

Research publications

1. Dwivedi, S., Kumar, A., **Mishra, S.***, et al. (2020) Orthosilicic acid reduced grain arsenic accumulation and enhanced yield by modulating the level of trace element, antioxidants and thiols in rice. *Environmental Science and Pollution Research* 27:24025–24038. ISSN: 1614-7499.
2. Dwivedi, S., Chauhan, P.S., **Mishra, S.** et al. (2020). Self cleansing properties of Ganga during mass ritualistic bathing on Maha-Kumbh. *Environmental Monitoring and Assessment* 192:221. ISSN: 0167-6369.
3. Dwivedi, S., **Mishra, S.***, Tripathi, R.D. (2018) Ganga water pollution: A potential health threat to inhabitants of Ganga basin. *Environment International* 117: 327–338. ISSN: 0160-4120
4. **Mishra, S.***, Mattusch, J and Wennrich, R (2017). Accumulation and transformation of inorganic and organic arsenic in rice and role of thiol-complexation to restrict their translocation to shoot. *Nature Scientific Reports* 7:40522 (DOI: 10.1038/srep40522). ISSN: 2045-2322.
5. Chauhan, R., Awasthi, S., Tripathi, P., **Mishra, S.**, Dwivedi, S., Niranjana, A., Mallick, S., Tripathi, P., Pande, V. and Tripathi, R.D. (2017) Selenite modulates the level of phenolics and nutrient element to alleviate the toxicity of arsenite in rice (*Oryza sativa* L.). *Ecotoxicology and Environmental Safety* 138:47-55. ISSN: 0147-6513.
6. Tripathi, P., Singh, P.C., Mishra, A., Srivastava, S., Chauhan, R., Awasthi, S., **Mishra, S.**, Dwivedi, S., Tripathi, P., Kalra, A., Tripathi, R.D. and Nautiyal, C.S. (2017). Arsenic tolerant *Trichoderma* sp. reduces arsenic induced stress in chickpea (*Cicer arietinum*). *Environmental Pollution* 223:137-145. ISSN: 0269-7491.
7. **Mishra, S.**, Mishra, A. and Küpper, H. (2017). Protein biochemistry and expression regulation of cadmium/zinc pumping ATPases in the hyperaccumulator plants *Arabidopsis halleri* and *Noccaea caerulescens*. *Frontiers in Plant Science*. 8:835. (doi: 10.3389/fpls.2017.00835). ISSN: 1664-462X.
8. Singh, A.P., Dixit, G., Kumar, A., **Mishra, S.**, Kumar, N. et al. (2017). A protective role for nitric oxide and silicic acid for arsenite phytotoxicity in rice (*O. sativa* L.). *Plant Physiology and Biochemistry* 115:163-173. ISSN: 0981-9428.
9. **Mishra S.***, Afeld, M., Sobotka, R., Andresen, E., Falkenberg, G. and Küpper, H. (2016). Analysis of sublethal arsenic toxicity to *Ceratophyllum demersum*: subcellular distribution of arsenic and inhibition of chlorophyll biosynthesis. *Journal of Experimental Botany* 67: 4639-4646. ISSN: 0098-8472.
10. **Mishra S.***, Dwivedi, S., Kumar, A., Chauhan, R., Awasthi, S., Mattusch, J. and Tripathi, R.D. (2016). Current status of ground water arsenic contamination in India and recent advancements in removal techniques from drinking water. *International Journal of Plant and Environment* 2(1-2), 1-15. ISSN: 2454-1117.

