

## **Journals**

1. Upadhyay, R., Kumar, R., Kumar, A., Mobarsha, G., Kiran, R. and **Rajak, V.K.**, 2026. Coalbed methane (CBM) well performance: A new methodology combining IPR and VLP analysis. *International Journal of Coal Science & Technology*, 13(1), p.16. <https://doi.org/10.1007/s40789-025-00844-8> (**Impact Factor: 8.7, Q1**)
2. Kiran, R., Saif, M., Wood, D.A., Datta Gupta, S., Kumar, A., Upadhyay, R. and **Rajak, V.K.**, 2025. Geological Hydrogen Prospectivity of Iron Ore Deposits in India Based on Semiquantitative Analysis. *ACS Omega*. <https://doi.org/10.1021/acsomega.5c02770> (**Impact Factor: 4.3, Q2**)
3. Doley, A., **Rajak, V.K.**, Kiran, R., Mahto, V., Upadhyay, R., Eswaran, U. and Yadav, P., 2025. Enhancing the Shale Drilling Compatibility Using Hydroxyethyl Acrylate Chitosan. *Arabian Journal for Science and Engineering*, pp.1-15. <https://doi.org/10.1007/s13369-025-10371-y> (**Impact Factor: 2.9, Q2**)
4. Gautam, S., Kumar, S., Kumar, A., **Rajak, V.K.** and Guria, C., 2025. Development of functional polymer-based clay-free HPHT drilling fluid: Effect of molecular weight and its distribution on drilling fluid performance. *Geoenergy Science and Engineering*, 246, p.213616. <https://doi.org/10.1016/j.geoen.2024.213616> (**Impact Factor: 4.6, Q1**)
5. Kiran, R., Upadhyay, R., **Rajak, V.K.**, Kumar, A. and Gupta, S.D., 2024. Underpinnings of reservoir and techno-economic analysis for Himalayan and Son-Narmada-Tapti geothermal sites of India. *Renewable Energy*, 237, p.121630. <https://doi.org/10.1016/j.renene.2024.121630> (**Impact Factor: 9.1, Q1**)
6. Kiran, R., **Rajak, V.K.**, Upadhyay, R. and Kumar, A., 2024. Comparative techno-economic assessment of superhot rock and conventional geothermal energy feasibility for decarbonizing India. *Geothermics*, 122, p.103078. <https://doi.org/10.1016/j.geothermics.2024.103078> (**Impact Factor: 3.9, Q1**)
7. Saif, M., Kiran, R., **Rajak, V.K.** and Verma, R.K., 2024. Investigation of an Indian Site with Mafic Rock for Carbon Sequestration. *ACS omega*, 9(28), pp.30270-30280. <https://doi.org/10.1021/acsomega.4c00213> (**Impact Factor: 4.3, Q2**)
8. Doley, A., Mahto, V., **Rajak, V.K.**, Kiran, R. and Upadhyay, R., 2024. Investigation of Filtration and Shale Inhibition Characteristics of Chitosan-N-(2-hydroxyl)-propyl trimethylammonium Chloride as Drilling Fluid Additives. *ACS omega*, 9(19), pp.21365-21377. <https://doi.org/10.1021/acsomega.4c01632> (**Impact Factor: 4.3, Q2**)

