1. **NAME**: Mamdouh T. Ghannam

2. **ACADEMIC RANK**: Professor

3**. DEGREES**

| | | |
|---|---|---|
| BSc in ChE | Cairo University, Egypt | 1981 |
| MSc in ChE | Cairo University, Egypt | 1985 |
| PhD in ChE | Univ. of Saskatchewan, Canada | 1991 |

4. **NUMBER OF YEARS OF SERVICE ON THIS FACULTY**: Since 1998

| | |
|---|---|
| Professor | 2007 - Date |
| Associate Professor | 2001 - 2006 |
| Assistant Professor | 1998 - 2001 |

5. **RELATED EXPERIENCE**:

| **Institution** | **Position** | **Date** |
|---|---|---|
| Concordia Univ, Canada | Adjunct Prof | Aug 2006 – Aug 2016 |
| Univ. of Saskatchewan, Canada | Lecturer | 1997 - 1998 |
| Univ. of Saskatchewan, Canada | Research Eng. | 1993 – 1997 |
| Cairo University, Egypt | Assistant Prof. | 1992 - 1995 |
| Univ. of Saskatchewan, Canada | Graduate St / TA | 1986 – 1991 |

6. **PRINCIPAL PUBLICATIONS OF THE LAST THREE YEARS:**

***JOURNAL PUBLICATIONS (Last 5 Years):***

1. Ihab Ayad, **Mamdouh T. Ghannam**, Mohamed YE Selim, "Combustion and engine roughness of water-jojoba biodiesel emulsions in diesel engine", ***Accepted*** Energy Conversion and Management: X (**2025**).
2. AbdulRazzag Bin Zekri, **Mamdouh Taha Ghannam**, Musaab Ibrahim Magzoub, "Effects of Formation Mineral Compositions on the Performance of High- & Low-Salinity Brine Injection in Carbonate Reservoirs", World Journal of Engineering and Technology12(4), 1008-1023 (**2024**).
3. Muhammad F. Siddique, Mohamed Y. E. Selim, Mahmoud Elgendi, **Mamdouh T. Ghannam**, "A review on slurry-based fuels for engines and furnaces: Preparation, stability, emission characteristics and applications", International Journal of Thermofluids 22, 100610 (**2024**).
4. **Mamdouh T. Ghannam,** Mohamed Y.E. Selim, "Viscoelastic performance evaluation of petrol oil and different macromolecule materials", International Journal of Thermofluids 22, 100596 (**2024**).
5. Ihab Ayad, **Mamdouh T. Ghannam**, Mohamed YE Selim, "Experimental stability investigation of different water-in-jojoba biodiesel emulsions", Fuel 357, 129782 (**2024**).
6. Abdulrazag Y. Zekri , Hala K. Alshadafan, **Mamdouh T. Ghannam**, Essa G. Lwisa , Fathi H. Boukadi (2023), "Design of low salinity waterflooding for oil-wet and water-wet carbonate reservoirs", World Journal of Engineering and Technology 9 (10), 93-114 (**2023**).
7. AM Ansari, LA Memon, **Mamdouh T. Ghannam**, MYE Selim, "Impact of Biodiesel Blended fuel with Nanoparticles on Performance and Noise Emission in Compression Ignition Engine", International Journal of Thermofluids, 100390 (**2023**).
8. **Mamdouh T. Ghannam**, Basim Abu-Jdayil, Mohamed Y. E. Selim, and Nabil Esmail, "Comparison of Synthetic and Natural Polymers-Oil-Emulsions in Terms of Viscous and Elastic Behaviors", Petroleum Science and Technology 41 (9), 959-977 (**2023**).
9. **Mamdouh T. Ghannam,** Mohamed Y.E. Selim, Ahmed Thaher, Alyazia Binamro, Mayasa Amansoori, Sami Abdallah "Flow Characteristics of Jojoba and Other Oil Blends for Skin Treatment Fluids", International Journal of Thermofluids 18, 100362 (**2023**).
10. **Mamdouh T. Ghannam**, Mohamed Y. E. Selim, Abdulrazag Y. Zekri and Nabil Esmail, "Rheological Assessment of Oil-Xanthan Emulsions in Terms of Complex, Storage, and Loss Moduli", Polymers 15 (2), 470 (**2023**).