11. Bajpai, R.[#], **Mishra, S.[#]**, Dwivedi, S. and Upreti, D.K. (2016) Change in atmospheric deposition during last half century and its impact on lichen community structure in Eastern Himalaya. *Nature Scientific Reports* 6:30838 (DOI: 10.1038/srep30838). ISSN: 2045-2322.
12. Singh, A.P., Dixit, D., Kumar, A., **Mishra, S.**, Singh P.K., Dwivedi, S., Trivedi, P.K., Chakrabarty, D., Mallick, S., Pandey, V., Dhankher, O.P. Tripathi, R.D. (2016) Nitric oxide alleviated arsenic toxicity by modulation of antioxidants and thiol metabolism in rice (*Oryza sativa* L.). *Frontiers in Plant Science* 6:1272. ISSN: 1664-462X.
13. Dixit, G., Singh, A.P., Kumar, A., **Mishra, S.**, Dwivedi, S., Kumar, S., Trivedi, P.K., Pandey, V., Tripathi, R.D. (2016) Reduced arsenic accumulation in rice (*Oryza sativa* L.) shoot involves sulfur mediated improved thiol metabolism, antioxidant system and altered arsenic transporters. *Plant Physiology and Biochemistry* 66: 86-96. ISSN: 0981-9428.
14. Singh, A.P., Dixit, D., **Mishra, S.**, Dwivedi, S., Tiwari, M., Mallick, S., Pandey, V., Trivedi, P.K., Chakrabarty, D., Tripathi, R.D. (2015) Salicylic acid modulates arsenic toxicity by reducing its root to shoot translocation in rice (*Oryza sativa* L.). *Frontiers in Plant Science* 6:340. ISSN: 1664-462X
15. **Mishra, S.**, Stärk, H.-J., Küpper, H. (2014) A different sequence of events than previously reported leads to arsenic-induced damage in *Ceratophyllum demersum* L. *Metallomics* 6: 444-454. ISSN: 1756-5901.
16. Srivastava, A.K., Srivastava, S., **Mishra, S.**, Suprasanna, P., D'souza, S.F. (2014) Identification of redox-regulated components of arsenate (As^V) tolerance through thiourea supplementation in rice. *Metallomics* 6: 1718-1730. ISSN: 1756-5901.
17. **Mishra, S.***, Wellenreuther, G., Mattusch, J., Stärk, H-J., Küpper, H. (2013) Speciation and distribution of arsenic in the nonhyperaccumulator macrophyte *Ceratophyllum demersum* L. *Plant Physiology* 163: 1396-1408. ISSN: 0032-0889.
18. **Mishra, S.***, Srivastava, S., Dwivedi, S., Tripathi, R.D. (2013) Investigation of biochemical responses of *Bacopa monnieri* L. upon exposure to arsenate. *Environmental Toxicology* 28: 419-430. ISSN: 1522-7278.
19. Shukla, D., Kesari, R., **Mishra, S.**, Dwivedi, S., Tripathi, R.D, Nath, P., Trivedi, P.K. (2012) Expression of phytochelatin synthase from aquatic macrophyte *Ceratophyllum demersum* L enhances cadmium and arsenic accumulation in tobacco. *Plant Cell Report* 31: 1687-1699. ISSN: 1432-203X.
20. Srivastava, S., **Mishra, S.**, Dwivedi, S., Tripathi, R. D. (2010) Role of thiol metabolism in arsenic detoxification in *Hydrilla verticillata* (L.f.) Royle. *Water Air Soil Pollution* 212: 155-165. ISSN: 1573-2932.
21. Dwivedi, S., Srivastava, S., **Mishra, S.**, Kumar, A., Tripathi, R.D., Rai, U.N., Dave, R., Tripathi, P., Charkrabarty D., Trivedi, P.K. (2010) Characterization of native microalgal strains for their chromium bioaccumulation potential: Phytoplankton response in polluted habitats. *Journal of Hazardous Material* 173: 95-101. ISSN: 0304-3894.
22. Dwivedi, S., Tripathi, R.D., Tripathi, P., Kumar, A., Dave, R., **Mishra, S.**, Singh, R., Sharma, D., Rai, U.N., Chakrabarty, D., Trivedi, P.K., Adhikari, B., Bag M., Dhankher, O.P., Tuli, R. (2010) Arsenate exposure affects amino acids, mineral nutrient status and

antioxidants in rice (*Oryza sativa* L.) Genotypes. Environment Science Technology 44: 9542-9549. ISSN: 1520-5851.

