

## Reddithota J. Krupadam

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Dr. Krupadam received his B.Sc degree from the Sri Venkateswara University, Tirupati and his M.Sc (Tech.), Ph.D. in Environmental Chemistry from Jawaharlal Nehru Technological University, Hyderabad. He conducted research on pesticide pollution on agricultural soils as a Research Associate of CSIR in 1999-2000. In his first appointment, Dr. Krupadam served as scientist of the Department of Environmental Impact Assessment and Department of Environmental Materials at CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur. Upon completion of 20 years of scientific and academic assignments in the field of materials science and engineering and environmental impact assessment, he founded state of the art molecular modeling and simulation facility for design of environmental materials and atomic microscopy facility recognized internationally. He is lead a group of 40 scientific staff in obtaining National accreditations such as NABL and NABET (of Quality Council of India, QCI) to CSIR-NEERI and this is a remarkable contribution of 60 years of existence of CSIR-NEERI.

Dr. Krupadam's research is in the general area of materials science and engineering, environmental impact assessment and environmental policy. Specifically, the research in his group involves: (i) molecularly imprinted polymers for sensing of environmental carcinogenic pollutants and pathogens, (ii) advanced materials for next-generation environmental separation technologies, (iii) environmental applications and implications of nanomaterials (iv) assessment and evaluation of environmental impacts of developmental projects and (v) graphene and graphene-polymer nanocomposites for rapid destruction of recalcitrant pollutants.

Dr. Krupadam has received numerous major awards in recognition of his research. Notable among these are the National Award for Technology Development by Ministry of Chemicals & Fertilizers, Government of India in 2013-14, Fulbright Senior Fellow in 2016, Sir CV Raman Fellow in 2010 and NEERI Golden Jubilee Outstanding Scientist Award for excellence in Environmental Science & Engineering research in 2008.

Dr. Krupadam has authored 55 refereed international journal publications including invited publications in Environmental Chemistry Letters, Environmental Science and Technology, Water Research, Journal of Hazardous Materials and Biosensors and Bioelectronics. He has written articles in 3 books. He has written about 110 environmental impact assessment reports for industrial projects and devised environmental management plans. He has lead a group of 30-40 scientists/specialists during preparation of EIA reports and showed an excellent leadership for effectively executing the major projects. He is an approved EIA Coordinator and FAE (Functional Area Expert) by NABET /NABL of Quality Control of India (QCI). He is an assessor of Federation for Development of Accreditation Services (FDAS), India. He is a Lead/Technical assessor of International Accreditation Services, United States; and recently he is appointed as the Evaluator of CAS Institutes of Czech Republic for quality of research.

Dr. Krupadam has advised 5 Ph.D students and 41 post graduate students, many of whom hold leading positions in academia and industry. He is actively involved in teaching of Ph.D and Post-graduate students of AcSIR (Academy of Scientific and Innovative Research, an academic wing of CSIR) as a Hon' Professor since 2013. In recognition of his excellence and dedication in teaching and mentoring, he received invitations for teaching as Visiting Professor/Fellow at Case Western Reserve University (CASE), United States; The University of Melbourne, Australia; Louisiana State University, United States and TU Dortmund, Germany.

Dr. Krupadam is a Fellow, Royal Society of Chemistry (London); FRSC.

## Selected publications

- M.D. Sharma, A.I. Elanjickal, J.S. Mankar, R.J. Krupadam. Assessment of cancer risk of microplastics enriched with polycyclic aromatic hydrocarbons. *Journal of Hazardous Materials*, **2020**, 398: 122994. DOI:10.1016/j.jhazmat.2020.122994 (JIF, 9.038)
- H. Munawar, J.S. Mankar, M.D. Sharma, A. Garcia-Cruz, L.A. Fernandez, M. Peacock, R.J. Krupadam. Highly selective electrochemical nanofilm sensor for detection of carcinogenic PAHs in environmental samples. *Talanta*, **2020**, 219:121273. DOI:10.1016/j.talanta.2020.121273 (JIF, 5.339)
- J.S. Mankar, M.D. Sharma, S.S. Rayalu, R.J. Krupadam. Molecularly imprinted microparticles (microMIPs) embedded with reduced graphene oxide for capture and destruction of E. coli in drinking water. *Materials Science and Engineering: C*, **2020**, 110, 110672. DOI: 10.1016/j.msec.2020.110672 (JIF, 5.880)

- S. Chatterjee, R.J. Krupadam. Amino acid-imprinted polymers as highly selective CO<sub>2</sub> capture materials. *Environmental Chemistry Letters*, **2019**, 17: 465-472. DOI:10.1007/s10311-018-0774-z (JIF, 5.922)
- B. A. Korde, J.S. Mankar, S. Phule, R.J. Krupadam. Nanoporous imprinted polymers (nanoMIPs) for controlled release of cancer drug. *Materials Science and Engineering:C*, **2019**, 99:222-230. DOI: 10.1016/j.msec.2019.01.108 (JIF, 5.880)
- S. Wankar, N.W. Turner, R.J. Krupadam. Polythiophene nano films for sensitive fluorescence detection of viruses in drinking water. *Biosensors and Bioelectronics*, **2016**, 82:20-25. DOI: 10.1016/j.bios.2016.13.020 (JIF, 10.257)
- B.D.B. Tiu, R.J. Krupadam, R.C. Advincula. Pyrene-imprinted polythiophene sensors for detection of polycyclic aromatic hydrocarbons. *Sensors and Actuators B: Chemical*, **2016**, 228:693-701. DOI: 10.1016/j.snb.2016.01.090 (JIF, 7.100)
- R.J. Krupadam, E.E. Nestrov, D.A. Spivak. Highly selective detection of oil spill polycyclic aromatic hydrocarbons using molecularly imported polymers for marine ecosystems. *Journal of Hazardous Materials*, **2014**, 274:1-7. DOI: 10.1016/j.hazmat.2014.03.050 (JIF, 9.038)
- R.J. Krupadam, M.S. Khan, S.R. Wate. Removal of probable human carcinogenic polycyclic aromatic hydrocarbons from contaminated water using molecularly imprinted polymers. *Water Research*, **2010**, 44:681-688. DOI: 10.1016/j.watres.2009.09.044 (JIF, 9.130)
- R.J. Krupadam, B. Bhagat, S.R. Wate, G.L. Bodhe, B. Sellergren, Y. Anjaneyulu. Fluorescence spectrophotometer analysis of polycyclic aromatic hydrocarbons in environmental samples based on solid phase extraction using molecularly imprinted polymer. *Environmental Science & Technology*, **2009**, 43:2871-2877. DOI: 10.1021/es802514c (JIF, 7.864)