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## EDUCATION

- 2002: PhD, Geology, University of Calcutta, India.  
*Title:* Petrology and Geochemistry of Ophiolitic Rocks of Dibang Valley District, Arunachal Pradesh, North Eastern Himalaya.
- 1994: MSc, Geology, University of Calcutta, India.
- 1992: BSc, Geology (Honours), University of Calcutta, India.

## PROFESSIONAL EXPERIENCE

### Department of Geology, University of Calcutta, Kolkata, India

*Associate Professor* (from June 2019).

*Assistant Professor* (December 2008 to June 2019).

### Geological Survey of India

*Geologist* (August 2002 to December 2008). Experience in (1) Investigation for ophiolite-hosted chromite and geological mapping in different parts of Andaman group of Islands; (2) Geochemical exploration and petrology-geochemistry of gahnite-bearing rocks, associated with base metal sulphide mineralization from Proterozoic Betul Inlier, Central India and (3) Specialized thematic mapping in relation to crustal evolution of Precambrians (middle Aravalli Gr. metasediments) and Deccan Traps in parts of Jhabua District, M.P., India

### Central Ground Water Board, Ministry of Water Resources, Govt. of India

*Geophysicist* (January 1999 to August 2002). Experience in surface geophysical surveys and borehole geophysical logging in relation to ground water exploration, determining aquifer properties and chemical parameters of ground water.

### Department of Geology, University of Calcutta, Kolkata, India

*Senior Research Fellow* (April 1997 to December 1998), 2-year grant, funded by University Grant Commission, Govt. of India.

*Junior Research Fellow* (March 1995 to March 1997) - extended 5-year grant, funded by University Grant Commission, Govt. of India.

### Jogamaya Devi College, Kolkata, India

*Part-time Lecturer* (October 1995 to February 1997) - undergraduate courses.

## **ADMINISTRATIVE EXPERIENCE**

### **Department of Geology, University of Calcutta, Kolkata, India**

- *Head of the Department* (April 2021 to March 2023).
- *Member of the PhD Research Advisory Committee in Geology* (since August 2023)
- *Member of the Undergraduate Board of Studies (UGBoS) in Geology*

## **HONOURS AND AWARDS**

12. National Geoscience Award – 2019 (conferred in 2022), Ministry of Mines, Government of India.
11. Fellow of the West Bengal Academy of Science and Technology (WAST), 2018.
10. JSPS Invitation Fellow (Long-term) (FY 2015).
9. Onboard member of Science Party in International Ocean Discovery Program (IODP) Expedition 360, 2015.
8. JSPS Invitation Fellow (Long-term) (FY 2012).
7. Prof. S.L. Biswas Memorial Gold Medal, 2001 from Asiatic Society, Calcutta, India.
6. Meritorious Silver Medal Award, 1999 from Central Ground Water Board, Govt. of India for performance in the Induction Level Training Program.
5. Prof. H.C. Dasgupta Memorial Award, 1996 for the best scientific article in the year 1996 from Geological, Mining and Metallurgical Society of India, Calcutta.
4. Qualified *National Eligibility Test (NET)* 1994 in Earth, Atmosphere, Ocean & Planetary Sciences, Joint CSIR-UGC Test for JRF and Eligibility for Lecturership, Govt. of India.
3. Prof. S.K. Chatterjee Memorial Award for best student in Geology (Hons.) in Asutosh College, Calcutta, India.
2. National Scholarship from Govt. of India for academic excellence in undergraduate studies in the University of Calcutta, India.
1. National Scholarship from Govt. of India for academic excellence in school leaving exam.

## **AFFILIATIONS**

- Fellow of the West Bengal Academy of Science and Technology (WAST).
- Fellow of the Japan Society for the Promotion of Science (JSPS).
- Member of the Sakura Science Club, Japan.
- Member of the Geological Society of India.

