Dr. Anupam Sharma

SCIENTIST-G • HEAD, GEOCHEMISTRY, TL/OSL & COAL LABORATORY • CONVENER, RDCC

Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, India

Honorary Professor, Academy of Scientific and Innovative Research (AcSIR), Ghaziabad

Former Associate Professor, Central University of Himachal Pradesh, Dharamsala

Phone: +91-9451307713 Email: anupam110367@gmail.com

PERSONAL DETAILS

Born: 11 March 1967

Nationality: Indian

Address: Flat 702, Kalyan Apartments, Sector 24, Indira Nagar, Lucknow 226 016, India

Marital Status: Married

RESEARCH INTERESTS

Geochemistry | Stable Isotope Systematics | Quaternary Palaeoclimate & Tectonics | Sedimentary Provenance | Soil dynamics | Radiogenic Waste | Astrobiogeology

PROFESSIONAL MEMBERSHIPS

- Member, Geochemical Society, USA
- Life Member, Paleontological Society of India
- Life Member, The Palaeobotanical Society
- Life Member, Himalayan Geology, India
- Life Member, Indian Science Congress
- Member, Association of Quaternary Researchers

ACADEMIC QUALIFICATIONS

Ph.D. in Geochemistry
School of Environmental Sciences, JNU, New Delhi
Awarded in 2000

Thesis: *Geochemical Aspects of Rock Weathering in the Upper Reaches of Kauvery River, South India.* Supervisor: Prof. V. Rajamani

PG Diploma (Distance) - Marketing Management
IGNOU, New Delhi
1998

PG Diploma (Distance) - Human Resource Management
IGNOU, New Delhi
1995

M.Phil. in Environmental Sciences
School of Environmental Sciences, JNU, New Delhi
1994 | Grade: 7.25/9

Thesis: *Geochemical Cycling of Carbon, Sulfur and Oxygen: Evidence Provided from Phanerozoic Geological Records.* Supervisor: Prof. V. Rajamani

M.Tech. in Applied Geology
Govt. Engineering College, NIT Raipur
1991 | 72.3%

B.Sc. - Geology, Chemistry, Botany
Govt. Science College, Ravishankar University, Raipur
1987 | 63.8%

OTHER QUALIFICATIONS

UGC/CSIR NET-JRF (1993)

GATE (1992)

PROFESSIONAL EXPERIENCE

Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow — Jan 2023 - Present
Scientist-G | Group Head, Geochemistry & TL/OSL, Coal Laboratory
Convener, RDCC. Leading flagship "Quaternary Lake Core Drilling" program. Heading a state-of-the-art geochemical and TL/OSL laboratory.

Academy of Scientific and Innovative Research (AcSIR), Ghaziabad — Jan 2020 - Present
Honorary Professor

BSIP, Lucknow — Jan 2018 - Dec 2022
Scientist-F

BSIP, Lucknow — Jan 2014 - Dec 2017
Scientist-E

Central University of Himachal Pradesh — Apr 2012 - Jan 2014
Associate Professor (served on lien)

BSIP, Lucknow — Apr 2007 - Mar 2012
Scientist-D

BSIP, Lucknow — Oct 2001 - Mar 2007
Scientist-C

ADMINISTRATIVE POSITIONS

Sl. No.	POSITION	INSTITUTION	FROM	TO
1	Convener, Research Development & Coordination Cell (RDCC)	BSIP	2019	Till date
2	Member, New Building Committee	BSIP	2019	Till date
3	Convenor, (Building and Electrical Maintenance Committee) BEMC	BSIP	2017	2023
4	Chairperson, Internal Grievance Committee	BSIP	2023	2023
5	Transparency Officer	BSIP	2020	Abolished
6	Nodal Officer, Swachhata Hi Sewa Committee	BSIP	2023	2025
7	Nodal Officer, Covid-19 Testing Facility	BSIP	2020	2021
8	Nominated Member, Expert Committee, SAIF	GSI	2018	2021
9	Member, Facility Management Committee, SAIF	CSIR-CDRI	2018	2021
10	Institutional Coordinator of Ph.D. Program	AcSIR	2020	2022
11	Warden, Men's Hostel	CUHP	2012	2014
12	Sports Convenor	CUHP	2012	2014

Ph.D. SCHOLARS SUPERVISED

SCHOLAR (Awarding University/Institute)	STATUS
Dr. Kamlesh Kumar (Lucknow University) *[Presently, Scientist-E, BSIP]*	Awarded
Dr. Meenakshi Hira (CUHP)	Awarded
Dr. Amritpal Singh Chaddha (Lucknow University) *[Presently, Specially Appointed Associate Researcher, USTC, China]*	Awarded
Dr. Shazi Farooqui (Lucknow University)	Awarded
Dr. Tarasha Sharma (Kurukshetra University)	Awarded
Dr. Mukesh Yadav (Banaras Hindu University) *(Presently, Contractual Assistant Professor, The MS University of Baroda, Gujarat)*	Awarded
Dr. Piyal Halder (BSIP, Lucknow & AcSIR) *[Presently, Postdoctoral Research Associate, WIHG, Dehradun; Formerly Project Scientist-I in the Scientific Deep Drilling Program at Koyna Intraplate Seismic Region, Ministry of Earth Sciences, Govt. of India]*	Awarded

SCHOLAR (Awarding University/Institute)	STATUS
Mrs. Harshita Srivastava (Banaras Hindu University)	Thesis submitted
Mr. Ishwar Chandra Rahi (Banaras Hindu University)	Thesis submitted

POST-DOCTORAL RESEARCHERS

RESEARCHER	STATUS
Dr. M.K. Shukla (NPDF) *[Presently, Scientist-D, MoES-BGRL]*	Completed
Dr. Rupa Ghosh (BSRA) *[Joined Dr. D. S. Kothari PDF at Jadavpur University]*	Completed
Dr. Sandhya Misra (BSRA)	Completed
Dr. Sandhya Misra (DST-WOSA)	Ongoing
Dr. Wagmare Balraju (BSRA)	Ongoing

Ph.D. THESIS ADJUDICATED

>25 Ph.D. Thesis, from JNU, Pondicherry University, Lucknow University, BHU, Bundelkhand University, UPES, Panjab University, etc.

RESEARCH PROJECTS (29 TOTAL: 15 IN-HOUSE, 9 SPONSORED, 5 COLLABORATIVE)

