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Dr. Krupadam received his B.Sc degree from the Sri Venkateswara University, Tirupati and M.Sc (Tech.), Ph.D. in Chemistry from Jawaharlal Nehru Technological University (JNTU), Hyderabad. He conducted research on pesticide pollution on agricultural soils as a Research Associate of CSIR in 1999-2000. After short rehabilitation in Technical University of Dortmund (Germany), Dr. Krupadam joined as a scientist in the Department of Environmental Impact Assessment and later to the Department of Environmental Materials at CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur. Dr. Krupadam is internationally recognized in the fields of environmental impact assessment, and materials science and engineering, specifically for molecularly imprinted polymers for environmental sensing and remediation. Upon completion of 22 years of scientific and academic assignments in the field of environmental science and engineering and materials research, Dr. Krupadam has developed the state of the art molecular modelling and simulation facility for design of environmental materials and established atomic force microscopy for depicting nano-meter scale morphology of materials. These facilities have international recognition. He is instrumental in obtaining National Accreditations such as NABL and NABET (of Quality Council of India, QCI) to CSIR-NEERI with the association of 40 cross-divisional scientific staff which demonstrates leadership quality and excellent coordination.

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 (v) graphene and graphene-polymer nanocomposites for rapid destruction of recalcitrant pollutants (vi) CO₂ mitigation technologies and (vii) climate change research, net zero and climate change policy & negotiations.

Dr. Krupadam has received numerous major awards in recognition of his research work. Notable among these are the National Award for Technology Innovation by Ministry of Chemicals & Fertilizers, Government of India in 2013-14, Fulbright Senior Fellow in 2015, Sir CV Raman Fellow in 2010 and NEERI Golden Jubilee Outstanding Scientist Award for excellence in Environmental Science & Engineering research in 2008. He is co-chair of Investment Committee of CSIR-NEERI. Dr. Krupadam is a core member of Subject Expert Committee of FIST funding program of DST, Govt. of India. 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 and International Accreditation Ser., United States.

Dr. Krupadam has authored 62 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 124 environmental impact assessment reports for industrial projects and devised environmental management plans for sustainable industrial operations. Some of the key industrial projects include petroleum/petrochemical complexes (of Reliance, ONGC, Cairn Energy and MRPL), ports and harbours (Paradip, Kakinada and JNPT), thermal power plants (NTPC, and Mahagenco), Chemicals & Soda ash (GHCL, RSPL) and many other industrial projects. An estimate of Rs 100 Cr contributed to ECF of CSIR-NEERI for conducting the EIA consultancy work. During these projects, Dr. Krupadam lead a group of 30-40 scientists/specialists for effectively executing projects shows the excellent leadership quality.

Dr. Krupadam has advised 5 Ph.D students and 42 post graduate students, of many 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. Currently, Dr. Krupadam is the coordinator of AcSIR activities in CSIR-NEERI.

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

Selected Publications

1. Aquatar MO., Bhatia U., Rayalu SS., Krupadam (2022) Reduced graphene-oxide-MnO₂ nanocomposites for CO₂ capture from flue gases at elevated temperatures. *Science of the Total Environment*, 816. <https://doi.org/10.1016/j.scitotenv.2021.151522> (JIF, 10.753)
2. Sharma MD., Elanjickal AI, Mankar JS, Krupadam (2020) Assessment of cancer risk of microplastics enriched with polycyclic aromatic hydrocarbons. *Journal of Hazardous Materials*, 398. <https://doi.org/10.1016/j.jhazmat.2020.122994> (JIF, 14.224)
3. Chatterjee S., Krupadam RJ (2019) Amino acid - imprinted polymers as highly selective CO₂ capture materials. *Environmental Chemistry Letters*, 17. <https://doi.org/10.1007/s10311-018-0774-z>. (JIF, 13.615)
4. Wankar S., Turner NW, Krupadam RJ (2016) Polythiophene nanofilms for sensitive fluorescence detection of viruses in drinking water. *Biosensors Bioelectronics*, 82. <https://doi.org/10.1016/j.bios.2016.03.020>. (JIF, 12.545)
5. Krupadam RJ, Nesterov EE, Spivak DA (2014) Highly selective detection of oil spill polyaromatic hydrocarbons using molecularly imprinted polymers for marine ecosystems. *Journal of Hazardous Materials*, 274. <https://doi.org/10.1016/j.jhazmat.2014.03.050> (JIF, 14.224)
6. Krupadam RJ (2011) An efficient fluorescent polymer sensing material for detection of traces of benzo[a]pyrene in environmental samples. *Environmental Chemistry Letters*, 9. <https://doi.org/10.1007/s10311-010-0291-1> (JIF, 13.615)
7. Krupadam RJ, Khan MS., Wate SR (2010) Removal of probable human carcinogenic polycyclic aromatic hydrocarbons from contaminated water using molecularly imprinted polymers. *Water Research*, 44. <https://doi.org/10.1016/j.watres.2009.09.044> (JIF, 13.4)
8. Krupadam RJ, Bhagat B., Wate SR, Bodhe GL, Selligren B., Anjaneyulu Y (2009) Fluorescence spectrometer analysis of polycyclic aromatic hydrocarbons in environmental samples based on solid phase extraction using molecularly imprinted polymer. *Environmental Science & Technology*, 43. <https://doi.org/10.1021/es802514c> (JIF, 11.357)