9. Banerjee, S., Banik, A., **Rajak, V.K.**, Bandyopadhyay, T.K., Nayak, J., Jasinski, M., Kumar, R., Jeon, B.H., Siddiqui, M.R., Khan, M.A. and Chakraborty, S., 2024. Two-Phase Crude Oil–Water Flow Through Different Pipes: An Experimental Investigation Coupled with Computational Fluid Dynamics Approach. *ACS omega*, 9(10), pp.11181-11193. <https://doi.org/10.1021/acsomega.3c05290> (**Impact Factor: 4.3, Q2**)
10. Das, D., Anand, A., Gautam, S. and **Rajak, V.K.**, 2024. Assessment of utilization potential of biomass volatiles and biochar as a reducing agent for iron ore pellets. *Environmental Technology*, 45(1), pp.158-169. <https://doi.org/10.1080/09593330.2022.2102936> (**Impact Factor: 2.0, Q3**)
11. Doley, A., Mahto, V., **Rajak, V.K.** and Suri, A., 2023. Development of a High-Performance Drilling Fluid Additive for Application in Indian Shale Gas Formations. *Energy & Fuels*, 37(17), pp.12824-12837. <https://doi.org/10.1021/acs.energyfuels.3c02066> (**Impact Factor: 5.2, Q1**)
12. Kiran, R., Upadhyay, R., **Rajak, V.K.**, Gupta, S.D. and Pama, H., 2023. Comprehensive study of the underground hydrogen storage potential in the depleted offshore Tapti-gas field. *International Journal of Hydrogen Energy*, 48(3), p. 12396-12409. <https://doi.org/10.1016/j.ijhydene.2022.12.172> (**Impact Factor: 8.3, Q1**)
13. Upadhyay, R., Datta Gupta, S. and **Rajak, V.K.**, 2023. Impact of pressure-dependent diffusivity on transient pressure analysis of a dry Coalbed Methane (CBM) wells: A new approach. *Journal of Earth System Science*, 132(1), p.34. <https://doi.org/10.1007/s12040-022-02040-7> (**Impact Factor: 1.7, Q3**)
14. Gautam, A., Yadav, R.K., Ajit, K.P. and **Rajak, V.K.**, 2023. A review on CDM-based ductile models and its application. *Transactions of the Indian Institute of Metals*, 76(5), pp.1141-1154. <https://doi.org/10.1007/s12666-022-02790-4> (**Impact Factor: 1.5, Q3**)
15. Sah, R.K., Kumar, A., Gautam, A. and **Rajak, V.K.**, 2022. Temperature independent FBG based displacement sensor for crack detection in civil structures. *Optical Fiber Technology*, 74, p.103137. <https://doi.org/10.1016/j.yofte.2022.103137> (**Impact Factor: 2.7, Q2**)
16. **Rajak, V.K.**, Gautam, S., Ajit, K.P., Kiran, R. and Madhumaya, A., 2022. Rheological Property Measurement and Application of Formate-Based Drilling Fluids at Elevated

Temperatures: A Review. *MAPAN*, 37(3), pp.665-681. <https://doi.org/10.1007/s12647-022-00546-5> (**Impact Factor: 1.3, Q4**)

17. Datta Gupta, S., Upadhyay, R. and **Rajak, V.K.**, 2022. Establishment of economic viability for hydrocarbon production through a geocellular model developed in challenging geological reservoir of onshore sedimentary basin, India. *Himalayan Geology*, 43(2), pp. 471-489. (**Impact Factor: 0.9, Q3**)
18. Gautam, S., Guria, C. and **Rajak, V.K.**, 2022. A state of the art review on the performance of high-pressure and high-temperature drilling fluids: Towards understanding the structure-property relationship of drilling fluid additives. *Journal of Petroleum Science and Engineering*, 213, p.110318. <https://doi.org/10.1016/j.petrol.2022.110318> (**Impact Factor: 5.16, Q1**)
19. Kiran, R., Dansena, P., Salehi, S. and **Rajak, V.K.**, 2022. Application of machine learning and well log attributes in geothermal drilling. *Geothermics*, 101, p.102355. <https://doi.org/10.1016/j.geothermics.2022.102355> (**Impact Factor: 3.9, Q1**)
20. **Rajak, V.K.**, Kumar, S., Thombre, N.V. and Mandal, A., 2018. Synthesis of activated charcoal from saw-dust and characterization for adsorptive separation of oil from oil-in-water emulsion. *Chemical Engineering Communications*, 205(7), pp.897-913. <https://doi.org/10.1080/00986445.2017.1423288> (**Impact Factor: 2.0, Q3**)
21. **Rajak, V.K.**, Kumar, H. and Mandal, A., 2016. Kinetics, equilibrium and thermodynamic studies of adsorption of oil from oil-in-water emulsion by activated charcoal. *International Journal of Surface Science and Engineering*, 10(6), pp.600-621. <https://doi.org/10.1504/IJSURFSE.2016.081038> (**Impact Factor: 1.2, Q4**)
22. **Rajak, V.K.**, Singh, I., Kumar, A. and Mandal, A., 2016. Optimization of separation of oil from oil-in-water emulsion by demulsification using different demulsifiers. *Petroleum Science and Technology*, 34(11-12), pp.1026-1032. <https://doi.org/10.1080/10916466.2016.1181654> (**Impact Factor: 1.4, Q3**)
23. **Rajak, V.K.**, Relish, K.K., Kumar, S. and Mandal, A., 2015. Mechanism and kinetics of separation of oil from oil-in-water emulsion by air flotation. *Petroleum Science and Technology*, 33(23-24), pp.1861-1868. <https://doi.org/10.1080/10916466.2015.1108987> (**Impact Factor: 1.4, Q3**)

## **Conferences**

1. Imtiaz, M., Rajak, V.K., Dei, S., Chhateja, J. and Biswas, A., 2016, March. Aquatic Oil Spill Remediation by Using Automated Unmanned Boat AUB. In *Offshore Technology Conference Asia*. Offshore Technology Conference.