11. **Mamdouh T. Ghannam,** Basim Abu-Jdayil, Mohamed Y. E. Selim, and Nabil Esmail, "Comparison of Synthetic and Natural Polymers-Oil Emulsions in Terms of Viscous and Elastic Behaviors", Petroleum Science and Technology, doi.org/10.1080/10916466.2022.2072332 (**2022**).
12. **Mamdouh T. Ghannam**, Mohamed Y. E. Selim, Abdulrazag Y. Zekri and Nabil Esmail, "Viscoelastic Behavior of Crude Oil-Gum Emulsions in Enhanced Oil Recovery", Polymers 14 (5), 1004 (**2022**).
13. MYE Selim, **Mamdouh T. Ghannam**, BN Abdo, YA Attai, MS Radwan. "Raw Jojoba Oil as a Sustainable Fuel to Diesel Engines and Comparison with Diesel Fuel", Energies 15 (16), 5770 (**2022**).
14. Basim Abu-Jdayil, **Mamdouh T. Ghannam**, K Alsayyed Ahmed and M Djama, "The Effect of Biopolymer Chitosan on the Rheology and Stability of Na-Bentonite Drilling Mud", Polymers 13 (19), 3361 (**2021**).
15. Basim Abu-Jdayil and **Mamdouh T. Ghannam**, "Effect of Surfactants on the Performance of Water-Based Drilling Fluids", ***Book Chapter*** in Surfactants in Upstream E&P, 73-111 (**2021**).
16. **Mamdouh T. Ghannam and** Mohamed Y.E. Selim, "Rheological Properties of the Jojoba Biofuel*",* Sustainability *13, 6047* (**2021**).
17. Nayef Ghasem **and Mamdouh T. Ghannam**, "Challenges, benefits & drawbacks of chemical engineering on-line teaching during Covid-19 pandemic", Education for Chemical Engineers 36, 107-114 (**2021**).
18. **Mamdouh T. Ghannam,** Mohamed Y.E. Selim, Noor Taleb, Norah Kaalan, Mona Khedr, "Experimental Flow Characteristics Investigation of Waste and Pure Lube Oils", Fuel 298, 120774 (**2021**).
19. **Mamdouh T. Ghannam** and Mohamed Y.E. Selim, "The flow behavior of raw Jojoba oil in comparison with some traditional lube oils", Industrial Crops & Products 161, 113164 (**2021**).
20. **Mamdouh T. Ghannam**, Mohamed Y.E. Selim, Abdulrazag Y. Zekri, and Nabil Esmail, "Thixotropic assessment of some enhanced oil recovery used polymers", International Journal of Engineering Research & Technology 9 (7), 1683-1693 (**2020**).
21. Mohamed Y E Selim, **Mamdouh T Ghannam**, Hosam E Saleh, Moudi T Ali Alameri, Mariam G Zaghloul, Aya Mansour, "Behaviour of water-waste cooking oil biodiesel emulsion for diesel engine performance, engine roughness and exhaust emissions", International Journal of Engineering Research & Technology 9 (7), 1282-1288 (**2020**).
22. A.Y. Zekri, M. J. Khalifi, H. Al-Attar, and **Mamdouh Ghannam**, "Modification of gulf seawater for possible use in improving oil recovery of carbonate formation: Mechanism investigation", International Journal of Advanced Science and Technology 29 (3), 12960 – 12976 (**2020**).
23. Mohamed A. Al-Bayywomi, Mohamed Y. E. Selim, **Mamdouh T. Ghannam**, "Another dimension to the engineering code of ethics", International Journal of Multidisciplinary and Current Educational Research 2 (4), 95-103 (**2020**).
24. A.Y. Zekri, L. Yang, G. Alusta, and **Mamdouh Ghannam**, "Sequential injection of carbonated water: A possible process for coupling CO2 enhanced oil recovery and storage", International Journal of Recent Technology and Engineering 9 (3), 2277-3878 (**2020**).
25. MYE Selim, **Mamdouh T. Ghannam**, ASA Awad, MSA Sabek, "Combustion and exhaust emissions of a direct-injection diesel engine burning jojoba ethyl ester and mixtures with ethanol", Biofuels 10 (4), 545-551 (**2019**).
26. Emad Elnajjar, Salah A.B. Al Omari, Mohammad O. Hamdan, **Mamdouh T. Ghannam** and Mohamed Y.E. Selim, "Characteristics of external furnace combustion of used lube oil with different percentages of diethyl ether additives burned with liquefied petroleum gas", Biofuels, DOI: 10.1080/17597269.2019.1608035, (**2019**).
27. **Mamdouh T. Ghannam**, Mohamed Y.E. Selim, Abdulrazag Y. Zekri and Nabil Esmail, "Flow characteristics of xanthan solutions and their crude oil emulsions in terms of thixotropic behaviour", Petroleum Science and Technology 37, 1279-1288 (**2019**).
28. Emad Elnajjar, Salah A.B. Al Omari, Mohammad O. Hamdan, **Mamdouh T. Ghannam** and Mohamed Y.E. Selim, "Characteristics of external furnace combustion of used lube oil with different percentages of diethyl ether additives burned with liquefied petroleum gas", Biofuels, DOI: 10.1080/17597269.2019.1608035, (**2019**).

