of methane adsorption in shale using low-field NMR Journal of Natural Gas Science and Engineering.
J352	Raza, A., Alafnan, S., Glatz, G., Arif, M., Mahmoud, M. , Rezk, M. 2022 . Hydrogen diffusion in organic-rich porous media: Implications for hydrogen geo-storage. Energy and Fuels.
J353	Al-Hajri, N., Hassan, A., and Mahmoud, M.* . 2022 . An Integrated Approach for Predicting the Downhole Leaks Utilizing Surface Measurements. Arabian Journal for Science and Engineering.
J354	Al-Darweesh, J., Al-Jawad, M., Al-Ramadan, M., Patil, S., Elkatatny, S., and Mahmoud, M. 2022 . Review of Underbalanced Drilling Techniques Highlighting the Advancement of Foamed Drilling Fluids. Journal of Petroleum Exploration and Production Technology. 13, pages929–958 (2023)
J355	Tariq, Z., Gudala, M., Yan, B., Sun, S., and Mahmoud, M. 2022 . A Fast Method to Infer Nuclear Magnetic Resonance Based Effective Porosity in Carbonate Rocks using Machine Learning Techniques. Journal of Petroleum Science and Engineering.
J356	Othman, A., Murtaza, M., Aljawad, M., Kamal, M., Mahmoud, M. Kalgaonkar, R. 2022 . Effect of Seawater Ions on Polymer Hydration in the Presence of a Chelating Agent: Application to Hydraulic Fracturing. ACS Omega
J357	Ahmed, M., Sultan, A., Saikia, T., Mahmoud, M. , Patil, S., and Kanj, M. 2022 . Investigating chelating agents' effects on viscoelastic surfactant flooding at the pore scale using micromodels. Energy Fuels 2023, 37, 2, 1070–108s. https://doi.org/10.1021/acs.energyfuels.2c03777 .
J358	Hassan, A., Mahmoud, M.* , Abu Khamsin, S., El-Husseiny, A., and Alkarnos, A. 2022 . Sand Consolidation Using Enforced Calcium and Magnesium Fluoride Precipitation. Journal of Energy Resources Technology.
J359	Yu, T., Gholami, R., Raza, A., Vorland, K., and Mahmoud, M. 2023 . CO ₂ Storage in Chalks: What are We Afraid of? International Journal of Greenhouse Gas Control. https://doi.org/10.1016/j.ijggc.2023.103832 .

J360	Al Darwish, J., Al Jawad, M., Al Youssef, Z., Bin Ghanim, A., Kamal, M., and Mahmoud, M. <u>2023</u> . Corrosion Inhibitor and Chelating Agent Impact on Foam Stability for Formation Stimulation Applications. Journal of Petroleum Science and Engineering.
J361	Hassan, A., Mohammed, E., Oshaish, A., Badhafere, D., Ayranci, K., Dong, T., Waheed, U. El-Husseiny, A., and Mahmoud, M.* <u>2023</u> . Prediction of Total Organic Carbon (TOC) in Organic Rich Shale Rocks Using Thermal Neutron Parameters. ACS Omega
J362	Isah, A., Mahmoud, M*., Kamal, M., Arif, M., and Al-Jawad, M. <u>2023</u> . Multi-Scale Wettability Characterization of Anhydrite-Rich Carbonate Rocks: Insights into Zeta Potential, Flotation, and Contact Angle Measurements. SPE Reservoir Engineering.
J363	Afagwu, C., Weijermars, R., Alafnan, S., and Mahmoud, M. <u>2023</u> . Multiscale and Multiphysics Production Forecasts of Shale Gas Reservoirs: New Simulation Scheme based on Gaussian Pressure Transients. Fuel.
J364	Khan, R., Murtaza, M., Mustafa, A., Abdulraheem, A., Mahmoud, M., and Kamal, M. <u>2023</u> . Ionic Liquids as Clay Stabilizer Additive in Fracturing Fluid. Fuel.
J365	Raza, A., Glatz, G., Alafnan, S., Mahmoud, M., and Gholami, R. <u>2023</u> . Depleted Shale Gas Formations as Naturally-Occurring Storage Compartments for Hydrogen: A Molecular-Level Assessment. Fuel.
J366	Alade, A., Mahmoud, M.*, and Al Nakhli, A. <u>2023</u> . Rheological Studies and Numerical Investigation of Barite Sag Potential of Drilling Fluids with Thermochemical Additive using Computational Fluid Dynamics (CFD). Journal Of Petroleum Science and Engineering.
J367	Olalekan S. Alade ¹ , Adeniyi S. Ogunlaja, Amjed H. Mohamed, Mohamed Mahmoud*, Dhafer Al Shehri, Ayman Al-Nakhli, Ronald Nguele, and Isah Mohammed. <u>2023</u> . Prospects of Co-Injecting Ionic Liquid and Thermochemical Fluid for Recovery of Extra-Heavy Oil. Fuel.
J368	Oshaish, A., Hassan, A., Mahmoud, M.*, El-Husseiny, A., Al Ofi, S., and Al Yaseri, A. <u>2023</u> . Evaluating the Rock Wettability Using Multi-Frequency Dielectric Measurements: A Review on The Fundamental Concept and Experimental Approach. Journal of Petroleum Science and Engineering.
J369	Hassan, A., Azad, M., and Mahmoud, M.* <u>2023</u> . An analysis of nitrogen EOR screening criteria parameters based on the up-to-date review. Journal of Petroleum Science and Engineering.
J370	Ahmed, M., Sultan, A., Saikia, T., Mahmoud, M., Patil, S., and Kanj, M. <u>2023</u> . Investigating the phase behavior of Visco-elastic surfactant with squalene and crude oil systems at high temperature. Arabian Journal for Science and Engineering.
J371	Al-Abdrabalnabi, R., Aljawad, M., Al Ramadan, M., Khan, H., and Mahmoud, M. <u>2023</u> . Experimental Investigations of Acid Fracturing in Layered Carbonate Rocks Utilizing Chelating Agents. Energy and Fuels.

J372	Murtaza, M., Gbadamosi, A., Ahmad, H., Hussain, S., Kamal, M., Mahmoud, M. , and Patil, S. 2023 . A magnetic surfactant having one degree of unsaturation in the hydrophobic tail as a shale swelling inhibitor. <i>Molecules</i> .
J373	Al-Ta'q, A., Aljawad, M., Alade, O., Mahmoud, M. , and Alrustum, A. 2023 . Thermally Activated Nitrogen/Heat Generating Reaction: A Kinetic Study. <i>ACS Omega</i> .
J374	Ouadi, H., Laalam, A., Hassan, A., Chemmakh, A., Rasouli, V., and Mahmoud, M. 2023 . Design and Performance Analysis of Dry Gas Fishbone Wells for Lower Carbon Footprint. <i>Fuels</i>
J375	Mustafa, A., Tariq, Z., Mahmoud, M. , and Abdulrahim, A. 2023 . Machine Learning Accelerated Approach to Infer Nuclear Magnetic Resonance Porosity for a Middle Eastern Carbonate Reservoir. <i>Scientific Reports</i> .
J376	Kalam, S., Abu-Khamsin, S., Patil, S., Hussain, S., Mahmoud, M. , Kamal, M., and Al-Shalabi, E. 2023 . Adsorption Characteristics of a Cationic Gemini Surfactant on Carbonate Outcrops: Adsorption Reduction Using Methylene Blue. <i>Energy and Fuels</i> .
J377	Deng, X., Kamal, M., Patil, S., Hussain, S., Mahmoud, M. , Al-Shehri, D., Al-Shalabi, E. 2023 . Investigation of the Coupled Effect of IFT Reduction and Wettability Alteration for Oil Recovery: New Insights. <i>ACS Omega</i> .
J378	Kalam, S., Abu-Khamsin, S., Patil, S., Hussain, S., Mahmoud, M. , Kamal, M., and Shalabi, E. 2023 . Static Adsorption of a Novel Cationic Gemini Surfactant: A Mineralogical Study. <i>Geoenergy Science and Engineering</i> .
J379	Kalam, S., Abu-Khamsin, S., Patil, S., Mahmoud, M. , Kamal, M., Murtaza, M., and Mohanty, K. 2023 . Adsorption Reduction of a Gemini Surfactant on Carbonate Rocks Using Formic Acid: Static and Dynamic Conditions. <i>Fuel</i> .
J380	Raza, A., Mahmoud, M.* , Murtaza, M., Arif, M., Hassan, A., Glatz, G., Alafnan, S., Kamal, M., and Al-Karnos, A. 2023 . Experimental Investigation of mafic rocks for carbon mineralization prospect. <i>Energy and Fuels</i> .
J381	Albenayyan, N., Murtaza, M., Alarifi, S., Kamal, M., Humam, A., Khalil, A., and Mahmoud, M.* . 2023 . Optimization of Calcium Carbonate Precipitation During Alpha-Amylase Enzyme-Induced Calcite Precipitation (EICP). <i>Frontiers in Bioengineering and Biotechnology</i> .
J382	Othman, A., Aljawad, M., Kamal, M., Mahmoud, M. , Patil, S., Kalgaonkar, R. 2023 . Individual Seawater Ions Impact on the Rheology of Crosslinked Polymer in the Presence of a Chelating Agent. <i>Energy and Fuels</i> .
J383	Alkathim, M., Al-Jawad, M., Hassan, A., Al-Arifi, S., and Mahmoud, M. 2023 . A Data-Driven Model to Estimate the Pore Volume to Breakthrough for Carbonate Acidizing. <i>Journal of Petroleum Exploration and Production Technology</i> .
J384	AlKharraa, H., Wolf, K., AlQuraishi, A., Mahmoud, M. , Deshenenkov, I., AlDuhaïlan, M., Alarifi, S., AlQahtani, N., Kwak, H., Zitha, P. 2023 . Impact of clay mineralogy on the petrophysical properties of tight sandstones. <i>Geoenergy Science and Engineering</i> .

J385	Isah, A., Arif, M, Mahmoud, M.* , and Kamal, M. 2023 . Influence of Rock Permeability and Surface Conditioning on Carbonate Wettability: A Link Between Contact Angle and Amott-Index. <i>Geoenergy Science and Engineering</i> .
J386	Alboghail, F., Ibrahim, A., Abdulraheem, A., Elkatatny, S., Mahmoud, M. 2023 . Resistivity Log Prediction in Horizontal Low Formation Quality Well Using Data-Driven Robust Models <i>Arabian Journal for Science and Engineering</i> . <i>Arabian Journal for Science and Engineering</i> .
J387	Ahmad, H., Murtaza, M., Gbadamosi, A., Kamal, M., Hussain, S., Mahmoud, M. , and Patil, S. 2023 . Application of Novel Magnetic surfactant-based drilling fluids for Clay Swelling inhibition. <i>Energy and Fuels</i> .
J388	Alade, O., Mohammed, I., Abdel-Azeim, S., Hussain, S., Kamal, M., Mahmoud, M. , Al-Shehri, D., Saibi, H., Adewunmi, A., Murtaza, M. Mahboob, A. 2023 . Review on Applications of Ionic Liquids (ILs) for Bitumen Recovery: Mechanisms, Challenges and Perspectives. <i>Energy and Fuels</i> .
J389	Isah, A., Mahmoud, M.* , Arif, M., Al-Jawad, M., and Amao, A. 2023 . Influence of surface cleaning on the wettability of calcite/oil/brine systems. <i>Fuels</i>
J390	Al Ameer, M., Azad, M., Al-Shehri, D., Mahmoud, M. , Kamal, M., Patil, S. 2023 . A Guide for Selection of Aging Time and Temperature for Wettability Alteration in Various Rock-Oil Systems. <i>ACS Omega</i> .
J391	Badhafere, D., Kirmizakis, P., Oshaish, A., El-Husseiny, A., Mahmoud, M* , Ntarlagiannis, D., and Soupios, P. 2023 . Detection of Iron Disulfide Materials in Geological Porous Media Using Spectral Induced Polarization Method. <i>SPE Journal</i> .
J392	Alkharraa , H., Wolf, K., Al Quraishi, A., Mahmoud, M. , AlDuhailan, M., and Zitha, P. 2023 . The Power of Characterizing Pore Fluid Distribution for Microscopic CO2 Injection Study in Tight Sandstones. <i>Minerals</i> .
J393	Al Darwish, J., Al Jawad, M., Al Youssef, Z., Kamal, M., Mahmoud, M. , and Al Shehri, D. 2023 . Investigation of Amine-Based Surfactants for Foamed Acid Stimulation at High Temperature, Pressure, and Salinity. <i>Geoenergy Science and Engineering</i> .
J394	Al-Azani, K., Abu-Khamsin, S., Kamal, M., Patil, S., Zhou, X., Mahmoud, M. , and Hussain, S. 2023 . Enhanced Oil Recovery in Carbonate Reservoirs Using Single Component Synthesized Surfactants under Harsh Reservoir Conditions. <i>Energy and Fuels</i> .
J395	Al-Sulaiman, M., Al-Jawad, M., Hassan, A., Al-Afnan, S., Liao, Q., Mahmoud, M. , and Sultan A. 2023 . Machine Learning Prediction of Acid Fracture Performance in Naturally Fractured Dolomite Formations <i>Arabian Journal for Science and Engineering</i> . <i>Arabian Journal for Science and Engineering</i> .
J396	Murtaza, M., Rasm, M., Alarifi, S., Kamal, M., Mahmoud, M. , and Al-Ajmi, M. 2023 . An Efficient Single Step Approach for Barium Sulfate Scale Removal at High Temperature. <i>Arabian Journal for Science and Engineering</i> .
J397	Ahmed, M., Sultan, A., Kamal, M., Saikia, T., Mahmoud, M. , Patil, S., Kanj, M. 2023 . Relationship between Dynamic Interfacial Tension and Ultimate Recovery

	in Gemini Surfactant Flooding: An Exploration through Fractured Micromodels. Energy and Fuels.
J398	Ahmad, H., Murtaza, M., Hussain, S., Mahmoud, M. , Kamal, M. 2023 . Performance Evaluation of Different Cationic Surfactants as Anti-swelling Agents for Shale Formations. Geoenergy Science and Engineering.
J399	Afeez O Gbadamosi, Nasiru S Muhammed, Shirish Patil, Dhafer Al Shehri, Bashirul Haq, Emmanuel I Epelle, Mohamed Mahmoud , Muhammad Shahzad Kamal. 2023 . Underground hydrogen storage: A critical assessment of fluid-fluid and fluid-rock interactions. Journal of Energy Storage.
J400	Isah, Abubakar; Mahmoud, Mohamed* ; Arif, Muhammad; Aljawad, Murtada; Kamal, Muhammad Shahzad. 2023 . Influence of surface cleaning on the wettability of quartz/oil/brine systems. Energy and Fuels.
J401	Isah, M., Alshehri, D., Mahmoud, M.* , Sultan, A., Kamal, S., Patil, S., Adebayo, A., Kamal, M., Alade, A. 2023 . Evaluation of Polymers as a Strategy to Reduce Asphaltene Adsorption on Rock Surface. SPE Journal.
J402	Raza, A., Mahmoud, M.* , Alafnan, S., and Arif, M. 2023 . Predictive power of theoretical adsorption models for gases (H ₂ , CO ₂ and CH ₄) in overmature kerogen. Arabian Journal for Science and Engineering.
J403	Al Naimi, K., Aboushanab, M., Arif, M., Al Kobaisi, M., Motiur Rahman, M., Anjum, D., and Mahmoud, M. 2023 . Micro-scale wettability of carbonate rocks via high-resolution ESEM imaging. Results in Physics.
J404	Elsayed, M., Elhusseiny, A., Hussaini, S., and Mahmoud, M. 2023 . Experimental and Simulation Study on the Estimation of Surface Relaxivity of Clay Minerals. Journal of Petroleum Science and Engineering
J405	Mohamed, I., Al -Yaseri, A., Al Shehri, D., and Mahmoud, M. 2023 . Basalt Mineral Surface Charge and the Effect of Mineralization on Its Colloidal Stability: Implications of Subsurface CO ₂ Storage. Fuel.
J405	Mouallem, J., Arif, M., Motiur Rahman, M., Glatz, G., Raza, A., and Mahmoud, M. 2023 . Critical review and meta-analysis of the interfacial tension of CO ₂ -brine and H ₂ -brine systems: Implications for CO ₂ and H ₂ geo-storage. Fuel.
J406	Mohamed, I., Al -Yaseri, A., Al Shehri, D., and Mahmoud, M. 2023 . Electrokinetic Property and Colloidal Stability Study of Igneous Rocks: Implication on Carbon Mineralization and Underground CO ₂ Storage. Energy and Fuels.
J407	Baig, A., Alarifi1, S., Mahmoud, M. , Kamal, M., Murtaza, M., Humam, A., and AlAhmari, M. 2024 . Experimental Investigation of A Modified Enzyme-Induced Carbonate Precipitation Solution for Sand Production Control Applications. SPE Journal.
J408	Hamza, A., Al-Marri, M., Hussein, I., Shawabkeh, R., and Mahmoud, M.*. 2024 . Adsorption of Flue Gas on Carbonate and Sandstone Rocks at Typical Reservoir Conditions: Influence of Feed Composition. Arabian Journal for Science and Engineering.

J409	Al-Taq, A., Al-Jawad, M., Alade, O., Al Hashim, M., Patil, S., Abu Khamsin, S., and Mahmoud, M., 2024. Advancing Sustainability Through Emulsification of Thermochemical Fluids: Exploring Emulsion Characteristics and Rheological Properties. <i>Journal of Molecular Liquids</i> .
J410	Afagwu, C., Alajmei, S., Al-Afnan, S., Mahmoud, M.* , and Patil, S. 2024. Permeability Modeling of Pore Shapes, Compaction, Sorption and Molecular Diffusivity in unconventional Reservoirs. <i>SPE Journal</i> .
J411	Al-Afnan, S., Raza, A., and Mahmoud, M. 2024. Assessment of Hydrogen Geo-storage Capacity in Depleted Shale Formations: Multiphysics Storage Mechanisms and the Impact of Residual Gas in Place. <i>Fuel</i> .
J412	Al-Azani, K., Abu-Khamsin, S., Kamal, M., Patil, S., Hussain, S., Al-Shehri, D., Mahmoud, M. 2024. Role of Injection Rate on Chemical Enhanced Oil Recovery Using a Gemini Surfactant under Harsh Conditions. <i>Energy and Fuels</i> .
J413	Tariq1,Z., Murtaza, M., Alrasheed, S., Kamal, M., Yan1, B., and Mahmoud, M. 2024. Experimental Study and Machine Learning Modeling of Shale Swelling in Extended Reach Wells when Exposed to Diverse Water-Based Drilling Fluids. <i>Energy and Fuels</i> .
J414	Afagwu, C., Al Afnan, S., Raza, A., Glatz, G., Mahmoud, M. , and Kovscek, T. 2024. Molecular Assessment of Storage Capacity and Enthalpy of Adsorption in Organic-Rich Shale Gas Reservoirs. <i>Arabian Journal for Science and Engineering</i> .
J415	Ahmed, M., Sultan, A., Adebayo, A., Babu, R., Mahmoud, M., Patil, S. 2024. Exploring The Impact Of Chelating Agents On Viscoelastic Surfactant Flooding On Sandstone Cores Using Magnetic Resonance Imaging. <i>Energy and Fuels</i> .
J416	Rana, A., Murtaza, M., Raza, A., Mahmoud, M. , Kamal, M. 2024. Application of High-Density Brines in Drilling and Completion Fluids: Current Insights and Future Perspectives. <i>Energy and Fuels</i> .
J417	Dafaallah, M., Azad, M., Hussaini, S., Al Shehri, D., Ayirala, S., and Mahmoud, M. 2024. Does Core-Length Matter for Mobility Control Displacements in Core? <i>Arabian Journal for Science and Engineering</i> .
J418	Hassan, A., Oshaish, A., Elhusseiny, A., Abu Mahfouz, I., Mahmoud, M. , Attia, H., Abouelresh, M., and Al Ofi, S. 2024. Evaluating the Impact of Artificial Maturation on the Petrophysical and Geochemical Properties of Unconventional Shale Formations by Integrating Dielectric and NMR Measurements. <i>International Journal of Coal Geology</i> .
J419	Raza, A., Mahmoud, M. , Alafnan, S., Arif, M., Kirmani, F., Kamal, M., Murtaza, M., and Rana, A. 2024. Role of high-density brines in reservoir development stages: A review. <i>Energy Geoscience</i> .
J420	Isah, A., Tareq, Z., Mustafa, A., and Mahmoud, M. 2024. A Review of Data-Driven Machine Learning Applications in Reservoir Petrophysics. <i>Journal of Petroleum Exploration and Production Technology</i> .