S. No.	Title of the Projects	Funding Agency	Starting Date	Status
1	Evaluation of mobility of REE in a weathering process as model for actinide mobility in RAD-Waste Repository	CSIR New Delhi	Sept.1997	Completed in Oct.2011
2	Palynological, Geochemical and magnetic studies in Lahaul-Spiti and Ladakh regions: Implications for Palaeoclimate and Neo-tectonic.	BSIP, Lucknow	01 April 2002	Completed
3	Establishment of Palaeobotanical -Geochemical Laboratory at BSIP, Lucknow	BSIP, Lucknow	01 April 2002	Completed
4	Palaeoclimatic conditions in Late Quaternary lakes, East Antarctica: A multidisciplinary study using sedimentological, Palynological, Geochemical, Mineral magnetic, and Chronological parameters	BSIP, Lucknow & NCAOR, Goa	April 2005	Completed in December 2009
5	Multi-proxy study on Quaternary sedimentary records of the Mahi River basin, Mainland Gujarat **(as PI)**	DST, New Delhi	05 December 2005	Completed on 31 March 2012
6	Tectono-climatic signature Ladakh & Lahaul sectors of Tethyan Himalaya during Quaternary period: A Multi-proxy approach using mineral magnetic, geochemical and Chronological parameters	BSIP, Lucknow	01 April 2007	Completed on 31 March 2012
7	Multi-proxy geological studies in Svalbard area and surrounding oceans: implication to Quaternary Palaeoclimate, Permo-Carboniferous and Mesozoic-Tertiary biostratigraphy, biogeography, ecology, tectonics and hydrocarbon potential	BSIP, Lucknow & NCAOR, Goa	2008	Completed
8	Linking Vadose zone microbial ecology and geochemistry of sediments cores from the alluvial Mahi basin, Western India **(as Co-PI)**	SERB, New Delhi	July 2013	Completed in 2016
9	Study of late Cretaceous-Early Paleogene successions of South Shillong Plateau: implications for climate and relative sea level changes	BSIP, Lucknow	01st April, 2012	Completed
10	Geomorphological and tectono-climatic signatures in Trans and Tethyan Himalaya during Quaternary period: a multi-proxy approach	BSIP, Lucknow	01st April, 2012	Completed
11	Development of OSL, geochemical and stable isotope laboratories	BSIP, Lucknow	01st April, 2012	Completed
12	Biota and sedimentary sequences of Indus-suture zone, Ladakh Himalaya: biostratigraphical, palaeoenvironmental and palaeogeographical implications	BSIP, Lucknow	01st April, 2012	Completed
13	Study of Late Cretaceous-Early Paleogene successions of South Shillong Plateau: Implications for climate and relative sea level changes.	BSIP, Lucknow	April 2012	Completed
14	Glacial chronology, Palaeoclimatic reconstruction and their climatic implications in the Thangu Valley, Sikkim Himalaya, India with special emphasis on luminescence characteristics of feldspar and quartz **(as Co-PI)**	SERB, New Delhi	June 2015	Completed in 2018
15	A comprehensive study on Natural Radiation Level in Lesser Himalayan Zone on the southern slopes of the Dhauladhar range [Project no: SCN No 2013/36/64-BRNS/2618] **(as Co-PI)**	BRNS, DAE, New Delhi	2015	Completed in 2018
16	Tectonic-climatic-geomorphic-palaeoclimatic model of Kota Kinabalu valley, Borneo	Non-funded, scientific collaborative project between the researchers	2015	Completed
17	Palaeoclimatic modeling of Mio-Pliocene coal and volcanic ash deposits of Sarawak, Malaysia	Non-funded, scientific collaborative project between the researchers	2015	Completed
18	Carbonate platform development modeling, the petroleum system evolutionary history of onland and offshore counterparts	Non-funded, scientific collaborative project between the researchers	2015	Completed
19	Quantification of the human-environment interaction with special reference to the Anthropocene Epoch	BSIP, Lucknow	01st April, 2017	Completed on 31st March, 2019
20	Early Palaeogene climatic records and biostratigraphy: an integrative multiproxy approach from the South Shillong Plateau (Meghalaya) and lignite-bearing sequences of Rajasthan	BSIP, Lucknow	01st April, 2017	Completed on 31st March, 2019

21	Geomorphological and tectono-climatic signatures in Trans and Tethyan Himalaya during the Quaternary period: a multi-proxy approach	BSIP, Lucknow	01st April, 2017	Completed on 31st March, 2019
22	Using sedimentary DNA to unravel the long-term impact of environmental changes on human health and subsistence in India **(as Co-PI)**	DST-UKIERI	19th June, 2018	Completed on 31st March, 2021
23	Role of human-environment in tracing urbanization in different sectors of Ganga Plain: geochemical and metagenomics approach	BSIP, Lucknow	01st April, 2019	Completed
24	Biostratigraphy and Palaeoclimate of early Paleogene lignite-bearing sequences of Rajasthan and coal-bearing horizons of Meghalaya using an integrated approach	BSIP, Lucknow	01st April, 2019	Completed
25	Holocene climate variations in Tethyan and Trans Himalaya with reference to local, regional, and global forcings: a multiproxy approach	BSIP, Lucknow	01st April, 2019	Completed
26	Fluid-rock interaction at the shallow subsurface level in the upper continental crust and its implications in altering the textural, mineralogical, and geochemical characteristics of host rocks [MoES/P.O.(Seismo)/1(374)/2019] **(as PI)**	MoES, New Delhi	17th February, 2020	Completed on 31st March, 2025
27	Quaternary Monsoon/ Climate reconstruction through high-resolution multi-proxy studies of Lacustrine archives from central India (Core Monsoon Zone and Indo-Gangetic Plain)	BSIP, Lucknow	1st April, 2021	Ongoing
28	Microbes assisted recovery of Rare Earth Elements (REE) from laterite badlands, coal and lignite mines overburden [CRG/2023/005851] **(as PI)**	CRG, ANRF (SERB), DST	21st May, 2024	Ongoing
29	Chemical weathering and sediment provenance in the northern part of the Bay of Bengal during the late Quaternary: decoupling the role of climate-tectonics in Bay of Bengal sedimentation [CRG/2023/007765] **(as Co-PI)**	CRG, ANRF (SERB), DST	28th May, 2024	Ongoing

M.Sc. DISSERTATION SUPERVISED

Name of the Student	Title of thesis	Name of the University/Institute	Year
Bharti	Solid municipal waste dumping and release of heavy metals in surface water: a study based on surface water analysis of a small natural stream in Kangra District, Himachal Pradesh	Central University of Himachal Pradesh	2013
Niharika Bhardwaj .	Analysis of the stages of weathering in Basalt from Deccan Bole Bed, Karad, Maharashtra	BSIP, Lucknow & Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow	2021
Mahanish Panda	Routine and analytical Techniques applied in Sedimentological and Geochemical studies: a case study on Kapurdi lignite mine sample, Rajasthan, NW India	BSIP, Lucknow & Karnataka University	2019

M.Sc. INTERNSHIP SUPERVISED

Name of the Student	Title of thesis	Name of the University/Institute	Year
Parvej Alam	Palaeobotanical, Sedimentological, and Geochemical analysis of soil/sediment samples	BSIP, Lucknow & IIT Roorkee	2015
Vishal Srivastava	Sedimentological, Mineralogical, and Geochemical analysis of soil/sediment samples	BSIP, Lucknow & Banaras Hindu University	2018
Nikhil Sarwadnya	Nuances of Geochemical Techniques Used in provenance / Palaeoclimatic Studies	BSIP, Lucknow & National Institute of Technology, Rourkela	2019
Kanika Pokahriya	Sedimentological, Mineralogical and Geochemical Analysis of Soil/Sediment samples	BSIP, Lucknow & Kachchh University, Bhuj	2019
Sharma Amrish Kumar Rajivranjan	Techniques of grain size, mineralogy and Geochemical study for soil/sediment	BSIP, Lucknow & IIT (ISM) Dhanbad	2021
Ashwini Kumar	Nuances of Geochemical Techniques Used in provenance / Palaeoclimatic Studies	BSIP, Lucknow & IIT Bombay	2021

