

Dr. Ajoy Kumar Bhaumik's publications

Peer-Reviewed journals

1. Roy, L., Ghosh, A. K., and Bhaumik, A. K., 2024. Tortonian-Messinian radiolarian events from Northeast Indian Ocean – diversity analysis, palaeogeographic distribution and depositional environment. *Journal of Earth System Science*. 134:32, 1-25; <https://doi.org/10.1007/s12040-024-02481-2>.
2. Bhaumik, A. K., Kumar, S., Chaudhuri, S., Mohanty, S., Mukherjee, M. K., Sain, K., Gupta, A. K., and Kumar, P., 2024. Accumulation of Gas Hydrates in Mass Transport Deposit at Krishna-Godavari Basin, Bay of Bengal: Foraminiferal, Sedimentological, and Seismic Evidence. *AAPG Bulletin*, 108(9), 1687-1703. doi.org/10.1306/03222423052.
3. Chaudhuri et al., 2024. Analysis of the spectral contrast between fossil-bearing and fossil-depleted limestone- Implication in delineating fossil-bearing limestone using reflectance and emittance spectroscopy data. *Journal of the Geological Society of India*, 100(7), 971-980. doi.org/10.17491/jgsi/2024/173940.
4. Roy, Lopamudra and Ghosh, Amit K and Bhaumik, Ajoy Kumar, 2024. Late Miocene radiolarian data from the sediment core of NGHP-01-17A in the Andaman and Nicobar Basin, NE Indian Ocean. Available at SSRN: <https://ssrn.com/abstract=4807267> or <http://dx.doi.org/10.2139/ssrn.4807267>.
5. Bhaumik et al., 2024. Biostratigraphy and sedimentation rate estimation of Quaternary sediments of the Krishna-Godavari Basin, Bay of Bengal: Evidence from NGHP-01 Holes 10D, 5C and 3B. *Micropaleontology*, 70(3), 239-252. [http://doi.org/10.47894/mpal.70.3.03](https://doi.org/10.47894/mpal.70.3.03).
6. Roy et al., 2023. Tortonian silicoflagellates from the offshore of northeast Indian Ocean. *Deep-Sea Research Part-II*, 210, 105297. doi.org/10.1016/j.dsr2.2023.105297.
7. Dey et al., 2023. Rhodolith-forming coralline red algae in the CaCO₃ biofactory – A case study from the Serravallian of tropical northeastern Indian Ocean. *Comptes Rendus Palevol*, 22(26), 541-567. doi.org/10.5852/cr-palevol2023v22a26.
8. Mohanty et al., 2023. Late Holocene Paleoceanographic and Climatic Changes and their Impact on Indian Socio-Economic Condition: Benthic Foraminiferal Evidence from the Bay of Bengal. *The Holocene*, 33(7) 791-806. doi.org/10.1177/09596836231163505.
9. Maiti et al., 2023. Experimental and kinetic modelling studies on the gas hydrate inhibition effect of PVP K-90 in drilling fluids. *Gas Science and Engineering*, 115, 205015. doi.org/10.1016/j.jgsce.2023.205015.
10. Chaudhuri et al., 2022. Multiproxy analysis constraining climatic control over the Cenozoic depositional history of Kachchh, Western India. *Geological Journal*, 57(9), 1-33. doi.org/10.1002/gj.4511.
11. Maiti et al., 2022. Inhibition effect of synthesized Ionic liquids on hydrate formation: A kinetic and thermodynamic study. *Energy & Fuels*, 36 (18), 10832-10844. doi: [10.1021/acs.energyfuels.2c01921](https://doi.org/10.1021/acs.energyfuels.2c01921).
12. Singh et al., 2022. Paleomonsoonal shifts during ~13700 to 3100 yr BP in the central Ganga Basin, India with a severe arid phase at ~4.2 ka. *Quaternary International*, 629, 65-73. doi.org/10.1016/j.quaint.2021.01.015.

