

**SAURABH K. BARMAN**

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**Education**

Ph.D	Geology, <a href="#">Department of Geology, Institute of Science, Banaras Hindu University</a> , Varanasi, India	2021
M.Sc. Tech.	Geology, <a href="#">Department of Geology, Institute of Science, Banaras Hindu University</a> , Varanasi, India	2015
B.Sc. (Hons.)	Geology, <a href="#">Department of Geology, Institute of Science, Banaras Hindu University</a> , Varanasi, India	2012

**Ph.D Title:** Geo-chemical Association, Mineralogical Characteristics and Genesis of Polymetallic Nodules from parts of Central Indian Ocean Basin (CIOB)

**Honors and Awards**

• Qualified <a href="#">Graduate Aptitude Test in Engineering (GATE)</a> , Geology & Geophysics conducted by IIT-Madras, India	2019
• Selected & Travel grant awarded by Geochemical Society for attending <a href="#">Goldschmidt 2018</a> Boston, USA	2018
• All India Rank 18 <sup>th</sup> in Geologist Group-A written examination, <a href="#">NMDC</a> , Ministry of Steel, Government of India	2018
• <a href="#">CSIR-SRF</a> , Council of Scientific and Industrial Research-New Delhi, India	2017
• <a href="#">CSIR-JRF</a> (Rank 82 <sup>nd</sup> ), Council of Scientific and Industrial Research-New Delhi, India	2015
• <a href="#">IIT-JAM</a> , Qualified Written Examination <a href="#">Joint Admission test for Masters</a> in IITs conducted by IIT-Roorkee, India	2012
• All India Rank 16 <sup>th</sup> in M.Sc. Geology Entrance Examination <a href="#">University of Delhi (DU)</a>	2012

**Professional Experience**

• 26 days Training on Geo-informatics at GIS Cell, Department of Civil Engineering MNNIT Allahabad.	2019
• 15 Days Dissertation on “Systematic study of Ammonoids from Karai Formation (Uttatur Group)” Cauvery Basin, Tamil Nadu.	2015
• 18 days Summer Training on Well Site Geological Operation & Technique at ONGC, Ahmedabad, Gujarat.	2014
• 15 days Summer Training on Mine Surveying at Northern Coalfield Limited (CIL) Singrauli, M.P	2013

**Research Interests**

- Engineering Geology
- Hydrogeology
- Marine Geology of Indian Ocean Basin & Oceanography
- Sedimentary Geology

**Geological Field Experience**

• 10-day fieldwork led by Profs. V. Pandey and A. S. Naik around Jaipur, Nagaur and Pushkar, Rajasthan, India	2014
• 10-day fieldwork led by Profs. N.V.C. Rao and D. Prakash on Cuddapah Supergroup Andhra Pradesh, India.	2013
• 8-Days fieldwork led by Profs. R. N. Tiwari, V. Pandey, D. Prakash and A.S. Naik in Chitrakoot District on Vindhyan Supergroup.	2012
• 2-days field trip to the Lower Vindhyan around Sonbhadra, U. P., India	2011
• 1-day field trip on the Lower Vindhyan around Chandauli and Mirzapur, U. P., India	2010

**Relevant laboratory and instrumentation skills**

- Geological mapping and fieldwork techniques
- Sample preparation and analysis of major elements by XRD
- Basic knowledge of clean lab procedures and trace element measurements by ICP-MS
- Polarized light microscopy and characterization of minerals in thin sections

**Trainings and short-course attendances**

• Online refresher course in Earth Science and Allied by Swayam arpit online course conducted by UGC-Human Resource Development Centre, BHU, Varanasi ( <i>one month</i> )	2019
• Basic course in “RS & GIS Applications in Water Resource” conducted by the Indian Institute of Remote Sensing (IIRS),	2018

BHU Campus, India (12 Days)