Gourishankar Sahoo	Application of Geochemical tools in understanding the weathering pattern in Red Bole Bed, Southern Maharashtra	BSIP, Lucknow & Central University of Karnataka	2021
Harshvardhan Patwa	Application of Geochemical tools in understanding the weathering pattern in Red Bole Bed, Southern Maharashtra	BSIP, Lucknow & Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow	2023

SELECTED TOP PUBLICATIONS (TOP 10)

1. **Sharma,A*,** & Rajamani, V. (2000). Weathering of gneisses in the upper reaches of Cauvery River, south India: implications to neotectonics. *Chemical Geology*, 166, 203-223.
2. **Sharma,A*, &** Rajamani, V. (2000). Major element, REE, and other trace element behavior in amphibolite weathering under semi-arid conditions. *The Journal of Geology*, 108(4), 487-497.
3. **Sharma,A*,** Sensarma S, Kumar K, Khanna PP, Saini NK. (2013). Mineralogy and Geochemistry of the Mahi River sediments in tectonically active western India. *Geochimica et Cosmochimica Acta*, 104, 63-83.
4. **Sharma A*,** Kumar K, Laskar A, Singh SK, & Mehta P. (2017). Oxygen, deuterium, and strontium isotope characteristics of the Indus River water system. *Geomorphology*, 284, 5-16.
5. **Sharma, A*,** & Phartiyal B. (2018). Late Quaternary Palaeoclimate and Contemporary Moisture Source to Extreme NW India. *Frontiers in Earth Science*, 6:150.
6. Farooqui S, Shah AP, Maurya DM, Archana G, Ali SN, & **Sharma A***. (2021). Texture, mineralogy, and geochemistry of late Quaternary sediments of the Mahi River basin. *Applied Geochemistry*, 134, 105088.
7. Chaddha AS, Singh NK, Malviya M, **& Sharma A*.** (2022). Birnessite-clay mineral couple in the rock varnish: a nature's electrocatalyst. *Sustainable Energy and Fuels (RSC)*, 6, 2553-2569.
8. Shekhar M, **Sharma A*,** Dimri AP, & Tandon S. (2022). Asian summer monsoon variability, global teleconnections, and dynamics during the last 1,000 years. *Earth-Science Reviews*, 230, 104041.
9. Chaddha AS*, **Sharma A*,** Singh NK, Patel DK, & Satyanarayana GNV. (2023). Rock Varnish: Nature's Shield. *ACS Earth and Space Chemistry*, 7(8), 1516-1527.
10. Halder, P., Shukla, M. K., Kumar, K., & **Sharma, A***. (2025). Understanding the mechanism of shallow crustal fluid-rock interaction in the Deccan Trap basement rocks, Koyna-Warna Seismogenic region. Physics and Chemistry of the Earth, 138, 103870.

PRIZES, MEDALS, AWARDS & HONOURS

- BSIP Medal 2014 for carrying out the best piece of scientific work in the institute.
- Shri Chandra Dutt Pant Medal 2008 adjudged the best scientist in the Scientist C category.
- Team Medal 2008 for carrying out the best piece of scientific work as a team.
- D.N. Wadia Best Poster Award at International Conference Geo-environment-challenges and response (2007).
- Third Prize, Best Poster at Geocollision 2007, WIHG, Dehradun.
- 26th Indian Antarctic Expedition 2006-07: Fieldwork in Schirmacher Oasis and Larsemann Hills, East Antarctica.
- 2nd Indian Arctic Expedition 2008: Fieldwork at Ny-Alesund, Svalbard, Norway.
- ITBP Trainee Award 2006 for pre-training and acclimatization course for the Antarctic Expedition.
- Appreciation Certificate from the Team Leader at Maitri, Antarctica, for exemplary work.
- CSIR Research Associateship (1997-2001).

INTERNATIONAL VISITS FOR SCIENTIFIC RESEARCH

- **Antarctica:** Nov 2006 - Apr 2007. 26th Indian Antarctic Scientific Expedition. Fieldwork in Schirmacher Oasis and Larsemann Hills, East Antarctica.
- **Arctic (Svalbard, Norway):** June-July 2010. 2nd Indian Arctic Scientific Expedition. Fieldwork at Ny-Alesund.
- **Italy (Rome):** July 2023. XXI INQUA Congress 2023.
- **Mauritius:** 2007. Transit during Antarctic Expedition.
- **United Kingdom (Oxford):** Sept 2000. Goldschmidt Conference.
- **South Africa:** Nov 2006. En route to Antarctica (26th IASE).
- **United States of America:** June 2014. Goldschmidt Conference.

RESEARCH IMPACT

The following metrics summarize the research impact: Citation (till 09/06/2026)

130+	2,960	29	68
PUBLICATIONS	CITATIONS	H-INDEX	I10-INDEX

LIST OF RESEARCH PUBLICATION

Following is the complete list of 130+ research publications in SCI/peer-reviewed journals (as of June, 2026). Articles are listed chronologically.

1. **Sharma, A.,** & Rajamani, V. (2000). Weathering of gneisses in the upper reaches of Cauvery River, south India: Implications to neotectonics of the region. *Chemical Geology*, 166, 203-223.
2. **Sharma, A**., & Rajamani, V. (2000). Major element, REE, and other trace element behavior in amphibolite weathering under semi-arid conditions in South India. The Journal of Geology, 108(4), 487-497.
3. **Sharma, A.,** & Rajamani, V. (2000). Weathering of amphibolite and mobility of elements under semi-arid conditions, southern India. Geochimica et Cosmochimica Acta, 5(2), 913.
4. **Sharma, A**., & Rajamani, V. (2001). Weathering of charnockites and sediment production in the catchment area of the Cauvery River, southern India. Sedimentary Geology, 143, 169-184.
5. Phartiyal, B., **Sharma, A**., Upadhyay, R., Ram-Awatar, & Sinha, A. K. (2005). Quaternary geology, tectonics and distribution of palaeo- and present fluvio/glacio lacustrine deposits in Ladakh, NW Indian Himalaya. Geomorphology, 65(3-4), 241-256.
6. Prasad, V., Phartiyal, B., & **Sharma, A**. (2007). Evidence of abrupt winter monsoonal activity in the Late-Mid Holocene in Gujarat. The Holocene, 17(7), 889-896.
7. Yadav, S., Chauhan, M. S., & **Sharma, A**. (2007). Characterization of bio-aerosols during the dust storm period in N-NW India. Atmospheric Environment, 41, 6063-6073.
8. Paul, S. K., Ram-Awatar, Mehrotra, R. C., **Sharma, A.,** Phartiyal, B., & Dorjey, C. P. (2007). A new fossil palm leaves from the Hemis Formation of Ladakh, J&K, India. Current Science, 92(6), 727-729.
9. Mehrotra, R. C., Ram-Awatar, **Sharma, A.,** & Phartiyal, B. (2007). A new palm leaf from the Indus Suture Zone, Ladakh Himalaya, India. Journal of the Palaeontological Society of India, 52(2), 159-162.
10. Phartiyal, B., **Sharma, A**., Srivastava, P., & Ray, Y. (2009). Chronology of relict lake deposits in the Spiti River, NW Trans Himalaya. Geomorphology, 108, 264-272.
11. Phartiyal, B., & **Sharma, A.** (2009). Soft-sediment deformation structures in the Late Quaternary sediments of Ladakh. Journal of Asian Earth Sciences, 34, 761-770.
12. Phartiyal, B., Srivastava, P., & **Sharma, A**. (2009). Tectono-Climatic signatures during late Quaternary Period from Upper Spiti Valley, NW Himalaya. Himalayan Geology, 30(2), 167-174.
13. Phartiyal, B., **Sharma, A.,** & Bera, S. K. (2011). Glacial Lakes and geomorphological evolution of Schirmacher Oasis, East Antarctica. Quaternary International, 235, 128-136.
14. Agarwal, K. K., **Sharma, A.,** Jahan, N., Prakash, C., & Agarwal, A. (2011). Occurrence of pseudotachylites in the vicinity of South Almora Thrust Zone, Kumaun Lesser Himalaya. Current Science, 101, 431-434.
15. **Sharma, A.,** Kumar, K., Prasad, V., & Thakur, B. (2011). Diatom distribution and their relationship with water quality in the Mahi River Basin. Current Science, 101, 1011-1015.
16. **Sharma, A.,** Singh, A. K., & Kumar, K. (2012). Environmental Geochemistry and Quality Assessment of Surface and Subsurface Water of Mahi River Basin, Western India. Environmental Earth Science, 65, 1231-1250.