13. Dey et al., 2022. Burdigalian–Serravallian radiolarians from Havelock Island, Northeast Indian Ocean and their palaeoecological significance. *Micropaleontology*, 68(4), 345-374. doi.org/10.47894/mpal.68.4.01.
14. Maiti et al., 2022. Geological characterization of natural gas hydrate bearing sediments and their influence on Hydrate formation and dissociation. *Journal of Natural Gas Science and Engineering*, 100, 104491, doi.org/10.1016/j.jngse.2022.104491.
15. Roy et al., 2022. Diatom assemblages from the Tortonian of northeast Indian Ocean (NGHP-01-17A): its correlation with significant radiolarian and calcareous nannofossil events. *Micropaleontology*, 68(1), 51-84. doi.org/10.47894/mpal.68.1.03.
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17. Srivastava et al., 2021. Biostratigraphy and sea-level fluctuations during the Jurassic of Kachchh region, Gujarat, India. *Journal of the Palaeontological Society of India*, 66(2), 156-162.
18. Maiti, et al., 2021. Performance of water-based drilling fluids for deep-water and hydrate reservoirs: designing and modeling studies. *Petroleum Science*, 18(6), 1709-1728. doi.org/10.1016/j.petsci.2021.09.001.
19. Dey et al., 2021. Late Pliocene to early Pleistocene Planktonic foraminifera from Northern Indian Ocean (Andaman and Nicobar Islands): Interpretation on cooling event and ocean upwelling. *Journal of Foraminiferal Research*, 51(3), 115-138. doi.org/10.2113/gsjfr.51.3.115.
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22. Singh et al., 2020. Abrupt shifts in the Indian summer monsoon during the last three millennia. *Quaternary International*, 558, 59-65. doi.org/10.1016/j.quaint.2020.08.033.
23. Biswas, S., and Bhaumik, A. K., 2020. Timing and cause of the disappearance of some elongated taxa in the Indian Ocean: Study from NGHP Hole 17A. *Journal of Earth System Science*, 129 (1), 128 (1-10), doi.org/10.1007/s12040-020-01399-9 (012345678).
24. Chowdhury, S., and Bhaumik, A. K., 2019. Palaeoceanographic changes in the Bay of Bengal during the Holocene. *Journal of the Paleontological Society of India*, 64(1), 61-72 (ISSN 0552-9360).
25. Srivastava et al., 2018. Characterisation of organic carbon in black shales of the Kachchh basin, Gujarat, India. *Journal of Earth System Science*, 127, (7). doi.org/10.1007/s12040-018-1002-8.
26. Srivastava et al., 2017. Depositional environment of intertrappean and intratrappean beds of the Anjar area in a marine environment: Foraminiferal evidence. *Journal of Paleontological Society of India*, 62(2), 147-156.
27. Bhaumik et al., 2017. Biostratigraphy and depositional environment of the Miocene limestone bed of Baripada, Mayurbhanj District, Odisha: Foraminiferal, sedimentological and bulk organic geochemical evidences. *Journal of Geological Society of India*, 90, 437-446. doi.org/10.1007/s12594-017-0737-1.

28. Jyothi et al., 2017. Seismic attenuation for characterization of gas hydrate reservoir in Krishna-Godavari basin, eastern Indian margin. *Journal of the Geological Society of India*, 90, 261-266. Doi:10.1007/s12040-017-0840-0.
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32. Bhaumik et al., 2014. Surface and deep-water variability at Blake Ridge, NW Atlantic during the Plio-Pleistocene linked to closing of the Central American Seaway. *Paleogeography, Paleoclimatology, paleoecology*, 399, 345-351. doi:10.1016/j.palaeo.2014.02.001.
33. Bhaumik et al., 2013. Gas hydrates occurrence, destabilization and potential energy resources: A review based on faunal, geochemical and geophysical investigations with special reference to the Blake Ridge, NW Atlantic. *Journal of the Palaeontological Society of India*, 58(1), 39-50.
34. Sain et al., 2012. Geo-scientific Investigations of Gas-Hydrates in India. *Proceedings of Indian National Science Academy*, 78, 503-511.
35. Bhaumik et al. 2011. *Stilostomella*: Extinction or local disappearance of elongated species? *Current Science*, 101 (7), 952-958.
36. Mohan et al., 2011. Distribution of deep-sea benthic foraminifera in the Neogene of Blake Ridge, NW Atlantic. *Journal of Micropalaeontology*, 30, 33-74, doi: 10.1144/0262-821X10-008.
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39. Bose et al., 2007. Meteoritic impacts and climatic changes in Pliocene-Pleistocene epoch. *Earth, Moon, and Planets*, 101, 141-151, doi:10.1007/s11038-007-9190-2.
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41. Bhaumik, A. K. and Gupta, A. K., 2007. Evidence of methane release from Blake Ridge ODP Hole 997A during the Plio-Pleistocene: Benthic foraminifer fauna and Total Organic Carbon. *Current Science*, 92(2), 192-199.
42. Bhaumik, A. K. and Gupta, A. K., 2005. Deep-sea benthic foraminifera from gas hydrate-rich zone, Blake Ridge, Northwest Atlantic (ODP Hole 997A). *Current Science*, 88(12), 1969-1973.
43. Das et al., 2002. Significance of Stable Isotopes in paleoclimatology and Paleoceanography – A Review. *Indian Journal of Geochemistry*, 17, 13-23.