- Basic course in “Overview of RS & GIS Applications for Natural Resource Management” conducted by the Indian Institute of Remote Sensing (IIRS), BHU Campus, India (15 Days) 2017
- Basic course in “Geographical Information System (GIS) & Global Navigation Satellite System (GNSS)” conducted by the Indian Institute of Remote Sensing (IIRS), BHU Campus, India (Two Month) 2017
- Basic course in “Geospatial Technologies for Urban Planning” conducted by the Indian Institute of Remote Sensing (IIRS), BHU Campus, India (One Month) 2016
- Basic course in “Remote Sensing, Geographical Information System & Global Navigation Satellite System” conducted by the Indian Institute of Remote Sensing (IIRS), BHU Campus, India (Three Month) 2016

### Invited Talk as Resource Person

- Refresher Program on Use and Development of Digital Resources in Higher Education: Emerging Accessible Technologies for Teachers at Ishwar Sharan P.G. College, University of Allahabad, Prayagraj. 2021
- National Workshop on “E-Contents Development, MOOCs and SWAYAM” at Ishwar Sharan P.G. College, University of Allahabad, Prayagraj. 2019
- National Workshop on “E-Contents Development, MOOCs and SWAYAM” UGC-HRDC, Banaras Hindu University, Varanasi. 2019
- 16<sup>th</sup> Refresher Course in “Women and Gender Sensitization Studies” at UGC-HRDC, Banaras Hindu University, Varanasi. 2018
- 81<sup>st</sup> Orientation Course on “Higher Education and University Governance: Global Prospective” at UGC-HRDC, Banaras Hindu University, Varanasi. 2018

### Research Publications

#### Peer-reviewed scientific publications:

- [7] **Barman, S.K.**, Tiwari. S.K and Kumar. G, (2022). Occurrence and Significance of Trace and Rare Earth Elements (REE) in Ferromanganese Nodules of the Central Indian Ocean Basin. *Journal of Indian Chemical Society*. Elsevier (Under Review).
- [6] **Barman, S.K.**, Tiwari. S.K, Kumar. G and Rahi. I.C, (2021). Abundance of Trace And Rare Earth Elements (REE) In Ferromanganese Nodules of The Central Indian Ocean Basin. *Journal of Mines, Metals & Fuels. (Scopus)* Vol. 69; No. 8; ISSN: 0022-2755. <https://doi.org/10.18311/jmmf/2021/29421>
- [5] **Barman, S.K.**, Tiwari. S.K, Kumar. G, (2021). Distribution of Major, Trace and Rare Earth Elements in Polymetallic Nodules of Central Indian Ocean Basin. *IOSR Journal of Applied Geology and Geophysics*. Vol. 9; Issue 1; February; ISSN: 2321-0990 <https://doi.org/10.9790/0990-0901023549>
- [4] **Barman, S.K.**, Tiwari. S.K, Kumar. G and Sonkar, A.K, (2022). Selective Extraction of Metals from Polymetallic Nodules of CIOB through chemical partitioning. *Deep Sea Research Part-II*. Elsevier (SCI) (Under Review).
- [3] **Barman, S.K.**, Tiwari. S.K, Kumar. G and Sonkar, A.K, (2022). Morphology, Geochemical Association and Genesis of Fe-Mn Nodules From The Central Indian Ocean Basin. *Journal of Geological Society of India*. Springer (Under Review).
- [2] **Tiwari, S.K.**, Barman. S.K, (2017). Significance of Ophiolite Emplacement in the Development of Ninety-east Ridge, South Andaman Island, Indian Ocean. *International Journal of Science and research (IJSR)* Vol. 6; Issue 1; January; ISSN: 2319-7064.
- [1] **Barman, S.K.**, Tiwari. S.K, (2016). Serpentinites: A Byproduct of Ophiolite Quarries for Regional Development: A case study of South Andaman Island, Bay of Bengal. *International Journal of Multidisciplinary Research and Development*. Vol. 3; Issue 9; September; ISSN: 2349-4182.