17. Trivedi, A., Chauhan, M. S., **Sharma, A.,** Nautiyal, C. M., & Tiwari, D. P. (2012). Late Pleistocene-Holocene vegetation and climate change in the Central Ganga Plain. Current Science, 103(5), 555-562.

18. Bera, S. K., Phartiyal, B., & **Sharma, A.** (2012). Evidence of pollen-spores retrieved from lichen patches distributed in Schirmacher oasis and adjacent nunataks, East Antarctica. International Journal of Earth Sciences & Engineering, 5, 724-730.

19. **Sharma, A.,** Sensarma, S., Kumar, K., Khanna, P. P., & Saini, N. K. (2013). Mineralogy and Geochemistry of the Mahi River sediments in tectonically active western India. Geochimica et Cosmochimica Acta, 104, 63-83.

20. Trivedi, A., Chauhan, M. S., **Sharma, A.,** Nautiyal, C. M., & Tiwari, D. P. (2013). Record of vegetation and climate during Late Pleistocene-Holocene in Central Ganga Plain, based on multiproxy data from Jalesar Lake, U.P., India. Quaternary International, 306, 97-106.

21. Chauhan, M. S., **Sharma, A.,** Phartiyal, B., & Kumar, K. (2013). Holocene vegetation and climatic variations in Central India. Journal of Asian Earth Sciences, 77, 45-58.

22. Srivastava, P., Ray, Y., Phartiyal, B., & **Sharma, A.** (2013). Late Pleistocene-Holocene morphosedimentary architecture, Spiti River. International Journal of Earth Sciences, 102, 1967-1984.

23. Chauhan, M. S., Kumar, K., Quamar, M. F., & **Sharma, A.** (2013). Correlation of data on loss-on-ignition and palynology for Late Quaternary climate change in southwestern Madhya Pradesh. Current Science, 104, 299-301.

24. Phartiyal, B., **Sharma, A.,** & Kothyari, G. C. (2013). Damming of River Indus during Late Quaternary in Ladakh Region. Chinese Science Bulletin, 58(1), 142-155.

25. Chauhan, M. S., Trivedi, A., & **Sharma, A.** (2013). Pollen analysis of multifloral honey from Lucknow, U.P., India. Phytomorphology, (3&4), 133-141.

26. Prasad, V., Farooqui, A., **Sharma, A.,** Phartiyal, B., Chakraborty, S., Bhandari, S., Raj, R., & Singh, A. (2014). Mid-late Holocene monsoonal variations from mainland Gujarat: multi-proxy study for evaluating climate culture relationship. Palaeogeography, Palaeoclimatology, Palaeoecology, 397, 38-51.

27. Sridhar, A., Laskar, A., Prasad, V., **Sharma, A.,** Tripathi, J., Balaji, D., Maurya, D. M., & Chamyal, L. S. (2015). Late Holocene flooding history of a tropical river in western India. Quaternary International, 371, 181-190.

28. Saxena, A., Trivedi, A., Chauhan, M. S., & **Sharma, A.** (2015). Holocene vegetation and climate change in Central Ganga Plain. Quaternary International, 371, 164-174.

29. Raj, R., Chamyal, L. S., Prasad, V., **Sharma, A.,** Tripathi, J. K., & Verma, P. (2015). Holocene climatic fluctuations in the Gujarat Alluvial Plains based on a multiproxy study. Palaeogeography, Palaeoclimatology, Palaeoecology, 421, 60-74.

30. Quamar, M. F., Ali, S. N., Phartiyal, B., Morthekai, P., & **Sharma, A.** (2016). Recovery of palynomorphs from the high-altitude cold desert of Ladakh. Geophytology, 46(1), 67-73.

31. **Sharma, A.,** Kumar, K., Laskar, A., Singh, S. K., & Mehta, P. (2017). Oxygen, deuterium, and strontium isotope characteristics of the Indus River water system. Geomorphology, 284, 5-16.

32. Shukla, M. K., & **Sharma, A.** (2017). Petrogenesis and mineral characteristics of the oldest volcanogenic breccia unit from the Himalayan foreland basin. GeoRes J, 13, 27-37.

33. Kumar, K., Tewari, R., Agnihotri, D., **Sharma, A.,** Pandita, S. K., Pillai, S. S. K., Singh, V., & Bhat, G. D. (2017). Geochemistry of the Permian-Triassic sequences of the Guryul Ravine section, J&K, India. GeoRes J, 13, 114-125.

34. Dubey, J., Ghosh, R., Agrawal, S., Quamar, M. F., Morthekai, P., Sharma, R. K., **Sharma, A.,** Pandey, P., Srivastava, V., & Ali, S. N. (2017). Characteristics of modern biotic data and their relationship to vegetation of the Alpine zone of Chopta valley, North Sikkim, India. The Holocene, 28, 363-376.

35. Hira, M., Yadav, S., Morthekai, P., Linda, A., Kumar, S., & **Sharma, A**. (2018). Mobile Phones, An asset or a liability: characterization and assessment of metals in waste mobile phone components. Journal of Hazardous Materials, 342, 29-40.

36. Ramkumar, M., Santosh, M., Ramasamy, N., Li, S. S., Mathew, M., Menier, D., **Sharma, A.,** Siddiqui, N., Prasad, V., Poppelreiter, M. C., Farroqui, S., Lai, J., & Rai, J. (2018). Late Middle Miocene volcanism in Northwest Borneo, Southeast Asia. Palaeogeography, Palaeoclimatology, Palaeoecology, 490, 141-162.

37. Prasad, V., Utescher, T., **Sharma, A.,** Singh, I. B., Garg, R., Gogoi, B., Srivastava, J., Uddandam, P. R., & Joachimski, M. M. (2018). Low-latitude vegetation and climate dynamics at the Paleocene-Eocene transition. Palaeogeography, Palaeoclimatology, Palaeoecology, 497, 139-156.

38. Shukla, M. K. S., & **Sharma, A.** (2018). A brief review on breccia: its contrasting origin and diagnostic signatures. Solid Earth Science, 3, 50-59.

