

CURRICULUM VITAE

PERSONAL INFORMATION:

Name: Ambalika Niyogi
Father's Name: Mr. M. K. Niyogi
Date of Birth: September 30, 1985
Sex: Female
Marital Status: Single
Present Address: 334/D, Chak Raghunath, P.O. Naini, Allahabad-211008, U. P., India
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EDUCATIONAL QUALIFICATIONS:

S.No.	Qualification	Board/ University	Year of Passing	Subjects	Division (Percentage)
1.	D. Phil.	University of Allahabad	2015	Environmental Earth Science	AWARDED
2.	M.Sc.	University of Allahabad	2008	Environmental Science	First (73.75%)
3.	B.Sc.	University of Allahabad	2006	Botany, Chemistry and Zoology	First (63.11%)
4.	12th	C.B.S.E. (New Delhi)	2003	Physics, Chemistry and Biology	First (68.4%)
5.	10th	C.B.S.E. (New Delhi)	2001	English, Hindi, Social Science, Mathematics and Science	First (66.4%)

D.Phil. Topic: Physicochemical characterisation of spherules in road-deposited sediment (RDS) of Allahabad City and its implications (Supervisor: Prof. J.K. Pati).

HONOURS AND AWARDS:

- Meritorious Certificate during post graduate level (M.Sc., Environmental Science, 2008).
- Women Scientist-WOS-B (Reference No.: DST/Disha/SoRF-PM/028/2013/G), Department of Science and Technology, Government of India (2015-2017).

Project title: Mass pollution and mass extinction-tracing the traces of catastrophe using impact, volcanic and anthropogenic spherules in space and time.

PROJECTS COMPLETED:

1. M.Sc. dissertation: "On-Screen Visual interpretation of Wetlands present in parts of Lucknow, Rae-Bareilly and Unnao district of Uttar Pradesh and its implication" (2008).
Supervisor: Dr. V. Rajamani, Scientist-D, Uttar Pradesh Remote Sensing and Application Centre, Lucknow.
2. M.Sc. Educational Project Report on "Study of the plants and their habitat of Jaipur, Udaipur and Mount Abu, Rajasthan" (2007).
Supervisor: Prof. D.R. Mishra, Ex-Head, and Prof. D.K. Chauhan, Department of Botany, University of Allahabad, Allahabad
3. M.Sc. Annual Project Report on "Statistical Assessment of different plant species present in Botanical Survey of India, Allahabad" (2007).
Supervisor: Prof. D.K. Chauhan, Department of Botany, University of Allahabad, Allahabad.

GEOLOGICAL FIELD EXPERIENCES:

- Geological Trip: Field work in parts of Chitrakoot, Manpur and Bharatkoop areas, central India (October 24-26, 2010).
- Geological Trip: Field work in parts of Chitrakoot, Manpur and Bharatkoop areas, central India (November 08-10, 2012).
- Geological Trip to Lonar Impact Crater, India (July 01-03, 2014)
- Geological trip to Bundelkhand and Dhala Impact crater, India (07-14 February, 2015).
- Geological trip to Jhansi, Sambalpur, Bhubaneswar and Puri, India (2-14 January, 2016).

EXPERIENCES:

- **Teaching Assistant** in "Environmental Geology" for Under-graduate (UG) class (2011).
- Worked as a Project JRF in the **Ganga River Basin Management Plan (GRBMP)** project from 16th November, 2013- 30th June, 2014.

WORKSHOP(S)/SEMINAR(S) ATTENDED:

- Attended 2nd Meghnad Saha Memorial International Symposium-cum-Workshop on **Laser Induced Breakdown Spectroscopy** (February 19-21, 2018), Department of Physics, University of Allahabad, Allahabad, India.
- Paper presented in the 2nd National Geo-Research Scholars Meet (NGRSM) organised by Wadia Institute of Himalayan Geology (WIHG), Dehradun (May 17-20, 2017).
- Attended National workshop on "Material Synthesis, HP-HT Technique and use of Electron Microscopy. National Centre for Experimental Mineralogy and Petrology, University of Allahabad, Allahabad (February 16-22, 2016).

