

# Dr. Sohini Ganguly

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## **Current Status:**

- From 01.04.2016: working as DST Inspire Faculty at Department of Earth Science, Goa University.

## **Working Experiences:**

- From 01.04.2015 -31.03.2016: worked as DST Inspire Faculty at Department of Geology, Andhra University, Visakhapatnam.
- From 01.12.2014 to 27.02.2015 : worked as Project Associate at Geochemistry Division, CSIR-National Geophysical Research Institute, Hyderabad.
- From 01.05.2012 to 30.04.2014: worked as CSIR Senior Research Fellow at Department of Geology, University of Calcutta.
- From 01.06.2011 to 30.04.2012: worked as Junior Research Fellow under UGC-RFSMS Fellowship at Department of Geology, University of Calcutta.
- From 24.09.2008 to 31.05.2011: worked as Project Fellow under UGC-DRS programme (Thrust area: Petrology) at Department of Geology, University of Calcutta.
- From 01.11.2010 to 30.11.2010: worked as a visiting Research Scholar at Department of Lithospheric Research, University of Vienna, Austria.

**Ph.D. Thesis Title:** “Petrology and Geochemistry of Deccan Trap lava flows around Linga, Chhindwara district, Madhya Pradesh, Central India”

**M.Sc Dissertation:** “Petrology of Ultramafic-Mafic-Alkaline Intrusive Bodies in and around Ganjang, Karbi-Anglong District, Assam, North Eastern India” with Prof. Jyotisankar Ray.

**Fields of Interest:** Igneous Petrology, Volcanology and Geochemistry

## **Membership:**

- Geological, Mining and Metallurgical Society of India (GMMSI)
- Indian Science Congress (ISC)
- Geological Society of America (GSA)
- Asia Oceania Geoscience Society (AOGS)

## **Academic Record:**

- **2006-** B.Sc (Hons.) in Geology from University of Calcutta
- **2008-** M.Sc in Applied Geology from University of Calcutta
- **2014-** Ph.D. in Geology from University of Calcutta (Ph.D. submitted in 2013)

## **Achievements:**

- Received **DST Inspire Faculty** award in Earth Science in the year 2015.
- Received **Prof. N. N. Chatterjee medal by The Asiatic Society** for contribution in the field of Economic Geology in the year 2012.
- Received **Senior Research Fellowship from CSIR**, New Delhi in the year 2012.
- Received **fellowship from University of Vienna, Austria** for carrying out geochemical work at Department of Lithospheric Research, University of Vienna in the year 2010.
- Received International Travel Grant from DST, New Delhi in the year 2009 for attending Asia Oceania Geoscience Society 6th Symposium, held in Singapore.
- **Secured 2<sup>nd</sup> position in Master of Science (M.Sc) examination**, University of Calcutta in the year 2008.

**Research page:** [https://www.researchgate.net/profile/Sohini\\_Ganguly](https://www.researchgate.net/profile/Sohini_Ganguly)

**Academic abroad visits:** Singapore, Austria, China

## **Other Academic responsibilities:**

- **Associate Editor:** Geoscience Frontiers, Elsevier
- **Secretary:** International Association of Gondwana Research (IAGR), Japan
- **Reviewer:** Lithos, Gondwana Research, Ore Geology Reviews, Precambrian Research, American Mineralogists, International Geology Reviews, Journal of Asian Earth Sciences, Geoscience Frontiers, Geological Journal, Journal of Applied Geochemistry etc.

## **Publications in peer-reviewed journals:**

**Total impact factor:** ~97

[https://scholar.google.co.in/citations?hl=en&view\\_op=search\\_authors&mauthors=Sohini+Ganguly](https://scholar.google.co.in/citations?hl=en&view_op=search_authors&mauthors=Sohini+Ganguly)

**Edited volume:** Greenstone belts and their mineral endowment. **Ganguly, S.,** Yang, Q.Y. (2018) *Geoscience Frontiers*.