39. Ali, S. N., Dubey, J., Ghosh, R., Quamar, M. F., **Sharma, A.,** Morthekai, P., Dimri, A. P., Shekhar, M., Arif, Md., & Agrawal, S. (2018). High frequency abrupt shifts in the Indian summer monsoon since Younger Dryas in the Himalaya. Nature Scientific Report.

40. Ghosh, R., Biswas, O., Paruya, D. K., Agrawal, S., **Sharma, A.,** Nautiyal, C. M., Bera, M., & Bera, S. (2018). Hydroclimatic variability and corresponding vegetation response in the Darjeeling Himalaya over the past ~2400 years. Catena, 170, 84-99.

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LIST OF BOOK CHAPTERS PUBLICATION

1. Binita Phartiyal, **Anupam Sharma** and C. M. Nautiyal. **2011**. Interpretation of the apparent Ages in the Ladakh and Lahaul Spiti Quaternary Lacustrine Sediments. In: Dhruv Sen Singh and N. L. Chabra (Eds.), **Geological Processes and Climate Change, Macmillan Publishers India Ltd.,** 105-116pp. ISBN 978-0230-32192-2;
2. **Anupam Sharma**, Amalava Bhattacharyya, Binita Phartiyal, Sameer Kumar Bera. **2016**.Multi-proxy studies on Late Quaternary Lake sediments from Schirmacher Oasis, East Antarctica. **MoES Technical Publication no.24, pp. 345-377. Scientific Report of 26th Indian Expedition to Antarctica;** ISBN No. 978-93-5196-731-6;
3. **Sharma A**., Kumar K. 2018. The Mahi: An Important West Flowing River of Central India. In: Singh D. (ed) **The Indian Rivers. Springer Hydrogeology. Springer, Singapore**. ISBN 978-981-10-2983-7;
4. **Anupam Sharma** and Binita Phartiyal. 2020. Geomorphological Changes During Quaternary Period Vis a Vis Role of Climate and Tectonics in Ladakh, Trans-

Himalaya. A.P. Dimri, B. Bookhagen, M. Stoffel and T. Yasunari (eds) **Himalayan Weather and Climate and their Impact on the Environment. Springer Nature Switzerland** AG 2020. ISBN 978-3-030-29683.

5. **Halder, P.,** Shukla, M.K., Kumar, K., **Sharma, A.***. 2025. Assessing the Influence of Clay Minerals on Landslides in the Lesser Himalayas. In: Rastogi, B.K., Kothyari, G.C., Luirei, K. (eds) Natural Hazards and Risk Mitigation. Springer Transactions in Civil and Environmental Engineering. Springer Nature, Singapore. ISBN 978-981-97-7657-3; ISBN 978-981-97-7658-0 (eBook)

6. Misra, S., **Sharma, A.,** Maurya, R. S., & Misra, A. K. G. (2022). Wetlands as Potential Zones to Understand Spatiotemporal Plant‐Human‐Climate Interactions: A Review on Palynological Perspective from Western and Eastern Himalaya. Advances in Remote Sensing Technology and the Three Poles, 340-350.

7. Prasanna, K., Kumar, A., **Sharma, A.,** Chakraborty, S., & Rangarajan, R. (2025, February). Temporal Patterns and Intra-seasonal Isotopic Characteristics of Indian Summer Monsoon Precipitation in Lucknow, India. In International Conference Water and Food Security in the Face of Climate Change: Challenges and Opportunities for Resilience (pp. 285-296). Cham: Springer Nature Switzerland.

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2. **Anupam Sharma** and V. Rajamani. 2000. Geochemical behavior of elements during weathering and soil formation: a case study of Cauvery River Basin. National symposium on Milestones in Petrology at the end of the millennium and future perspectives and the Annual Convention of the Geological Society of India, Banaras Hindu University, Varanasi, 14-16 November. pp. 115.

3. Binita Phartiyal, A. K. Sinha, R. Upadhyay, **A. Sharma,** S. J. Sangode, and Ram Awatar. 2003. Mineral magnetic parameters and tectonics of the Quaternary deposits in the Shyok River Valley, Northern Ladakh. 18th Himalaya-Karakoram-Tibet Workshop (HKT), Ascona, Switzerland. 2-4 April. pp. 93-94.

4. A. K. Sinha, **A. Sharma**, R. Upadhyay, B. Phartiyal, and Ram-Awatar. 2003. Soil formation process in Ladakh region. National Seminar on Himalayan Orogen-Foreland Interaction, Lucknow University, Lucknow. pp.72.

5. **Anupam Sharma**, Binita Phartiyal, Rajeev Upadhayay and Ram-Awatar. 2003. Neotectonics: Implications on soil formation processes at Ladakh and Cauvery River Basins. 20th Convention of Indian Association of Sedimentologists (20th IAS). HNB Garhwal University, Srinagar, Garhwal. pp. 17.

6. **Anupam Sharma**. 2005. Significance of Geochemical Applications in Palaeobotanical studies. Diamond Jubilee National conference on Challenges in Indian Palaeobiology – Current status, Recent developments and Future directions. Birbal Sahni Institute of Palaeobotany, Lucknow. 15-16 November. pp. 127.

7. **Anupam Sharma** and Binita Phartiyal. 2005. Palaeoclimate during Quaternary period in Ladakh, Northwest Himalaya: a multidisciplinary approach. DST sponsored Brain Storming Workshop on Palaeoclimate. University of Pune, Pune. 25-27 November. pp. 54

8. **Anupam Sharma**, Binita Phartiyal and Ram-Awatar. 2006. Weathering of rocks in Trans-Himalayan region and its effect of fertility in lower reaches. Diamond jubilee International Conference on Changing Scenario in Palaeobotany and Allied Subjects. Birbal Sahni Institute of Palaeobotany, Lucknow. 15-17 November. pp.133.

9. Binita Phartiyal, **Anupam Sharma**, Supriyo Chakraborty and Ram-Awatar. 2006. Palaeoseismic importance of the Quaternary sediments of Ladakh, Northwest Indian Himalayas. Diamond jubilee International Conference on Changing Scenario in Palaeobotany and Allied Subjects. Birbal Sahni Institute of Palaeobotany, Lucknow. 15-17 November. pp. 97.

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12. Binita Phartiyal and **Anupam Sharma**. 2007. Climate variations in Ladakh (NW Indian Himalayas) between the Past 30 Kyr to Middle Holocene as deduced from rock magnetism. International conference on Asian Monsoon Variability in Past Global Changes (AMV-PGC). Kumaun University, Nainital. 11-14 September. pp. 63.

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14. Yogesh Ray, Binita Phartiyal, **Anupam Sharma** and Pradeep Srivastava. 2007. Quaternary Deposits in Spiti Valley: Key to Palaeoclimate and tectonics. Collision Zone Geodynamic Workshop (Geocollision-2007). Wadia Institute of Himalayan Geology, Dehradun. 20-21 September. Himalayan Geology Vol. 28(3). pp. 35-36.

15. **Anupam Sharma**, Vandana Prasad, Kamlesh Kumar and Binita Phartiyal. 2007. Geochemistry and phytolith study of Rayka section, Mainland Gujarat: Implications to provenance and Quaternary climate. XXI Indian Colloquium on Micropaleontology and Stratigraphy. Birbal Sahni Institute of Palaeobotany, Lucknow. 16-17 November. pp. 182.