23. Thiol metabolism play significant role during cadmium detoxification by *Ceratophyllum demersum* L., **Mishra, S.**, Tripathi, R.D., Srivastava, S., Dwivedi, S., Trivedi, P.K., Dhankher, O. P., Khare, A., *Bioresource Technology*, ISSN: 0960-8524 (2009) 100: 2155-2161. DOI: 10.1016/j.biortech.2008.10.041.
24. Evaluation of zinc accumulation potential of *Hydrilla verticillata*. Srivastava, S., **Mishra, S.**, Dwivedi, S., Tripathi, R.D., Tandon, P.K., Gupta, D.K., *Biologia Plantarum*, ISSN: 0006-3134, (2009), 53(4), 789-792, DOI: 10.1007/s10535-009-0145-5.
25. Response of cyanobacterium *Anabaena doliolum* L. during nickel stress. Shukla, M.K., Tripathi, R.D., Sharma, N., Dwivedi, S., **Mishra, S.**, Singh, R., Rai, U.N. *Journal of Environmental Biology*, ISSN: 2394-0379 (2009) 30, 871-876.
26. Effect of arsenic on growth, oxidative stress, and antioxidant system in rice seedlings. Shri M., Kumar, S., Chakrabarty, D., Trivedi, P. K., Mallick, S., Misra, P., Shukla, D., **Mishra, S.**, Srivastava, S., Tripathi, R. D., Tuli, R., *Ecotoxicology and Environmental Safety*, ISSN: 0147-6513, (2009), 72, 1102-1110. DOI: 10.1016/j.ecoenv.2008.09.022.
27. Thiol metabolism and antioxidant systems complement each other during arsenate detoxification in *Ceratophyllum demersum* L., **Mishra, S.**, Srivastava, S., Tripathi, R.D., Trivedi, P.K. *Aquatic Toxicology*, ISSN: 1879-1514, (2008), 86: 205-215. DOI: 10.1016/j.aquatox.2007.11.001.
28. Response of antioxidant enzymes in coontail (*Ceratophyllum demersum* L.) plants under cadmium stress. **Mishra, S.**, Srivastava, S., Tripathi, R.D., Dwivedi, S., Shukla, M.K., *Environmental Toxicology*, ISSN: 1522-7278 (2008), 23(3), 294-301, DOI: 10.1002/tox.20340.
29. Screening of native plants and algae growing on fly ash affected areas near National Thermal Power Corporation, Tanda, Uttar Pradesh, India for accumulation of toxic heavy metals. Dwivedi, S., Srivastava, S., **Mishra, S.**, Dixit, B., Kumar, A., Tripathi, R.D. *Journal of Hazardous Material*, ISSN: 0304-3894 (2008), 158: 359-368, DOI: 10.1016/j.jhazmat.2008.01.081.
30. Phytoremediation efficiency of *Portulaca tuberosa* Rox and *Portulaca oleracea* L. naturally growing in an industrial effluent irrigated area in Vadodra, Gujrat, India. Tiwari, K.K., Dwivedi, S., **Mishra, S.**, Srivastava, S., Tripathi, R.D., Singh, N.K., Chakraborty, S., *Environmental Monitoring and Assessment*, ISSN: 1573-2959 (2008), 147(1-3), 15-22. DOI: 10.1007/s10661-007-0093-5.
31. Arsenic accumulation in root and shoot vis-a-vis its effects on growth and level of phytochelatins in seedlings of *Cicer arietinum* L. Gupta, D.K., Tripathi, R.D., **Mishra, S.**, Srivastava, S., Dwivedi, S., Rai, U.N., Inouhe, M., *Journal of Environmental Biology*, ISSN: 2394-0379, (2008), 29(3), 281-286.
32. Role of blue green algae biofertilizer in ameliorating the nitrogen demand and fly ash stress to the growth and yield of rice plants (*Oryza sativa* L.) plants. Tripathi, R.D., Dwivedi, S., Shukla, M.K., **Mishra, S.**, Srivastava, S., Singh, R., Rai, U.N., Gupta, D.K., *Chemosphere*, ISSN: 0045-6535, (2008), 70, 1919-1929, DOI: 10.1016/j.chemosphere.2007.07.038.