1. **Ganguly, S.,** Yang, Q.Y. (2018) Greenstone belts and their mineral endowment: Preface. *Geoscience Frontiers*. <https://doi.org/10.1016/j.gsf.2017.11.001>
2. Yang, Q.Y., **Ganguly, S.,** Santosh, M., Dong, Y., Nandakumar, V. (2017). Extensional collapse of the Gondwana orogen: Evidence from Cambrian mafic

- magmatism in the Trivandrum Block, southern India. *Geoscience Frontiers*. <https://doi.org/10.1016/j.gsf.2017.12.002>
3. Manikyamba C., **Ganguly S.**, Santosh M. and Subramanyam K.S.V. (2017) Volcano-sedimentary and metallogenic records of the Dharwar greenstone terranes, India: Window to Archean plate tectonics, continent growth, and mineral endowment. *Gondwana Research*, v.50, pp.38-66
  4. Saha A., **Ganguly S.**, Ray J., Koeberl C., Thoni M., Sarbajna C. and Sawant S.S. (2017) Petrogenetic evolution of Cretaceous Samchampi-Samteran Alkaline Complex, Mikir Hills, Northeastern India: Implications on multiple melting events of heterogeneous plume and metasomatized sub-continental lithospheric mantle. *Gondwana Research*, v.48, pp.237-256
  5. Xiao-Fang He, M. Santosh M. and **Ganguly S.** (2017) Mesozoic felsic volcanic rocks from the North China craton: Intraplate magmatism associated with craton destruction. *Geological Society of America Bulletin*. DOI: [10.1130/B31607.1](https://doi.org/10.1130/B31607.1)
  6. Saha, A., Santosh, M., **Ganguly, S.**, Manikyamba, C., Ray, J., Dutta, J. (2018) Geochemical cycling during subduction initiation: Evidence from serpentinized mantle wedge peridotite in the south Andaman ophiolite suite. *Geoscience Frontiers*. <https://doi.org/10.1016/j.gsf.2017.12.017>
  7. Khelen, A. C., Manikyamba, C., **Ganguly, S.**, Singh, T. D., Subramanyam, K. S. V., Ahmad, S. M., Reddy, M. R. (2017). Geochemical and stable isotope signatures of Proterozoic stromatolitic carbonates from the Vempalle and Tadpatri Formations, Cuddapah Supergroup, India: Implications on paleoenvironment and depositional conditions. *Precambrian Research*, V. 298, pp. 365-384.
  8. Singh M. R., Manikyamba C., **Ganguly S.**, Ray, J., Santosh M., Th.Dhanakumar Singh and Chandan Kumar B. (2017) Paleoproterozoic arc basalt-boninite-high magnesian andesite-Nb enriched basalt association from the Malangtoli volcanic suite, Singhbhum Craton, eastern India: Geochemical record for subduction initiation to arc maturation continuum. *Journal of Asian Earth Sciences*, v. 134, pp.191-206
  9. Singh, T. D., Manikyamba, C., Subramanyam, K. S. V., **Ganguly, S.**, Khelen, A. C., Reddy, N. R. (2018) Mantle heterogeneity, plume-lithosphere interaction at rift controlled ocean-continent transition zone: Evidence from trace-PGE geochemistry of Vempalle flows, Cuddapah Basin, India. *Geoscience Frontiers*. <https://doi.org/10.1016/j.gsf.2017.12.013>
  10. Manikyamba C., Said, N., Santosh M., Saha, A., **Ganguly S.**, Khelen A.C. and Subramanyam K.S.V. (2017) U enrichment and Th/U fractionation in Archean boninites: Implications for paleo-ocean oxygenation and U cycling at juvenile subduction zones. *Journal of Asian Earth Sciences*, [doi.org/10.1016/j.jseaes.2017.10.009](https://doi.org/10.1016/j.jseaes.2017.10.009)
  11. Yang Q.Y. , Santosh M., **Ganguly S.**, Arun-Gokul J. , Dhanil Dev S.G., Tsunogae T., Shaji E., Dong Y., C. Manikyamba C. (2016) Melt-fluid infiltration in Archean suprasubduction zone mantle wedge: Evidence from geochemistry, zircon U–Pb geochronology and Lu–Hf isotopes from Wynad, southern India. *Precambrian Research* v.281, pp. 101-127.
  12. Manikyamba C., Santosh M., Chandan Kumar B., Rambabu S., Li T., Saha A., Khelen A.C., **Ganguly S.**, Singh D., Subba Rao D.V. (2016) Zircon U-Pb geochronology, Lu-Hf isotope systematics, and geochemistry of bimodal volcanic rocks and associated granitoids from Kotri Belt, Central India: implications for Neoproterozoic-Paleoproterozoic crustal growth. *Gondwana Research*, [doi:10.1016/j.gr.2015.12.008](https://doi.org/10.1016/j.gr.2015.12.008)

