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**3. Institution:** Indian Institute of Science, Bangalore**4. Date of Birth:** 5<sup>th</sup> July 1980**5. Gender:** Male**6. Category:** General**7. Whether differently abled:** NO**8. Academic Qualification:**

	Degree	Year	Subject	University
1	BSc	2002	Chemistry (Hons) Maths and Physics	Calcutta University, St. Xavier's College
2	MSc	2004	Marine Science	Calcutta University
3	PhD	2010	Chemical Oceanography	Florida State University

**9. PhD Details:****Title:** Lithium Isotopic Evolution of Cenozoic Seawater**Guide:** Prof. Philip Nissen Froelich (AAAS Fellow)**Institution:** Florida State University, Department of Oceanography**Year of Award:** 2010**10. Work Experience:**

Sl No.	Position Held	Institute	From	To
1	Postdoctoral Fellow	Florida State University	August 2010	October 2011
2	Postdoctoral Fellow <i>Mentor: Prof. Henry Elderfield (FRS)</i>	University of Cambridge	October 2011	December 2014
3	Research Fellow	University of Cambridge	Jan 2015	August 2017
4	Assistant Professor	IISc, Bangalore	September 2017	Present

## 11. Awards and Recognition:

Sl No.	Name of Award	Awarding Agency	Year
1	Col. A. N. Basu Travel Fellowship	University of Calcutta	2005
2	Dissertations Initiative for the Advancement of Climate Change Research	NSF, USA	2012
3	Newton Trust Postdoctoral Fellowship	University of Cambridge	2015
4	Junior Research Fellowship	King's College, University of Cambridge	2015
5	Collegiate Research Associate	Clare College, University of Cambridge	2015
6	Swarnajayanti Fellowship	Department of Science and Technology	2020

## 12. Publications:

Sl No.	Authors	Title	Name of Journal	Volume	Page	Year
31.	Tarique, M., Waliur Rahaman, W., Fousiya, A. A., Lathika, N., Thamban, M., Achyuthan, H., <b>Misra S.</b>	Surface pH record (1990-2013) of the Arabian Sea from boron isotopes of Lakshadweep corals—trend, variability, and control doi.org/10.1029/2020JG006122	JGR Biogeosciences	126	e2020JG006122	2021
30.	Guillermic, M., Cameron, L.P., De Corte, I., <b>Misra, S.</b> , Villa, A., Chang, F., and Tripathi, A. Bijma, J., de Beer, D., Reymond, C., Westphal, H., Reiss J.B., Eagle, R.	Thermal stress reduces Pocilloporid coral resilience to ocean acidification by impairing control over calcifying fluid chemistry doi.org/10.1126/sciadv.aba9958	Science Advances	7	eaba9958	2021
29.	Sadekov, A. Y., Llyod, N., <b>Misra, S.</b> , D'Olivo, J., McCulloch, M.	<i>In situ</i> Mg isotope measurements of biogenic carbonates using laser ablation multi-collector inductively coupled plasma mass spectrometry: A new tool to understand biomineralization doi.org/10.1002/rcm.8918	Rapid Communications in Mass Spectrometry	34	e8918	2020
28.	Langer, G., Sadekov, A. Y., Greaves, M., Nehrke, G., Probert, I., <b>Misra, S.</b> , Thomas, S.	Li Partitioning Into Coccoliths of <i>Emiliana huxleyi</i> : Evaluating the General Role of “Vital Effects” in Explaining Element Partitioning in Biogenic Carbonates doi.org/10.1029/2020GC009129	Geochemistry, Geophysics, Geosystems	21	e2020GC009129	2020
27.	Guillermic, M., <b>Misra, S.</b> , Eagle, R., Villa, A., Chang, F., and Tripathi, A.	Seawater pH reconstruction using boron isotopes in multiple planktonic foraminifera species with different depth habitats and their potential to constrain pH and $p\text{CO}_2$ gradients doi.org/10.5194/bg-17-3487-2020	Biogeosciences Discussions	17	3487-3510	2020
26.	Dutta, S., Chattopadhyay, D., Chattopadhyay, D., <b>Misra, S.</b> , and Turchyn, A. V	Strontium stratigraphy of the Oligocene–Early Miocene shellbeds of the Kutch Basin, western India, and its implications	Lethaia	53	382-395	2020
25.	Pons, M. L., Millet, M. A., Nowell, G. N., <b>Misra S.</b> , and Williams, H. M.	Precise measurement of selenium isotopes by HG-MC-ICPMS using a 76-78 double-spike doi.org/10.1029/2020GC009129	Journal of Analytical Atomic Spectrometry	35	320-330	2020