33. Arsenic hazards: strategies for tolerance and remediation by plants. Tripathi, R.D., Srivastava, S., **Mishra, S.**, Singh, N., Tuli, R., Gupta, D.K. and Maathuis, F.J.M. *Trends in Biotechnology*, ISSN: 0167-7799, (2007), 25: 158-165, DOI: 10.1016/j.tibtech.2007.02.003.
34. Phytochelatins and antioxidant systems respond differentially during arsenite and arsenate stress in *Hydrilla verticillata* (L.f.) Royle, Srivastava, S., **Mishra, S.**, Tripathi, R.D., Dwivedi, S., Trivedi, P.K., Tandon, P.K., *Environmental Science and Technology*, ISSN: 1520-5851, (2007), 41: 2007, 2930-2936. DOI: 10.1021/es062167j.
35. Growth performance and biochemical responses of three rice (*Oryza sativa* L.) cultivars grown in fly-ash amended soil. Dwivedi, S., Tripathi, R.D., Srivastava, S., **Mishra, S.**, Shukla, M.K., Singh, R., Rai, U.N., *Chemosphere*, ISSN: 0045-6535, (2007), 67: 140-151. DOI: 10.1016/j.chemosphere.2006.09.012.
36. Growth and biochemical parameters of *Cicer arietinum* L. grown on amended fly-ash. Gupta, D.K., Tripathi, R.D., Rai, U.N., **Mishra, S.**, Srivastava, S., Maathuis, F.J.M., *Environmental Monitoring and Assessment*, ISSN: 1573-2959, (2007), 134: 479-487, DOI: 10.1007/s10661-007-9638-x.
37. Phytochelatin synthesis and response of antioxidants during cadmium stress in *Bacopa monnieri* L. **Mishra, S.**, Srivastava, S., Tripathi, R.D., Govindarajan, R., Kuriakose, S.V., Prasad, M.N.V. *Plant Physiology and Biochemistry*, ISSN: 0981-9428, (2006) 44: 2006, 25-37.
38. Lead detoxification by coontail (*Ceratophyllum demersum* L.) involves induction of phytochelatins and antioxidant system in response to its accumulation. **Mishra, S.**, Srivastava, S., Tripathi, R.D., Kumar, R., Seth, C.S., Gupta, D.K. *Chemosphere*, ISSN: 0045-6535, (2006) 65: 1027-1039, DOI: 10.1016/j.plaphy.2006.01.007.
39. Copper-induced oxidative stress and responses of antioxidants and phytochelatins in *Hydrilla verticillata* (L.f.) Royle. Srivastava, S., **Mishra, S.**, Tripathi, R.D., Dwivedi, S., Gupta, D.K., *Aquatic Toxicology*, ISSN: 1879-1514, (2006), 80: 405-415, DOI: 10.1016/j.aquatox.2006.10.006.
40. Changes in amino acid profile and metal content in seeds of *Cicer arietinum* L. (Chickpea) grown under various fly-ash amendments. Gupta, D.K., Tripathi, R.D., Rai, U.N., Dwivedi, S., **Mishra, S.**, Srivastava, S., Inouhe, M., **Chemosphere** ISSN: 0045-6535, (2006), 65: 939-945. DOI: 10.1016/j.chemosphere.2006.03.047.
41. Dominance of algae in Ganga water polluted through fly-ash leaching: metal bioaccumulation potential of selected algal species. Dwivedi, S., Tripathi, R.D., Rai, U.N., Srivastava, S., **Mishra, S.**, Shukla, M.K., Gupta, A.K., Sinha, S., Baghel, V.S., Gupta, D.K., *Bulletin of Environmental Contamination and Toxicology*, (2006), ISSN: 1432-0800, 77: 427-436. DOI: 10.1007/s00128-006-1083-y.
42. Nickel phytoremediation of broad bean *Vicia faba* L. and its biochemical responses. Srivastava, S., **Mishra, S.**, Dwivedi, S., Baghel, V.S., Verma, S., Tandon, P.K., Rai, U.N., Tripathi, R.D., *Bulletin of Environmental Contamination and Toxicology*, (2005), ISSN: 1432-0800, 74: 715-724. DOI: 10.1007/s00128-005-0641-z.
43. Effect of lead on growth and nitrate assimilation of *Vigna radiata* (L.) Wilczek seedlings in a salt affected environment. Singh, R.P., Tripathi, R.D., Dabas, S., Rizvi, S.M.H., Ali, M.B., Sinha, S.K., Gupta, D.K., **Mishra, S.** Rai, U.N., *Chemosphere*, (2003), ISSN: 0045-6535, 52: 1245-1250. DOI: 10.1016/S0045-6535(03)00318-7.

