



ENI AWARD 2023

Advanced Environmental Solutions

Thalappil Pradeep

Winner

Affordable clean water using advanced materials

Biography

Thalappil Pradeep is an Institute Professor at the Indian Institute of Technology Madras (IITM), Chennai, India. He is the Deepak Parekh Institute Chair Professor and is also a Professor of Chemistry. He studied at the University of Calicut, Indian Institute of Science (IISc), UC Berkeley, and Purdue. His research interests are in molecular and nanoscale materials. He is an author of over 550 scientific papers in journals and is an inventor of over 120 patents or patent applications. He is involved in the development of affordable technologies for drinking water purification and some of them have been commercialized. His pesticide removal technology has reached about 10 million people. Along with his associates, he has incubated seven companies and three of them have production units. His arsenic removal technology, approved for national implementation, is delivering arsenic free water to about 1.3 million people every day. He is a recipient of several awards including the Shanti Swaroop Bhatnagar Prize, BM Birla Science Prize, National Award for Nanoscience and Nanotechnology, India Nanotech Innovation Award, JC Bose National Fellowship and National Water Award. He has won The World Academy of Sciences (TWAS) prize in Chemistry for the year 2018. Nation conferred Padma Shri on him in 2020. He is also a recipient of the Nikkei Asia Prize, the Prince Sultan Bin Abdulaziz International Prize for Water and the VinFuture Prize. He is a Fellow of all the science and engineering academies of India, TWAS, American Association for the Advancement of Science and The African Academy of

Sciences. He is the author of the introductory textbook, Nano: The Essentials (McGraw-Hill) and is an author of the monograph, Nanofluids (Wiley-Interscience) and an advanced textbook, A Textbook of Nanoscience and Nanotechnology (McGraw-Hill). He is on the editorial boards of journals such as ACS Nano, Chemistry of Materials, Analytical Chemistry, Chemical Communications, Nanoscale, Environmental Science & Technology, etc., and is an associate editor of ACS Sustainable Chemistry & Engineering. He has authored popular science books in Malayalam and is the recipient of Kerala Sahitya Akademi Award for knowledge literature. He has received the Lifetime Achievement Research Award of IITM and Distinguished Alumnus Award of IISc. As part of philanthropy, he supports a school in his village where 500 students are on rolls.