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21. **Anupam Sharma**, S. K. Bartarya and Binita Phartiyal. 2008. Rock weathering, sediment characteristics and hydrochemistry in trans-Himalayan Ladakh region of NW Himalaya: Implications to tectonics and climate. International Symposium on Mountain Building and Climate-Tectonic interaction. Wadia Institute of Himalayan Geology, Dehradun. 23-25 October. Himalayan Geology. Vol. 29(3). pp.92.

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23. **Anupam Sharma**, Vandana Prasad, Binita Phartiyal and Kamlesh Kumar. 2008. Multi-proxy study of late-Holocene estuarine sedimentary sequence: A case study from Mahi Basin, mainland Gujarat. Indo-China International Conference on 'Biotic and climate change in Indo China region. Birbal Sahni Institute of Palaeobotany, Lucknow. 14-15 November, 14-15 November. pp. 3

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27. **Anupam Sharma** and Binita Phartiyal. 2009. Landscape, texture, mineralogy and geochemistry of lake sediments of the Schirmacher Oasis, east Antarctica: implication to earth surface processes and climate. National conference Climatic Changes during the Quaternary: Special reference to Polar Regions and Southern Ocean. National Center for Antarctic and Ocean Research, Goa and Birbal Sahni Institute of Palaeobotany, Lucknow. 22-23 October. pp. 71-72.

28. Binita Phartiyal, **Anupam Sharma**. 2009. Landscape evolution and 13,000-3000-year BP climatic record from Schirmacher Oasis, East Antarctica. National Conference on Climatic Changes during the Quaternary: Special reference to Polar Regions and Southern Ocean. National Center for Antarctic and Ocean Research, Goa and Birbal Sahni Institute of Palaeobotany, Lucknow. 22-23 October. pp. 51-52.

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32. Binita Phartiyal and **Anupam Sharma**. 2011. Neotectonic pulses during the Late Quaternary in the Ladakh Region of Trans Himalaya, NW India. In National Conference on Late Quaternary Geology of the Himalayan Orogen and the Foreland basin. University of Lucknow, Lucknow. 16-17 February. pp. 14-15.

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40. M.S. Chauhan, **Anupam Sharma,** Anjali Trivedi and C. M. Nautiyal. 2014. Pollen evidence of vegetation succession and climatic variability in southern Madhya Pradesh during last ca. 6,700 years. National Conference on the Quaternary Climate Change: New Approaches and Emerging Challenges. Birbal Sahni Institute of Palaeobotany, Lucknow. 15-16 December. pp.30.

41. M.S. Chauhan, Kamlesh Kumar, **Anupam Sharma**, Anju Saxena, C M. Nautiyal and Anjali Trivedi. 2014. Early Holocene vegetation shifts and climate change in southern Madhya Pradesh, India, based on multiproxy records. National Conference on the Quaternary Climate Change: New Approaches and Emerging Challenges. Birbal Sahni Institute of Palaeobotany, Lucknow during 15-16 December. pp.31.

42. Binita Phartiyal, Randheer Singh, Debarati Nag and **Anupam Sharma**. 2014. Sedimentary record of the climate-tectonic interplay during last 48 ka in Ladakh (NW Himalaya). National Conference on the Quaternary Climate Change: New Approaches and Emerging Challenges. Birbal Sahni Institute of Palaeobotany, Lucknow. 15-16 December. pp. 89.

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44. Anjali Trivedi, Anju Saxena, M.S. Chauhan, **Anupam Sharma**, C M. Nautiyal and D. P. Tiwari. 2014. Vegetation, climate change and human habitation since last Glacial Maximum in Central Ganga Plain, based on multiproxy records from Lashoda Tal, Raibareli District, Uttar Pradesh, India. National Conference on the Quaternary Climate Change: New Approaches and Emerging Challenges. Birbal Sahni Institute of Palaeobotany, Lucknow during 15-16 December. pp.140.

45. **Anupam Sharma**. 2015. Geochemical investigations of Palaeocene-Eocene Jathang sedimentary succession of the East Khasi Hills: implications to low latitude

PETM event. National Conference on Paleogene of the Indian Subcontinent, BSIP & GSI, Lucknow. 23-24 April.

46. **Anupam Sharma**. 2016. Mineralogical and Geochemical Characterization of aeolian sediments of the mainland Gujarat: implications to the Deccan Large Igneous Province source. 3rd NECLIME Asian meeting 2016. Birbal Sahni Institute of Palaeobotany, Lucknow. 23-24 February.

47. **Anupam Sharma**. 2017. Significance of abiotic proxies in Quaternary Palaeoclimate research. International Brainstorming Workshop on Quaternary Environments and Climates: Focus on Holocene and Anthropocene. BSIP, Lucknow. 21-23 February.

48. Shazi Farooqui and **Anupam Sharma**. 2017. Texture characteristics and depositional environment of the lower Mahi River sediment, Mainland Gujarat, India. XXVI Indian Colloquium on Micropaleontology and Stratigraphy (ICMS-2017). University of Madras, Guindy Campus, Chennai. 17-19 August. pp. 149-150.

49. Harshita Srivastava and **Anupam Sharma**. 2019. Mineralogy and Geochemistry of the Late Quaternary Palaeolakes sequences of the Ladakh region, NW India. 3rd National Geo-Research Scholars Meet. WIHG, Dehradun, India. 6-8 June. pp. 23.

50. Mukesh Yadav, **Anupam Sharma,** Uma Kant Shukla. 2020. Geochemical Study of Cliff Sediments from the Central Ganga Plain: Implications on Paleoclimate and Depositional History. Goldschmidt 2020. Virtual. 21-26 June.

51. Ishwar Chandra Rahi, **Anupam Sharma**, Amiya Shankar Naik. 2020. Mo-Ni, Organic Carbon Isotope and Rare Earth Elements Signatures of the Paleogene Deposit from the Barmer Basin Western Rajasthan, India. Goldschmidt 2020. Virtual. 21-26 June.

52. AP Chaddha, **Anupam Sharma,** NK Singh. 2021. Rock varnish: Potential future product. American Chemical Society (ACS) Spring 2021. Virtual. 5-16 April.

53. Amrit Pal Singh Chaddha, **Anupam Sharma**, Narendra K Singh, Niraj Rai. 2021. Geochemical Study of Cliff Sediments from the Central Ganga Plain: Implications on Paleoclimate and Depositional History. Goldschmidt 2021. Virtual. 4-9 July.

54. Amrit Pal Singh Chaddha, **Anupam Sharma**, Narendra K Singh, Niraj Rai. 2021. Biogeochemical Signatures of Early Life in Extremes of Cold Arid Region Ladakh, India: Insights from Rock Varnish Study. AGU Fall Meeting 2021. New Orleans, LA & Online Everywhere. 13-17 December.

55. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla, Kamlesh Kumar. 2021. Geochemical Analysis of Major Elements and Quantification of Weathering in Intrabasaltic Deccan Red Bole from Southern Maharashtra. 2021. Abstract Volume of National Seminar on Recent Advances in Geoscience Research in India, University of Delhi, Delhi. 1-2 July. pp. 24.

56. Piyal Halder, **Anupam Sharma**, Kamlesh Kumar, Matsyendra Kumar Shukla. 2021. Mechanism of Fluid rock interaction at shallow Crustal level due to anthropogenic activity in Koyna Seismogenic region of Indian Subcontinent. Student Colloquium, Association of Quaternary Researchers. 2-3 July.