44. Biochemical responses of *P. pectinatus* L. exposed to higher concentration of zinc. Tripathi, R.D., Rai, U.N., Vajpayee, P., Ali, M.B., Khan, E., Gupta, D.K., Shukla, M.K., **Mishra, S.**, Singh, S.N. *Bulletin of Environmental Contamination and Toxicology*, (2003), ISSN: 1432-0800, 71: 255-262. DOI: 10.1007/s00128-003-0158-2.

Chapters in Books

1. Redox homeostasis in plants under arsenic stress, **Mishra, S.***, Dwivedi, S., Mallick, S., and Tripathi, R.D., **Springer** Nature Switzerland AG, Eds. S.K. Panda and Y.Y. Yamamoto, Redox Homeostasis in Plants, Signaling and Communication in Plants, 9, 179-198, (2019), **ISBN: 978-3-319-95314-4**
2. Recent advances in the expression and regulation of plant metallothioneins for metal homeostasis and tolerance. Tripathi, P., Singh, P.K., **Mishra, S.**, Gautam, N., Dwivedi, S., Chakrabarty, D., Tripathi R.D. In Environmental Waste Management, Eds. Chandra R. CRC Press, **Taylor & Francis**, (2015), U.K., **551-564. ISBN: 978-1-4987-2474-6**
3. Role of aquatic macrophytes in arsenic phytoremediation in wetlands. Tripathi, R.D., **Mishra, S.**, Srivastava, S., In Wetland Ecology, Ed. Ambasht, R. S. **Proceedings of the National Academy of Sciences, India**, (2008), Special Issue, Vol. 78, B, 167-182. **ISSN 0369-8211**
4. Strategies for phytoremediation of environmental contamination. In: Development in Physiology, Biochemistry and Molecular Biology of Plants, Tripathi, R.D., Srivastava, S., **Mishra, S.**, Dwivedi, S., Eds. Bose, B. Hemantranjan, A. **New India Publishing Agency, New Delhi, India**, (2008), Vol. 2, 175-220. **ISBN 10: 81-89422-92-8**
5. Role of phytochelatins in phytoremediation of heavy metals. In: Environmental Bioremediation Technologies, Grill, E., **Mishra, S.**, Srivastava, S., Tripathi, R.D. Eds. Singh, S.N. and Tripathi, R.D. (**Springer, Berlin Heidelberg New York**), 101-145. (2007), **ISBN 10: 3-540-34790-9**
6. Nitrate pollution and its remediation. In: Environmental Bioremediation Technologies, Dwivedi, U.N., **Mishra, S.**, Singh, P., Tripathi, R.D., Eds. Singh, S.N. and Tripathi, RD (**Springer, Berlin Heidelberg New York**), 353-385. (2007), **ISBN 10: 3-540-34790-9**.
7. Bioremediation of hazardous lead from the environment. In: Focus on Environmental Research, Tripathi, R.D., Srivastava, S., **Mishra, S.**, Ed. Davis, E.B. (**Nova Science Publisheres Inc., New York**), 1-26. (2006), **ISBN 1-59454-628-2**.

POPULAR ARTICLES IN SCIENTIFIC MAGAZINES

1. **Mishra, S.**, Kuepper, H.K. (2016) How arsenic toxicity affects plants on the subcellular level. Photon Science, Science highlight, Life sciences, 68-69.
2. **Mishra, S.** (2016) Nuclei of the plant cells are the first loading site for arsenic. **Environews**, 22(4), 5.
3. **Mishra, S.**, Sivastava, S., Tripathi, R.D. (2006) *Arsenic vishaktata: samasya avam jaivic samadhan*. **Vigyan Vani**, pp. 12-17.
4. **Mishra, S.**, Dwivedi, S., Verma, R., Tripathi, R.D. (2017) Drinking water arsenic contamination in India and available removal techniques. **Kahar**, 4 (1-2), 53-54.
5. **Mishra, S.**, Dwivedi, S., Singh, R.P., Tripathi, R.D. (2014) *Arsenic vishaktata pani se dhan tak*. **Kahar**, 1(1), 9-10.
6. **Mishra, S.** (2017) Climate change affects lichen community in north-east India. CGES Newsletter, 1(2), 4.
7. Srivastava, S., **Mishra, S.**, Tripathi, R.D. (2004) Phytoremediation of hazardous lead from environment. **Environews**, 10(2), 9-10.