- Attended Workshop on “Geo-informatics in Earthquake Studies” organised by **Department of Earth Sciences and Department of Earthquake Engineering, IIT Roorkee (28th November, 2015).**
- **Tier-II Training course on “Sustainable Development and Management of Ground Water Resources”** Organized by the **Central Ground Water Board, Northern Region, Lucknow & Rajiv Gandhi Ground Water Training and Research Institute, Central Ground Water Board, Raipur** in Allahabad (**March 16-22, 2015**).
- **Paper presented in the Seminar cum Workshop on ‘Modern Methods of Chemical Analysis – Future Trends (MMCA-2013)’ held at CSIR-NML, Jamshedpur during November 20-22, 2013.**
- **Abstract Presentation in National Conference on Geology and Society and Training Programme on Disaster Management (February 29- March 01, 2012),** Organized by Department of Geology, University of Lucknow, Lucknow (U.P.), Sponsored by Purse Programme, Department of Science and Technology, New Delhi- 110016.
- **Attended Arc GIS workshop at IIT, Kanpur (February 12-14, 2011).**
- **Attended workshop in "Experimental Tools for Characterization of Novel materials" National Academy of Science, India (NASI), Allahabad (February 9-10, 2011).**
- **A Short Course on "Ore Geology & Mineral Exploration", Department of Earth and Planetary Sciences, University of Allahabad, Allahabad (November 15-21, 2010).**
- **A Workshop on River Style (GRBM Project, Ministry of Environment and Forest, Govt. of India), IIT Kanpur (November 21-22, 2010).**
- **A meeting on 6th Chandrayan-1 Science Meeting, Physical Research Laboratory, Ahmedabad (February 8-9, 2010).**
- **Attended a review meeting on PLANEX Project, Physical Research Laboratory, Ahmedabad (February 10, 2010).**
- **Training on Water Management Organized by the Central Ground Water Board, Govt. of India, Allahabad (March 18-19, 2009).**
- **Participated in Symposium on Sustainable Watershed Management held at Department of Botany, University of Allahabad, Allahabad (March 16-18, 2008).**

LABORATORY VISITS:

1. Physical Research Laboratory (PRL), Ahmedabad
2. Indian Institute of Technology, Kanpur
3. Indian Institute of Technology, Kharagpur
4. Indian Institute of Technology, Roorkee
5. Pondicherry University, Pondicherry
6. Wadia Institute of Himalyan Geology, Dehradun

PUBLICATIONS:

A. Peer-reviewed Journal Publications:

A.1. Rai, A. K., Singh, A.K., Pati, J.K., Gupta, S., Chakarvorty, M., **Niyogi, A.**, Pandey, A., Dwivedi, M.M., Pandey, K. and Prakash, K. (2019) Assessment of topsoil contamination in an urbanized interfluvial region of Indo-Gangetic Plains (IGP) using magnetic measurements and spectroscopic techniques. **Environmental Monitoring and Assessment**, v. 191, pp. 403 (1-22).

A.2. Niyogi, A., Pati, J.K., Panigrahi, M. K., Panda, D., Chakarvorty, M. and Parthasarathy, G. (2018) Raman, infrared and chemical characterization of fly ash- generated spherules. **Journal of Applied Spectroscopy**, v. 85, no. 5, pp. 856-863.

A.3. Niyogi, A., Pati, J.K., Patil, S.K., Panda, D. and Chakarvorty, M. (2018) Magnetic measurements and geochemical characterization of the road-deposited sediments (RDS), Allahabad city, India: impact of climatic perturbations on sediment composition and provenance tracing. **Journal of Soils and Sediments**, v. 18, no. 7, pp. 2581-2595.

A.4. Chakarvorty, M., Pati, J.K., Prakash, K. and Niyogi, A. (2017) Effect of seasonal variation on dust samples of a winter fog affected urban environment of India, South East Asia. **International Journal of Environmental Analytical Chemistry**, v. 97, pp. 1266-1282.

A.5. Chakarvorty, M., Dwivedi, A. K., Shukla, A. D., Kumar, S., **Niyogi, A.**, Usmani, M., Pati, J. K. (2015) Geochemistry and magnetic measurements of suspended sediment in urban sewage water vis-à-vis quantification of heavy metal pollution in Ganga and Yamuna Rivers, India. **Environmental Monitoring and Assessment**, v. 87, pp. 604 (1-17).

A.6. Niyogi, A., Pati, J.K., Panda, D., Chakarvorty, M., and Usmani, M. (2014) Micro-chemical analysis of anthropogenic spherules and its role in spherule type discrimination. **Indian Journal of Chemical Society**, v. 91, pp. 569-573.

A.7. Chakarvorty, M., Pati, J.K., Patil, S.K., Shukla, S., **Niyogi, A.** and Sharaf, A.K. (2014) Physical characterization, magnetic measurements, REE geochemistry and bio- monitoring of dust-load accumulated during a protracted winter fog period and their implications. **Environmental Monitoring and Assessment**, v. 186, pp. 2965-2978.