57. Piyal Halder, Matsyendra Kumar Shukla, **Anupam Sharma**, Kamlesh Kumar. 2021. Mesoscopic observations of fluid-rock interaction at the pre-Deccan Basement rocks up to 1500 m depth in the Koyna Intraplate Seismogenic Zone of India. Abstract Volume of International Symposium on Geofluids, Hungary. 7-9 July. pp. 25.

58. Piyal Halder, Matsyendra Kumar Shukla, Kamlesh Kumar, **Anupam Sharma**. 2021 Mineralogical and geochemical evidence of fluid-rock interaction at the shallow crustal level in Koyna Seismogenic Region, Maharashtra, India: Impact and implications. International Symposium on Deep Earth Exploration and Practices (DEEP-2021). Nanjing, China. 26-31 October.

59. Sagar R, Kapur VV, Kumar K, Morthekai P, **Sharma A,** Chauhan G and Thakkar MG. 2021. Preliminary data on coprolites from the Neogene (Miocene: Aquitanian–Burdigalian) Khari Nadi and Chassra formations, Kutch Basin, western India. Online NECLIME international conference. 7-9 September. pp. 43-44.

60. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla and Kamlesh Kumar. 2022. Mechanisms of secondary mineralization at shallow crustal depths of the Koyna Seismogenic region, Maharashtra, India and its significance. Goldschmidt 2022. Hawaii, USA, 10-15 July.

61. Ishwar Chandra Rahi, **Anupam Sharma,** Sajid Ali, Vandana Prasad and Amiya Shankar Naik. 2022. Palaeocene-Eocene Thermal Maximum continental sediments in the Barmer Basin, Rajasthan, India: A record of enhanced precipitation in South Asia. Goldschmidt 2022. Hawaii, USA. 10-15 July.

62. Rimpy Chetia, Ishwar Chandra Rahi, Runcie Paul Mathews, **Anupam Sharma** and Prakash K. Singh. 2022. The geochemical documentation of redox conditions in Paleogene lignite deposit of Barsingsar, Bikaner-Nagaur Basin, western India. Goldschmidt 2022. Hawaii, USA. 10-15 July.

63. **Anupam Sharma**, Mukesh Yadav and U K Shukla 2023. Geochemical and Clay Mineralogy Characterization of Ganga Flood Plain Sediments: Insights to Weathering and Sediment Provenance. XXI INQUA Congress, Rome, Italy. 13-20 July.

64. Halder, P., **Sharma, A.,** Shukla, M. K., and Kumar, K.: Is secondary mineralization playing a pivotal role in recurring seismicity at Koyna-Warna Seismogenic Region of India: a geochemical perspective? EGU General Assembly 2023, Vienna, Austria, 24–28 Apr.

65. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla, Kamlesh Kumar. 2023. Can fluid-rock interaction act as a causal phenomenon behind recurring seismicity?: Unraveling the interplay of geochemistry and seismology. Goldschmidt 2022, Lyon, France. 9-14 July.
66. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla, Kamlesh Kumar. 2023. Unravelling the role of chlorite structure behind the recurring seismicity of an intracratonic region. AGU 23. San Francisco, USA. 11-15 December.
67. Piyal Halder, Matsyendra Kumar Shukla, Kamlesh Kumar, **Anupam Sharma*.** 2024. Biotite alteration in the basement faults- a plausible cause of earthquake recurrence at the Koyna-Warna Seismogenic Region, Maharashtra, India. 2nd Indian Quaternary Congress (IQC), Association of Quaternary Researchers (AOQR), IISER Mohali. 3-5 June.
68. Piyal Halder, Matsyendra Kumar Shukla, Kamlesh Kumar**, Anupam Sharma***. 2024. Intracrystalline deformation may explain the recurrence of small-magnitude tremors in an intraplate region- A case study from the Koyna-Warna Seismogenic Region, Western India. 37th International Geological Congress, Busan, South Korea. 25-31 August.
69. Piyal Halder, **Anupam Sharma*.** 2024. Decoding the role of clay mineralization in the landslides of the Lesser Himalayas: A rheological perspective of the Himalayan landslides. National Seminar on Disaster Risk Reduction in the Himalayas: Recent Advancements, Center for the Study of Regional Development (CSRD), Jawaharlal Nehru University (JNU), Delhi. 20-21 September.
70. Piyal Halder, **Anupam Sharma,** Kamlesh Kumar, Matsyendra Kumar Shukla. 2024. Natural and Anthropogenic Hazards and Environmental Sedimentology Deciphering the role of clay minerals on earthquakes and landslides- a generalised hypothesis emanated from a site-specific study. 40th IAS convention and National Conference. Indian Association of Sedimentologists and Birbal Sahni Institute of Palaeosciences, Lucknow, Uttar Pradesh. 11-13 December, 2024.
71. Piyal Halder, **Anupam Sharma,** Kamlesh Kumar. 2024. Decoupling chemical influence on the frictional resistance of the fault affected by fluid-rock interaction- A case study from the Koyna-Warna Seismogenic Region, Western India. AGU 24. Washington, D.C., USA. 8-13 December.
72. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla, Kamlesh Kumar. 2025. Investigating the influence of Deccan Volcanism and hydrothermal alteration on seismic hazards in the Koyna-Warna Seismogenic Region, Western India. Scientific Assembly of the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI). Geneva, Switzerland. 29-4 June.
73. Amritpal Singh Chaddha, Sunil Kumar Shukla, Kamlesh Kumar, **Anupam Sharma**, Mahesh G Thakkar, Devendra Kumar Patel, GNV Satyanarayana. 2025. Tracing Biosignatures from a Martian Analogue site of Puga Hot Spring, Ladakh, India: Insights from Crystallography and Biomarkers. Goldschmidt 2025. Prague, Czech Republic. 6-11 July.
74. Piyal Halder, **Anupam Sharma**, Matsyendra Kumar Shukla, Kamlesh Kumar. 2025. Decrypting the role of shallow crustal fluid-rock interaction on fault mechanics and seismicity in the Koyna-Warna Seismogenic Region, Western India. Goldschmidt 2025. Prague, Czech Republic. 6-11 July.

INVITED TALKS

1. Special Lecture: "Significance of Geochemical Tools in Quaternary Sediment Characterization: Implications for Palaeoclimatic Studies." Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, 12 January 2009.
2. Special lecture on the Role of Geochemistry in understanding the Quaternary Palaeoclimatic records and training on various instrumentation techniques; Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, 13 January 2009
3. Special lecture on Role of Geochemistry in Palaeobotanical studies; Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, 25 November 2009
4. Expert lecture entitled 'Mother Earth" in the refresher course for teachers organized by Govt. College Dharamshala in October. 24, 2013
5. Lecture delivered on 'Research Methodology in Social Science.' At the School of Education (Central University of Himachal Pradesh). 12, November, 2013.
6. Expert lecture entitled 'Mother Earth" in the senior-level teachers' training organized by Govt. College Dharamshala on Dec. 17, 2013
7. Expert lecture entitled 'ICP-MS technique" under the internal lecture series program on May 09, 2014, at Birbal Sahni Institute of Palaeobotany, Lucknow.
8. Lecture on Challenges in estimation of Upper Continental Crust (UCC) composition and geochemical cycling of elements in the National Conference on Biogeochemical Cycles and Climate Change, on 10-11 August 2018, at IIT(ISM), Dhanbad.
9. Invited lecture on Upper Continental Crust (UCC) composition and geochemical cycling of elements: present challenges and future perspective, on Sept. 14, 2018, at the Chemistry department of Integral University, Lucknow.