8. Dwivedi, S., **Mishra, S.** (2017) *Holi ke rang herbal gulal ke sang*. **Kahar**, 4 (1-2), 42-43.
9. Mattusch, J., Stenzel, A., **Mishra, S.** (2010) Schwermetalle in Pflanzen: Identifizierung von Phytochelatin-Komplexen mittels HPLC/ICP-MS/ESI-MS (Heavy metals in plants: Identification of Phytochelatin-complexes using HPLC/ICP-MS/ESI-MS). *GIT Labor-Fachzeitschrift*, 54. Jahrgang August 8, Umweltanalytic pp. 580-582.
10. Shukla, M.K., Bajpai, R., **Mishra, S.**, Tripathi, R.D. (2002) *Yagya avam paryavaran sanrakshan*. **Vigyan Vani**, pp. 30-32.

RESEARCH PAPERS PRESENTED IN CONFERENCES/ SEMINARS

1. **Seema Mishra** (2020). Transformation of Inorganic and Organic Arsenic in Rice (Lead Lecture) in National Conference on **Climate Change: Agricultural Biodiversity and Human Health**, 22-23, February, 2020 organized by CGES and CSIR-NBRI, Lucknow, India.
2. **Seema Mishra** (2019). New insights in arsenic metabolism in plants investigated through advanced analytical techniques complemented with Synchrotron based techniques (Oral presentation) in National Conference on **Smart materials and sustainable technologies (NCSMST)**, 23-24 February, organized by Department of Chemistry, DDU Gorakhpur University.
3. **Seema Mishra** (2019). Complementary application of advanced analytical and imaging techniques: A tool to investigate arsenic metabolism in plants (Invited Lecture) in International symposium on advances in functional and biological materials (ISAFBM-2019), 28 February, Organized by Humboldt Academy Lucknow and physics department, University of Lucknow.
4. **Seema Mishra** (2018). Speciation and compartmentation of arsenic and mechanism of its sub-lethal toxicity (Oral presentation) in **6th International Conference on Plants and Environmental Pollution (ICPEP-6)**, 27-30 November, Lucknow, India.
5. **Seema Mishra** (2018). Mechanism of lethal and sub-lethal arsenic toxicity in *Ceratophyllum demersum* (Oral presentation) in National Conference on **Climate Change, Environmental Pollution and Biodiversity Conservation**, 24-25, February, organized by CGES and CSIR-NBRI, Lucknow, India.
6. **Seema Mishra**, Hendrik Küpper, Matthias Alfeld, Roman Sobotka, Jürgen Mattusch (2016) Transformation and subcellular distribution of arsenic and mechanism of its sub-lethal toxicity in plants (Invited lecture). **Plant Biology Europe EPSO/FESPB 2016 Congress**. June 26-30, Prague, Czech Republic.
7. Sanjay Dwivedi, **Seema Mishra**, Rudra D. Tripathi, Bijon Adhikari, Madhav Dhara, C.S. Nautiyal (2016) Rice for arsenic contaminated regions. **Plant Biology Europe EPSO/FESPB 2016 Congress**. June 26-30, Prague, Czech Republic.
8. Archana Mishra, **Seema Mishra**, Hendrik Küpper (2016) Expression regulation of cadmium and zinc transporting ATPases HMA3 and HMA4 in the hyperaccumulator plants *Noccaea caerulea* and *Arabidopsis halleri*. **Plant Biology Europe EPSO/FESPB 2016 Congress**. June 26-30, Prague, Czech Republic.
9. Jyoti Mishra, **Seema Mishra**, Sanjay Dwivedi, Praveen Chandra Verma (2016). Uptake and rhizoremediation of arsenic by hairy root culture of *Withania somnifera*. **Plant Tissue Culture Conference** 24-26 Feb., CSIR-NBRI, Lucknow.
10. **Seema Mishra** (2015) Environmental chemistry of arsenic: Role of microbes (Invited lecture). National Conference on **Microbes in Extreme Environment: Diversity and translational Application**, 30-31 October, H.N.B. Garhwal University, Srinagar