## **EDITORIAL BOARD MEMBER**

- ✓ *Associate Editor*, Indian Journal of Geosciences (2023-2024),  
<https://www.gsi.gov.in/webcenter/portal/OCBIS/pageQuickLinks/pageIndianJournal>
- ✓ *Editorial Board Member*, Petrological Journal, <https://ijp.ui.ac.ir/journal/editorial.board?lang=en>

- ✓ *Editorial Board Member*, Discover Minerals, [Editors | Discover Minerals \(springer.com\)](https://www.springer.com)

## ACADEMIC VISIT

10. Japan-Asia Youth Exchange Program in Science 2023 (Sakura Exchange Program) administered by the Japan Science and Technology Agency (JST), held at Kanazawa, Japan.
9. Japan-Asia Youth Exchange Program in Science 2019 (Sakura Exchange Program) administered by the Japan Science and Technology Agency (JST), held at Kanazawa, Japan.
8. Japan-Asia Youth Exchange Program in Science 2018 (Sakura Exchange Program) administered by the Japan Science and Technology Agency (JST), held at Kanazawa, Japan.
7. Japan-Asia Youth Exchange Program in Science 2017 (Sakura Exchange Program) administered by the Japan Science and Technology Agency (JST), held at Kanazawa, Japan.
6. JSPS Invitation Fellow 2016-2017, Kanazawa University, Japan.
5. Annual Meeting of Japan Association of Mineralogical Sciences 2016, Kanazawa University, Japan.
4. Japan Geoscience Union 2013, Tokyo, Japan.
3. CHIKYU+10 International Workshop 2013, Tokyo, Japan.
2. JSPS Invitation Fellow 2012-2013, Kanazawa University, Japan.
1. Visiting Scientist 2011, Kanazawa University, Japan.

## PROFESSIONAL DEVELOPMENT

6. UGC sponsored Interdisciplinary Refresher Course (3 weeks duration), conducted by Calcutta University Human Resource Development Centre.
5. UGC sponsored Orientation Programme (4 weeks duration), conducted by Calcutta University Human Resource Development Centre.
4. 26<sup>th</sup> Orientation Course for Geologists (10 months duration) 2003-04, conducted by Geological Survey of India Training Institute, Govt. of India.
3. Refresher course on 'Geophysical Surveys for Ground Water Investigation' 2001, conducted by Central Ground Water Board, Govt. of India.
2. Induction level training course on 'Hydrogeological Investigations, Development and Management of Ground Water Resources' (5 months duration) 1999-2000, conducted by Central Ground Water Board, Govt. of India.
1. Fourth SERC winter school on 'Databases, Numerical Methods and Computer Modelling in Modern Approach to Petrology' 1996 (3 weeks duration), conducted by Wadia Institute of Himalayan Geology, Dehradun, Department of Science and Technology, Govt. of India.

## CURRENT RESEARCH

- Constraining shallow mantle environment and related processes in the formation of oceanic lithosphere: records from ophiolite study.
- Origin of chromitites in various tectonic settings and their modifications (textural and

- mineralogical) in response to alteration/metamorphism/deformation.
- Evolution of sub-continental lithospheric mantle by studying ultramafic xenoliths hosted in alkali basalts.
  - Lower crustal architecture and nature of Moho transition zone in slow-spreading ridges. IODP 360 samples from Atlantis Bank, Southwest Indian Ridge.
  - Kinematics of reaction microstructures, in particular symplectites.

## PUBLICATIONS

### a. Edited Book Volume

"Topics in Igneous Petrology" (editors: Ray J, Sen G and **Ghosh B**), 2011, Springer, 486p., e-ISBN 978-90-481-9600-5, <https://doi.org/10.1007/978-90-481-9600-5>

### b. Research Articles (Journals)

64. Dhar A, **Ghosh B**, Morishita T, Chattopadhyaya S, Bandyopadhyay D, Chalapathi Rao N V, France L, Nguyen D, Roy S and Koley M (2024): Development of oxy-symplectites in a slow-spreading lower oceanic crust: Insights from the Atlantis Bank Gabbro Massif, Southwest Indian Ridge. *American Mineralogist* (published online, <https://doi.org/10.2138/am-2024-9350>).

63. Chaudhury S, Mehera L, Ghosh P and **Ghosh B** (2024): Petrogenetic evolution of Ramagiri greenstone terrane, Central Dharwar craton, Andhra Pradesh, India: Unravelling ancient oceanic basin of Archean Earth. *Geological Journal*, v.59, 1449-1681, <https://doi.org/10.1002/gj.4940>.