A.8. Chakarvorty, M., Pati, J.K., **Niyogi, A.**, and Usmani, M. (2013) The importance of magnetic measurements dovetailed with chemical analysis for the rapid characterization of heavy metal-bearing urban dust load. **Indian Journal of Chemical Society**, v. 90, pp. 1989-1991.

A.9. Niyogi, A., Pati, J.K., Patel, S.C., Panda, D. and Patil, S.K. (2011) Anthropogenic and impact spherules: morphological similarity and chemical distinction-A case study from India and its implications. **Journal of Earth System Science**, v. 120, pp. 1043–1054.

B. Publications in International/National Conferences/Seminar/ Workshop:

B.1. Niyogi, A., Pati, J.K. and Rai, A.K. (2018) Chemical variations amongst fly ash samples using different coal feeds- A Laser Induced Breakdown Spectroscopy (LIBS) study. **2nd Meghnad Saha**

Memorial International Symposium-cum-Workshop on Laser Induced Breakdown Spectroscopy (February 19-21, 2018), Department of Physics, University of Allahabad, Allahabad, India, pp. 62.

B.2. Rai, A.K., Pati, J.K., Gupta, S., Singh, A., Chakarvorty, M., Pandey, K., Dwivedi, M.M., Niyogi, A. and Pandey, A. (2018) Rapid detection of heavy metal distribution in top soil of Allahabad city using magnetic measurements coupled with Laser-Induced Breakdown Spectroscopy (LIBS) technique. 2nd Meghnad Saha Memorial International Symposium-cum-Workshop on Laser Induced Breakdown Spectroscopy (February 19-21, 2018), Department of Physics, University of Allahabad, Allahabad, India, pp. 61.

B.3. Niyogi, A. (2017) Anthropogenic spherules: Connecting past to anthropocene period in Geoscience. 2nd National Geo-Research Scholars Meet (NGRSM) organised by Wadia Institute of Himalayan Geology (WIHG), Dehradun (May 17-20, 2017).

B.4. Niyogi, A. (2017) Characterization of fly ash fractions to trace the extent of pollution. World of Coal Ash 2017 (May 8-11, 2017), Lexington, Kentucky, USA. (Acceptance status: 258).

B.5. Niyogi, A. (2017) Investigation on a comprehensive characterization of fly ash particles (spherules) and its impact on environment. The 3rd International Conference on Environment & Ecology (March 27-29, 2017), Ranchi, Jharkhand, India. (Accepted).

B.6. Niyogi, A. (2016) Anthropogenic Spherules as a Major Pollution Indicator in Urban Area. 8th International Conference on Environmental Science and Technology, American Academy of Sciences, Houston, Texas, USA (Abs. No. #764).

B.7. Niyogi, A. (2015) Anthropogenic spherules: An ubiquitous micro environmental pollutant. Seminar cum Workshop on Modern Methods of Chemical Analysis-Future Trend (MMCA-2015), Organized by CSIR-NML, Jamshedpur & Atomic Mineral Directorate for Exploration and Research (AMD), Hyderabad, Souvenir, pp. 23.

B.8. Niyogi, A., Chakarvorty, M., Usmani, M., Dwivedi, N. and Pati, J.K. (2015) Geochemistry of subsurface sediments and groundwater from palaeochannels and adjoining areas of Phulpur, Allahabad. Seminar cum Workshop on Modern Methods of Chemical Analysis-Future Trend (MMCA-2015), Organized by CSIR-NML, Jamshedpur & Atomic Mineral Directorate for Exploration and Research (AMD), Hyderabad, Souvenir, pp. 12.

B.9. Niyogi, A. and Dwivedi, N. (2015) Mapping of paleochannels and their groundwater potentials of Phulpur area, Allahabad district, India. Workshop on Groundwater prospects of paleochannels organized by Central Ground Water Board, Allahabad (October 6, 2015), pp. 13.

B.10. Niyogi, A. (2015) Fly ash spherules of all sizes and compositions omnipresent- a case study from Allahabad, India. **National Symposium on Weather & Climate Extremes (TROPMET-2015), February 15-18, 2015 held on Chandigarh, India. Abstract Volume**, jointly Hosted by Indian Meteorological Society (IMS) and Panjab University, Chandigarh and Organized by Indian Meteorological Society, New Delhi, India, pp. 195.

B.11. Niyogi, A. and J.K. Pati (2015) Fly ash spherules: A micro environmental pollutant. **International Conference on Water: From Pollution to Purification (ICW-2015) held on Kerala (January 23-26, 2015)** organized by the Centre for Environment Education and Technology (CEET), Kottayam, India in association with Advanced Centre of Environmental Studies and Sustainable Development (ACCESSD), Mahatma Gandhi University Kottayam, Kerala & Karunya University, Coimbatore.