Conference full articles in edited volumes

1. Bhaumik A. K., and Gupta, A. K., (2011). Occurrence, clues, and importance of natural gas hydrates: Evidence from NW Atlantic. In *New Paradigms of Exploration and Sustainable Mineral Development: Vision 2050* (Eds. Varma, O. P., Sarkar, B. C., Varma, A. K., Mukherjee, M. K., Singh, S.). 17th Convention of Indian Geological Congress and International Conference, ISM, Dhanbad, pp. 493-506.
2. Bhaumik, A. K. and Gupta, A. K. (2011). Biotic evidence of methane seepage in gas hydrate-rich marine settings. *World Petrocoal Congress*, New Delhi, pp. 1-14.
3. Bhaumik, A. K. and Gupta, A. K. (2010). Foraminiferal (Protozoan) signatures for gas hydrate exploration: A case study from NW Atlantic. In *Geological and Technological Facets of CBM, Shale Gas, Energy Resources and CO₂ Sequestration* (Eds. Varma, A. K., Dubey, R. K., Sarkar, B. C. and Saxena, V. K.), Allied Publishers Pvt. Ltd., New Delhi, pp.116-125.

Conference abstracts

1. Mohanty et al., 2023. Holocene Climate Variability Recorded from Benthic Foraminifera Morphogroup in Western Bay of Bengal, India. Abstract ID: 14611. Session 13i: Ocean circulation, carbon and climate: Perspectives from proxies and models. Goldschmidt Conference 2023.
2. Chaudhuri et al., 2023. Influence of Paleoclimate and Paleodepositional Environment on Organism's flourishing: A Case Study on the Cenozoic Sediments From the Kachchh Region, Western India. Abstract ID: 14581, Session 8d: (Bio)chemical sediments as geochemical archives through deep time - Nutrient availability and the co-evolution of Earth's oceans, atmosphere, continents, and life. Goldschmidt Conference 2023.
3. Ghosh et al., 2021. Signature of high productivity during Tortonian: evidence from biosiliceous microfossils from northeast Indian Ocean. Online International NECLIME conference on "Neogene Climate Evolution and Biotic Response(S) in South Asia, Organised by BSIP, Lucknow, 7-9 September 2021.
4. Dey et al., 2021. Impact of Radiolarians on Neil Island of Andaman and Nicobar Basin, Northeast Indian Ocean, TMS Annual Conference 2021, Prague on 18th -19th November, 2021, Czech Republic.
5. Dey et al., 2021. WADE ratio of radiolarians: A tool for interpretation on the palaeoecology of Neogene sediments from Andaman and Nicobar Basin, Online International NECLIME conference on "Neogene Climate Evolution and Biotic Response(s) in South Asia", 7-9 September, 2021, organized by Birbal Sahni Institute of Palaeosciences, Lucknow (Oral Presentation).
6. Dey et al., 2019. Late Pliocene to early Pliostocene Planktonic foraminifera from Northern Indian Ocean (Andaman and Nicobar Islands): Interpretation on Glaciations Episode, Upwelling Cold Current and Palaeoecology. XXVII Indian colloquium on "Micropaleontology and Stratigraphy" BHU, Varanasi, U.P., 4th - 6th November, 2019, pp. 210 (Poster Presentation).