62. Roy S, **Ghosh B**, Chattopadhyaya S, Bandyopadhyay D, Dhar A, Koley M, Morishita T and Tripathi S K (2024): Mayodia ophiolitic complex of Arunachal Pradesh, India: a multistage evolutionary record during the Tethyan closure. *International Geology Review* (published online, <https://doi.org/10.1080/00206814.2024.2312512>).

61. Koley M, **Ghosh B**, Bandyopadhyay D, Roy S, Dhar A, Chattopadhyaya S, Kar R and Bhattacharya S (2022): Unraveling the pre-metamorphic cooling history of the Koraput Alkaline Complex, India: constraints from feldspar exsolution texture. *Mineralogy and Petrology*, v.116, 493-513, <https://doi.org/10.1007/s00710-022-00795-x>.

60. Dhar A, **Ghosh B**, Bandyopadhyay D, Morishita T, Tamura A, France L, Nguyen D, Boulanger M, Koley M, Roy S and Chattopadhyaya S (2022): The lower oceanic crust at ultraslow-spreading Southwest Indian Ridge: The inside story. *Gondwana Research*, v.111, 223-248, <https://doi.org/10.1016/j.j.gr.2022.08.008>.

59. Roy S, Bandyopadhyay D, Morishita T, Dhar A, Koley M, Chattopadhyaya S, Karmakar A and **Ghosh B** (2022): Microtextural evolution of chrome spinels in dunites from Mayodia ophiolite complex, Arunachal Pradesh, India: Implications for a missing link in the "two-stage" alteration mechanism. *Lithos*, v.420-421, <https://doi.org/10.1016/j.lithos.2022.106719>.

58. Choudhuri S, Kar R, Bhattacharya S, Chatterjee S, Ghosh A, **Ghosh B**, and Morishita T (2022): Orthopyroxene megacrysts from the Chilka Lake anorthosite massif, Eastern Ghats, India: a clue to magmatic evolution. *Mineralogy and Petrology*, v.116, 273-286,

<https://doi.org/10.1007/s00710-022-00779-x>.

57. Baranval N K, Guha A, Bhattacharya S, **Ghosh B**, and Vinod Kumar K (2022): Combined use of band shape algorithms, linear spectral un-mixing on Clementine & Moon Mineralogy Mapper data for identifying the imprints of magmatic differentiation - a study around Aristarchus Plateau. *Advances in Space Research*, v.69, 3164-3181, <https://doi.org/10.1016/j.asr.2022.01.028>.

56. Chattopadhyaya S, **Ghosh B**, Bandyopadhyay D, Koley M, Dhar A and Roy S (2022): Multistage evolution of subcontinental lithospheric mantle of Northwestern Deccan Volcanic Province, India: Constraints from the ultramafic xenoliths in alkali magma. *Journal of Earth System Science* (published online), <https://doi.org/10.1007/s12040-021-01793-x>.

55. Bandyopadhyay P C, van Hinsbergen D J J, Bandyopadhyay D, Licht A, Advokaat E L, Plunder A, **Ghosh B**, Dasgupta A and J Trabucho-Alexandre (2022): Paleogeography of the West Burma Block and the eastern Neotethys Ocean: constraints from Cenozoic sediments shed onto the Andaman-Nicobar ophiolites. *Gondwana Research*, v.103, 335-361, <https://doi.org/10.1016/j.gr.2021.10.011>.

54. Boulanger M, France L, Ferrando C, Ildefonse B, **Ghosh B**, Sanfilippo A, Liu C-Z, Morishita T, Koepke J, Bruguier O (2021): Magma-Mush Interactions in the Lower Oceanic crust: Insights from Atlantis Bank Layered Series (Southwest Indian Ridge). *Journal of Geophysical Research: Solid Earth* (published online), <https://doi.org/10.1029/2021JB022331>.

53. Bandyopadhyay D, **Ghosh B**, Guilmette C, Plunder A, Corfu F, Advokaat E L, Bandyopadhyay P C and van Hinsbergen D J J (2021): Geochemical and geochronological record of the Andaman Ophiolite, SE Asia: From back-arc to forearc during subduction polarity reversal? *Lithos*, v.380-381, <https://doi.org/10.1016/j.lithos.2020.105853>.

52. Ovung T N, **Ghosh B** and Ray J (2021): Petrogenesis of neo-Tethyan ophiolites from the Indo-Myanmar ranges: a review. *International Geology Review*, v.63, 1437-1449, <https://doi.org/10.1080/00206814.2020.1775137>.