13. **Ganguly S.**, Manikyamba C., Saha A., Lingadevaru M., Santosh M., Rambabu S., Khelen A.C., Purushotham D. and Linga D. (2016) Geochemical characteristics of gold bearing boninites and Banded Iron Formations from Shimoga greenstone belt, India: Implications for gold genesis and hydrothermal processes in diverse tectonic settings. *Ore Geology Reviews*, v.73, pp. 59-82. [doi:10.1016/j.oregeorev.2015.10.013](https://doi.org/10.1016/j.oregeorev.2015.10.013)
14. Manikyamba C., Ray J., **Ganguly S.**, Singh M. R., Santosh M., Saha, A., and Satyanarayanan M. (2015) Boninitic metavolcanic rocks and island arc tholeiites from the Older Metamorphic Group (OMG) of Singhbhum Craton, eastern India: geochemical evidence for Archean subduction processes. *Precambrian Research* v.271, pp. 138-159. [doi:10.1016/j.precamres.2015.09.028](https://doi.org/10.1016/j.precamres.2015.09.028)
15. Manikyamba C., **Ganguly S.**, Santosh M., Saha A., Chatterjee A. and Khelen A.C. (2015) Neoproterozoic arc-juvenile back-arc magmatism in eastern Dharwar Craton, India: geochemical fingerprints from the basalts of Kadiri greenstone belt. *Precambrian Research*, v.258, pp. 1-23.
16. Manikyamba C., **Ganguly S.**, Santosh M., Singh M. R. and Saha A. (2015) Arcnascent back arc signature in metabasalts from the Neoproterozoic Jonnagiri greenstone terrane, Eastern Dharwar Craton, India. *Geological Journal*, v. 50, pp. 651-669.
17. Manikyamba C., **Ganguly S.**, Santosh M., Saha A. and Lakshminarayana G. (2015) Geochemistry and petrogenesis of Rajahmundry trap basalts of Krishna Godavari Basin, India. *Geoscience Frontiers*. v.6, pp. 437-451.
18. Singh M. R., Manikyamba C., Ray, J. **Ganguly S.**, Santosh M., Saha, A., Rambabu, S., and Sawant, S.S. (2015) Major, trace and platinum group element (PGE) geochemistry of Archean Iron Ore Group and Proterozoic Malangtoli metavolcanic rocks of Singhbhum Craton, Eastern India: Inferences on mantle melting and sulphur saturation history. *Ore Geology Reviews*, [doi:10.1016/j.oregeorev.2015.04.024](https://doi.org/10.1016/j.oregeorev.2015.04.024).
19. Saha A., Manikyamba C., Santosh M., **Ganguly S.**, Khelen A.C. and Subramanyam K.S.V. (2015) Platinum Group Elements (PGE) geochemistry of komatiites and boninites from Dharwar Craton, India: implications for mantle melting processes. *Journal of Asian Earth Sciences*, v.105, pp. 300-319. [doi:10.1016/j.jseaes.2015.01.020](https://doi.org/10.1016/j.jseaes.2015.01.020).
20. **Ganguly S.**, Ray J., Koeberl C., Saha A., Thoni M. and Balaram V. (2014) Geochemistry and petrogenesis of lava flows around Linga, Chhindwara area in the Eastern Deccan Volcanic Province. *Journal of Asian Earth Sciences*, v. 91, pp. 174-193.
21. Manikyamba C., **Ganguly S.**, Saha A., Santosh M., Singh M. R. and Subba Rao D.V. (2014) Continental lithospheric evolution: constraints from the geochemistry of felsic volcanic rocks in the Dharwar Craton, India. *Journal of Asian Earth Sciences*. v. 95, pp. 65-80.
22. Manikyamba C., Saha A., **Ganguly S.**, Santosh M., Lingadevaru, M. and Singh M. R. (2014) Sediment-infill volcanic breccia from the Neoproterozoic Shimoga greenstone terrane, Western Dharwar Craton: implications on pyroclastic volcanism and sedimentation in an active continental margin. *Journal of Asian Earth Sciences*, v.96, pp. 269-278.
23. Manikyamba C., Saha A., Santosh M., **Ganguly S.**, Singh M. R., Subba Rao D.V. and M. Lingadevaru (2014) Neoproterozoic felsic volcanic rocks from the Shimoga