J421	Mouallem, J., Arif, M., Isah, A., Raza, A., Rahman, M., Mahmoud, M. and Kamal, M. 2024 . Effect of formation brine on interfacial interaction: Implications for CO2 storage. Fuel.
J422	Janjua, A., Bashir, A., Murtaza, M., Kamal, M., Patil, S., Aljawad, M., Mahmoud, M. 2024 . The Impact of Hydrocarbons on the Rheological Properties of Seawater-Based Fracturing Fluids. Energy and Fuels.
J423	Murtaza, M., Tariq, Z., Kamal, M., Rana, A., Saleh, T., Mahmoud, M. , Alarifi, S., Syed, N. 2024 . Improving Water-Based Drilling Mud Performance Using Biopolymer Gum: Integrating Experimental and Machine Learning Techniques. Molecules.
J424	Elsayed, M., Elhusseiny, A., Kwak, H., Adebayo, A., and Mahmoud, M. 2024 . The Impact of Clay and Fluid Conductivity on the Electrical-Diffusion Tortuosity Correlations in Sandstone Reservoirs. Water Resources Research
J425	Kirmani, F., Raza, A., Ahmad, S., Arif, M., and Mahmoud, M. 2024 . A holistic overview of the in-situ and ex-situ carbon mineralization: methods, mechanisms, and technical challenges. Science of the Total Environment
J426	Isah, A., Mahmoud, M.* , Al Jawad, M., Arif, M., Hussaini, S., Amao, A., Raza, A., and Kamal, M. 2024 . Enforced CO2 Mineralization in Anhydrite-Rich Rocks. Energy.
J427	Elyasa, A., Hassan, A., Mahmoud, M.* , Gajbhiye, R., El-Husseiny, A., Abu-Mahfouz, I. 2024 . Mitigating Liquid Loading in Gas Wells Using Thermochemical Fluid Injection: An Experimental and Simulation Study. ACS Omega.
J428	Isah, A., Mahmoud, M.* , Raza, A., Murtaza, M., Arif, M., and Kamal, M. 2024 . CO2-Brine Interactions in Anhydrite-Rich Rock: Implications for Carbon Mineralization and Geo-storage. International Journal of Greenhouse Gas Control.
J429	Aboluhom, H., Aljawad, M., Alafnan, S., Liao, Q., and Mahmoud, M. 2024 . A Coupled Three-Dimensional Wormhole Modeling in Heterogenous Carbonate Lithology in Limited-Entry and Openhole Completions. Geoenergy Science and Engineering.
J430	Kellal, S., Kirmizakis, P., El-Husseiny, A., Ntarlagiannis, N., Soupios, P., and Mahmoud, M. 2024 . Low Resistivity Pay Zone Detection in Hydrocarbon Formation: The Feasibility of the Spectral Induced Polarization Method. SPE Journal.
J431	Mohammed, I., Isah, A., Bello, A., Mahmoud, M., Al Shehri, D., Raza, A., Alafnan, S. 2024 . Iron-Rich Rocks for Hydrogen Geo-Storage: Induced Storage Capacity by Active Sorption. Energy and Fuels
J432	Baig, A., Alarifi, S., Murtaza, M., Kamal, M., Mahmoud, M. , Al Ahmari, M., and Humam, A. 2024 . Assessing the Viability of Different Bio-Polymers and Synthetic-Copolymers with Modified Enzyme-Induced Carbonate Precipitation Solutions for Sand Consolidation Applications. Journal of Petroleum Exploration and Production Technology.

J433	Mohamed, I., Isah, A., Bello, A., Mahmoud, M.* , Al-Shehri, D., Raza, A., Alafnan, S. 2024 . Iron-Rich Rocks for Hydrogen Geo-Storage: Induced Storage Capacity by Active Sorption. Energy and Fuels
J434	Mohammed, I., Svenningsen, S., Kamounah, F., Chen, T., Pittelkow, M., Sjølling, T., and Mahmoud, M.* 2024 . Calcium Sulfate Scale: A Review of State-of-the-Art. Geoenery Science and Engineering.
J435	Khan, F., Mahmoud, M.* , Raza, A., AlTammar, M., Patil, S., Murtaza, M., Kamal, M. 2024 . Application of Endothermic Fluids to Lower Breakdown Pressure of Unconventional Reservoirs: Implications for hydraulic fracturing. ACS Omega.
J436	Khan, H., Al-Abdrabalnabi, R., Aljawad, M., Al Ramadan, M., and Mahmoud, M. 2024 . The Evolution of Fracture Surface Parameters in Heterogeneous Carbonate Reservoirs Employing Chelating Agents as Fracturing Fluids. Energy and Fuels
J437	Rajabi, M., Parker, M., Abdulhussein, A., Badalyan, A., Kwong, P., Salamachi, A., Zeinijahromi, A., Al-Afnan, S., Raza, A., Al Yaseri, A., Mahmoud, M. 2024 . Experimental investigation of alterations in coal fracture network induced by thermal treatment: implications for CO2 geo-sequestration. Energy
J438	Mohammed, I., Mahmoud, M.* , Bello, A., and Al Shehri, D. 2024 . A Complementary Eco-Friendly Approach to Heavy Metal Removal from Wastewater/Produced Water Streams Through Mineralization. Journal of Environmental Chemical Engineering.
J439	Al-Darweesh, J., Al Jawad, M., Kamal, M., Mahmoud, M. , and Al-Yousef, Z. 2024 . The Impact of Chelating Agent pH on the Stability and Viscosity of CO2 Foam under Harsh Reservoir Conditions . Journal of Molecular Liquids
J440	Al-Taq, A., Aljawad, M., Alade, O., Al-Ajwad, H., Murtaza, M., Al-Abdrabalnabi, R., Alrustum, A., Mahmoud, M. 2024 . Investigations of Thermochemical Fluids as Cleanup System for Polymer-Based Fracturing Fluids. Geoenery Science and Engineering.
J441	Deng, X., Kamal, M., Hussain, S., Israr, M., Murtaza, M., Mahboob, A., and Mahmoud, M. , and Patil, S. 2024 . Impact of Organic Acid Molecular Length and Structure on Rock Oil-wetting Rapidity and Stability. Journal of Molecular Structure
J442	Bashir, A., Abdulmoniem, M., Gbadamosi, A., Patil, S., Aljawad, M., Mahmoud, M. , Kamal, M. 2024 . Application of Foam for Enhanced CO2 Geological Storage: A Mini-Review. Energy and Fuels.
J443	Mohammed, I., Mahmoud, M.* , Bello, A., and Al Shehri, D. 2024 . Production of Colloidally Stable Calcium Carbonate Precipitates to Enhance CO2 Subsurface Storage Through Mineralization. Geoenery Science and Engineering
J444	Deng , X., Alotaibi, M., Fahmi, M., Patil, S., Mahmoud, M. , Kamal, M., Hussain, S. 2024 . Locally Synthesized Zwitterionic Surfactants as EOR Chemicals in Sandstone and Carbonate. ACS Omega.

J445	Isah, A., Mahmoud, M.* , Eltom, H., Salih, M., Arif, M., Aljawad, M. 2024 . Exploring the Impact of Mineralogy on Pore Structure and Fluid Dynamics in Tight Reservoir Rocks: Insights for Enhanced Oil Recovery and Gas Storage. Arabian Journal for Science and Engineering
J446	Raza, A., Alafnan, S., Mahmoud, M.* , Glatz, G., and Kamal, M. 2024 . Diffusive nature of different gases in graphite: Implications for gas separation membrane technology. Journal of Industrial and Engineering Chemistry.
J447	Kirmazakis, P., et al. 2024 . Spectral Induced Polarization Measurements to Detect Different Scales in Oil and Gas Production Tubing. Petroleum Science and Technology.
J448	Muhammad, N., Haq, B., Al Shehri, D., Rahman, M., Al Ghuraya, H., Al Abdrabalnabi, R., Al Hamad, J., Mahmoud, M. , Mahfoz, W., Hakeem, A., Al Ahmed, A., Hossain, Z. 2024 . Red Sand Dunes Nanoparticles for Green Enhanced Oil Recovery. Journal of Molecular Liquids
J449	Deng , X., Bashir, A., Kamal, M., Raza, A., Patil, S., Zhou, X., Mahmoud, M. , Hussain, S. 2024 . Insights into Rock Wettability Influencing Factors: A Review. ACS Omega.
J450	Al-Taq, A., Aljawad, M., Alade, O., Ajwad, H., Abu-Khamsin, S., Patil, S., and Mahmoud, M. 2024 . Emulsification and pH Control for Sustainable Thermochemical Fluids Reactivity. Molecules
J451	Davy, N., Elhusseiny, A., Ayranci, K., Bin Waheed, U., Fawad, M., Mahmoud, M. , and Harris, N. 2024 . Leveraging petrophysical and geological constraints for AI-driven predictions of total organic carbon (TOC) and hardness in unconventional reservoir prospects. Geomechanics and Geophysics for Geo-Energy and Geo-Resources.
J452	Muhammed, N., Haq, B., Al Shehri, D., Badmus, S., Adebayo, A., and Mahmoud, M. 2024 . Hydrogen Injection and Withdrawal Performance in Depleted Gas Reservoirs. International Journal of Hydrogen Energy
J453	Al Darwish, J., Al Jawad, M., Kamal, M., Mahmoud, M. , Al Ajmi, S., Al Shehri, D. 2024 . CO2 Foamed Viscoelastic Gel-based in Seawater Fracturing Fluid for High-Temperature Wells. Gels
J454	Alyousef, M., Kamal, M., Murtaza, M., Hussain, S., Raza, A., Patil, S., Mahmoud, M. , 2024 . Enhancing Aqueous Stability of Anionic Surfactants in High Salinity and Temperature Conditions with SiO ₂ Nanoparticles. ACS Omega.
J455	Hanfi, M., Alarifi, S., Alade, O., Tanimu, A., and Mahmoud, M. 2024 . Catalytic and non-catalytic in-situ hydrogen production from heavy oil: A review of experimental studies. ACS Omega.
J456	Basaleh, A., Hassan, A., Tawabini, B., Mahmoud, M. , Alghamdi, F., Althubiti, A., Alrayaan, M., Al-Nasser, R. 2024 . Removal of MTBE and BTEX Pollutants from Contaminated Water Using Colloidal Activated Carbon (CAC). ACS Omega

J457	Oshaish, A., Hassan, A., Abdulrahim, A., Elhousseiny, A., and Mahmoud, M. 2025 . An Artificial Intelligence Approach for Predicting Water Filled Porosity and Water Saturation for Carbonate Reservoirs Using Conventional Well Logs. Neural Computing and Applications
J458	Hamdy, M., Shahid, M., Farooqi, A., El-Adawy, M., Mahmoud, M. , Alarifi, S., and Nemitallah, M. 2025 . Recent advances of in-well hydrogen production with integrated in-situ carbon dioxide sequestration: A comprehensive review. Process Safety and Environmental Protection.
J459	Oshaish, A., Elhousseiny, A., Mahmoud, M. , Alofi, S., Alarifi, S., Attia, H., Hassan, A. 2025 . Quantification of Rock's Wettability Index Using Dielectric Measurements. SPE Journal
J460	Zhang, H., Mahmoud, M. , Iglauer, S., Arif, M. 2025 . Field-scale investigation of CO ₂ plume dynamics under spatial wettability variations: Implications for geological CO ₂ storage. Advances in Geo-Energy Research
J461	Khan, F., Mahmoud, M.* , Raza, A., AlTammar, M., Patil, S., Al Shafloot, T., AlMarri, M. 2025 . A Review on Breakdown Pressure in Hydraulic Fracturing of Subsurface Geologic Formations: Influencing Factors, Reduction Strategies and Research Gaps. Journal of Rock Mechanics and Geotechnical Engineering.
J462	Alade, O., Al Ramadan, A., Al-Hamad. J., Abdullah, E., and Mahmoud, M. 2025 . Exploring Date Palm Ash for Greener Enhanced Oil Recovery: Experimental and Simulation Studies on Thermophysical Properties and Recovery Performance. Cleaner Chemical Engineering.
J463	Rana, A., Murtaza, M., Saleh, T., Kamal, M., Mahmoud, M. 2025 . Effectiveness of Chloride Salts in Shale Swelling Inhibition: An Assessment of its Impact on Drilling Fluid Performance. Arabian Journal for Science and Engineering.
J464	Al Darwish, J., Al Jawad, M., Kamal, M., Mahmoud, M. , Al Ajmi, S., Kardkar, P. and Al Harbi, B. 2025 . CO ₂ Foam Stabilized by Viscoelastic Surfactant: Effects of Chelating Agents' Type, pH, and Water Chemistry on Microstructure, Stability, and Rheology of Foam. SPE Journal
J465	Dafalla, M., Azad, M., Ayirala, S., Alotaibi, M., Fahmi, M., Saleh, S., Al Shehri, D., and Mahmoud, M. 2025 . Potential of polymer's viscosity and viscoelasticity for accessible oil recovery during low salinity polymer flooding in heterogeneous carbonates. Fuel
J466	Adewunmi, A., Nazar, M., Mahmoud, M. , Patil, S., Hussain, S., Kamal, M. 2025 . Advanced Ionic Liquid as a Sustainable Demulsifier for Crude Oil Emulsions. Energy and Fuels
J467	Gbadamosi, A., Badmus, S., Haruna, K., Patil, S., Kamal, M., Mahmoud, M. , and Saleh, T. 2025 . Surfactant applications in oil and gas industry: Efficiency, toxicity, and remediation techniques. Journal of Molecular Liquids.
J468	Ali, M., Isah, A., Yekeen, N., Hassanpouryouzband, A., Sarmadivaleh, M., Okoroafor, E., Al Kobaisi, M., Mahmoud, M. , Vahrenkamp, V., Hoteit, H. 2025 . Recent Progress in Underground Hydrogen Storage. Energy &

	Environmental Science. IF 32.4, 1/170 in chemical engineering, 99.7 percentile, 2/358 in Environmental Engineering, 99.6 percentile
J469	Mouallem, J., Raza, A., Mahmoud, M. , Mouallem, J., and Arif, M. 2025 . Impact of Petrophysical Properties on CO ₂ Residual Trapping in Limestone Formations. Fuel.
J470	Aboushanab, M., Isah, A., Mahmoud, M. , Anjum, D., Arif, M. 2025 . Surface Wettability of Quartz and Calcite: Impact of Cleavage, Exposure Time, and Scale-of Measurement. Petroleum Research
J471	Khan, F., Mahmoud, M.* , Raza, A., Patil, S., and AL Shafloot, T. 2025 . A Comprehensive Review of Geothermal Reservoirs - Current Understanding and Future Outlook. Arabian Journal for Science and Engineering.
J472	Akomolafe, F., El-Husseiny, A., Adebayo, A., Mahmoud, M. , Bageri, B. 2025 . A Systematic Investigation of Drilling Fluid Bulk Relaxation Impact on NMR Interpretation for Formation Evaluation. Petroleum.
J473	Hanfi, M., Alade, O., Tanimu, A., Mahmoud, M. , and Alarifi, S. 2025 . An Experimental Study to Investigate the Role of Pyrolysis Reaction on InSitu Hydrogen Generation from Sandstone Oil Reservoirs. Petroleum.
J474	Isah, A., Tariq, Z., Mustafa, A., Mahmoud, M.* , Okoroafor, R. 2025 . A Review of Data-Driven Machine Learning Applications in Reservoir Petrophysics. Arabian Journal for Science and Engineering.
J475	Tariq, Z., Abu-Al-Saud, M., Mahmoud, M. , Zhu, C., Sun, S., Yan, B. 2025 . Fast Tracking of Safe CO ₂ Trapping Indices using Machine Learning for Smarter Reservoir Management. Petroleum.
J476	Adila, A., Aboushanab, M., Raza, A., Mahmoud., M. , Iglauer, S., Armstrong, R., and Arif, M. 2025 . Wettability of Hydrogen-Rock-Brine Systems: Parametric Analysis and Knowledge Gaps. Fuel
J477	Tackie-Otoo, B., Mahmoud, M.* , Murtaza, M., Raza, A., Kamal, M., Patil, S., Alafnan, S., Attar, N. 2025 . An integrated experimental and simulation study for the feasibility of underground H ₂ production from natural gas reservoir. ACS Omega
J478	Al Mukainah, H., Almalichy, A., Mahmoud, M. , Aljawad, M., Ibrahim, A., Al Ramadan, M., and Al-Yaseri, A. 2025 . Effects of Long-Term CO ₂ Storage on Carbonate Rock Stability. Energy and Fuels
J479	Mohammed, I., Alafnan, S., Mahmoud, M. , Raza, A. 2025 . Experimental and Molecular Insights into Organic Matter Wettability: Implications for Hydrocarbons Recovery, and Gas Geo-Storage in Source Rocks. Langmuir
J480	Helmi, M., Mohammed, I., Rezk, M., Gbadamosi, A., Raza, A., and Mahmoud, M.* . 2025 . Unlocking the Potential of CO ₂ Storage in Saline Aquifers: Challenges, Knowledge Gaps, and Future Directions for Large-Scale Storage. Carbon Capture Science & Technology
J481	Tariq1, Z., Abid, M., Mustafa, A., Mahmoud, M. 2025 . Accelerated Prediction of Clay-Bound Water in Complex Reservoirs Using Sequential Learning Techniques. SPE Journal