51. González-Jiménez J M, Mondal S K, **Ghosh B**, Griffin W L and O'Reilly S Y (2020): Re-Os Isotope Systematics of Sulfides in Chromitites and Host Lherzolites of the Andaman Ophiolite, India. *Minerals*, v.10, 1-21, <https://doi.org/10.3390/min10080686>.

50. Abdullah S, Misra S, Sarvesha R and **Ghosh B** (2020): Resurfacing of deeply buried oceanic crust in Naga Hills Ophiolite, North-East India: Petrofabric, Microstructure and Seismic properties. *Journal of Structural Geology*, v.139, <https://doi.org/10.1016/j.jsg.2020.10414>.

49. Plunder A, Bandyopadhyay D, Ganerød M, Advokaat E L, **Ghosh B**, Bandyopadhyay P C and van Hinsbergen D J J (2020): History of subduction polarity reversal during arc-continent collision: constraints from the Andaman Ophiolite and its metamorphic sole. *Tectonics*, v.39, e2019TC005762, <https://doi.org/10.1029/2019TC005762>.

48. Dick H J B, MacLeod C J, Blum P, Abe N, Blackman D K, Bowles J A, Cheadle M J, Cho K, Ciążela J, Deans J R, Edgcomb V P, Ferrando C, France L, **Ghosh B**, Ildefonse B, John B,

Kendrick M A, Koepke J, Leong J A M, Liu C-Z, Ma Q, Morishita T, Morris A, Natland J H, Nozaka T, Pluemper O, Sanfilippo A, Sylvan J B, Tivey M A, Tribuzio R and Viegas G (2019): Dynamic accretion beneath a slow-spreading ridge segment: IODP Hole 1473A and the Atlantis Bank Oceanic Core Complex. *Journal of Geophysical Research: Solid Earth*, v.124, 12631-12659, <https://doi.org/10.1029/2018JB016858>.

47. Nguyen D, Morishita T, Soda Y, Tamura A, **Ghosh B**, Harigane Y, France L, Liu C, Natland J, Sanfilippo A, MacLeod C, Blum P and Dick H (2018): Occurrence of Felsic Rocks in Oceanic Gabbros from IODP Hole 1473A: Implications for Evolved Melt Migration in the Lower Oceanic Crust. *Minerals*, v.8, 1-31, <https://doi.org/10.3390/min8120583>

46. Abdullah S, Misra S and **Ghosh B** (2018): Melt-rock interaction and fractional crystallization in the Moho transition Zone: Evidence from the cretaceous Naga Hills Ophiolite, North-East India. *Lithos*, v.322, 197-211.

45. Morishita T, Yoshikawa M, Tamura A, Guotana J and **Ghosh B** (2018): Petrology of Peridotites and Nd-Sr Isotopic Composition of Their Clinopyroxenes from the Middle Andaman Ophiolite, India. *Minerals*, v.8, 1-16, <https://doi.org/10.3390/min8090410>

44. **Ghosh B**, Mukhopadhyay S, Morishita T, Tamura A, Arai S, Bandyopadhyay D, Chattopadhyaya S and Ovung T N (2018): Diversity and evolution of suboceanic mantle: constraints from Neotethyan ophiolites at the eastern margin of the Indian plate. *Journal of Asian Earth Sciences*, v.160, 67-77.

43. Morishita T, Tani K, Soda Y, Tamura A, Mizukami T and **Ghosh B** (2018): The uppermost mantle section below a remnant proto-Philippine Sea island arc: Insights from the peridotite fragments from the Daito Ridge. *American Mineralogist*, v.103, 1151-1160.

42. Guha A, **Ghosh B**, Vinod Kumar K and Chaudhury S (2018): Spectral response of few important textural variants of chromitite and its potentials in estimating relative grades of Chromitite- a case study for Chromitite of Nugglihalli Schist Belt, India. *Current Science*, v.114, 1721-1731.

41. Morishita T, **Ghosh B**, Soda Y, Tani K, Ishizuka O, Tamura A, Komaru C, Arai S, Yang H-C and Chen W-S (2018): Petrogenesis of ultramafic rocks and olivine-rich troctolites from the East Taiwan Ophiolite in the Lichi mélange. *Mineralogy and Petrology*, v.112, 521-534.