- greenstone belt, Dharwar Craton, India: geochemical fingerprints of crustal growth at an active continental margin. *Precambrian Research*, v. 252, pp. 1-21.
24. Ray J., Saha A., Koeberl C., Thoni M., **Ganguly S.** and Hazra S. (2013): Geochemistry and Petrogenesis of Proterozoic mafic rocks from East Khasi Hills, Shillong Plateau, Northeastern India. *Precambrian Research*, v. 230, pp.119-137.
  25. **Ganguly S.**, Ray J., Koeberl C., Ntaflos T. and Banerjee M. (2012): Mineral Chemistry of Lava Flows from Linga Area of the Eastern Deccan Volcanic Province, India. *Journal of Earth System Science*, v. 121, pp. 91-108.
  26. Bhattacharyya N., Ray J., **Ganguly S.**, and Saha A. (2012): Mineral Chemical Studies on Gabbro-Anorthosite of Dumka, Chhotanagpur Gneissic Complex, Eastern Indian Shield. *Journal of Geological Society of India*, v.80, pp.481-492.
  27. Saha A., Ray J., **Ganguly S.**, and Chatterjee N. (2011): Occurrence of Melanite Garnet in Syenite and Ijolite-Melteigite rocks of Samchampi-Samteran Alkaline Complex, Mikir Hills, Northeastern India. *Current Science*, v. 101, pp. 95-100.
  28. Ray J., Saha A., **Ganguly S.**, Balaram V., Keshav Krishna A. and Hazra S. (2011): Geochemistry and Petrogenesis of Neoproterozoic Myllem Porphyritic Granite Pluton, Meghalaya Plateau, Northeastern India. *Journal of Earth System Science*, v. 120, pp. 459-473.
  29. Saha A., **Ganguly S.**, Ray J. and Chatterjee N. (2010): Evaluation of phase chemistry and petrochemical aspects of Samchampi-Samteran differentiated alkaline complex of Mikir Hills, Northeastern India. *Journal of Earth System Science*, v. 119, pp. 675-699.
  30. Saha A., **Ganguly S.**, Ray J. and Dhang A. (2010): Vanadium Bearing Titaniferous Magnetite Ore Bodies of Ganjang, Karbi-Anglong District, NorthEastern India. *Journal of Geological Society of India*, v.76, pp.26-32.