J482	Al-Ghamdi, A., Hassan, A., Mahmoud, M.* , and Al-Shafloot, T. 2025 . Novel Thermochemical Fracturing: A Breakthrough in Sustainable and Efficient Enhanced Geothermal Systems (EGS). Petroleum.
J483	Matovu, S., Al Shafloot, T., Raza, A., Mahmoud, M. , Hassan, A., Alarifi, S., Abu-Mahfouz, I. 2025 . A Novel Approach to Stimulate Tight Reservoirs Using Cyclic Thermochemical Fluids. Energy and Fuels
J484	Mouallem, J., Al-Abdrabalnabi, R., Raza, A., Mahmoud, M. , Isah, A., and Arif, M. 2025 . Experimental investigation of CO ₂ residual trapping in naturally water-wet and artificially tailored oil-wet limestones: Implications for geological CO ₂ storage. Mobeen, M., Kamal, M., Mahmoud, M., Alshehri, D. 2025. Plant-based Drilling Fluid Composition. US 12384951 B1 in Geo-Energy Research.
J485	Mohammed, I., AlSultan, S., Al Shehri, D., Mahmoud, M.* , Mashat, A., Sangaru, S., Alsmail, A., Abdel-fattah, A. 2025 . Influence of Carbonated Brine and CO ₂ Nanobubbles on the Rock-Fluid Interface of Carbonate Reservoir Rocks. Fuel.
J486	Raza, A., Alafnan, S., Mahmoud, M.* , Glatz, G., Kamal, M. 2025 . H ₂ , CO ₂ and CH ₄ adsorption potential of graphite: Implications for gas separation membrane technology. Arabian Journal for Science and Engineering
J487	Mohammed, I., Al Shehri, D., Mahmoud, M.* , Bello, A., Onaizi, S. 2025 . Impact of Hydrogen Sulfide on CO ₂ Mineralization and Carbon Storage Efficiency. Energy
J488	Al Jaberi, J., Bageri, B., AlBoraikan, R., Solling, T., Mahmoud, M. 2025 . The Role of pH and Alkali Salts on Corrosion Indices of EDTA Solutions in Oilfield Applications. Arabian Journal for Science and Engineering
J489	Shehryar, M., Raza, A., Glatz, G., Kamal, M., Mahmoud, M.* , Mahboob, A., Alafnan, S. 2025 . Review of EOR-Based Techniques for Enhancing Sweep Efficiency in Carbon Geo-Storage. Petroleum
J490	Tackie-Otoo, B., Mahmoud, M.* , Raza, A., 2025 . Renewable energy versus hydrogen energy: Assessing current needs for sustainable energy solutions. Energy and Fuels
J491	Marapira, T. R., Alafnan, S. F., Raza, A., Mahmoud, M. A. , Murtaza, M., & Kamal, M. S. 2025 . Enhanced CO ₂ mineralization in saline aquifers using alkaline earth metals, Chemical Engineering Journal, IF 13.2
J492	Budiman, O., Alajmi, S., Aljawad, M., Mahmoud, M. , Kamal, M., Murtaza, M., Karadkar, P., Alghunaimi, F. 2025 . Scale Inhibition Efficiency of Chelating Agents Under High Temperature and Salinity. Arabian Journal for Science and Engineering
J493	YOUSSEF, M., Mohammed, I., Adebayo, A., Abdelgawad, K., and Mahmoud, M.* . 2025 . Geoelectrical Evaluation of CO ₂ Storage in Carbonate Aquifers Using Carbonated Water Injection. Energy and Fuels
J494	Janjua, A., Ali, M., Kamal, M., Patil, S., Hoteit, H., Mahmoud, M. , and Younas, M. 2025 . Experimental Insights into Surface Wettability Alterations and Solvent Adsorption Effects on Porous Sandstone and Carbonate Rocks in H ₂ -Brine

	Systems: Implications for Underground Hydrogen Storage. Journal of Energy Storage
--	---

Refereed Conference Proceedings

No	Title
1	Kellal, S., Kirmizakis, P., El-Husseiny, A., Soupios, P., & Mahmoud, M. (2023, April 2). Hydrocarbon Detection in Low Pay Resistivity Pay Zones Using Spectral Induced Polarization. In <i>AAPG/SPWLA Low Resistivity Reservoirs: Path to Explore, Discover and Develop</i> . Khobar: AAPG/SPWLA.
2	Aboushanab, M. S., Al Naimi, K., Al Kobaisi, M., Rahman, M. M., Arif, M., & Mahmoud, M. (2023). Wettability Characterization of Carbonate Rocks Using a Micro-Scale Approach. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214065-MS
3	Deng, X., Patil, S., Kamal, M. S., Shakil, S. M., Mahmoud, M., Zhou, X., . . . Hassan, A. (2023). Wettability Alteration of Carbonate Rock by Chelating Agents. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214215-MS
4	Othman, A., Murtaza, M., Aljawad, M., Kamal, M., Mahmoud, M., & Kalgaonkar, R. (2023). The Impact of Salt Ions on the Rheology of a Crosslinked Polymer Containing a Chelating Agent. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213601-MS
5	Abdelaal, A., Alsabaa, A., Gajbhiye, R., Mahmoud, M., Al-Shehri, D., & Patil, S. (2023). Supercritical Carbon Dioxide Foam Performance for Enhanced Oil Recovery: Challenges and Solutions. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 2023-June. doi: 10.2118/213798-MS
6	Kamal, M. S., Ahmad, H. M., Murtaza, M., Rana, A., Hussain, S. M. S., Patil, S., . . . Al Shehri, D. (2023). Smart Drilling Fluids Formulations for Sensitive Shale Formations Using Surfactants and Nanoparticles. In <i>SPE Western Regional Meeting Proceedings</i> Vol. 2023-May. doi: 10.2118/212966-MS
7	Kalam, S., Khan, M. R., Shakeel, M., Mahmoud, M., & Abu-Khamsin, S. A. (2023). Smart Algorithms for Determination of Interfacial Tension (IFT) between Injected Gas and Crude Oil-Applicable to EOR Projects. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213375-MS
8	Altowilib, A., Gajbhiye, R., Mahmoud, M., & Solling, T. (2023). Selection and Optimization of Demulsifier Based on Physio-Chemical Characteristics of Emulsion. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213617-MS

9	Fathy, A., Arif, M., Adila, A. S., Raza, A., & Mahmoud, M. (2023). Quantitative Assessment of CO ₂ Mineral Trapping Capacity in Presence of Sealing Fault in Carbonate Sequences: A Numerical Approach. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/213985-MS
10	Murtaza, M., Rana, A., Ahmad, H. M., Mahmoud, M., Patil, S., Kamal, M. S., & Al Sheri, D. (2023). Performance Evaluation of Iron Oxide and Graphite Nanoparticles in Water-Based Drilling Muds at HPHT Conditions. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213963-MS
11	Al-Ghamdi, A., Al-Jawad, M., & Mahmoud, M. (2023). Paradigm Shift in Conventional Hydraulic Fracturing - Emerging Fracturing Techniques Using Thermochemical Fluids. In <i>Society of Petroleum Engineers - SPE Europec - Europe Energy Conference featured at the 84th EAGE Annual Conference and Exhibition, EURO 2023</i> . doi: 10.2118/214376-MS
12	Mouallem, J., Arif, M., & Mahmoud, M. (2023). Numerical Simulation of CO ₂ Mineral Trapping Potential of Carbonate Rocks. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214162-MS
13	Deng, X., Patil, S., Al Shehri, D., Kamal, M. S., Shakil, S. M., Zhou, X., . . . Hassan, A. (2023). IFT Reduction Negatively Impacts Oil Recovery When Wettability Alteration Happens. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214178-MS
14	Adila, A. S., Raza, A., Zhang, Y., Mahmoud, M., & Arif, M. (2023). Geochemical Interactions Among Rock/CO ₂ /Brine Systems: Implications for CO ₂ Geo-Storage. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214029-MS
15	Aboushanab, M. S., Al Naimi, K., Mahmoud, M., & Arif, M. (2023). Experimental Investigation of the Effect of Surface Cleavage and Exposure Time on Rock Wettability. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214078-MS
16	Mouallem, J., Raza, A., Mahmoud, M., & Arif, M. (2023). Critical Review of Interfacial Tension of CO ₂ -brine Systems: Implications for CO ₂ Storage. In <i>Society of Petroleum Engineers - Gas and Oil Technology Showcase and Conference, GOTS 2023</i> . doi: 10.2118/214175-MS
17	Deng, X., Kamal, M. S., Patil, S., Shakil, S. M., Al Shehri, D., Zhou, X., . . . Al Shalabi, E. W. (2023). Contribution of Wettability Alteration to Imbibition Oil Recovery in Low and High Permeability Conditions. In <i>SPE Western Regional Meeting Proceedings</i> Vol. 2023-May. doi: 10.2118/213045-MS

18	Ahmad, H. M., Iqbal, T., Yaseen, S., AlNabbat, Y. Y., Murtaza, M., Mahmoud, M., . . . Kamal, M. S. (2023). Comparison of Zirconia Nanoparticles with Conventionally Used Silica Nanoparticles for HTHP Drilling Applications. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213646-MS
19	Mouallem, J., Fathy, A., Arif, M., & Mahmoud, M. (2023). CO ₂ Mineral Trapping Potential of Carbonates: A Numerical Investigation. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> . doi: 10.2118/213517-MS
20	Murtaza, M., Tariq, Z., Kamal, M. S., Rana, A., Patil, S., Mahmoud, M., & Al-Shehri, D. (2023). Application of a Novel Green and Biocompatible Clay Swelling Inhibitor in Fracturing Fluid Design. In <i>SPE Western Regional Meeting Proceedings</i> Vol. 2023-May. doi: 10.2118/213030-MS
21	Fathy, A., Arif, M., Adila, A. S., Raza, A., & Mahmoud, M. (2023). A Numerical Study of Mineral Dissolution in Deep Heterogeneous Carbonate Reservoirs: Implications for CO ₂ Geo-sequestration. In <i>Society of Petroleum Engineers - SPE Reservoir Characterisation and Simulation Conference and Exhibition 2023, RCSC 2023</i> . doi: 10.2118/212632-MS
22	AlKharraa, H. S., Wolf, K. H. A. A., Kwak, H. T., Deshenenkov, I. S., AlDuhailan, M. A., Mahmoud, M. A., . . . Zitha, P. L. J. (2023). A Characterization of Tight Sandstone: Effect of Clay Mineralogy on Pore-Framework. In <i>Society of Petroleum Engineers - SPE Reservoir Characterisation and Simulation Conference and Exhibition 2023, RCSC 2023</i> . doi: 10.2118/212638-MS
23	Tawabini, B., Al-Shahrani, F., Saleh, T., Alrayaan, M., Alaama, S., Nasser, R., . . . Mahmoud, M. (2022, November 27). A lab study to assess the use of biochar-based liquid activated carbon for the removal of MTBE and Benzene from contaminated groundwater. In <i>MedGU-22-P229</i> . Tunisia.
24	Badhafere, D., Oshaish, A., Kirmizakis, P., El-Husseiny, A., Soupios, P., & Mahmoud, M. (2022, November 7). Geophysical monitoring of iron sulfide scales properties. In <i>AAPG middle East Region</i> . Dhahran.
25	Abouelresh, M. O., & Mahmoud, M. (2022). Petrographic Characterization of microporosity in the Organic-Rich Carbonate Hanifa Formation, Jafurah Basin, Saudi Arabia. In <i>SEG Technical Program Expanded Abstracts</i> Vol. 2022-August (pp. 3540-3542). doi: 10.1190/image2022-3745573.1
26	Solling, T., Mahmoud, M., & Pittelkow, M. (2022). Taking a New Approach Towards Chelating Agents for Scale Removal. doi: 10.2523/iptc-22604-ea
27	Fathy, A., Arif, M., Afagwu, C., Rahman, M. D. M., Ali, M., Iglauer, S., . . . Mahmoud, M. (2022). Wettability of Shale/Oil/Brine Systems: A New Physicochemical and Imaging Approach. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22177-MS

28	Adila, A., Arif, M., Mahmoud, M., & Iglauer, S. (2022). Wettability of Hydrogen-rock-brine systems: Implications for Underground Hydrogen Storage. In <i>Unknown Conference</i> (pp. 1-5). doi: 10.3997/2214-4609.202221048
29	BinGhanim, A., Al-Darweesh, J., Aljawad, M. S., Zhou, X., Kamal, M. S., AlYousif, Z., & Mahmoud, M. (2022). Rheological Optimization of CO2 Foamed Chelating Stimulation Fluids at High-Pressure, High-Temperature, and Salinity. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22485-MS
30	Alade, O., Abdullah, E., Alfaraj, M., Hamad, J. A., Hassan, A., Mahmoud, M., . . . Nakhli, A. (2022). Removal of Wax Deposit from Tight Formation Using Ultrasonic Cavitation with Thermochemical Heat Source. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2022-October. doi: 10.2118/210494-MS
31	Hassan, A., Mahmoud, M., & Abdulraheem, A. (2022). Prediction of Dew Point Pressure for High-Pressure Gas Reservoirs Using Artificial Intelligence Techniques. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211064-MS
32	Hashmi, U. I., Osisanya, S., Rahman, M., Ghosh, B., Subaihi, M. H., Bin Kuwair, H. F., . . . Mahmoud, M. (2022). Optimization of Nitrogen Lifting Operation in Horizontal Wells of Carbonate Formation. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22397-MS
33	AlKuroud, D. N., Tariq, Z., Khalil, A. B., Mahmoud, M., Alahmari, M., & Bataweel, M. (2022). Optimization of Enzyme-Induced Calcite Precipitation Process for Oil and Gas Sand Consolidation Applications. In <i>Offshore Technology Conference Asia, OTCA 2022</i> . doi: 10.4043/31454-MS
34	Fathy, A., Arif, M., Raza, A., Mahmoud, M., & Iglauer, S. (2022). Numerical Investigation of Mineral Trapping in Compositionally Distinct Environments: Implications for CO2 Sequestration in Carbonate Reservoirs. In <i>Unknown Conference</i> (pp. 1-5). doi: 10.3997/2214-4609.202221101
35	Afagwu, C. C., Al-Afnan, S. F., Mahmoud, M., & Patil, S. (2022). Langmuir Parameters Prediction: New Insights into the Porosity of the Nanoporous Media of Organic Media of Organic-Rich Shale. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22670-MS
36	Gasimli, N., Mahmoud, M., Hassan, A., Kamal, M. S., Patil, S., & Al-Abdrabalnabi, R. (2022). Iron Sulfide Scale Inhibition Through Adsorption of Chelating Agents. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2022-October. doi: 10.2118/210275-MS
37	Al Malki, F., Alade, O., Al Hamad, J., Al Shehri, D., & Mahmoud, M. (2022). Improved Viscosity Model for Bitumen-Solvent Binary Mixtures. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22561-EA

38	Hassan, A., Tariq, Z., Al-Abdrabalnabi, R., Aljawad, M. S., & Mahmoud, M. (2022). Evaluating the Impact of Rock Hardness and Roughness on Acid Fracturing Conductivity. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22478-MS
39	Al-Darweesh, J., Aljawad, M. S., Kamal, M. S., Al-Yousef, Z., & Mahmoud, M. (2022). Enhancing CO ₂ Foam Viscosity and Stability at Harsh Reservoir Conditions Through the Synergetic Interactions of Surfactant and Polymer. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211465-MS
40	Tariq, Z., Murtaza, M., Kamal, M. S., Hussain, S. M. S., Mahmoud, M., & Al-Jawad, M. (2022). Clay Swelling Mitigation During Fracturing Operations Using Novel Magnetic Surfactants. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22199-MS
41	Mustafa, A., Tariq, Z., Mahmoud, M. A., & Abdulraheem, A. (2022). Artificial Intelligence Approach for Predicting the Shale Brittleness Index - A Middle East Basin Case Study. In <i>Society of Petroleum Engineers - SPE EuroPEC - Europe Energy Conference featured at the 83rd EAGE Annual Conference and Exhibition, EURO 2022</i> . doi: 10.2118/209707-MS
42	Tariq, Z., Gudala, M., Xu, Z., Yan, B., Sun, S., & Mahmoud, M. (2022). An Effective Method of Estimating Nuclear Magnetic Resonance Based Porosity Using Deep Learning Approach. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211360-MS
43	Gasimli, N., Mahmoud, M., Hassan, A., Kamal, M. S., Patil, S., & Al-Abdrabalnabi, R. (2022). Adsorption of Aminopolycarboxylic Acids in Carbonate Formations. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2022-October. doi: 10.2118/210058-MS
44	Hassan, A. M., Elsayed, M. K., Oshaish, A. A., Al-Ofi, S. M., El-Husseiny, A. A. H., Abu-Mahfouz, I. S., . . . Attia, H. M. (2022). A New Workflow to Study the Impact of Artificial Maturations on the Petrophysical Properties of Unconventional Shale Rocks. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211794-MS
45	Eliebid, M., Hassan, A., Mahmoud, M., & Abdulraheem, A. (2022). A New Approach to Quantify the Wellhead Performance for Gas Condensate Reservoirs Using Artificial Intelligent Techniques. In <i>International Petroleum Technology Conference, IPTC 2022</i> . doi: 10.2523/IPTC-22116-MS
46	Tariq, Z., Yan, B., Sun, S., Gudala, M., & Mahmoud, M. (2022). A Machine Learning Based Accelerated Approach to Infer the Breakdown Pressure of the Tight Rocks. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211129-MS

47	Mohamed, E., Elsayed, M., Hassan, A., Mahmoud, M., & El-Husseiny, A. (2022). A Machine Learning Approach to Predict the Permeability from NMR T2 Relaxation Time Distribution for Various Reservoir Rock Types. In <i>Society of Petroleum Engineers - ADIPEC 2022</i> . doi: 10.2118/211624-MS
48	Al-Nakhli, A., Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2021). Thermochemical-pulse fracturing of tight gas: Investigation of pulse loading on fracturing behavior. In <i>Proceedings of the SPE/IADC Middle East Drilling Technology Conference and Exhibition</i> Vol. 2021-May. doi: 10.2118/202190-MS
49	Al-Nakhli, A., Tariq, Z., & Mahmoud, M. (2021). Thermochemical-Pulse Fracturing of Tight Gas: Investigation of Pulse Loading on Fracturing Behavior. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204569-MS
50	Elsayed, M., Kwak, H., El-Husseiny, A., & Mahmoud, M. (2021). The Measurement of Tortuosity of Porous Media Using Imaging, Electrical Measurements, and Pulsed Field Gradient NMR. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204629-MS
51	Afagwu, C. C., Al-Afnan, S. F., & Mahmoud, M. (2021). The impact of kerogen structure on shale permeability: Coupled molecular diffusion and geomechanical behavior study. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2021-September. doi: 10.2118/205922-MS
52	Gasimli, N., Al-Garadi, K., Alshalan, M., Aljawad, M., Glatz, G., Abdalla, M., & Mahmoud, M. (2021). Selection Criterion and Economical Evaluation of Refracturing in Tight Gas-Condensate Reservoirs. In <i>Unknown Conference</i> (pp. 1-5). doi: 10.3997/2214-4609.202112934
53	Hassan, A. M., Mahmoud, M. A., Al-Majed, A. E., & Al-Nakhli, A. R. (2021). Reducing the Capillary Forces in Tight Gas Reservoirs Using Thermochemical Fluids. In <i>55th U.S. Rock Mechanics / Geomechanics Symposium 2021</i> Vol. 4.
54	Hassan, A. M., Aljawad, M. S., & Mahmoud, M. A. (2021). Predicting the Productivity Enhancement after Applying Acid Fracturing Treatments in Naturally Fractured Reservoirs Utilizing Artificial Neural Network. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/208172-MS
55	Othman, A., Aljawad, M. S., Kamal, M. S., Mahmoud, M., & Patil, S. (2021). Optimizing Seawater Based Fracture Fluids Rheology Utilizing Chelating Agents. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204684-MS