10. Resource Person lecture in online Refresher Course on Disaster Management entitled “Earthquake- A way of the mother earth to release stress with a special reference to Reservoir Triggered Seismicity in Koyna, Maharashtra, on Aug. 08, 2022, at the Department of Geology, Kurukshetra University, Kurukshetra, in collaboration with UGC-Human Resource Development Centre.
11. Invited lecture entitled "Space and climate: a palaeoclimatic perspective" in a one-day regional seminar on the theme "Strategic aspects of disturbances in Akasha Tattva, like weather modification, space warfare, climate migration" as a part of “Akash for Life” National Space Event hosted by Indian Institute of Geomagnetism, New Panvel, Navi Mumbai, on Nov. 09, 2022.
12. Invited lecture entitled "Earth and Organic Geochemistry: a proxy to understand the environment" in the International School and Workshop “LEM-ISS, 2023” funded by the International Union for Quaternary Research (INQUA) under the Humans & Biosphere Commission (HABCOM) in western Vidarbha, Maharashtra, India, on March 22, 2023.
13. Invited lecture entitled “Role of major and trace including rare earth elements in determining the provenance of sediments: a case study from the Mahi River Basin, western India” at Indian Institute of Geomagnetism, New Panvel, Navi Mumbai, on March 24, 2023.
14. Invited lecture entitled “Sediments-an excellent archive for earth surface processes: A case study from the Central ganga Flood Plain” in IIG IMPRESS 2024 at the Indian Institute of Geomagnetism, New Panvel, Navi Mumbai, on February 12-15, 2024.
15. Invited Lecture on “Identifying Alternative Sources of Rare Earth Elements and Their Eco-Friendly Recovery: A Geobiochemical Approach for a Self-Sustained and Self-Reliant Nation.” North Eastern Hill University, Shillong, 15 October 2025.
16. 5th Prof. I. B. Singh Memorial Lecture on “Geochemical Characterization of Quaternary Sediments: Implications for Weathering, Provenance, and Climate–Tectonic Interactions.” at the Department of Geology, University of Lucknow, 12 February 2025.

TRAINING PROGRAMMES & PROFESSIONAL DEVELOPMENT COURSES

S. NO	Training Programme/Course	Organizing Institution	Duration/Date
1	Certificate Course in Art Appreciation	National Museum Institute of History of Art, Conservation and Museology, New Delhi	5 Months
2	DST-Sponsored Training Programme on Fluvial Systems	Department of Geology, Maharaja Sayajirao University of Baroda	16–25 November 2004
3	Training on Clay Mineral Separation and Identification Techniques	National Bureau of Soil Survey and Land Use Planning (NBSS&LUP), Nagpur	June 2005 (Two Weeks)
4	Brainstorming Workshop on Palaeoclimate (DST Sponsored)	Department of Geography, University of Pune	25–27 November 2005
5	Special Training on Mountaineering and Challenges of Glacial Regions (Pre-Antarctic Expedition)	Mountaineering and Skiing Institute, Indo-Tibetan Border Police (ITBP), Auli, Uttarakhand	15–25 September 2006
6	Training on Scanning Electron Microscopy (SEM) Techniques	Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow	One Week
7	Shooting Certification Course for Arctic Field Operations	Ny-Ålesund, Svalbard, Norway	June–July 2008
8	Training Programme on Sequence Stratigraphy	Paleontological Society of India and BSIP, Lucknow	3–11 October 2009

RESEARCH VISION

With over 30 years of research experience, Dr. Anupam Sharma has made seminal contributions to understanding earth surface processes, Quaternary Palaeoclimate, and tectonochemistry. His pioneering work in Ladakh, Lahaul-Spiti, and mainland Gujarat has resolved critical questions about monsoon variability, climate-tectonic interactions, and provenance characterization using geochemical proxies (elemental and isotope geochemistry). His Antarctic and Arctic research has provided invaluable climatic data spanning millennia. Currently leading a flagship "Quaternary Lake Core Drilling" program, Dr. Sharma continues to push the frontiers of Palaeosciences while mentoring the next generation of earth scientists.

- The Ladakh and Lahaul-Spiti regions have vast exposures of Quaternary sediments, however, establishing the chronology by both radiocarbon and luminescence techniques is quite challenging because of extremely low carbon content, hard water effect, and poor bleaching of samples respectively. Therefore, all the studies so far carried out in the region on Palaeoclimate become questionable where our extensive research work has pointed out this not only very emphatically but also working seriously and inching close in resolving the issue. Additionally, the Ladakh is the region falling under the westerly winds bringing the moisture; however, based on the Indus River water and meltwater isotopic study, I along with my intellectual research team have been able to establish that the monsoon has a major role in precipitation.

- The collaborative work on the Quaternary sedimentary records of Mainland-Gujarat has resulted in establishing the climate culture relationship wherein they emphasized that deteriorating climatic conditions forced the Harappan civilization to migrate further east from their original position.

- Under the multiproxy-based DST-sponsored project on Quaternary exposures of the Mahi River catchment, we have confirmed that climate and tectonics are the major drivers and a major part of the sediment is supplied through the weathering of the Deccan basalt with complementary contributions received from the Aravallis upland. So, the research work on the Quaternary sediments of Ladakh, Lahaul-Spiti, and Mainland Gujarat has not only resolved the issues pertaining to role of monsoon in precipitation but also established the climate culture relationship.

- On the other hand, the work on the Antarctica lake sediments has provided climatic data for the last 8,000 years BP. The palaeoclimatic study conducted on Priyadarshini and Long Lake reflects arid-warm and humid climatic conditions intermittently and their potentiality to yield more dependable palaeoclimatic data.

- Currently leading the “Quaternary Lake Core Drilling” project, a flagship program of the institute to understand the Monsoon Behavior during the Late Quaternary. Several other associated disciplines, such as Dendrochronology, contemporary forest vegetation dynamics, land use and land cover estimation, species distribution modelling, etc., are also integrated to develop a comprehensive understanding of the subject.

- Besides, the research work carried out on Bio-investigations for pollen and spores on dry free-fall dust, and PM10 aerosol samples collected from the dust storm hit region of N–NW India has that the presence of Nigrospora fungal spores, which can be considered as the root cause of several health problems. As far as the source of aerosols is concerned, these are derived from a mixed source from the Thar Desert and Himalayan regions.

- Along with these mainstream research activities, I have worked proactively and successful in setting up a state of the art geochemical and TL/OSL laboratory in the institute, hosting several sophisticated instruments such as ICP-MS, ICP-OES, XRF, XRD, FE-SEM, Raman, GCMS, Micro-FTIR and multiple IRMS, which has not only enhanced the research output (both in terms of quality and quantity) of the institute but also supporting academia and industry through consultancy services. I am also happy to state that though this facility is only 5-6 years old, however, it is able generating maximum funds amongst all facilities of the institute since it became functional.

I hereby declare that the information given above is correct and no relevant information has been concealed.

Last updated on 09th June, 2026

(Anupam Sharma)