### **Abstracts (Published):**

- **Ganguly S.**, Ray J., Saha A, Koeberl C. and Thoni M. (2013): Deccan Trap Lava Flows around Linga, Chhindwara District, Central India: Implications from Flow morphology, Geochemistry and Sr-Nd isotope systematics. 100<sup>th</sup> Indian Science Congress, Kolkata.
- Saha A., Ray J., **Ganguly S.**, Koeberl C. and Thoni M. (2010): Tracking Kerguelen Plume Related Source for Samchampi-Samteran Alkaline Complex, Mikir Hills, Northeastern India: Implications from Sr-Nd isotope systematics, abstract published in Geological Society of America (GSA) annual meeting, held in Denver, U.S.A., Geological Society of America (GSA) abstracts with programs, 2010, v. 42, no. 5, p. 647.
- **Ganguly S.**, Ray J., Koeberl C., Ntaflos T. and Saha A. (2010): Phase Chemistry and Flow Correlations of Deccan Trap Lavas around Linga, Chhindwara, Central India, abstract published in 7<sup>th</sup> Asia Oceania Geoscience Society Conference, held in Hyderabad, India, Abstract ID: SE12-A003.
- Saha A., Ray J., **Ganguly S.**, Koeberl C. and Thoni M. (2010): Sr and Nd Isotope systematics of Samchampi-Samteran Alkaline Complex, Karbi-Anglong, Northeastern India: Implications for Kerguelen Plume-Related Mantle Source Characteristics, published and presented in 7<sup>th</sup> Asia Oceania Geoscience Society Conference, held in Hyderabad, Abstract ID: SE12-A002.
- **Ganguly S.**, Ray J., Koeberl C., and Saha A. (2009): Field Geological and Petrographic Study of Deccan Lava Flow Stratigraphy around Linga, Chhindwara

District, Central India, abstract published in 6<sup>th</sup> Asia Oceania Geoscience Society Conference, held in Singapore, Abstract ID: SE65-A002.

- Saha A., **Ganguly S.**, Ray J. and Koeberl C. (2009): Alkaline Differentiates of Samchampi-Samteran Complex: A Key to Decipher Kerguelen Plume Activities in North Eastern India, abstract published and presented in 6<sup>th</sup> Asia Oceania Geoscience Society Conference, held in Singapore, Abstract ID: SE 64-A002.
- Saha A., Ray J. and **Ganguly S.** (2008): Tracking Kerguelen Plume Activities in North Eastern India in the Light of Samchampi Alkaline-Carbonatite Complex, abstract published in 5<sup>th</sup> Asia Oceania Geoscience Society Conference, held in Busan, South Korea, Abstract ID: SE59-A014.

## **Teaching assignments and Masters Dissertations**

- **2016-2017:**
  - Theory Lectures on Metamorphic Processes and Tectonic implications for MSc. Part I students.
- **2017-2018:**
  - Full course Theory and Practical Lectures on Principles of Mineralogy and Geochemistry [GLC 101 and GLC 124] and Theory Lectures on Geotectonics [GLC 102] for MSc. Applied Geology Part I 1st Semester
  - Full course Theory and Practical Lectures on Metamorphic Petrology [GLC 104 and GLC 127] for MSc. Applied Geology Part I 2<sup>nd</sup> Semester
  - Theory Lectures on Marine Geology [GLO 207] for MSc. Applied Geology Part II 4<sup>TH</sup> Semester
- **2016-2017:**

Guided five (5) M.Sc. students for dissertation (12 credit course).

  1. Anmol Naik 2. Gandha Talaulikar 3. Chinmay Chari 4. Deeksha Karapukar and 5. Menfred Pereira

Four (4) students worked on Geological, petrological and geochemical studies of ultramafic mafic rocks of greenstone belts from western Dharwar Craton and one (1) student worked on geology of mafic dykes from Shirvoi, Goa. Results, observations and outcome of the dissertations are being synthesized for preparation of manuscripts to be submitted for publication in peer-reviewed journals.
- **2017-2018**

Guided two (2) M.Sc. students for dissertation (12 credit course).

  1. Erin Viegas 2. Rajat Rane

Both are working on Petrological and Geochemical studies of greenstone belt lithologies from western Dharwar Craton.

**Languages known:** English, Bengali, and Hindi  
**Date of Birth:** 16<sup>th</sup> September, 1984  
**Sex:** Female  
**Marital status:** Married  
**Nationality:** Indian (Carrying Indian Passport)

I do hereby declare that the above informations are true to the best of my knowledge.

Dated: 21<sup>st</sup> May, 2018

Sohini Ganguly