56	Ghamdi, A. A. A., Opoku, D., Awotunde, A., Mahmoud, M., & Liao, Q. (2021). Optimization of waterflooding utilizing data driven models: An application of the two-phase capacitance resistance model. In <i>Society of Petroleum Engineers - SPE Europec featured at 82nd EAGE Conference and Exhibition, EURO 2021</i> .
57	Hassan, A. M., Al-Nakhli, A. R., & Mahmoud, M. A. (2021). Novel Sandstone Stimulation Using Thermochemical Fluid: Successful Field Application. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/207702-MS
58	Hassan, A., Mahmoud, M., Kamal, M. S., Al-Majed, A., Al-Nakhli, A., Hussain, S. M. S., & Patil, S. (2021). Mitigation of gas condensate banking using thermochemical fluids and gemini surfactant: A comparison study. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2021-September. doi: 10.2118/206023-MS
59	Hassan, A. M., Mahmoud, M. A., & Al-Nakhli, A. R. (2021). Mitigation of Gas Condensate Banking Using an Integrated Chemical Approach. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/207665-MS
60	Al-Nakhli, A., Al-Jeshi, H., Alade, O., Mahmoud, M., & Buhazah, W. (2021). Improve Oil Production From Tar-Impacted Reservoirs Using In-Situ Steam Generation and Ionic Liquids. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204526-MS
61	Khan, R. A., Ahmad, H. M., Murtaza, M., Abdulraheem, A., Kamal, M. S., & Mahmoud, M. (2021). Impact of multi-branched ionic liquid on shale swelling and hydration for high temperature drilling applications. In <i>Proceedings of the SPE/IADC Middle East Drilling Technology Conference and Exhibition</i> Vol. 2021-May.
62	Khan, M. R., Tariq, Z., & Mahmoud, M. (2021). Generation of Synthetic Photoelectric Log using Machine Learning Approach. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/208201-MS
63	Hassan, A., Al-Nakhli, A., Al-Majed, A., & Mahmoud, M. (2021). Evaluation of Formation Integrity After Flooding Hydrocarbon Reservoirs with Thermochemical and Chelating Agent Solutions. In <i>SPE/AAPG/SEG Unconventional Resources Technology Conference, URTC 2021</i> . doi: 10.15530/urtec-2021-5486
64	Khan, R. A., Murtaza, M., Ahmad, H. M., Abdulraheem, A., Kamal, M. S., & Mahmoud, M. (2021). Development of Novel Shale Swelling Inhibitors Using Hydrophobic Ionic Liquids and Gemini Surfactants for Water-Based Drilling Fluids. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204740-MS

65	Desouky, M., Tariq, Z., Al jawad, M., Alhoori, H., Mahmoud, M., & Abdulraheem, A. (2021). Development of Machine Learning Based Propped Fracture Conductivity Correlations in Shale Formations. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204606-MS
66	Tariq, Z., AlNakhli, A., Abdulraheem, A., & Mahmoud, M. (2021). Core Scale FEM Modeling of Thermochemical Fracturing on Cement Cube Samples. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/208095-MS
67	Al-Nakhli, A., Hassan, A., Mahmoud, M., Al-Baiz, A., & Buhaezah, W. (2021). Condensate Banking Removal Using Slow Release of In-Situ Energized Fluid. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204729-MS
68	Al-Nakhli, A. R., Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2021). Chemically-induced pressure pulse: Fracturing competent reservoirs. In <i>Proceedings of the SPE/IADC Middle East Drilling Technology Conference and Exhibition</i> Vol. 2021-May. doi: 10.2118/202126-MS
69	Isah, A., Adebayo, A. R., Mahmoud, M., Babalola, L. O., & El-Husseiny, A. (2021). Characterization of fluid drainage mechanism at core and pore scales: An NMR capillary pressure-based saturation exponent prediction. In <i>Society of Petroleum Engineers - SPE Europe featured at 82nd EAGE Conference and Exhibition, EURO 2021</i> .
70	Fatima, S., Khan, H. M. M., Tariq, Z., Abdalla, M., & Mahmoud, M. (2021). An Experimental and Simulation Study of CO ₂ Sequestration in an Underground Formations; Impact on Geomechanical and Petrophysical Properties. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2021-November. doi: 10.2118/204726-MS
71	Ogolo, O., Nzerem, P., Okafor, I., Abubakar, R., Mahmoud, M., & Kalu, G. (2021). A hybrid petroleum fiscal system for investment in the exploration and production E&P of hydrocarbon. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2021-September. doi: 10.2118/206349-MS
72	Tariq, Z., Aljawad, M. S., Murtaza, M., Mahmoud, M., Al-Shehri, D., & Abdulraheem, A. (2021). A data-driven approach to predict the breakdown pressure of the tight and unconventional formation. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2021-September. doi: 10.2118/206136-MS
73	Alkhowaildi, M. A., Mahmoud, M., Bataweel, M. A., & Tawabini, B. (2021). A Comprehensive Review on the Characteristics, Challenges and Reuse Opportunities Associated with Produced Water in Fracturing Operations. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference, ADIP 2021</i> . doi: 10.2118/207835-MS

74	Lawal, L., & Mahmoud, M. (2020). Poisson's ratio, porosity and aspect ratio as geomechanical index of shale brittleness. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> .
75	Kalam, S., Khan, M., Mahmoud, M., Khan, R. A., & Abu-Khamsin, S. A. (2020). New vision into relative permeability estimation using artificial neural networks. In <i>Society of Petroleum Engineers - SPE Asia Pacific Oil and Gas Conference and Exhibition 2020, APOG 2020</i> .
76	Ba alawi, M., Gharbi, S., & Mahmoud, M. (2020). Modeling and prediction of resistivity, capillary pressure and relative permeability using artificial neural network. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-19854-ms
77	Olayiwola, T., El-Husseiny, A., Mahmoud, M., & Ali, A. W. (2020). Machine learning approach to predict variations of compressional wave velocity as function of pressure in carbonates. In <i>5th EAGE Workshop on Rock Physics - Advancements in Rock Physics: Embracing the Fourth Industry Revolution</i> . doi: 10.3997/2214-4609.2020603018
78	Alade, O., Hassan, A., Shehri, D. A., Mahmoud, M., Nakhli, A., & Bataweel, M. (2020). Investigation into emulsion blockage removal using thermochemical fluid. In <i>Proceedings - SPE International Symposium on Formation Damage Control</i> Vol. 2020-February.
79	Al Jaber, J. B., Bageri, B. S., Barri, A., Adebayo, A., Patil, S., Babu, R., & Rizwanullah, S. (2020). Insight into secondary posterior formation damage during barite filter cake removal in calcite formations. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-19611-ms
80	Chan, S. A., Hassan, A. M., Humphrey, J. D., Mahmoud, M. A., & Abdulraheem, A. (2020). Evaluation of brittleness index based on mineral compositions prediction using artificial neural network. In <i>ARMA/DGS/SEG International Geomechanics Symposium 2020, IGS 2020</i> .
80	Hassan, A., Mahmoud, M., Al-Majed, A., & Al-Nakhli, A. (2020). Enhance the gas productivity for shale gas reservoirs using thermochemical treatment. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-19603-abstract
82	Al-Dossary, B., AL-Naser, M., Al-Dogail, A., Gajbhiye, R., Al-Qathmi, A., & Mahmoud, M. (2020). Decision support system for optimizing GOSP operation. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-20021-abstract
83	Al-Nakhli, A. R., Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2020). Chemically-induced pressure pulse: Fracturing competent reservoirs. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2020, ADIP 2020</i> .

84	Al-Rubaii, M. M., Mahmoud, M. A., Gajbhiye, R. N., Al-Yami, A., Al-Awami, M. B., & Alafnna, S. (2020). Automated evaluation of rocks physical properties to enhance drilling efficiency and reduce non-productive time. In <i>SPE/IADC Drilling Conference, Proceedings</i> Vol. 2020-March.
85	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., Al-Nakhli, A., Murtaza, M., & Mustafa, A. (2020). An experimental study and finite element modelling of thermochemical fracturing in ultra-tight cement mortar samples. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-19916-ms
86	Kalam, S., Khan, M., Khan, R. A., Alam, M. M. M., Sadeed, A., Mahmoud, M., & Abu-Khamsin, S. A. (2020). Advancing relative permeability estimation through data-driven modeling. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2020, ADIP 2020</i> .
87	Al-Nakhli, A. R., Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2020). A State-of-The-Art Technology to Reduce Fracturing Pressure in Tight Gas Formations Using Thermochemical Pulse. doi: 10.15530/urtec-2020-2439
88	Hassan, A. M., Mahmoud, M. A., Al-Majed, A. E., & Al-Nakhli, A. R. (2020). A novel treatment for mitigating condensate damage and improving reservoir productivity using thermochemical fluids. In <i>ARMA/DGS/SEG International Geomechanics Symposium 2020, IGS 2020</i> .
89	Hassan, A., Mahmoud, M., Al-Majed, A., & Abdulraheem, A. (2020). A new technique to quantify the productivity of complex wells using artificial intelligence tools. In <i>International Petroleum Technology Conference 2020, IPTC 2020</i> . doi: 10.2523/iptc-19706-abstract
90	Ahmed S., A., Mahmoud, A. A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2019). Prediction of Pore and Fracture Pressures Using Support Vector Machine. doi: 10.2523/19523-ms
91	Murtaza, M., Mahmoud, M., Elkatatny, S., Majed, A. A., Chen, W., & Jamaluddin, A. (2019). Experimental Investigation of the Impact of Modified Nano Clay on the Rheology of Oil Well Cement Slurry. doi: 10.2523/19456-ms
92	Al-Nakhli, A., Mahmoud, M., Al-Badairy, H., & Alqam, M. (2019). Advanced Study of Pore Structure and Mechanical Property Change of Tight Sand Due to Thermochemical Treatment. doi: 10.2523/19150-ms
93	Murtaza, M., Rahman, M. K., Al Majed, A. A., Tariq, Z., & Mahmoud, M. (2019). Scratch test for strength and toughness of oil well cement with nanoclay as an additive. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> . doi: 10.2118/197681-ms

94	Al-Nakhli, A., Hassan, A., Mahmoud, M., & Al-Majed, A. (2019). Removal of condensate banking from different formations using thermochemical treatment. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
95	Al-Nakhli, A., Aramco, S., Zeeshan, T., Mahmoud, M., & Abdulraheem, A. (2019). Reducing breakdown pressure of tight reservoirs via in-situ pulses: Impact of mineralogy. In <i>Society of Petroleum Engineers - SPE/IATMI Asia Pacific Oil and Gas Conference and Exhibition 2019, APOG 2019</i> .
96	Abdulmalek Ahmed, S., Elkatatny, S., Ali, A. Z., Mahmoud, M., & Abdulraheem, A. (2019). Rate of penetration prediction in shale formation using fuzzy logic. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> .
97	Muqtadir, A., Elkatatny, S. M., Mahmoud, M. A., Abdulraheem, A., & Gomaa, A. (2019). Quantifying the Reduction in Breakdown Pressure based on Fluid Saturation. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .
98	Abdulmalek Ahmed, S., Mahmoud, A. A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2019). Prediction of pore and fracture pressures using support vector machine. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> .
99	Hassan, A., Mahmoud, M., Al-Majed, A., Al-Nakhli, A., BaTaweel, M., Aramco, S., & Elktatany, S. (2019). Permanent removal of condensate banking in tight gas reservoirs using thermochemicals. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry Vol. 2019</i> .
100	Al-Nakhli, A., BaTaweel, M., Mustafa, A., Tariq, Z., Mahmoud, M., & Abdulrahim, A. (2019). Novel methodology to reduce the strength of high stress-tight gas reservoirs using thermochemical. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .
101	Al-Nakhli, A., Hassan, A., Mahmoud, M., BaTaweel, M., & Al-Majed, A. (2019). Novel condensate removal with in-situ pressure generation via thermochemical fluids in different sandstone formations. In <i>Society of Petroleum Engineers - SPE/IATMI Asia Pacific Oil and Gas Conference and Exhibition 2019, APOG 2019</i> . doi: 10.2118/196523-ms
102	Mahmoud, A. A., Elkatatny, S., Abdulmalek Ahmed, S., & Mahmoud, M. (2019). Nanoclay content influence on cement strength for oil wells subjected to cyclic steam injection and high-temperature conditions. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2018, ADIPEC 2018</i> .
103	Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2019). Method for Estimating Permeability in carbonate reservoirs from Typical Logging Parameters using Functional Network. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .

104	Mustafa, A., Tariq, Z., Abdulraheem, A., Mahmoud, M., Al Nakhli, A., & BaTaweel, M. (2019). Increasing stimulated reservoir volume SRV in unconventional reservoirs: Microstructural and rock mechanical study. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2018, ADIPEC 2018</i> .
105	Mahmoud, A. A., Elkatatny, S., & Mahmoud, M. (2019). Improving class G cement carbonation resistance using nanoclay particles for geologic carbon sequestration applications. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2018, ADIPEC 2018</i> .
106	Hassan, A., Al-Majed, A., Mahmoud, M., Elkatatny, S., & Abdulraheem, A. (2019). Improved predictions in oil operations using artificial intelligent techniques. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194994-ms
107	Moussa, T., Patil, S., & Mahmoud, M. (2019). Feasibility study of heavy oil recovery using in-situ steam generated by thermochemicals. In <i>SPE Western Regional Meeting Proceedings</i> Vol. 2019. doi: 10.2118/195358-ms
108	Murtaza, M., Mahmoud, M., Elkatatny, S., Al Majed, A., Chen, W., & Jamaluddin, A. (2019). Experimental investigation of the impact of modified nano clay on the rheology of oil well cement slurry. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> .
109	Murtaza, M., Mahmoud, M., Elkatatny, S., Al Majed, A., Chen, W., & Jamaluddin, A. (2019). Experimental investigation of the impact of modified nano clay on the rheology of oil well cement slurry. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> . doi: 10.2523/iptc-19456-ms
110	Murtaza, M., Kamal, M. S., Hussain, S. M. S., & Mahmoud, M. (2019). Experimental investigation of newly synthesized gemini surfactants as shale inhibitors in drilling fluids. In <i>Society of Petroleum Engineers - SPE/PAPG Pakistan Section Annual Technical Symposium and Exhibition 2019, PATS 2019</i> .
111	Murtaza, M., Kamal, M. S., Hussain, S. M. S., & Mahmoud, M. (2019). Experimental investigation of newly synthesized gemini surfactants as shale inhibitors in drilling fluids. In <i>Society of Petroleum Engineers - SPE/PAPG Pakistan Section Annual Technical Symposium and Exhibition 2019, PATS 2019</i> . doi: 10.2118/201181-MS
112	Ahmed, M., Onawole, A., Hussien, I., Saad, M., Mahmoud, M., & Nimir, H. (2019). Effect of pH on dissolution of iron sulfide scales using THPS. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 2019. doi: 10.2118/193573-ms
113	Al-Azani, K., Al-Yousef, H., & Mahmoud, M. (2019). Effect of permeability anisotropy on probe permeameter measurements. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194769-ms

114	Ba geri, B. S., Mahmoud, M., Elkatatny, S., Patil, S., Benaafi, M., & Mohamed, A. (2019). Effect of drill cuttings mechanical properties on filter cake properties and mud-filtrate invasion. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .
115	Abdelgawad, K., Mahmoud, M., Elkatatny, S., & Patil, S. (2019). Effect of calcium carbonate on barite solubility using a chelating agent and converter. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 2019. doi: 10.2118/193566-ms
116	Radwan, A. E., Abudeif, A., Attia, M., & Mahmoud, M. (2019). Development of formation damage diagnosis workflow, application on hammam faraun reservoir: A case study, Gulf of Suez, Egypt. In <i>Offshore Mediterranean Conference and Exhibition 2019, OMC 2019</i> .
117	Hassan, A., Mahmoud, M., Al-Majed, A., Alade, O., Al-Nakhli, A., BaTaweel, M., & Elktatany, S. (2019). Development of a new chemical treatment for removing water blockage in tight reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194879-ms
118	Alade, O., Al Shehri, D., Mahmoud, M., Sasaki, K., & Sugai, Y. (2019). Computational fluid dynamics CFD evaluation of laminar flow of bitumen-in-water emulsion stabilized by poly vinyl alcohol PVA: Effects of salinity and water cut. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194778-ms
119	Abdulmalek Ahmed, S., Elkatatny, S., Ali, A. Z., Abdulraheem, A., & Mahmoud, M. (2019). Artificial neural network ANN approach to predict fracture pressure. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March.
120	Muqtadir, A., Elkatatny, S. M., Tariq, Z., Mahmoud, M. A., & Abdulraheem, A. (2019). Application of artificial intelligence to predict sonic wave transit time in unconventional tight sandstones. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .
121	Muqtadir, A., Elkatatny, S. M., Tariq, Z., Mahmoud, M. A., & Abdulraheem, A. (2019). Application of artificial intelligence to predict sonic wave transit time in unconventional tight sandstones. In <i>53rd U.S. Rock Mechanics/Geomechanics Symposium</i> .
122	Tariq, Z., Mahmoud, M., & Asad, A. (2019). An intelligent data-driven framework to develop new correlation to predict gas deviation factor for high-temperature and high-pressure gas reservoirs using artificial neural network. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194715-ms

123	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., Al-Nakhli, A., & Asad, A. (2019). An experimental evaluation of thermochemical fracturing in layered formations. In <i>Society of Petroleum Engineers - SPE/PAPG Pakistan Section Annual Technical Symposium and Exhibition 2019, PATS 2019</i> .
124	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., Al-Nakhli, A., & Asad, A. (2019). An experimental evaluation of thermochemical fracturing in layered formations. In <i>Society of Petroleum Engineers - SPE/PAPG Pakistan Section Annual Technical Symposium and Exhibition 2019, PATS 2019</i> .
125	Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2019). An artificial intelligence approach to predict the water saturation in carbonate reservoir rocks. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2019-September. doi: 10.2118/195804-ms
126	Al-Nakhli, A., Mahmoud, M., Al-Badairy, H., & Alqam, M. (2019). Advanced study of pore structure and mechanical property change of tight sand due to thermochemical treatment. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> .
127	Al-Nakhli, A., Mahmoud, M., Al-Badairy, H., & Alqam, M. (2019). Advanced study of pore structure and mechanical property change of tight sand due to thermochemical treatment. In <i>International Petroleum Technology Conference 2019, IPTC 2019</i> . doi: 10.2523/iptc-19150-ms
128	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Nakhli, A., & Bataweel, M. (2019). A review of pulse fracturing treatment: An emerging stimulation technique for unconventional reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2019-March. doi: 10.2118/194870-ms
129	Mustafa, A., Mahmoud, M. A., & Abdulraheem, A. (2019). A review of pore structure characterization of unconventional tight reservoirs. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
130	Mustafa, A., Mahmoud, M. A., & Abdulraheem, A. (2019). A review of pore structure characterization of unconventional tight reservoirs. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
131	Al-Nakhli, A., Tariq, Z., Mahmoud, M., Abdulraheem, A., & Al-Shehri, D. (2019). A novel thermochemical fracturing approach to reduce fracturing pressure of high strength rocks. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> . doi: 10.2118/197593-ms
132	Al-Nakhli, A., Tariq, Z., Mahmoud, M., Abdulraheem, A., & Al-Shehri, D. (2019). A novel thermochemical fracturing approach to reduce fracturing pressure of high strength rocks. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .

133	Hassan, A., Alade, O., Mahmoud, M., & Al-Majed, A. (2019). A novel technique for removing wax deposition in the production system using thermochemical fluids. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
134	Hassan, A., Alade, O., Mahmoud, M., & Al-Majed, A. (2019). A novel technique for removing wax deposition in the production system using thermochemical fluids. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
135	Hassan, A., Alade, O., Mahmoud, M., & Al-Majed, A. (2019). A novel technique for removing wax deposition in the production system using thermochemical fluids. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> . doi: 10.2118/197323-ms
136	Lawal, L. O., Mahmoud, M., Adebayo, A. R., & Syed, R. H. (2019). A novel method to determine kerogen content of tight gas shale. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings Vol. 2019-March</i> . doi: 10.2118/194808-ms
137	Al-Nakhli, A., Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., & Murtaza, M. (2019). A novel approach to reduce breakdown pressure of unconventional rocks using cyclic injection scheme. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
138	Al-Nakhli, A., Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., & Murtaza, M. (2019). A novel approach to reduce breakdown pressure of unconventional rocks using cyclic injection scheme. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> .
139	Al-Nakhli, A., Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., & Murtaza, M. (2019). A novel approach to reduce breakdown pressure of unconventional rocks using cyclic injection scheme. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019</i> . doi: 10.2118/197595-ms
140	Jafarov, T., Elkatatny, S., Al-Majid, A., & Mahmoud, M. (2018). Zero solid invasion water-based drilling fluid. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
141	Jafarov, T., Elkatatny, S., Al-Majid, A., & Mahmoud, M. (2018). Zero solid invasion water-based drilling fluid. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192189-ms

142	Mahmoud, M. A., Mohamed, I. M., Nasr-El-Din, H. A., & De Wolf, C. A. (2018). When should we use chelating agents in carbonate stimulation?. In <i>Society of Petroleum Engineers - SPE/DGS Saudi Arabia Section Technical Symposium and Exhibition 2011</i> (pp. 1238-1252).
143	Moussa, T., Patil, S., Mahmoud, M., & Elkatatny, S. (2018). Well-placement optimization in a novel heavy oil recovery process using in-situ steam generated by thermochemicals. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
144	Moussa, T., Patil, S., Mahmoud, M., & Elkatatny, S. (2018). Well-placement optimization in a novel heavy oil recovery process using in-situ steam generated by thermochemicals. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192378-ms
145	Eliebid, M., Mahmoud, M., Al-Shehri, D., Elkatatny, S., Abouelresh, M., & Shawabkeh, R. (2018). Temperature impact on adsorption contribution to sequestration of CO ₂ in immature shale formations in Saudi Arabia. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
146	Al-Azani, K., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Al-Shehri, D. (2018). Real time prediction of the rheological properties of oil-based drilling fluids using artificial neural networks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
147	Al-Azani, K., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Al-Shehri, D. (2018). Real time prediction of the rheological properties of oil-based drilling fluids using artificial neural networks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192199-ms
148	Abdelgawad, K., Elkatatny, S., Mousa, T., Mahmoud, M., & Patil, S. (2018). Real time determination of rheological properties of spud drilling fluids using a hybrid artificial intelligence technique. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
149	Abdelgawad, K., Elkatatny, S., Mousa, T., Mahmoud, M., & Patil, S. (2018). Real time determination of rheological properties of spud drilling fluids using a hybrid artificial intelligence technique. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192257-ms
150	Basfar, S., Elkatatny, S., Mahmoud, M., Kamal, M. S., Murtaza, M., & Stanitzek, T. (2018). Prevention of barite sagging while drilling high-pressure high-temperature (HPHT) wells. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .

151	Basfar, S., Elkatatny, S., Mahmoud, M., Kamal, M. S., Murtaza, M., & Stanitzek, T. (2018). Prevention of barite sagging while drilling high-pressure high-temperature (HPHT) wells. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192198-ms
152	Abdulmalek Ahmed, S., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Ali, A. Z. (2018). Prediction of rate of penetration of deep and tight formation using support vector machine. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
153	Al-Azani, K., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Ali, A. (2018). Prediction of cutting concentration in horizontal and deviated wells using support vector machine. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
154	Al-Azani, K., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Ali, A. (2018). Prediction of cutting concentration in horizontal and deviated wells using support vector machine. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192193-ms
155	Al-AbdulJabbar, A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2018). Predicting rate of penetration using artificial intelligence techniques. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
156	Al-AbdulJabbar, A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2018). Predicting rate of penetration using artificial intelligence techniques. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192343-ms
157	Al-Abdul Jabbar, A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2018). Predicting formation tops while drilling using artificial intelligence. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
158	Al-Abdul Jabbar, A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2018). Predicting formation tops while drilling using artificial intelligence. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192345-ms
159	Abdulmalek Ahmed, S., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Ali, A. Z. (2018). Pore pressure prediction while drilling using fuzzy logic. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .

160	Moussa, T., Patil, S., & Mahmoud, M. (2018). Performance and economic analysis of a novel heavy oil recovery process using in-situ steam and nitrogen generated by thermochemicals. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
161	Moussa, T., Patil, S., & Mahmoud, M. (2018). Performance and economic analysis of a novel heavy oil recovery process using in-situ steam and nitrogen generated by thermochemicals. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192432-ms
162	Moussa, T. M., Patil, S., & Mahmoud, M. A. (2018). Performance analysis of a novel heavy oil recovery process using in-situ steam generated by thermochemicals. In <i>SPE Western Regional Meeting Proceedings Vol. 2018-April</i> . doi: 10.2118/190074-ms
163	Alakbari, F., Elkatatny, S., Kamal, M. S., & Mahmoud, M. (2018). Optimizing the gel strength of water-based drilling fluid using clays for drilling horizontal and multi-lateral wells. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
164	Alakbari, F., Elkatatny, S., Kamal, M. S., & Mahmoud, M. (2018). Optimizing the gel strength of water-based drilling fluid using clays for drilling horizontal and multi-lateral wells. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192191-ms
165	Moussa, T., Mahmoud, M., Patil, S., Elkatatny, S., & Abdelgawad, K. (2018). Optimization of a thermochemical recovery process using global optimization methods to enhance heavy oil recovery. In <i>Society of Petroleum Engineers - SPE International Heavy Oil Conference and Exhibition 2018, HOCE 2018</i> . doi: 10.2118/193791-MS
166	Tariq, Z., Mahmoud, M. A., Abdulraheem, A., & Al-Shehri, D. A. (2018). On utilizing functional network to develop mathematical model for Poisson's ratio determination. In <i>52nd U.S. Rock Mechanics/Geomechanics Symposium</i> .
167	Tariq, Z., Mahmoud, M., Al-Yousef, H., & Khan, M. R. (2018). Non-archie rock characterization using triple porosity conductivity model in carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
168	Tariq, Z., Mahmoud, M., Al-Yousef, H., & Khan, M. R. (2018). Non-archie rock characterization using triple porosity conductivity model in carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192423-ms

169	Elzenary, M., Elkatatny, S., Abdelgawad, K. Z., Abdulraheem, A., Mahmoud, M., & Al-Shehri, D. (2018). New technology to evaluate equivalent circulating density while drilling using artificial intelligence. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
170	Elzenary, M., Elkatatny, S., Abdelgawad, K. Z., Abdulraheem, A., Mahmoud, M., & Al-Shehri, D. (2018). New technology to evaluate equivalent circulating density while drilling using artificial intelligence. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192282-ms
171	Hassan, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., & Hossain, E. (2018). New technique to estimate temperature distribution during thermal EOR operations. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
172	Hassan, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., & Hossain, E. (2018). New technique to estimate temperature distribution during thermal EOR operations. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192350-ms
173	Elkatatny, S., Basfer, S., Mahmoud, M., Shawabkeh, R., & Bahgat, M. (2018). New hydrogen sulfide scavenger for drilling sour horizontal and multilateral reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
174	Elkatatny, S., Basfer, S., Mahmoud, M., Shawabkeh, R., & Bahgat, M. (2018). New hydrogen sulfide scavenger for drilling sour horizontal and multilateral reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192188-ms
175	Abdulmalek Ahmed, S., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Ali, A. Z. (2018). New approach to predict fracture pressure using functional networks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
176	Eliebid, M., Hassan, A. M., Mahmoud, M., Abdulraheem, A., & Elkatatny, S. (2018). Intelligent Prediction of Acid-fracturing Performance in Carbonates Reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
177	Eliebid, M., Hassan, A. M., Mahmoud, M., Abdulraheem, A., & Elkatatny, S. (2018). Intelligent Prediction of Acid-fracturing Performance in Carbonates Reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192356-ms

178	Jafarov, T., Mahmoud, M., Al-Majed, A., Elkatatny, S., & Bageri, B. (2018). Improving well productivity of tight gas reservoirs by using sodium silicate in water-based drill-in fluid. In <i>Proceedings - SPE International Symposium on Formation Damage Control</i> Vol. 2018-February. doi: 10.2118/189535-ms
179	Tariq, Z., Abdulraheem, A., Elkatatny, S., Mahmoud, M., Muqtadir, A., & Murtaza, M. (2018). Geomechanical studies on CO2 sequestrated rocks in an aqueous saline environment. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
180	AL-Dogail, A. S., Gajbhiye, R. N., Mahmoud, M., & ElKatatny, S. (2018). Evaluating the effects of surface tension and viscosity on two-phase flow in horizontal pipes. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
181	AL-Dogail, A. S., Gajbhiye, R. N., Mahmoud, M., & ElKatatny, S. (2018). Evaluating the effects of surface tension and viscosity on two-phase flow in horizontal pipes. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192276-ms
182	Muqtadir, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., & Gomaa, A. (2018). Effect of the type of fracturing fluid on the breakdown pressure of tight sandstone rocks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
183	Muqtadir, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., & Gomaa, A. (2018). Effect of the type of fracturing fluid on the breakdown pressure of tight sandstone rocks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192365-ms
184	Arqam, M., Elkatatny, S. M., Mahmoud, M. A., Abdulraheem, A., & Gomaa, A. (2018). Effect of saturating fluid on the geomechanical properties of low permeability Scioto sandstone rocks. In <i>52nd U.S. Rock Mechanics/Geomechanics Symposium</i> .
185	Hassan, A. M., Mahmoud, M. A., Al-Majed, A. E., Elkatatny, S. M., Al-Nakhli, A. R., & Bataweel, M. A. (2018). Effect of in-situ generation of heat and pressure on phase behavior of gas condensate. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
186	Hassan, A. M., Mahmoud, M. A., Al-Majed, A. E., Elkatatny, S. M., Al-Nakhli, A. R., & Bataweel, M. A. (2018). Effect of in-situ generation of heat and pressure on phase behavior of gas condensate. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192348-ms

187	Eliebid, M., Mahmoud, M., Al-Yousef, H. Y., Elkatatny, S., & Al-Garadi, K. (2018). Effect of gas adsorption on pulse-decay permeability measurements. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
188	Eliebid, M., Mahmoud, M., Al-Yousef, H. Y., Elkatatny, S., & Al-Garadi, K. (2018). Effect of gas adsorption on pulse-decay permeability measurements. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192397-ms
189	Hassan, A., Al-Majed, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., Nader, M., . . . Khamis, M. (2018). Developing an efficient drilling system by coupling torque modelling with mechanical specific energy. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
190	Hassan, A., Al-Majed, A., Elkatatny, S., Mahmoud, M., Abdulraheem, A., Nader, M., . . . Khamis, M. (2018). Developing an efficient drilling system by coupling torque modelling with mechanical specific energy. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192251-ms
191	Gowida, A. H., Ahmad, Z., Elkatatny, S., & Mahmoud, M. (2018). Cement evaluation challenges. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
192	Gowida, A. H., Ahmad, Z., Elkatatny, S., & Mahmoud, M. (2018). Cement evaluation challenges. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192360-ms
193	Tariq, Z., Mahmoud, M., Hassan, A., Rasheed Khan, M., & Sadeed, A. (2018). Carbonate Rock Resistivity Index Measurement using Equivalent Rock Model. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
194	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., Khan, M. R., & Janjua, A. N. (2018). An intelligent solution to forecast pressure drop in a vertical well having multiphase flow using functional network technique. In <i>Society of Petroleum Engineers - PAPG/SPE Pakistan Section Annual Technical Conference and Exhibition 2018, PATC 2018</i> .
195	Tariq, Z., Mahmoud, M., Abdulraheem, A., Al-Shehri, D., Khan, M. R., & Janjua, A. N. (2018). An intelligent solution to forecast pressure drop in a vertical well having multiphase flow using functional network technique. In <i>Society of Petroleum Engineers - PAPG/SPE Pakistan Section Annual Technical Conference and Exhibition 2018, PATC 2018</i> . doi: 10.2118/195656-ms

196	Tariq, Z., Mahmoud, M., Al-Shehri, D., Sibaweihi, N., Sadeed, A., & Enamul Hossain, M. (2018). A stochastic optimization approach for profit maximization using alkaline-surfactant-polymer flooding in complex reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
197	Elkatatny, S., Mousa, T., & Mahmoud, M. (2018). A new approach to determine the rheology parameters for water-based drilling fluid using artificial neural network. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
198	Elkatatny, S., Mousa, T., & Mahmoud, M. (2018). A new approach to determine the rheology parameters for water-based drilling fluid using artificial neural network. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> . doi: 10.2118/192190-ms
199	Elkatatny, S. M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2018). A new approach to determine filter cake properties of water-based drilling fluids. In <i>Society of Petroleum Engineers - SPE/DGS Saudi Arabia Section Technical Symposium and Exhibition 2011</i> (pp. 730-743).
200	Hassan, A., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2018). A new approach to characterize CO ₂ flooding utilizing artificial intelligence techniques. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2018, SATS 2018</i> .
201	BaGeri, B. S., Mahmoud, M., Al-Majed, A. A., Al-Mutairi, S. H., Abdulazeez, A., & Shawabkeh, R. (2017). Water base barite filter cake removal using non-corrosive agents. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2017-March (pp. 2940-2947). doi: 10.2118/183653-ms
202	Mahmoud, M., & Elkatatny, S. (2017). Towards a complete removal of barite weighted water and oil based-drilling fluids in single stage. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 0. doi: 10.2118/187122-ms
203	Mohamed, A. K., Elkatatny, S. A., Mahmoud, M. A., Shawabkeh, R. A., & Al-Majed, A. A. (2017). The evaluation of micronized barite as a weighting material for completing HPHT wells. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2017-March (pp. 697-712). doi: 10.2118/183768-ms
204	Eliebid, M., Mahmoud, M., Shawabkeh, R., & Elkatatny, S. (2017). Surfactants impact on CO ₂ sequestration for enhanced gas recovery and in depleted carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Abu Dhabi International Petroleum Exhibition and Conference 2017</i> Vol. 2017-January.

205	Abdelgawad, K. Z., Mahmoud, M. A., & Elkatatny, S. M. (2017). Stimulation of high temperature carbonate reservoirs using seawater and GLDA chelating agents: Reaction kinetics comparative study. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> .
206	Abdelgawad, K. Z., Mahmoud, M. A., & Elkatatny, S. M. (2017). Stimulation of high temperature carbonate reservoirs using seawater and GLDA chelating agents: Reaction kinetics comparative study. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> . doi: 10.2118/187558-ms
207	Elkatatny, S., & Mahmoud, M. (2017). Real time prediction of the rheological parameters of NaCl water-based drilling fluid using artificial neural networks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 1726-1740). doi: 10.2118/187976-ms
208	Adewole, J. K., Sultan, A. S., Fogang, L. T., & Mahmoud, M. A. N. (2017). Processing and compositional characterization of khulays clay for drilling fluid application. In <i>Process Development Division 2017 - Core Programming Area at the 2017 AIChE Annual Meeting</i> Vol. 2017-October (pp. 23-38).
209	Elkatatny, S. M., Tariq, Z., Mahmoud, M. A., & Al-AbdulJabbar, A. (2017). Optimization of rate of penetration using artificial intelligent techniques. In <i>51st US Rock Mechanics / Geomechanics Symposium 2017</i> Vol. 3 (pp. 1620-1627).
210	Mahmoud, A. A., ElKatatny, S., Abdulraheem, A., Mahmoud, M., Ibrahim, M. O., & Ali, A. (2017). New technique to determine the total organic carbon based on well logs using artificial neural network (white box). In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 1441-1452).
211	Elkatatny, S., Mahmoud, M., & Shawabkeh, R. (2017). Investigating the compatibility of enzyme with chelating agents for calcium carbonate-filter cake removal. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 1154-1169). doi: 10.2118/187978-ms
212	Tariq, Z., Elkatatny, S. M., Mahmoud, M. A., Abdulraheem, A., Abdelwahab, A. Z., & Woldeamanuel, M. (2017). Estimation of rock mechanical parameters using artificial intelligence tools. In <i>51st US Rock Mechanics / Geomechanics Symposium 2017</i> Vol. 2 (pp. 1036-1046).
213	Alloush, R. M., Elkatatny, S. M., Mahmoud, M. A., Moussa, T. M., Ali, A. Z., & Abdulraheem, A. (2017). Estimation of geomechanical failure parameters from well logs using artificial intelligence techniques. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> .