40. Ovung T N, Ray J, **Ghosh B**, Koeberl C, Topa D and Paul M (2018): Clinopyroxene composition of volcanics from the Manipur Ophiolite, Northeastern India: implications to geodynamic setting. *International Journal of Earth Sciences*, v.107, 1215-1229.

39. Ovung T N, Ray J, **Ghosh B**, Mandal D, Dasgupta P and Paul M (2017): Occurrence of nepouite in the serpentinite of the Manipur Ophiolite Belt, Northeastern India: implication for melt-rock interaction in a suprasubduction zone. *Journal of the Geological Society of India*, v.90, 114-158.

38. **Ghosh B**, Morishita T, Ray J, Tamura A, Mizukami T, Soda Y and Ovung T N (2017): A new occurrence of titanian (hydro)andradite from the Nagaland ophiolite, India: Implications for



element mobility in hydrothermal environments. *Chemical Geology*, v.457, 47-60.

37. Chattopadhyaya S, **Ghosh B**, Morishita T, Nandy S, Tamura A and Bandyopadhyay D (2017): Reaction microtextures in entrapped xenoliths from Deccan Large Igneous Province, India: implications to its origin and evolution. *Journal of Asian Earth Sciences*, v.138, 291-305.

36. Ovung T N, Ray J, Teng X, **Ghosh B**, Paul M, Ganguly P, Sengupta S and Das S (2017): Mineralogy of the Manipur Ophiolite Belt, North-eastern India: implication for Mid-Oceanic Ridge and Supra-Subduction Zone origin. *Current Science*, v.112, 2122-2129.

35. **Ghosh B**, Mishra S and Morishita T (2017): Plastic deformation and post-deformation annealing in chromite: mechanisms and implications. *American Mineralogist*, v.102, 216-226.

34. Guha A, **Ghosh B**, Vinod Kumar K and Chaudhury S (2015): Implementation of reflection spectroscopy based new ASTER indices and principal components to delineate chromitite and associated ultramafic–mafic complex in parts of Dharwar Craton, India. *Advances in Space Research*, v.56, 1453-1468.

33. Bandopadhyay P C and **Ghosh B** (2015): Provenance and tectonic setting of the Oligocene turbidites from Andaman-Nicobar accretionary ridge, South Andaman Island: a geochemical perspective. *Journal of Earth System Science*, v.124, 1019-1037.

32. Bandopadhyay P C, **Ghosh B** and Limonta M (2014): A reappraisal of the eruptive history and recent (1991-2009) volcanic eruptions of the Barren Island, Andaman Sea. *Episodes*, v.37, 192-205.

31. Bhatta K and **Ghosh B** (2014): Chromian spinel-rich black sands from eastern shoreline of Andaman Island, India: Implication for source characteristics. *Journal of Earth System Science*, v.123, 1387-1397.

30. **Ghosh B**, Morishita T, Sen Gupta B, Tamura A, Arai S and Bandyopadhyay D (2014): Moho transition zone in the Cretaceous Andaman ophiolite, India: A passage from the mantle to the crust. *Lithos*, v.198-199, 117-128.

29. **Ghosh B** and Bhatta K (2014): Podiform chromitites in Iherzolitic mantle rocks (Andaman ophiolite, India): the role of magma/rock interaction and parental melt composition. *Bulletin Geological Society of France*, v.185, 123-130.

28. **Ghosh B**, Ray J and Morishita T (2014): Grain-scale plastic deformation of chromite from podiform chromitite of the Naga-Manipur ophiolite belt, India: Implication to mantle dynamics. *Ore Geology Reviews*, v.56, 199-208.

27. **Ghosh B**, Morishita T and Bhatta K (2013): Significance of chromian spinels from the mantle sequence of the Andaman Ophiolite, India: paleogeodynamic implications. *Lithos*, v.164-167, 86-96.

26. Bhattacharya A, Pal T and **Ghosh B** (2013): Characterisation of the accreted ophiolite slices of Rutland Island, Andaman Sea: Evolution in a suprasubduction zone setting. *Ophioliti*, v.38,

121-142.