29. Abdulrazag Y. Zekri, Hamdi B. Zekri, **Mamdouh T. Ghannam**, and Essa G. Lwisa, "Possible Application of Enhanced Oil Recovery Technology in Low Permeability Carbonate Reservoir", American Journal of Engineering Research 7, 274-281 (**2018**).
30. **Mamdouh T. Ghannam**, Mohamed Y.E. Selim, Abdulrazag Y. Zekri and Nabil Esmail, "Yield Stress of Alcoflood and Xanthan Polymers Solutions and their Emulsions with Crude Oil", International Journal of Chemical Engineering and Applications 9, 1-8 (**2018**).
31. Mohamed Y.E. Selim, **Mamdouh T. Ghannam**, and Adel M. Hussein, "Effects of Di-Ethyl-Ether Addition on the Water-Diesel Emulsion Fuel Combustion Pressures and Pressure Rise Rates", American Journal of Modern Energy 3 (6), 146-152 (**2017**).
32. **Mamdouh T. Ghannam,** Basim Abu-Jdayil, and Nabil Esmail, "Flow Behaviors Comparison of Crude Oil-Polymer Emulsions", International Journal of Ambient Energy, **DOI:** 10.1080/01430750.2017.1324812 (**2017**).
33. Mohamed Y. E. Selim, **Mamdouh T. Ghannam**, Ahmed S. Al Awad, and Mohamed Saed Al Sabek, " Combustion and Exhaust Emissions of a Direct-Injection Diesel Engine Burning Jojoba Ethyl Ester and Mixtures with Ethanol", BIOFUELS, **DOI**: 10.1080/17597269.2017.1332296 (**2017**).
34. Abdulrazag Y. Zekri, **Mamdouh T. Ghannam**, Mohamed Nasr, and Amer M. Aborig "Relative Flow of Bacteria and Oil in Porous Media", Modern Environmental Science and Engineering 3 (2), 98-106 (**2017**).
35. **Mamdouh T. Ghannam**, Mohamed Y.E. Selim, Abdulrazag Y. Zekri and Nabil Esmail, "Experimental Investigation of the Yield Stress Measurements for Xanthan Solutions and Crude Oil-Xanthan Emulsions", Petroleum Science and Technology 34, 546-554 (**2016**).
36. **Mamdouh T. Ghannam** and Mohamed Y. E. Selim, "Rheological Properties of Water-in-Diesel Fuel Emulsions", International Journal of Ambient Energy 37, 1 (**2016**).
37. Basim Abu-Jdayil, **Mamdouh T. Ghannam,** and Mustafa S. Nasser, "The Modification of Rheological Properties of Bentonite-Water Dispersions with Cationic and Anionic", International Journal of Chemical Engineering and Applications Vol. 7, No. 2 (**2016**).
38. **Mamdouh T. Ghannam**, Mohamed Y. E. Selim, Saud Aldajah, Hosam E. Saleh, and Adel M. M. Husien, "Effect of Blending on Physiochemical Properties of Jojoba-Diesel Fuels", Biofuels, **DOI:**10.1080/17597269.2015.1123982 (**2016**).