214	Alloush, R. M., Elkatatny, S. M., Mahmoud, M. A., Moussa, T. M., Ali, A. Z., & Abdulraheem, A. (2017). Estimation of geomechanical failure parameters from well logs using artificial intelligence techniques. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> . doi: 10.2118/187625-ms
215	Hasan, M., Eliebid, M., Mahmoud, M., Elkatatny, S., & Shawabkeh, R. (2017). Enhanced Gas Recovery (EGR) methods and production enhancement techniques for shale & tight gas reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 639-646).
216	Eliebid, M., Mahmoud, M., Shawabkeh, R., Elkatatny, S., Sultan, A., Abouelresh, M., & Al-Shehri, D. (2017). Effect of temperature and CO2 content on the natural gas production from shale gas reservoirs. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 599-613).
217	Abdulazeem, A., Mahmoud, M., Elkatatny, S., Barri, A., & Muhammadain, A. (2017). Effect of novel chelating agent seawater-based system on the integrity of sandstone rocks. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 2258-2267).
218	Eliebid, M., Mahmoud, M., Shawabkeh, R., Elkatatny, S., & Hussein, I. (2017). Effect of CO2 content on the natural gas production from tight gas sandstone reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2017-March (pp. 526-538).
219	Abdulazeem, A., Mahmoud, M., Elkatatny, S., Barri, A., & Muhammadain, A. (2017). Development of new seawater-based formulation to stimulate sandstone formations. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 460-468).
220	Tariq, Z., Elkatatny, S. M., Mahmoud, M. A., Abdulraheem, A., Abdelwahab, A. Z., Woldeamanuel, M., & Mohamed, I. M. (2017). Development of new correlation of unconfined compressive strength for carbonate reservoir using artificial intelligence techniques. In <i>51st US Rock Mechanics / Geomechanics Symposium 2017</i> Vol. 3 (pp. 1614-1619).
221	Mohammed, M. N., Mahmoud, M., & Elkatatny, S. (2017). Development of a smart fracturing fluid for tight and unconventional reservoirs. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 0. doi: 10.2118/187125-ms
222	Elkatatny, S., Aloosh, R., Tariq, Z., Mahmoud, M., & Abdulraheem, A. (2017). Development of a new correlation for bubble point pressure in oil reservoirs using artificial intelligence technique. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 438-451). doi: 10.2118/187977-ms

223	Ahmed, A. A., Elkatatny, S., Abdulraheem, A., & Mahmoud, M. (2017). Application of artificial intelligence techniques in estimating oil recovery factor for water derive sandy reservoirs. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> .
224	Ahmed, A. A., Elkatatny, S., Abdulraheem, A., & Mahmoud, M. (2017). Application of artificial intelligence techniques in estimating oil recovery factor for water derive sandy reservoirs. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> . doi: 10.2118/187621-ms
225	Elkatatny, S. M., Tariq, Z., Mahmoud, M. A., Abdulraheem., Abdelwahab, Z. A., Woldeamanuel, M., & Mohamed, I. M. (2017). An artificial intelligent approach to predict static Poisson's ratio. In <i>51st US Rock Mechanics / Geomechanics Symposium 2017</i> Vol. 4 (pp. 2854-2860).
226	Eliebid, M., Mahmoud, M., Elkatatny, S., Abouelresh, M., & Shawabkeh, R. (2017). Adsorption role in shale gas recovery and the feasibility of CO2 in shale enhanced gas recovery: A study on shale gas from Saudi Arabia. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference 2017</i> .
227	Tariq, Z., Elkatatny, S., Mahmoud, M., Ali, A. Z., & Abdulraheem, A. (2017). A new technique to develop rock strength correlation using artificial intelligence tools. In <i>Society of Petroleum Engineers - SPE Reservoir Characterisation and Simulation Conference and Exhibition, RCSC 2017</i> (pp. 1340-1353). doi: 10.2118/186062-ms
228	Tariq, Z., Elkatatny, S., Mahmoud, M., Ali, A. Z., & Abdulraheem, A. (2017). A new approach to predict failure parameters of carbonate rocks using artificial intelligence tools. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 1428-1440). doi: 10.2118/187974-ms
229	Moussa, T., Elkatatny, S., Abdulraheem, A., Mahmoud, M., & Alloush, R. (2017). A hybrid artificial intelligence method to predict gas solubility and bubble point pressure. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition 2017</i> (pp. 1681-1689). doi: 10.2118/188102-ms
230	Tariq, Z., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2016). A New Artificial Intelligence Based Empirical Correlation to Predict Sonic Travel Time. doi: 10.2523/19005-ms
231	Tariq, Z., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2016). A New Artificial Intelligence Based Empirical Correlation to Predict Sonic Travel Time. doi: 10.2523/iptc-19005-ms
232	Attia, M., Mahmoud, M., Abdulraheem, A., & Abido, M. A. (2016). Prediction of the gas compressibility factor using coefficient-matrices based on ANN. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition</i> .

233	Attia, M., Mahmoud, M., Abdulraheem, A., & Abido, M. A. (2016). Prediction of the gas compressibility factor using coefficient-matrices based on ANN. In <i>Society of Petroleum Engineers - SPE Kingdom of Saudi Arabia Annual Technical Symposium and Exhibition</i> . doi: 10.2118/182780-ms
234	Khan, W. A., Rahman, M. K., Mahmoud, M. A., & Sarmah, P. (2016). MWCNT for enhancing mechanical properties of oil well cement for HPHT applications. In <i>Proceedings of the SPE/IADC Middle East Drilling Technology Conference and Exhibition</i> Vol. 2016-January. doi: 10.2118/178175-ms
235	Rahman, M. K., Khan, W. A., Mahmoud, M. A., & Sarmah, M. P. (2016). MWCNT for enhancing mechanical and thixotropic properties of cement for HPHT applications. In <i>Offshore Technology Conference Asia 2016, OTCA 2016</i> (pp. 2797-2807). doi: 10.4043/26465-ms
236	Mahmoud, M., Elkatatny, S., Shawabkeh, R., & Bahgat, M. (2016). Less corrosive, non-damaging iron sulfide scale remover. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2016</i> Vol. 2016-January. doi: 10.2118/183457-ms
237	Elkatatny, S. M., Zeeshan, T., Mahmoud, M., Abdulazeez, A., & Mohamed, I. M. (2016). Application of artificial intelligent techniques to determine sonic time from well logs. In <i>50th US Rock Mechanics / Geomechanics Symposium 2016</i> Vol. 3 (pp. 2335-2345).
238	Tariq, Z., Elkatatny, S., Mahmoud, M., & Abdulraheem, A. (2016). A holistic approach to develop new rigorous empirical correlation for static young's modulus. In <i>Society of Petroleum Engineers - Abu Dhabi International Petroleum Exhibition and Conference 2016</i> Vol. 2016-January. doi: 10.2118/183545-ms
239	Bageri, B. S., Mahmoud, M. A., Al-Mutairi, S. H., Kuwait, C., & Abdulraheem, A. (2015). Filter Cake Porosity and Permeability Profile Along the Horizontal Well and Their Impact on Filter Cake Removal. doi: 10.2523/iptc-18465-ms
240	Bageri, B. S., Mahmoud, M. A., Al-Majed, A. A., Abdulraheem, A., & Al-Mutairi, S. H. (2015). Impact of Sand Content on Filter Cake and Drilling Fluid Properties in Extended Reach Horizontal Wells. doi: 10.2118/175714-ms
241	Mahmoud, M. A., Nasr-El-Din, H. A., & De Wolf, C. A. (2015). High-temperature laboratory testing of illitic sandstone outcrop cores with HCl-alternative fluids. In <i>SPE Production and Operations</i> Vol. 30 (pp. 43-51). doi: 10.2118/147395-PA
242	Attia, M., & Mahmoud, M. A. (2015). The impact of adding high pH fluid to sea water on the sandstone rock charge during EOR process. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 11-23). doi: 10.2118/172513-ms

243	Mahmoud, M. A., Kamal, M., Bageri, B. S., & Hussein, I. (2015). Removal of pyrite and different types of iron sulfide scales in oil and gas wells without H ₂ S generation. In <i>International Petroleum Technology Conference, IPTC 2015</i> Vol. 2015-January.
244	Attia, M., Abdulraheem, A., & Mahmoud, M. A. (2015). Pressure drop due to multiphase flow using four artificial intelligence methods. In <i>Society of Petroleum Engineers - SPE North Africa Technical Conference and Exhibition 2015, NATC 2015</i> (pp. 170-179). doi: 10.2118/175724-ms
245	Mahmoud, M. A., Abdelgawad, K. Z., Akram, A., & Stanitzek, T. (2015). Non-coiled tubing stimulation of water injectors. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 591-606). doi: 10.2118/172572-ms
246	Al-Amri, M. A., Mahmoud, M. N., Al-Yousef, H. Y., & Al-Ghamdi, T. M. (2015). Integrated petrophysical and reservoir characterization workflow to enhance permeability and water saturation prediction. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Annual Technical Symposium and Exhibition</i> .
247	Al-Amri, M. A., Mahmoud, M. N., Al-Yousef, H. Y., & Al-Ghamdi, T. M. (2015). Integrated petrophysical and reservoir characterization workflow to enhance permeability and water saturation prediction. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Annual Technical Symposium and Exhibition</i> . doi: 10.2118/178028-ms
248	Abdelgawad, K. Z., & Mahmoud, M. A. (2015). In-situ generation of CO ₂ to eliminate the problem of gravity override in EOR of carbonate reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 41-50).
249	Bageri, B. S., Mahmoud, M. A., Sultan, A. S., Al-Mutairi, S. H., & Abdulraheem, A. (2015). Effect of the drilled cuttings on filter cake sealing properties and internal invasion depth in MRC wells. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference</i> .
250	Bageri, B. S., Mahmoud, M. A., Sultan, A. S., Al-Mutairi, S. H., & Abdulraheem, A. (2015). Effect of the drilled cuttings on filter cake sealing properties and internal invasion depth in MRC wells. In <i>Society of Petroleum Engineers - SPE Kuwait Oil and Gas Show and Conference</i> . doi: 10.2118/175168-ms
251	Barri, A. A., & Mahmoud, M. A. (2015). Effect of stimulation with chelating agents on carbonate rocks integrity. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 1781-1796). doi: 10.2118/172709-ms

252	Attia, M., & Mahmoud, M. A. (2015). Defining the optimum properties of chelating agents to be used as EOR fluid for sandstone reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Annual Technical Symposium and Exhibition</i> .
253	Attia, M., & Mahmoud, M. A. (2015). Defining the optimum properties of chelating agents to be used as EOR fluid for sandstone reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Annual Technical Symposium and Exhibition</i> . doi: 10.2118/177985-ms
254	Al-Ameri, W. A., Abdulraheem, A., Mahmoud, M., Abdullatif, O., & Adebayo, A. R. (2015). Aquifer selection for CO ₂ sequestration based on mechanical properties evaluation. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 88-104).
255	Alam, M. M. M., Mahmoud, M., & Sibaweihi, N. (2015). A slow release CO ₂ for enhanced oil recovery in carbonate reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings</i> Vol. 2015-January (pp. 693-704).
256	Adebayo, A. A., Al-Yousef, H. Y., Mahmoud, M. A., & Sultan, A. (2014). The Prospect of Using Permanent Downhole Sensors for Monitoring Oilfield Scales. doi: 10.2523/17856-ms
257	Adebayo, A. R., Al-Yousef, H. Y., Mahmoud, M., & Sultan, A. S. (2014). The prospect of using permanent downhole sensors for monitoring oilfield scales. In <i>Society of Petroleum Engineers - International Petroleum Technology Conference 2014, IPTC 2014 - Innovation and Collaboration: Keys to Affordable Energy</i> Vol. 2 (pp. 1447-1455). doi: 10.2523/iptc-17856-ms
258	Attia, M., Mahmoud, M. A., Al-Hashim, H. S., & Sultan, A. S. (2014). Shifting to a new EOR area for sandstone reservoirs with high recovery, no damage, low cost. In <i>Society of Petroleum Engineers - SPE EOR Conference at Oil and Gas West Asia 2014: Driving Integrated and Innovative EOR</i> (pp. 131-143).
259	Sultan, A. S., Azad, M. S., Hussein, I. A., & Mahmoud, M. A. (2014). Rheological assessment of VES as an EOR fluid in carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE EOR Conference at Oil and Gas West Asia 2014: Driving Integrated and Innovative EOR</i> (pp. 858-865).
260	Adebayo, A. R., Al-Yousef, H. Y., & Mahmoud, M. A. (2014). Resistivity index hysteresis for carbonate rocks undergoing carbon dioxide-EOR. In <i>Trinidad and Tobago Energy Resources Conference, SPETT 2014 - Future Assets: Acquisition, Maintenance and Reliability</i> (pp. 208-219). doi: 10.2118/169930-ms

261	Al-Duailej, Y., Mahmoud, M., Al-Khaldi, M., Kwak, H., Shebatalhamd, A., & Al-Yami, I. (2014). NMR as a characterization tool for wormholes: The complete picture. In <i>Society of Petroleum Engineers - 30th Abu Dhabi International Petroleum Exhibition and Conference, ADIPEC 2014: Challenges and Opportunities for the Next 30 Years</i> Vol. 1 (pp. 182-195). doi: 10.2118/171699-ms
262	Abdelgawad, K. Z., & Mahmoud, M. A. (2014). High-performance EOR system in carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition</i> .
263	Abdelgawad, K. Z., & Mahmoud, M. A. (2014). High-performance EOR system in carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition</i> . doi: 10.2118/172182-ms
264	Al-Ameri, W. A., Abdulraheem, A., Mahmoud, M., Abdullatif, O., & Adebayo, A. R. (2014). Effect of CO ₂ sequestration period on the mechanical properties of carbonate aquifers. In <i>Society of Petroleum Engineers - 30th Abu Dhabi International Petroleum Exhibition and Conference, ADIPEC 2014: Challenges and Opportunities for the Next 30 Years</i> Vol. 1 (pp. 203-216). doi: 10.2118/171702-ms
265	Adebayo, A. R., Al-Yousef, H. Y., & Mahmoud, M. (2014). Determination of Archie's saturation exponent for CO ₂ sequestration in carbonate reservoirs. In <i>38th Nigeria Annual International Conference and Exhibition, NAICE 2014 - Africa's Energy Corridor: Opportunities for Oil and Gas Value Maximization Through Integration and Global Approach</i> Vol. 1 (pp. 78-91).
266	Azad, M. S., Sultan, A. S., Nuaim, S. A., Mahmoud, M. A., & Hussein, I. A. (2014). Could VES be a part of a hybrid option to recover heavy oil in complex heavy oil reservoirs. In <i>Society of Petroleum Engineers - SPE Heavy Oil Conference Canada 2014</i> Vol. 3 (pp. 2127-2139).
267	Adebayo, A. R., Mahmoud, M., & Al-Yousef, H. Y. (2014). Challenges of resistivity log as a monitoring technique during carbon dioxide sequestration in carbonate formations. In <i>38th Nigeria Annual International Conference and Exhibition, NAICE 2014 - Africa's Energy Corridor: Opportunities for Oil and Gas Value Maximization Through Integration and Global Approach</i> Vol. 1 (pp. 105-118). doi: 10.2118/172356-ms
268	Mahmoud, M. A., & Abdelgawad, K. Z. (2014). A new chemical EOR for sandstone and carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition</i> .
269	Mahmoud, M. A., & Abdelgawad, K. Z. (2014). A new chemical EOR for sandstone and carbonate reservoirs. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition</i> . doi: 10.2118/172183-ms

270	Mahmoud, M. A., & Abdelgawad, K. Z. (2013). Investigation of the precipitation of calcium sulfate scale during low and high salinity water injection in EOR processes in carbonate and sandstone reservoirs. In <i>SPE - European Formation Damage Conference, Proceedings, EFDC Vol. 2</i> (pp. 772-789).
271	Ba Geri, B. S., & Mahmoud, M. A. (2013). A new diversion technique to remove the formation damage from maximum reservoir contact and extended reach wells in sandstone reservoirs. In <i>SPE - European Formation Damage Conference, Proceedings, EFDC Vol. 2</i> (pp. 790-799).
272	Abdelgawad, K. Z., & Mahmoud, M. A. (2013). Effect of CO ₂ flooding during EOR process on the rock petrophysical and electrical properties. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2013, NATC 2013 Vol. 2</i> (pp. 1132-1143).
273	Mahmoud, M. A. (2013). Development of a new correlation of gas compressibility factor (Z-factor) for high pressure gas reservoirs. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2013, NATC 2013 Vol. 1</i> (pp. 74-86).
274	Mahmoud, M. A. (2013). Development of a New Correlation of Gas Compressibility Factor (Z-Factor) for High Pressure Gas Reservoir. doi: 10.2118/164587-ms
275	Mahmoud, M. A. (2013). New numerical and analytical models to quantify the near-wellbore damage due to sulfur deposition in sour gas reservoirs. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings Vol. 3</i> (pp. 2082-2100). doi: 10.2118/164440-ms
276	Mahmoud, M. A., & Abdelgawad, K. Z. (2013). New insights into the prediction of capillary pressure from resistivity measurements. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition 2013</i> (pp. 29-44). doi: 10.2118/168059-ms
277	Mahmoud, M. A., & Gadallah, M. A. (2013). New insights into evaluating the damage due to calcium sulfate scale precipitation during low and high salinity water injection. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2013, NATC 2013 Vol. 1</i> (pp. 392-410). doi: 10.2118/164634-ms
278	Mahmoud, M. A., & Gadallah, M. A. (2013). Modeling of the change of rock petrophysical properties due to sulfur deposition in sour gas reservoirs. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2013, NATC 2013 Vol. 1</i> (pp. 362-374). doi: 10.2118/164626-ms
279	Attia, M., Mahmoud, M. A., Abdulraheem, A., & Al-Neaim, S. A. (2013). Evaluation of the pressure drop due to multi phase flow in horizontal pipes using fuzzy logic and neural networks. In <i>SPE Middle East Oil and Gas Show and Conference, MEOS, Proceedings Vol. 2</i> (pp. 1065-1075). doi: 10.2118/164278-ms

280	Ba Geri, B. S., Al-Mutairi, S. H., & Mahmoud, M. A. (2013). Different techniques for characterizing the filter cake. In <i>Society of Petroleum Engineers - SPE Middle East Unconventional Gas Conference and Exhibition 2013, UGAS 2013 - Unconventional and Tight Gas: Bridging the Gaps for Sustainable Economic Development</i> (pp. 104-116). doi: 10.2118/163960-ms
281	Kharraa, H. S., Al-Amri, M. A., Mahmoud, M. A., & Okasha, T. M. (2013). Assessment of uncertainty in porosity measurements using NMR and conventional logging tools in carbonate reservoir. In <i>Society of Petroleum Engineers - SPE Saudi Arabia Section Technical Symposium and Exhibition 2013</i> (pp. 570-586). doi: 10.2118/168110-ms
282	Mahmoud, M. A., & Nasr-El-Din, H. A. (2012). Modeling flow of chelating agents during stimulation of carbonate reservoirs. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2012, NATC 2012: Managing Hydrocarbon Resources in a Changing Environment</i> Vol. 1 (pp. 291-302).
283	Mahmoud, M. A., & Nasr-El-Din, H. A. (2012). Challenges during shallow and deep carbonate reservoirs stimulation. In <i>Society of Petroleum Engineers - International Petroleum Technology Conference 2012, IPTC 2012</i> Vol. 3 (pp. 2349-2358).
284	Mahmoud, M. A., & Al-Majed, A. A. (2012). New model to predict formation damage due to sulfur deposition in sour gas wells. In <i>Society of Petroleum Engineers - North Africa Technical Conference and Exhibition 2012, NATC 2012: Managing Hydrocarbon Resources in a Changing Environment</i> Vol. 1 (pp. 88-100). doi: 10.2118/149535-ms
285	Elkatatny, S. M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2012). Characterization of filter cake generated by water-based drilling fluids using CT scan. In <i>SPE Drilling and Completion</i> Vol. 27 (pp. 282-293). doi: 10.2118/144098-PA
286	Mahmoud, M. A., & Nasr-El-Din, H. A. (2011). Challenges During Shallow and Deep Carbonate Reservoirs Stimulation. doi: 10.2523/iptc-14932-ms
287	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & Alex, A. K. (2011). Effect of reservoir fluid type on the stimulation of carbonate cores using chelating agents. In <i>Society of Petroleum Engineers - Brazil Offshore Conference 2011</i> Vol. 1 (pp. 265-277).
288	Mahmoud, M. A., Nasr-El-Din, H. A., & De Wolf, C. A. (2011). Novel environmentally friendly fluids to remove carbonate minerals from deep sandstone formations. In <i>Society of Petroleum Engineers - 9th European Formation Damage Conference 2011</i> Vol. 1 (pp. 196-211).
289	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & Alex, A. K. (2011). Sandstone acidizing using a new class of chelating agents. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 1 (pp. 1-17).