25. **Ghosh B**, Morishita T and Bhatta K (2012): Detrital chromian spinels from beach placers of Andaman Islands, India: a perspective view of petrological characteristics and variations of the Andaman ophiolite. *Island Arc*, v.21, 188-201.

24. **Ghosh B** and Konar R (2012): Textural developments in chromite deforming under eclogite-facies conditions from the Neoproterozoic Sittampundi anorthosite complex, southern India. *Geological Journal*, v.47, 253-262.

23. **Ghosh B**, Some S and Thakur A (2011): Petrogenesis of zincian spinel from Mamandur base metal sulphide prospect, Tamilnadu. *Journal of the Geological Society of India*, v.78, 365-370.

22. **Ghosh B** and Konar R (2011): Chromites from meta-anorthosites, Sittampundi layered igneous complex, Tamil Nadu, southern India. *Journal of Asian Earth Sciences*, v.42, 1394-1402.

21. Mukhopadhyay S, Ray J, Balaram V, Krishna A K, **Ghosh B** and Mukhopadhyay S (2011): Geochemistry and petrogenesis of syenites and associated rocks of the Elagiri complex, Southern Granulite Terrane, India. *Journal of Asian Earth Sciences*, v.42, 1256-1270.

20. **Ghosh B** and Morishita T (2011): Andradite-uvarovite solid solution from hydrothermally altered podiform chromitite, Rutland ophiolite, Andaman, India. *Canadian Mineralogist*, v.49, 573-580.

19. Mukhopadhyay S, Ray J, Chattopadhyay B, Sengupta S, **Ghosh B** and Mukhopadhyay S (2011): Significance of mineral chemistry of syenites and associated rocks of Elagiri Complex, Southern Granulite terrane of the Indian Shield. *Journal of the Geological Society of India*, v.77, 113-129.

18. Pal T, Raghav S, Bhattacharya A, Bandopadhyay P C, Mitra S K, Renjit M L, Sankar M S and **Ghosh B** (2010): The 2005-2006 eruption of the Barren Volcano, Andaman Sea: Evolution of basaltic magmatism in island arc setting of Andaman-Java subduction complex. *Journal of Asian Earth Sciences*, v.39, 12-23.

17. Pal T, **Ghosh B**, Bhattacharya A and Bhaduri S K (2010): Felsic tuff from Rutland Island-a pyroclastic flow deposit in Miocene sediments of Andaman-Java subduction complex. *Journal of Earth System Science*, v.119, 19-25.

16. Praveen M N and **Ghosh B** (2009): Submarine volcanic facies and its implication as possible tracker of sulphide mineralization- a study from Jilharidev area, Betul belt, central India. *Current Science*, v.97, 670-679.

15. **Ghosh B**, Pal T, Bhattacharya A and Das D (2009): Petrogenetic implication of ophiolitic chromite from Rutland Island, Andaman - a boninitic parentage in supra-subduction setting. *Mineralogy and Petrology*, v.96, 59-70.