B.12. Niyogi, A. and J.K. Pati (2015) Role of spherules and its effect on the urban environment. **International Conference on Asian Plant and Science Conference, Lumbini, Nepal (November 01-03, 2014).**

B.13. Niyogi, A. (2014) Spherule beyond a spherical shape. **National Seminar on Recent Advances in Earth Sciences (February 22-23, 2014). Abstract Volume, Department of Earth Sciences, Sambalpur University, Odisha, pp. 82.**

B.14. Niyogi, A., Pati, J.K., Panda, D., Chakarvorty, M., and Usmani, M. (2013) Micro-chemical analysis of anthropogenic spherules and its role in spherule type discrimination. **Modern Methods of Chemical Analysis-Future Trend (MMCA-2013, CSIR-NML, Jamshedpur, Abstract Volume, pp. 67).**

B.15. Chakarvorty, M., Pati, J.K., Niyogi, A., and Usmani, M. (2013) Heavy metals in urban dust load-chemical analysis dovetail with magnetic measurement. **Modern Methods of Chemical Analysis-Future Trend (MMCA-2013, CSIR-NML, Jamshedpur, Abstract Volume, pp. 30).**

B.16. Niyogi, A., and Pati, J.K. (2012) Spherules are not impact diagnostic! **National Conference on Geology and Society and Training Programme on Disaster Management, Abstract Volume, Department of Geology, University of Lucknow, Lucknow (U.P.), pp. 103-104.**

B.17. Niyogi, A., and Pati, J.K. (2012) Silica-rich spherules in road-deposited sediments of Allahabad city, India and their implications. **National Seminar on the Frontiers of Earth Science Research, Abstract Volume, Central University of Karnataka, Gulbarga, pp. 220-221, (ISBN No. 978-81-909728-40).**

B.18. Niyogi, A., and Pati, J.K. (2012) Spatio-Temporal and Chemical Variability of Anthropogenic Spherules from Allahabad, India. **6th International Conference on Environmental Science and Technology, American Academy of Sciences, Houston, Texas, USA** (Abs. No. #1000).

B.19. Niyogi, A., and Pati, J.K. (2012) Spherules do not Lead to Impact Craters Always! **National Conference on “Green Earth”, Abstract Volume, Wadia Institute of Himalayan Geology (WIHG), Dehradun, pp. 52-53.**

B.20. Niyogi, A., Pati, J.K., and Panda, D. (2010) Fly Ash generated Spherules in Road Dusts of Allahabad City, India. **5th International Conference on Environmental Science and Technology, American Academy of Sciences, Houston, Texas, USA** (Abs. No. #947).

JOURNAL REVIEWER

- International Journal of Environmental Monitoring and Analysis

EXTRA CURRICULAR ACTIVITIES:

- Delivered various talks on Gyan Vani and Yuva vani at **Prasar Bharti (All India Radio), Allahabad.**

INSTRUMENTS USED:

1. **Petrological and Binocular Zoom Microscopes (Leica, Germany)**
2. **Gem Refractometer (Kruss, Germany)**
3. **X-ray Diffractometer (X’Pert Pro High Score, Philips, Germany)**
4. **Electron Probe Micro-Analyzer (Cameca SX-100, France)**
5. **Particle Size Analyzer (Cilas 1100, France)**
6. **Laser Raman Spectrometer (Renishaw, Germany)**
7. **FTIR Spectrometer (Excalibur Series, Varian 3100, Germany)**
8. **Magnetic Susceptibility Meter (Bartington MS-2B, UK)**
9. **Molspin Pulse Magnetizer (MMPM-10, UK)**
10. **Molspin Spinner Magnetometer (Molspin Ltd, UK)**
11. **Laser Induced Breakdown Spectroscopy (LIBS) (Continuum Surelite III-10)**
12. **Multi-parameter Water Testing Kit (Multi 3420 Set G, Germany)**

AREAS OF INTEREST:

Fly ash spherules, Geochemistry, Environmental magnetism, Environmental Chemistry.

COMPUTER SKILL:

Can use various softwares and write program on EXCEL

SOFTWARE KNOWLEDGE:

Adobe Illustrator, ILWIS, ArcGIS, ENVI, ERDAS, SPSS, PAST, ORIGIN and Iqpet

REFERENCES:

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3. Dr. Kuldeep Prakash
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DECLARATION

I hereby declare that the above informations are correct and best of my knowledge.

Place: Allahabad

Date: 02:01:2020

(Ambalika Niyogi)