PUBLICATIONS OF Professor Ajay Mandal, Department of Petroleum Engineering, IIT(ISM)

Sl. No.	Publications (Total-265)	Publisher	IF
	Year-2025		
1.	Dinesh Joshi and Ajay Mandala, et al., Synthesis and Characterization of Carbon Dots for Enhanced Oil Recovery Applications- Under revision with minor revision in Journal of Molecular Liquids.	Elsevier	5.3
2.	Ranjit Dutta and Ajay Mandal et al., Optimization of CO2 Storage in Saline Aquifers: A Field-Scale Mechanistic Study on Injection Strategies, Pressure Management, and Long-Term Containment, Under revision with minor revision in Environmental Earth Sciences	Springer Nature	2.28
3.	Rajib Chakraborty & Mandal et al Optimization of Control Parameters in Alkaline-Surfactant-Polymer (ASP) Flooding for Enhanced Oil Recovery: A Simulation Approach; Under revision with minor revision in Journal of Petroleum Exploration and Production Technology (PEPT)	Springer Nature	2.4
4.	Rohit Kumar Saw, Ajay Mandal; A Comprehensive Investigation on Ion Tuned Low Salinity Water Flooding in Carbonate Reservoirs: Impact of Phosphate Ion (PO43-)- Under second Review in SPE Journal.	SPE	3.6
5.	Chakraborty G, Ojha K, Mandal A, Patra N. Optimizing Oil Detachment from Silica Surfaces Using Gemini Surfactants and Functionalized Silica Nanoparticles: A Combined Molecular Dynamics and Machine Learning Approach. Physical Chemistry Chemical Physics. 2025.	RSC	3.68
6.	Chakraborty R, Jangid L, Pandey R, Pasivedala RK, Shaw T, Dutta R, Mandal A. Synergistic Effects of Nonionic Surfactant and Organic Alkali for Enhanced Oil Recovery: Optimizing Interfacial Tension Reduction, Emulsion Stability, and Corrosion Control under Optimal Salinity Conditions. Energy & Fuels. 2025 Feb 7.	ACS	5.2
7.	Akash T, Verma V, Ali M, Mandal A, Pal N. Characterization and optimization of anionic surfactant-polyethylene glycol-alumina based nanofluids for enhanced oil recovery application. Journal of Molecular Liquids. 2025 Jan 12:126924.	Elsevier	5.3
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9.	Goru Lakshmi Papa Rao, Ajay Mandal, Nilanjan Pal, Choline Chloride-Urea based deep eutectic Solvent: Characterization, interfacial behavior and Synergism in binary (surfactant) systems, Chemical Physics, Volume 588, 2025, 112496,	Elsevier	2.0
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10.	Rajib Chakraborty, Ranjit Dutta, Gaurav Kundu, Saloma Yomdo, Trailukya Borgohain, Prakash Bajpai, Saket Kumar, Ajay Mandal, Optimization of Control Parameters in Alkaline Surfactant Polymer (ASP) Flooding for Enhanced Oil Recovery: A Simulation Approach; Journal of Petroleum Exploration and Production Technology, 2024	Springer	2.4
11.	Ray D, Jangid L, Joshi D, Prakash S, Ojha K, Manor O, Mandal A. Formulation of Polymer-Augmented Surfactant-Based Oil–Water Microemulsions for Application in Enhanced Oil Recovery. ACS omega. 2024 Dec 6.	ACS	3.7
12.	Joshi D, Ramesh DN, Prakash S, Saw RK, Maurya NK, Rathi KB, Mitra S, Sinha OP, Bikkina PK, Mandal A. Formulation and Characterisation of Polymer and Nanoparticle-Stabilized Anionic Surfactant Foam for Application in Enhanced Oil Recovery. Surfaces and Interfaces. 2024 Dec 10:105615.	Elsevier	5.7
13.	Priyanshu Kumar Singh, Dinesh Joshi, Ajay Mandal, Nilanjan Pal; Formulation and Optimization of Silica nanoparticle-stabilized Anionic surfactant microemulsions for application in Enhanced Oil Recovery" Energy & Fuels, 2025.	Nature.com	3.8
14.	Ranjit Dutta, Gaurav Kundu, Seyed Mousa Mousavi Mirkalaei, Rajib Chakraborty, Saloma Yomdo, Ajay Mandal Evaluation of Potential of CO2 Enhanced Oil Recovery (EOR) and Assessment of Capacity for Geological Storage in a Mature Oil Reservoir within Upper Assam Basin, India, Energy & Fuels.	ACS	5.3
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16.	Pillai, Prathibha, Rohit Kumar Saw, and Ajay Mandal. "Formulation and characterization of ionic liquid-based nanoemulsion for enhanced oil recovery applications." Journal of Molecular Liquids (2024): 124189.	Elsevier	6.0
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25.	Saw, R.K. and Mandal, A., 2023. Experimental investigation on fluid/fluid and rock/fluid interactions in enhanced oil recovery by low salinity water flooding for carbonate reservoirs. Fuel, 352, p.129156.	Elsevier	7.2
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27.	R Kumar Pandey, A Kumar, A Mandal, B Vaferi, Genetic algorithm optimization of deep structured classifier-predictor models for pressure transient analysis, Journal of Energy Resources Technology 145 (2), 023003, 2023.	ASME	3.41
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42.	Khan MY, Mandal A: Analytical model of incremental oil recovery as a function of WAG ratio and tapered WAG ratio benefits over uniform WAG ratio for heterogeneous reservoir, Journal of Petroleum Science and Engineering 209, 109955, 2022	Elsevier	5.168
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50.	Narendra Kumar, Amit Kumar, Ajay Mandal, Formation, Characteristics and Oil Industry Applications of Nanoemulsions: A Review, Journal of Petroleum Science and Engineering, Volume 206, November 2021, 109042	Elsevier	5.168
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