11. Surabhi Awasthi, Reshu Chauhan, **Seema Mishra**, Sanjay Dwivedi, Sudhakar Srivastava, Rudra Deo Tripathi (2015). Application of bacteria and algae to promote plant growth and mitigation of arsenic stress. **National Conference on Microbes in Extreme Environments: Diversity and Translational Application (MEEDTA, 2015)**, October 30-31, HNB Garhwal University, Srinagar-Garhwal, Uttarakhand, India.
12. Reshu Chauhan, Surabhi Awasthi, **Seema Mishra**, Sanjay Dwivedi, Lalit Agarwal, Rudra Deo Tripathi (2015). Effect of selenium on arsenic accumulation and detoxification in rice (*Oryza sativa* L.). **National Conference on Microbes in Extreme Environments: Diversity and Translational Application (MEEDTA, 2015)**, October 30-31, HNB Garhwal University, Srinagar-Garhwal, Uttarakhand, India.
13. **Seema Mishra**, Gerd Wellenreuther, Jürgen Mattusch, Hans-Joachim Stärk, Hendrik Küpper (2015). Complimentary application of advanced analytical and imaging techniques: A tool to investigate arsenic metabolism in plants. **5th International Conference on Plants and Environmental Pollution**, 24-27 February, Lucknow, India.
14. **Seema Mishra**, Gerd Wellenreuther, Jürgen Mattusch, Hans-Joachim Stärk, Hendrik Küpper (2013). Speciation and distribution of arsenic in the Non-hyperaccumulator Macrophyte *Ceratophyllum demersum* L. and its Relation to Toxicity. 'Chemistry of Metals in Biological Systems', 12-19 May, Louvain-la-Neuve, Belgium.
15. **Seema Mishra**, Gerd Wellenreuther, Hans-Joachim Stärk, Hendrik Küpper (2012). Mechanisms of sublethal and lethal arsenic toxicity in plants and its modification by phosphate nutrition. **Plant Biology Congress** jointly organized by FESPB and EPSO during 29 July-3 August, at Albert-Ludwigs-University, Freiburg, Germany.
16. **Seema Mishra**, Jürgen Mattusch, Hans-Joachim Stärk, Rainer Wennrich, Hendrik Küpper (2011). Mechanisms of arsenic toxicity to *Ceratophyllum demersum*, a rootless submerged macrophyte under environmentally relevant conditions. **Gordon Research Conference on 'Metals in Biology'** during January 30, 2011 - February 4, at Four Points Sheraton / Holiday Inn Express in Ventura, CA United States.
17. **Seema, Mishra**, Jürgen Mattusch, Rainer Wennrich (2010). Response of Coontail, a rootless aquatic macrophytes to arsenic stress (Invited lecture). (**Session lecture**), In: **Transport and Bioavailability of elements: Soil plant interactions, Biogeochemistry and toxicology**, Jahrestagung der Gesellschaft für Mineralstoffe und Spurenelemente e.V. held at Leipziger KUBUS, Helmholtz Zentrum für Umweltforschung (UFZ), Germany during october 07-09.
18. **Seema Mishra**, Rainer Wennrich, Jürgen Mattusch (2010). Chemical speciation of arsenic in *Ceratophyllum demersum* L. In: **Chemicals In The Environment (CITE)** held at Leipziger KUBUS, Helmholtz Zentrum für Umweltforschung (UFZ), Germany on 23 March.
19. **Seema, Mishra**, Jürgen Mattusch, Rainer Wennrich (2009). Arsenic tolerance in plants: Accumulation and chemical speciation, (P43). In: **Arsen-Workshop 2009**, Verhalten von arsen in geologischen, hydrologischen und biologischen systemen held at Helmholtz Zentrum für Umweltforschung (UFZ), Germany during 23-24 September.
20. **Seema, Mishra**, Jürgen Mattusch, Rainer Wennrich (2009). Arsenic tolerance in *Ceratophyllum demersum* L.: Studies on accumulation and chemical speciation. In: TraceSpec 2009, **12th Workshop on progress in analytical methodologies for trace metal speciation** organized by the Johannes Gutenberg-University Mainz, the European Virtual Institute for Speciation Analysis (EVISA) and the International Association of Environmental Analytical Chemistry (IAEAC) held at Johannes Gutenberg-University Mainz, Germany during 15-18 September.
21. **Seema, Mishra**, Rainer Wennrich, Jürgen Mattusch and Rudra D. Tripathi (2009). Investigation of phytochelatins based detoxification of arsenic in plants (sessional lecture). In: **Humboldt Network Meeting** held at Bonn, Germany during 28-30 April.

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