24.	Gout, M., <b>Misra S.</b> , Tipper, E. T., Bohlin, M., Guo, R., and Farnan, I.	Diffusive processes in aqueous glass dissolution doi.org/10.1038/s41529-019-0102-5	Nature Partner Journal, Material Degradation	3	1-9	2019
23.	Nilsson-Kerr, K., Anand, P., Sexton, P. F., Leng, M. J., <b>Misra, S.</b> , Clemens, S. C., and Hammond, S. J.	Role of Asian summer monsoon subsystems in the inter-hemispheric progression of deglaciation	Nature Geoscience	12	290-295	2019
22.	Sadekov, A. Y., Llyod, N., <b>Misra, S.</b> , Trotter, J., D'Olivo, J., McCulloch, M.	Accurate and precise microscale measurements of boron isotope ratios in calcium carbonates using laser ablation multicollector-ICPMS	Journal of Analytical Atomic Spectrometry	34	550-560	2019
21.	Roberts, J., Kazmarek, K., Skinner, L. C., Bijma, J., Bradbury, H., Turchyn, A., Lamy, F., and <b>Misra, S.</b>	Lithium isotopic composition of benthic foraminifera: A new proxy for paleo-pH reconstruction	Geochimica et Cosmochimica Acta	236	336-350	2018
20.	Llyod, N., Sadekov, A. Y., and <b>Misra, S.</b>	Application of 10 <sup>13</sup> ohm Faraday cup current amplifiers for boron isotopic analyses by solution mode and laser ablation MC-ICP-MS	Rapid Communications in Mass Spectrometry	32	9-18	2018
19.	Bohlin, M. S., <b>Misra S.</b> , Llyod, N., Elderfield, H., and Bickle, M. J.	High precision determination of lithium and magnesium isotopes utilising single column separation and MC-ICPMS	Rapid Communications in Mass Spectrometry	32	93-104	2018
18.	Howes, E. L., Kazmarek, K., Raitzsch, M., Mewes, A., Bijma, N., Horn, I., <b>Misra, S.</b> , Jean-Pierre Gattuso, J. P., and Bijma, J.	Decoupled carbonate chemistry controls on the incorporation of boron into <i>Orbulina universa</i>	Biogeosciences Discussions	14	415-430	2017
17.	Langer, G., Sadekov, A. Y., Thomas, S., Keul, N., Nehrke, G., Mewes, A., Greaves, M., <b>Misra, S.</b> , Reinhart, G. J., Jan de Nooijer, L., Bijma, J., and Elderfield H.	Sr partitioning in the benthic foraminifera <i>Ammonia aomoriensis</i> and <i>Amphistegina lessonii</i>	Chemical Geology	440	306-312	2016
16.	Kazmarek, K., Nehrke, G., <b>Misra, S.</b> , and Bijma, J., Elderfield H.	Investigating the Effects of Growth Rate and Temperature on the B/Ca ratio and $\delta^{11}\text{B}$ during Inorganic Calcite Formation	Chemical Geology	421	81-92	2016
15.	Langer, G., Sadekov, A., Thoms, S., Mewes, A., Nehrke, G., Greaves, M., <b>Misra, S.</b> , and Bijma, J., Elderfield H.	Li partitioning in the benthic foraminifera <i>Amphistegina lessonii</i>	Geochemistry, Geophysics, Geosystems	16	4275-4279	2015
14.	Van Hoecke, K., Belza, J., Croymans, T., <b>Misra, S.</b> , Claeys, P., and Vanhaecke, F.	Single-step chromatographic isolation of lithium from whole rock carbonate and clay for isotopic analysis with multi-collector ICP-mass spectrometry	Journal of Analytical Atomic Spectrometry	30	2533-2540	2015
13.	Gottschalk, J., Skinner, L. C., <b>Misra, S.</b> , Waelbroeck, C., Menviel, L., and Axel Timmermann, A.	Greenland imprint on abrupt ocean circulation anomalies in the deep sub-Antarctic Atlantic	Nature Geoscience	8	950-955	2015
12.	Branson, O., Kaczmarek, K., Redfern, S. A. T., <b>Misra, S.</b> , Langer, G., Tyliczszak, T., Bijma, J., and Elderfield, H.	The Coordination of B in Foraminiferal Calcite	Earth Planetary Science Letter	416	67-72	2015