290	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & Alex, A. K. (2011). Effect of lithology on the flow of chelating agents in porous media during matrix acid treatments. In <i>SPE Production and Operations Symposium, Proceedings</i> (pp. 69-83).
291	Bendame, M., Elrayes, K., Mahmoud, M., Abdel-Rahman, E. M., El-Saadany, E., & Mansour, R. (2011). Vertically-Aligned Springless Energy Harvester. In <i>Unknown Conference</i> (pp. 309-315). doi: 10.1115/detc2011-48371
292	Mahmoud, M. A., Nasr-El-Din, H. A., & DeWolf, C. A. (2011). Removing formation damage and stimulation of deep illitic-sandstone reservoirs using green fluids. In <i>Proceedings - SPE Annual Technical Conference and Exhibition Vol. 5</i> (pp. 4325-4340). doi: 10.2118/147395-ms
293	Rabie, A. I., Mahmoud, M. A., & Nasr-El-Din, H. A. (2011). Reaction of GLDA with calcite: Reaction kinetics and transport study. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry Vol. 1</i> (pp. 18-37). doi: 10.2118/139816-ms
294	Yu, M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2011). Propagation and retention of viscoelastic surfactants following matrix-acidizing treatments in carbonate cores. In <i>SPE Journal Vol. 16</i> (pp. 993-1001). doi: 10.2118/128047-PA
295	Mahmoud, M. A., Nasr-El-din, H. A., De Wolf, C. A., & LePage, J. N. (2011). Optimum injection rate of a new chelate that can be used to stimulate carbonate reservoirs. In <i>SPE Journal Vol. 16</i> (pp. 968-980). doi: 10.2118/133497-PA
296	Mahmoud, M. A., & Nasr-El-Din, H. A. (2011). Challenges during shallow and deep carbonate reservoirs stimulation. In <i>International Petroleum Technology Conference 2011, IPTC 2011</i> .
297	Al-Ghamdi, A. H., Hill, A. D., Nasr-El-Din, H. A., & Mahmoud, M. A. (2011). Acid diversion using viscoelastic surfactants: The effects of flow rate and initial permeability contrast. In <i>Proceedings - SPE Annual Technical Conference and Exhibition Vol. 1</i> (pp. 10-27). doi: 10.2118/142564-ms
298	Elkhatatny, S. M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2011). A new technique to characterize drilling fluid filter cake. In <i>Society of Petroleum Engineers - 9th European Formation Damage Conference 2011 Vol. 2</i> (pp. 879-892). doi: 10.2118/144098-ms
299	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & LePage, J. N. (2010). An effective stimulation fluid for deep carbonate reservoirs: A core flood study. In <i>Society of Petroleum Engineers - International Oil and Gas Conference and Exhibition in China 2010, IOGCEC Vol. 3</i> (pp. 2209-2223).
300	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & LePage, J. N. (2010). Stimulation of carbonate reservoirs using GLDA (chelating agent) solutions. In <i>Society of Petroleum Engineers - Trinidad and Tobago Energy Resources Conference 2010, SPE TT 2010 Vol. 1</i> (pp. 64-77).

301	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., & LePage, J. N. (2010). Optimum injection rate of a new chelate that can be used to stimulate carbonate reservoirs. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 2 (pp. 1034-1055).
302	Mahmoud, M. A., Nasr-El-Din, H. A., De Wolf, C. A., LePage, J. N., & Bemelaar, J. H. (2010). Evaluation of a new environmentally friendly chelating agent for high-temperature applications. In <i>Proceedings - SPE International Symposium on Formation Damage Control</i> Vol. 2 (pp. 554-569).
303	Al-Ghamdi, A. H., Mahmoud, M. A., Hill, A. D., & Nasr-El-Din, H. A. (2010). When do surfactant-based acids work as diverting agents?. In <i>Proceedings - SPE International Symposium on Formation Damage Control</i> Vol. 2 (pp. 925-939). doi: 10.2118/128074-ms
304	Yu, M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2010). Propagation and retention of viscoelastic surfactants following matrix acidizing treatments in carbonate cores. In <i>Proceedings - SPE International Symposium on Formation Damage Control</i> Vol. 2 (pp. 786-797). doi: 10.2118/128047-ms
305	Mohamed, I. M., He, J., Mahmoud, M. A., & Nasr-El-Din, H. A. (2010). Effects of pressure, CO ₂ volume, and the CO ₂ to water volumetric ratio on permeability change during CO ₂ sequestration. In <i>Society of Petroleum Engineers - 14th Abu Dhabi International Petroleum Exhibition and Conference 2010, ADIPEC 2010</i> Vol. 1 (pp. 252-264). doi: 10.2118/136394-ms
306	Gomaa, A. M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2010). A study of diversion using polymer-based in-situ-gelled acids systems. In <i>Society of Petroleum Engineers - Trinidad and Tobago Energy Resources Conference 2010, SPE TT 2010</i> Vol. 1 (pp. 223-240). doi: 10.2118/132535-ms
307	Pournik, M., Mahmoud, M., & Nasr-El-Din, H. A. (2009). Acid re-fracturing: Is it a good practice?. In <i>Proceedings - SPE Annual Technical Conference and Exhibition</i> Vol. 6 (pp. 3516-3531).
308	Yu, M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2009). Quantitative analysis of an amphoteric surfactant in acidizing fluids and coreflood effluent. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 2 (pp. 865-878).
309	Al-Ghamdi, A. H., Mahmoud, M. A., Hill, A. D., & Nasr-El-Din, H. A. (2009). Propagation of viscoelastic surfactant-based acids in carbonate cores. In <i>Proceedings - SPE International Symposium on Oilfield Chemistry</i> Vol. 2 (pp. 849-864).
310	Al-Ghamdi, A. H., Mahmoud, M. A., Hill, A. D., & Nasr-El-Din, H. A. (2009). Diversion and Propagation of Viscoelastic Surfactant Based Acid in Carbonate Cores. doi: 10.2118/121713-ms

311	Gomaa, A. M., Mahmoud, M. A., & Nasr-El-Din, H. A. (2009). When polymer-based acids can be used? A core flood study. In <i>Society of Petroleum Engineers - International Petroleum Technology Conference 2009, IPTC 2009</i> Vol. 4 (pp. 2384-2401). doi: 10.2523/iptc-13739-ms
312	Gomaa, A. M., Mahmoud, M., & Nasr-El-Din, H. A. (2009). When Polymer-based Acids can be used? A Core Flood Study. doi: 10.2523/13739-ms

Granted Patents

P1	Mahmoud, M. A. <u>2020</u> . Method of acidizing a geological formation and method of determining an effectiveness of acidizing. US 10,590,750 B2.
P2	Mahmoud, M. A. , Shawabkeh; R.A., Elkatatny, S. <u>2019</u> . Method for drilling a wellbore with a weighted hydrogen sulfide scavenger fluid. US 10,501,676B2.
P3	Mahmoud, M.* , Elkatatny, S., and Mohammed, M. <u>2019</u> . Organic acid fracturing fluid composition. US 10,479,930 B2.
P4	Elkatatny, S., Mahmoud; M. A. , Shawabkeh; R.A. <u>2019</u> . Method for drilling a hydrogen sulfide-containing formation. US 10,479,919 B2.
P5	Mahmoud; M.* , Elkatatny; S., Ali; A. Z. <u>2019</u> . Method for making a drilling fluid composition and fracturing a subterranean formation. US 10,457,855 B2.
P6	Mahmoud, M.* , Elkatatny, S., and Mohammed, M. <u>2019</u> . Fracturing fluid composition containing an acrylamido-tert-butylsulfonate polymer. US 10,435,621 B2.
P7	Mahmoud; M.* , Elkatatny; S., Ali; A. Z. <u>2019</u> . Method of forming a mixture of barite particles, chelating agent and bentonite for fracturing. US 10,358,593 B2.
P8	Mahmoud, M.* , Ba Geri, B., Hussein, I. <u>2019</u> . Method for removing iron sulfide scale from oil well equipment. US 10,323,173 B2.
P9	De Wolf; C.A., Le Page, J., Mahmoud; M. , Nasr-El-Din; H., Bemelaar, J. <u>2019</u> . Environmentally friendly stimulation fluids, processes to create wormholes in carbonate reservoirs, and processes to remove wellbore damage in carbonate reservoirs. US 10,294,412 B2.
P10	De Wolf; C.A., Mahmoud; M. , Nasr-El-Din; H. <u>2019</u> . Treatment of illitic formations using a chelating agent. US 10,301,534 B2.

P11	Elkakatny, S., Mahmoud; M. A. , Shawabkeh; R.A. <u>2019</u> . Method of drilling a subterranean geological formation with a drilling fluid composition comprising copper nitrate. US 10,301,524 B2.
P12	Ba Geri; B. S. Mahmoud; M. A.* , Abdulraheem; A., Shawabkeh; R.A. <u>2019</u> . Barite filter cake removing composition and method. US10,294,407B2.
P13	Mahmoud, M.* and Mansoor, M. <u>2019</u> . High pressure capsule-injection process for carbonate reservoirs. 10,202,539 B2.
P14	Mahmoud; M.* , Elkakatny; S., Ali; A. Z. <u>2019</u> . Method of fracturing a subterranean formation using micronized barite particles. US 10,179,874 B2.
P15	Adebayo; A., Al-Yousef; H., Mahmoud; M. , Sultan; A. <u>2018</u> . Well-bore and reservoir monitoring process by logging temperature and resistivity. US 10,138,715 B2.
P16	Mahmoud, M.* and Mansoor, M. <u>2018</u> . Directional drilling and capsule flooding process for recovering hydrocarbons. US 10,138,411 B1.
P17	Mahmoud, M.* , Elkakatny, S., and Mohammed, M. <u>2018</u> . Saltwater-based fracturing fluid. US 10,125,308 B1.
P18	Mahmoud, M.* , Elkakatny, S., and Mohammed, M. <u>2018</u> . Glutamic diacetic acid-containing aqueous fluid composition. US 10,119,066 B1.
P19	Mahmoud, M.* and Mansoor, M. <u>2018</u> . High pressure capsule injection process for oil recovery. US 10,106,723 B2.
P20	Magzoub, M. I.; Nasser, M.S., Hussein, I.A., Mahmoud, M.A.* , Sultan; A.S. <u>2018</u> . Process for converting calcium bentonite to sodium bentonite. US 10081574 B2.
P21	Mahmoud, M.* , Elkakatny, S., and Mohammed, M. <u>2018</u> . Fracturing Fluid Composition and A Method of Fracturing Subterranean Formation Using the Same. US 10,047,278 B1.
P22	Mahmoud, M.* and Mansoor, M. <u>2018</u> . Enhanced Oil Recovery Process. US 9,976,071 B2.
P23	Ba Geri, B. and Mahmoud, M.* <u>2018</u> . Method of Drilling a Well with Reduced Infiltration. US 9,856,410 B2.
P24	Elkakatny, S. and Mahmoud, M.* <u>2017</u> . Method for Evaluating the Effectiveness of Matrix Acidizing in A Subterranean Formation. US 9,810,063 B2.

P25	Mahmoud, M.* , Ba Geri, B., Hussein, I. <u>2017</u> . Method for Removing Iron Sulfide Scale. US 9,783,728 B2.
P26	Ba Geri, B. and Mahmoud, M.* <u>2017</u> . Zero Invasion Acidic Drilling Fluid. US 9,657,214 B2.
P27	De Wolf, C.A., LePage, J.N., Mahmoud, M.A. , Nasr-El-Din, H., Bang, E., and George, N. <u>2017</u> . Ammonium Salts of Chelating Agents and Their Use in Oil and Gas Field Applications. US 9,587,171 B2.
P28	Magzoub, M., Nasser, M., Hussein, I., Mahmoud, M.* , and Sultan, A. <u>2017</u> . Method of Producing Sodium Bentonite. US 9,676,669 B1.
P29	Mahmoud, M.A.* , Abdelgawad, K.Z., Sultan, A., and Al-Hashim, H. <u>2016</u> . Chelating Fluid for Enhanced Oil Recovery in Carbonate Reservoirs and Method of Using the Same. US 9,453,401 B2.
P30	Mahmoud, M.A. <u>2016</u> . Non-Coiled Tubing Well Clean-Up. US 9,238,771 B1.
P31	De Wolf, C.A., Nasr-El-Din, H., LePage, J.N., Mahmoud, M.A. , and Bemelaar. <u>2015</u> . Environmentally Friendly Stimulation Fluids, Processes to Create Wormholes in Carbonate Reservoirs, and Processes to Remove Wellbore Damage in Carbonate Reservoirs. US 9,150,780 B2.
P32	Mahmoud et al. 2020. Composition and method for removing oil-based filter cake. US10,844,278 B2
P33	Ba Geri; B., Mahmoud; M., Abdurraheem; A., Shawabkeh; R. 2021. Method for improving production of a well bore. US 10,883,038 B2.
P34	Al-Nakhli, A., BaTaweel, M., Mahmoud, M., and Hassan, A. 2021. Methods for reducing condensation. US10,895,136 B2
P35	Mahmoud, M.A. <u>2021</u> . Stimulation fluid injection method and NMR verification. US11,125,064B2
P36	Mahmoud, M.A. and Elkatatny. S. <u>2021</u> . Method of removing oil-based barite filter cake. US11,124,695B2
P37	Al-Garadi, K., El-Husseiny, A., Mahmoud, M., Elsayed; M. 2021. Method for determining wettability index of rock from T.sub.2 NMR measurements. US11,131,186B1
P38	Elsayed, m, el-Husseiny, a., Mahmoud, m., Al-Garadi, k. 2021. Method for evaluation of permeability anisotropy using nmr diffusion measurements for oil and gas wells. US11,143,607b2
P39	Al-Nakhli, A., Hassan, A., Alade, O., and Mahmoud, M. 2021. Removal of water blockage in tight gas reservoir using thermochemical fluids. US 11,208,877 B2

P40	Al-Nakhli, A. and Mahmoud, M. 2022. Systems, methods, and compositions for reservoir stimulation treatment diversion using thermochemicals. <u>US11,268,017B2</u>
P41	Kamal; Muhammad Shahzad, Hussain; S. M. Shakil, Murtaza; Mobeen, Mahmoud; Mohamed. 2022. Gemini surfactants containing an arylene linker for clay swelling inhibition. <u>US11,292,957 B2</u>
P42	Elsayed; Mahmoud, Mahmoud; Mohamed , El-Husseiny; Ammar, Kamal; Muhammad Shahzad, Al-Garadi; Kareem. 2022. Method for acid fracturing and acid stimulation based on NMR diffusion measurements. <u>US11,299,986B2</u>
P43	Mahmoud, M. 2022. Combined thermochemical and chelating agents useful for well cleanup. <u>US 11,326,090B2</u>
P44	Al-Nakhli, A. and Mahmoud, M. , Abdulraheem, A., Tariq, Z. 2022. Reduction of breakdown pressure by filter cake removal using thermochemicals. <u>US 11,339,319B2</u>
P45	Kwak; Hyung Tae, Elsayed; Mahmoud, El-Husseiny; Ammar, Mahmoud; Mohamed. 2022. Mapping a fracture geometry. US 11,371,335B2
P46	Mahmoud, M. and Zaki, A. 2022. Location and orientation control by acid etching process. US11,407,933B2
P47	Ba Geri; Badr, Gomaa; Ibrahim, Mahmoud; Mohamed , Patil; Shirish. 2022. Barite-quartz and calcite-quartz filter cake removal method. US11,407,929B2
P48	Kamal; Muhammad Shahzad, Al-Harthi; Mamdouh A., Ahmad; Hafiz Mudaser, Hussain; S. M. Shakil, Mahmoud; Mohamed.2022. Organophilic clay based drilling fluids containing Gemini surfactant and polyacrylamide. US11,407,928B2
P49	Gomaa; Ibrahim, Mahmoud; Mohamed , Abdelgawad; Khaled Zidan, Hasan; Amjed, Al-Shehri; Dhafer. 2022. Acidizing of subterranean formation using in-situ generated HF. US11,414,593B2
P50	Mahmoud, Mohamed and Elkatatny, Salaheldin. 2022. Method for removing iron sulfide and calcium carbonate scale. US11,421,143B2
P51	Abu-Khamsin; Sidqi, Mahmoud; Mohamed , Al-Afnan; Saad, Al-Jawad; Murtada, and Gowida; Ahmed. 2022. Sand consolidation for subterranean sand formations. US 11,441,396B1
P52	Elkatatny; Salaheldin, Mahmoud; Mohamed , Gamal; Hany, Sultan; Abdullah. 2022. Method of removing iron-containing scale from a wellbore, pipe, or surface using a biodegradable descaler solution. US 11,441,064B2
P53	Kamal; Muhammad Shahzad; Hussain; Shakil, Murtaza; Mobeen, Mahmoud; Mohamed. 2022. Methods for clay swelling inhibition using gemini surfactants containing a saturated linker. US11,447,688B2