14. Pal T, **Ghosh B** and Bhattacharya A (2009): A high-Si, high-Ca spinel-like phase from mantle peridotite: a report from Cretaceous ophiolite of Rutland Island, Andaman-Java Subduction Complex. *Current Science*, v.97, 1081-1088.
13. **Ghosh B** and Praveen M N (2008): Indicator minerals as guides to base metal sulphide mineralisation in Betul Belt, Central India. *Journal of Earth System Science*, v.117, 521-536.
12. Pal T, **Ghosh B** and Chakraborty S (2008): Petrogenesis of the chromites of the Roro- Jojohatu ultramafic intrusive of Singbhum Craton: a boninitic parental melt in supra-subduction setting. Special volume on "Petrology, Geochemistry and Ore Geology of Orthomagmatic Deposits related to Ultramafic-Mafic Rocks". *Journal of the Geological Society of India*, v.72, 635-647.
11. **Ghosh B** and Praveen M N (2007): Garnet-Gahnite-Staurolite relations and occurrence of Ecandrewsite from the Koparpani base metal sulfide prospect, Betul Belt, Central India. *Neues Jahrbuch fur Mineralogie Abhandlungen*, v.184, 105-116.
10. Praveen M N, **Ghosh B**, Shrivastava H S, Dora M L and Gaikwad L D (2007): Sulphide mineralization in Betul Belt: Classification and general characteristics. *Journal of the Geological Society of India*, v.69, 85-92.
9. Praveen M N and **Ghosh B** (2007): Multiple origins of gahnite associated with hydrothermal alteration from the Bhuyari base metal prospect of Proterozoic Betul Belt, Central India. *Journal of the Geological Society of India*, v.69, 233-241.
8. **Ghosh B**, Mahoney J and Ray J (2007): Mayodia ophiolites of Arunachal Pradesh, North-Eastern Himalaya, India. *Journal of the Geological Society of India*, v.70, 595-604.
7. **Ghosh B** and Praveen M N (2006): Meta-exhalites as guides to base metal sulphide exploration in Betul Belt, Central India. *Indian Journal of Geochemistry*, v.21, 273-282.
6. **Ghosh B**, Praveen M N and Shrivastava H S (2006): Gahnite Chemistry from Metamorphosed Zn-Pb-Cu Sulphide Occurrences of Betul Belt, Central India. *Journal of the Geological Society of India*, v.67, 17-20.
5. **Ghosh B**, Shrivastava H S, Praveen M N, Kumaran G S and Sisodiya D S (2003): Occurrence and genetic implication of gahnite from Betul Belt, Madhya Pradesh; *Gondwana Geological Magazine*, v.18, 108-115.
4. **Ghosh B** and Ray J (2003): Petrology of the Ophiolitic Assemblage around Mayodia, Dibang Valley District, Arunachal Pradesh, North Eastern India. *Indian Minerals*, v.57, 39-52.
3. **Ghosh B**, Ray J and Mukhopadhyay S (1999): Mineral Chemistry of Ultramafic-Mafic Intrusive Bodies of Mangalapuram-Timminayakkampatti Areas of the Southern Granulite Terrain, Salem District, Tamil Nadu. *Indian Journal of Geology*, v.71, 193-204.
2. **Ghosh B**, Mukhopadhyay S and Ray J (1999) Petrological Studies of the Area around Nallur-Arunagiripalaiyam Areas, Salem District, Tamil Nadu. *Indian Journal of Earth Sciences*, v.26,

37-44.

1. **Ghosh B**, Basu N and Ray J (1996): Petrology of Ultramafic-Mafic Bodies of Mangalapuram-Timminayakkampatti Areas, Tamil Nadu. *Indian Journal of Geology*, v.68, 276-289.

### **c. Research Articles (Chapters in Memoirs/Special Publications/Books)**

6. Chattopadhyaya S, **Ghosh B**, Liu C-Z, Bandyopadhyay D, Roy S, Dhar A, Koley M and Kumar D (2023): Intraplate alkali basalts related to end-Cretaceous Deccan magmatism: Implications to tectonomagmatic processes. In: Alkaline Rocks: Economic and Geodynamic Significance through Geological Time, (editors: Pandey R, Pandey A, Krmíček L, Cucciniello C, Müller D), *Geological Society, London*, Special Publication (published online; <https://doi.org/10.1144/SP551-2023-86>).

5. Bandyopadhyay D, van Hinsbergen D J J, Plunder A, Bandopadhyay P C, Advokaat E L, Chattopadhyaya S, Morishita T, and **Ghosh B** (2020). Andaman ophiolite: an overview. pp.1-17. In: The Andaman Islands and Adjoining Offshore: Geology, Tectonics and Paleoclimate [Special International Geological Congress (IGC) Volume under the Society of Earth Scientists Series] (editors: Ray J S, Radhakrishna M), *Springer International Publishing*, 400p.

4. **Ghosh B**, Bandyopadhyay D and Morishita T (2017): Andaman-Nicobar ophiolites, India: Origin, Evolution and Emplacement. pp.95-110. In: The Andaman-Nicobar Accretionary Ridge: Geology, Tectonics and Hazards, (editors: Bandopadhyay P C, Carter A), *Geological Society, London*, Memoir 47, 235p.

3. Bandopadhyay P C, **Ghosh B** and Carter A (2017): Natural Resources. pp.227-234. In: The Andaman-Nicobar Accretionary Ridge: Geology, Tectonics and Hazards, (editors: Bandopadhyay, P C, Carter A), *Geological Society, London*, Memoir 47, 235p.