11.	Dial, A., <b>Misra, S.</b> , Landing W. L.	Accurate and precise determination of low concentration iron, arsenic, selenium, cadmium, and other trace elements in natural samples by octopole collision/reaction cell (CRC) equipped Quadrupole-ICP-MS.	Rapid Communications in Mass Spectrometry	9	1-12	2015
10.	Elmore, A. C., McClymont, E. L., Elderfield, H., Kender, S., Cook, M. R., Leng, M. L., Greaves, M., and <b>Misra, S.</b>	Antarctic Intermediate Water properties since 400 kyr recorded in infaunal ( <i>Uvigerina peregrina</i> ) and epifaunal ( <i>Planulina wuellerstorfi</i> ) benthic foraminifera.	Earth Planetary Science Letter	428	193-203	2015
9.	Kazmarek, K., Langer, G., Nehrke, G., Horn, I., <b>Misra, S.</b> , Janse, M., and Bijima, J.	Boron incorporation in the foraminifer <i>Amphistegina lessonii</i> under a decoupled carbonate chemistry	Biogeosciences Discussions	11	16743-16771	2014
8.	<b>Misra, S.</b> , Owen, R., Kerr, J., Greaves, M., Elderfield, H.	Determination of $\delta^{11}\text{B}$ by HR-ICP-MS from Mass Limited Samples: Application to Natural Carbonate and Water Samples	Geochimica et Cosmochimica Acta	140	531-553	2014
7.	<b>Misra, S.</b> , Greaves, M., Owen, R., Kerr, J., Elmore, A. E., Elderfield, H.	Determination of B/Ca of Natural Carbonates by HR-ICP-MS	Geochemistry, Geophysics, Geosystems	15	1617-1628	2014
6.	Froelich, P. N. and <b>Misra, S.</b>	Was the Late Paleocene-Early Eocene Hot Because Earth was Flat? An Ocean Lithium Isotope View of Mountain Building, Continental Weathering, Carbon Dioxide, and Earth's Cenozoic Climate	Oceanography	27	36-49	2014
5.	Peterson, R. N., Burnett, W. C., Opsahl, S. P., Santos, I. R., <b>Misra, S.</b> , Froelich, P. N.	Tracking Suspended Particle Transport via Radium Isotopes ( $^{226}\text{Ra}$ and $^{228}\text{Ra}$ ): The Apalachicola-Chattahoochee-Flint River System	Journal of Environmental Radioactivity	116	65-75	2013
4.	<b>Misra, S.</b> and Froelich, P. N.	Lithium Isotope History of Cenozoic Seawater: Changes in Silicate Weathering and Reverse Weathering	Science	335	818-823	2012
3.	Santos, I. R., Burnett, W. C., <b>Misra, S.</b> , Suryaputra, I. G. N. A., Chanton, J. P., Dittmar, T., Peterson, R. N., and Swarenski, P. W.	Uranium and Barium Cycling in a Salt Wedge Subterranean Estuary: The Influence of Tidal Pumping	Chemical Geology	287	114-123	2011
2.	<b>Misra, S.</b> and Froelich, P. N.	Measurement of Lithium Isotope Ratios by Quadrupole-ICP-MS – Application to Seawater and Natural Carbonates	Journal of Analytical Atomic Spectrometry	24	1524-1533	2009
1.	Peterson, R. N., Burnett, W. C., Taniguchi, M., Chenc J., Santos, I. R., and <b>Misra, S.</b>	Determination of Transport Rates in the Yellow River–Bohai Sea Mixing Zone via Natural Geochemical Tracers	Continental Shelf Research	28	2700-2707	2008

### 13. Extra Mural Funding:

Project Title	Funding Agency	Role	Funding Amount	Duration	Summary of Details
Estimating silicate weathering in a rising CO <sub>2</sub> world from river water chemistry and lab-experiments: implications for future climate models	DST and UKIERI	PI (UK)	₹30,000	April 2017 to March 2020	Seasonal monitoring of Godavari river geochemistry with an emphasis of trace element and isotopes of Li, Mg, Si, Ca, and Sr.
Sustainable water management in urbanised Lower Bengal: novel isotope tracers of the release of heavy metals in the Ganga (Hooghly) River Estuary	Global Challenges Research Fund	PI (IND)	₹19,600	March 2019 to August 2019	Assessing the role of heavy metal absorption and desorption in Ganges estuary during saltwater intrusion as a function of ion exchange reactions.
Heavy metal cycling in mangrove forests and their potential as a bio-remediation solution for metal pollution in coastal regions (West Bengal, India)	Global Challenges Research Fund	PI (IND)	₹25,000	January 2020 to December 2020	Tracing heavy metal pollution in the Ganga estuary and developing a potential remediation method.
Fast Forward to SDG6: Acceptable and affordable water in secondary Indian cities	DST	Co-PI	Rs. 2.14 Crore (IISc)	Nov 2019 – Oct 2024	Developing an intelligent pathway and practices for good quality water supply to secondary Indian cities meet rising demand.
Role of CO <sub>2</sub> in amplifying Glacial–Interglacial Cycles	SwarnaJayanti Fellowship, DST and SERB	PI	Rs. 1.90 Crore	Jan 2021 – Dec 2025	Understanding the role of atmospheric CO <sub>2</sub> concentrations in amplification the magnitude of glacial – interglacial cycles.