***CONFERENCE PUBLICATIONS/PRESENTATIONS:***

1. Abdulrazag Zekri, Sarah Al-Tamimi, **Mamdouh T Ghannam**, "Estimation of Carbon Dioxide Storage Capacity in Saline Aquifer: A New Approach," the 3rd International Conference on Applied Science & Engineering held during, Bangkok-Thailand, October 23-24 (**2023**).
2. A. Zekri, **Mamdouh T Ghannam**, H.B Zekri, "Interfacial Tension of Hydrocarbon/Water System with Mixed Anionic Surfactants at High Pressures and Temperatures: Optimization of Alkane Number and Salinity", Vietnam Symposium on Advances in Offshore Engineering, 467-474 (**2021**).
3. Mohamed Y. E. Selim, **Mamdouh T Ghannam**, and Soliman M.S. Elfeky "Combustion noise from diesel engine using raw palm oil and its biofuel", 26th International Congress on Sound and Vibration, Montreal-Canada, July 7-11 (**2019**).
4. A. Zekri, A., G. Al-Austa, **M.T. Ghannam**, H. Zekri, "Optimization of oil-low salinity water-surfactant mixtures at high temperatures and pressures", Global Chemistry Congress, Rome-Italy, June 10-12 (**2019**).
5. Mohamed O. Hamdan, Mohamed Y. E. Selim, Salah Addin Al Omari, Emad Elnajjar, and **Mamdouh Ghannam**, "Effect of Stabilized Water-Diesel Emulsions on External Combustion Characteristics", ASME 2013 Summer Heat Transfer Conference, HT2013, Minneapolis MN, USA, July 14-19 (**2013**).
6. **Mamdouh T. Ghannam**, A Zekri, H Al-Attar, M Mahmoud, and R Almehaideb, "The Impact of LoSal on Oil Recovery from a Selected Carbonate Reservoir in Abu Dhabi-An Experimental Approach", 18th Middle East Oil & Gas Show and Conference (MEOS) (**2013**).
7. Eisa AlMatroushi and **Mamdouh T. Ghannam**, "Flow Behavior of Crude Oil Droplet Moving within Aqueous Solutions", Interdisciplinary Transport Phenomena VII, Dresden, Germany, September 19-23 (**2011**).

7. **Membership of Scientific and Professional Societies**

- Member of the Chemical Institute of Canada.
- Member of the Canadian Society for Chemical Engineering.
- Peer Reviewer for several International Journals such as Journal of Applied, Polymer Science, Fuel, Industrial & Engineering Chemistry Research, and Chemical Engineering Communication.
- Reviewer for the Institution of Chemical Engineers.

8. **HONORS AND AWARDS**:

- Included in the top 2% of the world scientists by Stanford in the last four cycles (**2020-2023**).
- Recipient of the College Teaching Excellence Award (**2008**).
- Recipient of the merit Award (**2007**), UAE University.
- Member of the editorial board Journal of Energy Engineering for the ASCE (American Society of Civil Engineers 2004-2008).
- Listed on the 2009 edition of Who's Who in the World.
- Listed in the 2006-2007 edition of Who's Who in Science & Engineering.

**9. SUBJECTS OR COURSES TAUGHT BY TERMS (2023-2024):**

| Semester | Course # | Course Title |
|---|---|---|
| First | CHME390 | Engineering & Strength of Materials (Two Sections) |
| | CHME585 & 590 | GPI & GPII |
| Second | CHME390 | Engineering & Strength of Materials (Two Sections) |
| | CHME585 & 590 | GPI & GPII |