2. **Ghosh B** (2011): Giant plagioclase basalt from northern part of Jhabua district, Madhya Pradesh, central India. pp.181-189. In: Topics in Igneous Petrology, (editors: Ray J, Sen B and Ghosh B), *Springer International Publishing*, 486p.

1. **Ghosh B** and Ray J (2003): Mineral chemistry of ophiolitic rocks of Mayodia-Hunli area of Dibang valley district, Arunachal Pradesh, North Eastern India. pp.447-471. In: Milestones in Petrology and Future Perspectives, (editor: Anand Mohan), *Geological Society of India*, Memoir 52, 472p.

### **d. Full Papers in Conference/Symposia/Seminar Proceedings**

1. Praveen M N, **Ghosh B**, Shrivastava H S, Kumaran G S, Roy S and Sisodiya D S (2005): Metamorphic mineral assemblages associated with sulphide mineralisation in Betul Belt: A possible hydrothermal origin. pp.193-218. In: Proceeding volume of 1<sup>st</sup> Indian Mineral Congress "Showcasing the Indian Mineral Industry in the 21<sup>st</sup> Century", ISM, Dhanbad, India, (editors: Sinha A, Singh S K), *Allied Publishers*, New Delhi, 550p.

### **RESEARCH PROJECTS (completed/in progress)**

- Diversity of Phanerozoic ophiolites between Nagaland-Manipur and Andaman Islands (completed). *Sponsoring Agency: Science and Engineering Research Board, Department*

*of Science and Technology, Government of India.*

- The nature of the lower crust at slow spreading ridges: constraints from gabbroic samples recovered from IODP Expedition 360, Southwest Indian Ridge (completed). *Sponsoring Agency: National Council for Antarctic and Ocean Research, Ministry of Earth Sciences, Government of India.*
- Evaluation of zincian spinel composition as a path finder for sulphide mineralization in Mamandur area, South India (completed). *Sponsoring Agency: University Grants Commission, Government of India.*
- Origin of Podiform Chromite from Andaman Ophiolite (completed). *Sponsoring Agency: Department of Science and Technology, Government of India.*

### **PhD SUPERVISION (awarded/in progress)**

10. Sukanya Chaudhury, *Thesis title: "Petro-tectonic evolution of the greenstone belt in and around Ramagiri, Andhra Pradesh, India"* (pursuing).
9. Sachin Kumar Tripathi, *Thesis title: "Petrology and geochemistry of island arc volcanic rocks of the Andaman Sea"* (pursuing).
8. Priyanka Bachhar, *Thesis title: "Structure, stratigraphy and geochemistry of Badampahar Greenstone Belt and adjoining granitic plutons, Singhbhum-Odisha Craton-Implications for Archean tectonics"* (submitted).
7. Archisman Dhar, *Thesis title: "The nature of the lower oceanic crust at ultraslow-spreading ridges - constraints from gabbroic cumulates recovered from Southwest Indian Ridge"* (submitted).
6. Manojit Koley, *Thesis title: "Origin and evolution of the Koraput Alkaline Complex in the Eastern Ghats Granulite Belt, India: a petrological and geochemical perspective"* (submitted).
5. Sankhadeep Roy, *Thesis title: "Petrological and geochemical evolution of Phanerozoic ophiolitic rocks exposed along Mayodia – Hunli stretch of Lower Dibang Valley district, Arunachal Pradesh, India"* (submitted).
4. Trisrota Chaudhuri, *Thesis title: "Geochemistry and petrogenesis of Paleoproterozoic komatiite from eastern Iron Ore Group (IOG) of rocks, Singhbhum craton, Eastern India"* (awarded, jointly with Prof. Tapas Bhattacharya).
3. Debaditya Bandyopadhyay, *Thesis title: "Archean Sittampundi Layered Anorthosite Complex and Cretaceous Andaman Ophiolite: Contrasting geodynamic history of Indian plate from petro-geochemical study"* (awarded).
2. Soumi Chattopadhyaya, *Thesis title: "Origin and evolution of Subcontinental Lithospheric Mantle beneath western India – Constraints from ultramafic xenoliths in alkali basalts, Kutch district, Western India"* (awarded).
1. Thungyani N. Ovung, *Thesis title: "Petrology of igneous members of Manipur Ophiolite Belt, Jessami-Moreh areas, Northeastern India"* (awarded, jointly with Prof. Jyotisankar Ray).