7. Srivastava et al., 2018. Characterization of Black shales of Kachchh Basin and its hydrocarbon generation potentiality. In: Emerging Trends in Geophysical Research for Make-In-India, organized by the Department of Applied Geophysics, IIT(ISM) Dhanbad, 9-10 March 2018.
8. Bhaumik, A. K., 2018. 'Microfossils in gas hydrate exploration'. Emerging Trends in Geophysical Research for Make in India, Department of Applied Geophysics, Indian Institute of Technology (Indian School of Mines), Dhanbad, India, March 9-11, 2018, pp. 63-64.
9. Singh et al., 2018. Paleoclimate variability in the NW Himalaya over the past three millennia. EGU General Assembly 2018, v20, pp. 161.
10. Mohanty, S., and Bhaumik, A. K., 2017. Bay of Bengal oceanographic changes during the last 300 years related to monsoonal variation. Abstract Book of 1st International Congress on Earth Sciences, Bandar Seri Begawan, Brunei Darussalam, held during 14-18 Nov, 2017, PP. 46-47.
11. Chaudhuri, et al., 2017. Landsat satellite imagery: A new informative source in the palaeontological study: Case study of Mahanadi Basin, Odisha, south eastern India. Abstract Book of 1st International Congress on Earth Sciences, Bandar Seri Begawan, Brunei Darussalam, held during 14-18 Nov, 2017, PP. 111.
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14. Chowdhury, S., and Bhaumik, A. K., 2017. Paleooceanographic changes of Bay of Bengal during the Holocene. Abstract volume of ICMS XXVI, Department of Geology, University of Madras, Chennai, pp. 26-27.
15. Bhaumik, et al., 2017. Closing of the Panamanian Seaway: timing and effects. Abstract volume of ICMS XXVI, Department of Geology, University of Madras, Chennai, pp. 5-6.
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18. Srivastava, H., and Bhaumik, A. K., 2016. Fluvial and marine intertrappeans of Anjar: Foraminiferal evidences. Abstract Volume of Seminar on developments in geosciences in the past decades-Emerging trends for the future and impact on society and 58th AGM of the Geological Society of India. 21-23rd October, 2016, Department of Geology and Geophysics, IIT, Kharagpur, pp. 430.
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22. Bhaumik, A. K., 2013. Disappearance of *Stilostomella lepidula* during Mid Pleistocene Transition. Annual General Meeting of the Geological Society of India and International Conference on Future Trends for Energy and Mineral Resources (ESEMR-2013), Department of Applied Geology, ISM, Dhanbad, 14-16th November, 2013, pp. 263.
23. Bhaumik et al., 2013. Distribution of benthic foraminifera at gas hydrate rich zone in Krishna-Godavari Basin. 18th Convention of Indian Geological Congress and International Symposium on Minerals and Mining in India-The way forward, inclusive of cooperative mineral-based industries in SAARC countries. Organized jointly with Madhya Pradesh Council of Science and Technology, Bhopal, April 27-29, 2013, Pre Convention Volume, pp-45.
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29. Bhaumik, A. K., and Gupta A. K., 2007. Benthic foraminiferal and geochemical evidences of gas hydrate formation and destabilization from Blake Outer Ridge, NW Atlantic. ICP IX Program and Abstracts, Pp-33.
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31. Bhaumik, A. K. and Gupta, A. K., 2004. Origin of gas hydrates at ODP Site 994, Hole C, Leg 164, Blake Ridge: Evidence from benthic foraminiferal and geochemical data. ICP VIII Program and Abstracts, Pp-79.
32. Bhaumik, A. K. and Gupta, A. K., 2003. Benthic foraminiferal and geochemical evidences for

gas hydrate formation in the upper gas hydrate zone at Site 994C, Leg 164, Blake Ridge, NW Atlantic. Abstract Volume, XIX India Colloquium on Micropaleontology and stratigraphy. Pp-4.