P54	Mohamed; Abdelmjeed, Mahmoud; Mohamed , Elkatatny; Salaheldin, Sultan; Abdullah. <u>2022</u> . Method of producing sodium bentonite. US11,447,395B2
P55	Mahmoud; Mohamed. 2022 . Method for determining acidization effectiveness for wellbore operations. US 11,454,099B2
P56	Al-Nakhli, A., Bataweel; Mohammed, Mahmoud, M. , Abdulaheem, A., Tariq, Z. <u>2022</u> . Methods for wellbore formation using thermochemicals. US 11,454,098B2
P57	El Sayed, M., El-Husseiny, A., Mahmoud, M. , and Al-Garadi, K. <u>2022</u> . Measurement Method for Determining Resistivity and Permeability in a Borehole. US 11493462 B2
P58	Mahmoud, M. 2022 . Downhole Exothermic Reaction Well Bore Wall Clean Up Method. US11518925B2
P59	El Sayed, M., El-Husseiny, A., Mahmoud, M. , and Al-Garadi, K. <u>2022</u> . NMR Method For Determining Permeability In Geologic Formation. US 11525792 B2
P60	El Sayed, M., El-Husseiny, A., Mahmoud, M., and Al-Garadi, K. 2023. Downhole Method For Determining Geologic Permeability. US 11543370 B2
P61	El Sayed, M., El-Husseiny, A., Mahmoud, M., and Al-Garadi, K. 2023. Method For Determining Permeability In A Hydrocarbon Formation. US 11543369 B2
P62	Elsayed, M., El-Husseiny, A., Mahmoud, M., Al Garadi, k. 2023. Method For Downhole Determination Of Permeability Anisotropy Using NMR. US 11555795 B2
P63	Kamal, M.S, Shakil, S., Murtaza, M., and Mahmoud, M. 2023. Gemini Surfactants Containing An Unsaturated Linker For Clay Swelling Inhibition. US 11566167 B2
P64	Elkatatny; Salaheldin, Mahmoud; Mohamed, Sultan; Abdullah. 2023. Method Of Removing Calcium-containing Water-based Filter Cake Using A Biodegradable Acid Solution. US 11566161 B2
P65	Mahmoud, M. 2023. Thermochemical Composition For Well Cleanup. May 23rd 2023, US 11655411 B2.
P66	Mahmoud, A., Elkatatny, S., Mahmoud, M. 2023. July 25th. Cementing Formulations Containing Halloysite And Silica Flour And Methods Of Use. US 11708520 B2.
P67	Alkhowaildi, M, Mahmoud, M., Bataweel, M., Kalgaonkar, R. 2024. January 9 th . Fracturing Fluid Based On Oilfield Produced Fluid. US11866644B1.
P68	Mohamed Mahmoud and Muhammad Shahzad Kamal. 2024. OIL AND GAS WELL SCALE MITIGATION TREATMENT METHOD. US 11965132 B2. April 23 rd 2024

P69	Saleh. T., Rana, A., Murtaza, M., Kamal, M., and Mahmoud, M. 2024. Date Palm Leaves Extract (DPLE) As A Shale Swelling Inhibitor In Water-based Drilling Fluids. US 11981856 B1. May 2024
P70	Mahmoud, M. and Kamal, M. 2024. Well Sulfatizing And Scale Mitigation Treatment Method. US 12031086 B1, July
P71	Mahmoud, M. and Kamal, M. 2024. Oil/gas Pipeline Treatment Method. US 12084613 B2, September 10 th
P72	Mahmoud, M. and Kamal, M. 2024. Akaline Scale Mitigation Treatment Method. US 12084614 B2, September 10 th
P73	Hassan, A., Mahmoud, M., Abu-Khamsin, S., and El-Husseiny, A. 2024. Method For Sand Consolidation Using Enforced Calcium And Magnesium Fluoride Precipitation. US 12116529 B1. October 17 th
P74	Saleh. T., Rana, A., Murtaza, M., Kamal, M., and Mahmoud, M. 2024. Date Palm Residue Drilling Mud Composition. US 12116524 B2
P75	Saleh. T., Rana, A., Murtaza, M., Kamal, M., and Mahmoud, M. 2024. Method Of Drilling A Subterranean Geological Formation With Date Based Drilling Fluid Preliminary Class. US12146094B2
P76	Saleh. T., Rana, A., Murtaza, M., Kamal, M., and Mahmoud, M. 2024. Modified Bentonite Drilling Fluid Composition. US 12157854 B2
P77	Mohamed, A., Elkatatny, A., and Mahmoud, M. 2024. Method For Drilling A Wellbore With A Reduced Ferrite Sag Composition. 24 December 2024. US 12173225 B2
P78	Hassan, A., Mahmoud, M., Abu-Khamsin, S., and Elhusseiny, A. 2025. Method For Treating Unconsolidated Subterranean Formations. US 12269990 B2
P79	Hassan, A., Mahmoud, M., Abu-Khamsin, S., and Elhusseiny, A. 2025. Method For Binding Sand In Subterranean Formation. US 12269991 B2
P80	Hassan, A., Mahmoud, M., Abu-Khamsin, S., and Elhusseiny, A. 2025. Method For Consolidating Target Region In A Geologic Formation. US 12269992 B2
P81	Raza, A., Glatz, G., Mahmoud, M., Mokheimer, E., Alade, O., Kamal, M. 2025. THERMOCHEMICAL ENGINE. US 12269023 B2
P82	Oshaish, A., Mahmoud, M., Souprios, P., El-Husseiny, A., Kirmizakis, P. 2025. Detection Of Water In Oil Emulsions Using Spectral Induced Polarization. US 12276652 B1
P83	Al-Nakhli, A., Mahmoud, M., Tariq, Z., Alade, O., Kamal, M. 2025. Removal of Filter Cake . US 12281258 B2
P84	Mohammed, I., Alshehri, D., Isah, A., Mahmoud, M. 2025. Hydrogen Storage And Recovery With Iron-rich Sediments. US 12305488 B1

P85	Mobeen, M., Kamal, M., Mahmoud, M., Alshehri, D. 2025. Okra composition as a shale swelling inhibitor in water-based drilling fluids. US12312531B2.
P86	Mohammed, I., Al Shehri, D., Isah, A., Mahmoud, M. 2025. Method For Storing Hydrogen In A Subterranean Gas Storage Cell. US 12371973 B1
P87	Mobeen, M., Kamal, M., Mahmoud, M., Alshehri, D. 2025. Plant-based Drilling Fluid Composition. US 12384951 B1
P88	Al-Arifi, S., Murtaza, M., Baig, A., Mahmoud, M., Kamal, M., Alahmari, M., Humam, A. 2025. Method For Consolidating Sand In Hydrocarbon Reservoirs. US 12398311 B1
P90	Mohammed, I., Al Shehri, D., Mahmoud, M. 2025. Subterranean Banded Iron Based Injection Fluid For Hydrogen Storage. US 12428232 B1
P91	Khan, F., Mahmoud, M., Raza, A., Al Tammar, M., Patil, S. 2025. Methods And Compositions For Thermally Shocking Subsurface Formations. US 12442282 B1
P92	Al-Nakhli, A., Mahmoud, M., Tariq, Z. 2025. Self-destructive Barite Filter Cake In Water-based And Oil-based Drilling Fluids. US 12441925 B2

Citations by Other Researchers

1. Google Scholar Link:

<https://scholar.google.com/citations?user=nxoOLSIAAAAJ&hl=en>

2. Scopus Link:

<https://www.scopus.com/authid/detail.uri?authorId=35792348900>

Professional Activities

Technical Conference Attendance and Presentation

I am the (co) author of 156 conference papers since 2006. These papers were presented at top conferences in Petroleum Engineering such as ATCE (Annual Technical Conference and Exhibition), the most prestigious technical conference in petroleum industry and other regional and international conferences. Three of my conference papers got the best paper award, SPE-ATCE 2009 and 2011, and in SPE-ATSE 2017.

I attended and presented papers at the following conferences:

No.	Conference Name	Location	Date
1	SPE Oilfield Chemistry	Woodlands, Texas, USA	April 22-24, 2009
2	SPE Oilfield Chemistry	Woodlands, Texas, USA	April 11-13, 2011

3	SPE Formation Damage	Lafayette, Louisiana, USA	Feb. 10-12, 2010
4	SPE Formation Damage	Noordwijk, The Netherlands	June 5-7, 2013
5	SPE Annual Technical Conference and Exhibition	Denver, Colorado, USA	Oct. 30-Nov 2, 2011
6	SPE Annual Technical Conference and Exhibition	Florence, Italy	Sep. 20-22, 2010
7	SPE Annual Technical Conference and Exhibition	New Orleans, Louisiana, USA	Oct. 4-7, 2009
8	SPE Production and Operation Symposium	Oklahoma, USA	March 27-29, 2011
9	SPE Trinidad and Tobago Energy Resources	Trinidad	June 27-30, 2010
10	CPS/SPE International Oil & Gas Conference and Exhibition	Beijing, China	June 8–10, 2010
11	Annual Technical Symposium & Exhibition	Al-Khobar, Saudi Arabia	May 19-22, 2013
12	Middle East Oil & Gas Show and Conference	Manama, Kingdom of Bahrain	March 8 – 11, 2015
13	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	Nov. 10-13, 2014
14	Brazil Offshore Conference and Exhibition	Macaé, Brazil	June 14–17, 2011
15	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	November 2013
16	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	November 2014
17	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	November 2018
18	SPE Annual Technical Conference and Exhibition	San Antonio, Texas, USA	9-11 Oct. , 2017
19	SPE Annual Technical Conference and Exhibition	Dallas, Texas, USA	24-26 Sep. , 2018
20	SPE Middle East Oil Show	Manama, Bahrain	18-21 March, 2019
21	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	11-14 November 2019
22	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	2022
23	Abu Dhabi International Petroleum Exhibition & Conference	Abu Dhabi, UAE	2023

Technical Workshops

I was invited to present in the following workshops/seminars:

No.	Workshop Name	Location	Date
1	Applied Technical Workshop on Formation Damage	Dubai, UAE	March 26, 2015
2	Carbon Capture Sequestration Workshop organized by KACST-TIC-CCS center at KFUPM	KFUPM, Dhahran	May 5, 2015
3	Dissolution and Precipitation	KAUST, Thowal	7-10 Feb. 2016
4	A New Approach to Dissolution and Precipitation Quantification Using NMR	KFUPM/CPG	15 March, 2017
5	Recovery of Difficult Hydrocarbons	KAUST, Thowal	11-14 Feb. 2018
6	Oilfield Chemistry: Challenges and New Frontiers	Dammam, SPE-ATSE	15 April, 2019
7	Deep Sensing Petrophysics	Dammam, SPE-ATSE	14 April, 2019

Educational, Advising, and Skills Workshop Attendance

I have attended the following workshops:

1. "Participatory Classrooms" Workshop organized by Deanship of Academic Development, KFUPM, December 25, 2012.
2. "Students' Motivation" Workshop organized by Deanship of Academic Development, KFUPM, March 12, 2012.
3. "Students-Centered Active Learning Environments: Design and Implementation" Workshop organized by Deanship of Academic Development, KFUPM, April 30, 2012.
4. "Learning and Communication Through Graphs" Workshop organized by Deanship of Academic Development, KFUPM, May 1, 2012.
5. "Learning/Learner-Centered Approach for Designing Course Assessment Plans" Workshop organized by Deanship of Academic Development, KFUPM, August 26, 2012.
6. "Graduate Admission" Workshop organized by Deanship of Academic Development, KFUPM, November 20, 2013.
7. "Assessment: Promises, Prospects and Pitfalls", Workshop organized by Deanship of Academic Development, KFUPM, August 18, 2014.
8. "Designing an Instructional Plan Incorporating Research-based Instructional Strategies" Workshop organized by Deanship of Academic Development, KFUPM, August 17, 2015.
9. "LEAN in Higher Education: Increasing the Value and Performance of University Processes". Prof. William K. Balzer, Bowling Green State University, USA. Seminar organized by Deanship of Academic Development, KFUPM, August 22, 2016.
10. "Experiential Education" by Prof. Steve Lambert, University of Waterloo, Canada. Seminar organized by Deanship of Academic Development, KFUPM, August 22, 2016.
11. "Risk Management- An Overview". Seminar organized by Deanship of Academic Development, KFUPM, August 25, 2016.
12. "Vision 2030 in Higher Education". Seminar organized by Deanship of Academic Development, KFUPM, August 25, 2016.
13. "Entrepreneurial Mindset Building: Why is it a Core Mission of Universities in the 21st Century?" Seminar organized by Deanship of Academic Development, KFUPM, August 29, 2016.
14. "Integrated Course Design", Workshop organized by Deanship of Academic Development, KFUPM, August 20, 2017.

Appendix III: Community Services

Departmental Committees

I have served on the following departmental committees:

1. PETE Faculty Search and Recruitment Committee

I am serving as a member on this committee from 2013 to date. The committee has carried out the following activities: (a) identified the areas of teaching and research specializations that are currently not covered by the available faculty members in the PETE Department. These areas include enhanced oil recovery, advanced petrophysics, and multiphase flow in oil wells; (b) review faculty applications; (c) search and attract distinguished faculty; (d) review the required and preferred qualifications for the department. During the last two years we evaluated more than 15 applications and interviewed more than 5 applicants.

2. PETE Graduate Committee

I chaired this committee from 2013 until 2016. Currently I am a member of this committee since 2016. In 2015, I started the revision of the graduate program and we came up with the first draft in September 2016. Now the revision has been completed and the new graduate program was approved by the University Board. I have participated in the following activities: (a) evaluate applications for PhD and MS degrees with the help of the committee members and select the best students from leading schools (we receive in the range of 80 applications every semester). The committee has to review the rank and the reputation of the universities that we are receiving applications from; (b) review the proposals for independent research and directed research courses submitted by MS and PHD students. The proposals should be reviewed by all committee members and the outcomes are evaluated at the end of the semester and then a score is sent to the advisor based on the committee evaluation.

3. PETE Laboratory and Safety Committee

I served as the chairman of this committee during the academic year 2012-13. I participated in upgrading the laboratory equipment of all laboratories in the Department. The following are the outcomes during my tenure in year 2012-13: (a) prepare annual plan with budget for new equipment and consumables for the years 2012 to 2015. The plan was prepared for each year with detailed requirements of the equipment for the PETE teaching laboratories; (b) provide/suggest laboratory space for new equipment; and (c) conduct regular visits to PETE laboratories to ensure the implementation of safety standards.

4. PETE Text Book Committee

I served as a member of this committee during the academic year 2012-13. I participated in the following activities: (a) selecting text books for undergraduate courses by reviewing the proposed text books and requesting for updates if required; and (b) the committee was responsible for receiving and processing requests for new textbooks.

5. PETE Senior Design Project Committee

I am serving as a chairman of this committee during the academic year 2019-2020. In collaboration with the committee members, we set the senior design project problem that includes a complete field development plan for one of the selected oilfields. We prepare the problem and hand the students all the required data.

6. Senior Design Project Coordinator

I am serving as a senior design project coordinator during the academic year 2019-2020. My role is to assign advisors for different groups and evaluate the progress throughout the semester. Also, my role is to set the evaluators for different groups, help students in different tasks by referring them to the subject matter expert. Also, in consultation with the advisors we set the final exam schedule and format for the different groups. Also, I prepare the students for the university senior design project competition at the end of every semester.

College/University Committees

I have served in the following College committees:

- I worked as a member of the steering committee of the College of Engineering Sciences responsible for preparing the KFUPM strategic plan for the College of Engineering Sciences 2012/2017. This was during the academic year 2012/2013. The committee was responsible for drafting and finalizing the college strategic plan.
- I served as a member of the University Text Book Committee for the academic year 2018/2019. This committee is responsible for reviewing and endorsing proposals for undergraduate and graduate text books from the academic departments.
- Currently I am serving as member in the university research committee for the academic year 2019/2020.
- Member in the Senior Design Project Expo Executive Committee, 2019-2020.
- Currently I am serving as a member in the University Scientific Council.

Journal Review/Editor/Advisor Board

Currently I am working as an associate editor of the following journals:

- ACS Omega
- Arabian Journal for Science and Engineering
- Polymers
- Energies
- Advisory board member, energy and fuels, ACS
- Advisory board member, Unconventional Resources Journal

Currently I am working as a reviewer for the following journals:

- SPE Journal
- SPE Drilling and Completion Journal
- SPE Reservoir Evaluation and Engineering Journal
- Arabian Journal of Science and Engineering (AJSE), Springer.
- International Journal of Mining and Mineral Engineering, INDERSCIENCE Publisher.
- International Journal of Petroleum Engineering, INDERSCIENCE Publisher.
- Journal of Chemistry, Hindawi Publishing Corporation.
- Journal of Korean Chemical Engineering, Springer.
- Journal of Energy Resources Technology, Transaction of ASME.
- Journal of Natural Gas Science and Engineering, Elsevier.
- Journal of Petroleum Science and Engineering
- Fuel Journal
- Computer and Geoscience Journal
- Journal of Petroleum Exploration and Production Technology

Other Activities

I was involved in the following activities off campus:

- Chaired the production enhancement session at the MEOS 2013 SPE Conference.
- Chaired the reservoir management session at the MEOS 2015 SPE Conference.
- Served in the technical committee of the SPE Annual Conference held in Al-Khobar, Saudi Arabia, from 2013 to 2019. I was responsible on reviewing and evaluating the abstracts in the reservoir characterization section.
- Served in the steering committee of the applied technical workshop on formation damage held in Al Khobar, KSA, December 9-11, 2012, organized by the Society of Petroleum Engineers. I chaired the Challenges of Stimulation of Shale Sandstone Reservoirs session. I was responsible for inviting industry experts in the area on shaly sandstone stimulation in addition to the organization of the workshop.

- Chaired technical sessions in the SPE Annual Technical Symposium and Exhibition from 2013 to 2018.
- Acted as Judge for students' paper contest for the MENA (Middle East and North Africa) region in 2016 organized by the Society of Petroleum Engineers. Students from more than 10 international universities contributed at the BS, MS, and PhD levels.
- Presented a seminar for the SPE Chapter at KFUPM on Shale Gas, November 9, 2016.
- Acted as a committee member in the International Clay Conference, Spain 2017. At this conference, and for the first time, I introduced a special session on "Clay Minerals in Oil Industry".
- Attended and presented several research topics in "Knowledge Sharing Session" organized by the PTT (production technology team), EXPEC ARC, Saudi Aramco.
- Founder and Advisor of SPWLA student chapter at KFUPM and Board member in SPWLA Saudi Arabia section.
- Board member of the Society of Petrophysics and Well Log Analysts, Saudi Arabia Section.
- Arranged and conducted 5 regional workshops in SPWLA-SAC.
- Organized five SPWLA seminars in 2018 in the SPWLA student chapter at KFUPM.
- Organized the pre-event workshop in the ATSE-SPE 2018 "Petrophysics-Challenges & Recent Advancement".
- Organized a pre-event short course in the ATSE-SPE 2019 "Oilfield Chemistry Challenges".
- Organized a pre-event short course in the ATSE-SPE 2019 "Deep Sensing Petrophysics". Also, I am chairing a session in this workshop.
- Organized a technical workshop between the College of petroleum Engineering and Production Technology Davison (EXPEC ARC, Saudi Aramco), May 7th, 2019. In this workshop we discussed the ongoing projects progress, in addition to the potential of establishing a "Thermochemical Research Program' at CPG.
- Organizing committee and session chair for the 7th SPWLA topical workshop, "Advancements in Geochemistry and Their Applications in E&P". I chaired session " New Technologies and Way Forward", November 5th, 2019.
- Serving in the steering committee/technical committee of several SPE Conferences and workshops such as 2023 MEOS/GEOS, 2025 MEOS/GEOS, 2024 ADIPEC, 2025 SPE Oman Petroleum Show.