### Conference abstracts

#### International:

- [2] **Barman, S.K.**, Tiwari, S.K, and Kumar, G, (2020). Marine Geochemistry, AABW and its relation with respect to Genesis of Polymetallic nodules from Central Indian Ocean Basin (CIOB). *36<sup>th</sup> International Geological Congress (IGC)*, New Delhi.
- [1] **Barman, S.K.**, Tiwari, S.K, and Kumar, G, (2018). Genesis of Fe-Mn nodules in various Geo-chemical zones of Central Indian Ocean Basin. *Goldschmidt Conference, Boston, USA (Selected & Travel Grant Awarded)*.

#### National:

- [8] **Barman, S.K.**, Tiwari. S.K & Kumar. G, (2021). Morphology, Geochemical Association and Genesis of Fe-Mn Nodules From The

- Central Indian Ocean Basin. *National Symposium Advances in Remote Sensing, BIT, Mesra, Ranchi. (Oral Presentation).*
- [7] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2018). Morphological and Textural Variation of the Ferromanganese Nodules with reference to AAWB Current in the Central Indian Ocean Basin (CIOB). *University of Lucknow, Uttar Pradesh. (Oral Presentation).*
- [6] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2017). Genesis of Fe-Mn nodules in various Geo-chemical zones of Central Indian Ocean Basin. *National Centre for Earth Science Studies, Trivandrum, Kerala. (Poster Presentation).*
- [5] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2017). A comparative study of the Ferromanganese Deposits of Central Indian Ocean Basin, Arabian Sea, Bay of Bengal, Pacific Ocean and World Ocean. *Department of Geology, Aligarh Muslim University, Aligarh. (Oral Presentation).*
- [4] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2017). Morphology, Mineralogical Composition and Chemical Association of the Fe-Mn nodules from the Central Indian Ocean Basin (CIOB). *Institute of Agricultural Science, BHU, Varanasi. (Poster Presentation).*
- [3] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2016). Chemical Association and the genesis of ferromanganese nodules from Central Indian Ocean Basin (CIOB). *Indian Institute of Remote Sensing (IIRS), Dehradun. (Poster Presentation).*
- [2] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2016). Morphology, Nucleation and Enrichment of Ferro-manganese Nodules in Parts of Central Indian Ocean Basin. *Institute of Science, BHU, Varanasi. (Poster Presentation).*
- [1] **Barman. S.K.**, Tiwari. S.K & Kumar. G, (2016). Morphology and Chemical behaviour of the ferromanganese nodules from the Central Indian Ocean Basin (CIOB). *IIT Kharagpur. (Poster Presentation).*

### Academic Visit

- Department of Civil Engineering, MNNIT, Allahabad. 2019
- Department of Earth Science, **IIT-Kanpur**, Uttar Pradesh. 2018
- National Centre for Earth Science Studies (NCESS), **Trivandrum**, Kerala. 2018
- Department of Applied Geology & Geophysics, **IIT(ISM)-Dhanbad**, Jharkhand. 2015, 2016, 2018
- School of Environmental Science, **JNU**, New Delhi. 2015, 2018
- CFRI & CMRI (**CSIR-CIMFR**), **Dhanbad**, Jharkhand. 2015, 2016, 2018
- Department of Remote Sensing, **BIT, Mesra, Ranchi**, Jharkhand. 2017
- Department of Earth Science, **IIT-Bombay**, Maharastra. 2012, 2014, 2016
- Department of Applied Geology & Geophysics, **IIT-Kharagpur**, West Bengal. 2016
- Indian Institute of Remote Sensing (**ISRO**)-**Dehradun**, Uttarakhand. 2016
- National Institute of Oceanography (**CSIR-NIO**), **Dona Paula**, Goa. 2016
- Department of Geology, **University of Delhi**. 2015
- National Geophysical Research Institute (**CSIR-NGRI**), **Hyderabad**, Andhra Pradesh 2014

### Professional References

#### Prof. Sanjay K. Tiwari

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