

Prashant V. Kamat

Prashant V. Kamat is a Rev. John A. Zahm, C.S.C., Professor of Science in the Department of Chemistry and Biochemistry and Radiation Laboratory and Concurrent Professor in the Department of Chemical and Biomolecular Engineering. A native of Binaga, India, he earned the masters (1974) and doctoral degree (1979) in Physical Chemistry from the Bombay University, and carried out his postdoctoral research at Boston University (1979-1981) and University of Texas at Austin (1981-1983). He joined Notre Dame in 1983. Professor Kamat has for more than three decades worked to build bridges between physical chemistry and material science by developing advanced nanomaterials for cleaner and more efficient light energy conversion.

Professor Kamat's research has made significant contributions to four areas: (1) Photoinduced catalytic processes using semiconductor and metal nanoparticles, nanostructures and nanocomposites, (2) Development of light energy harvesting assemblies (e.g., quantum dots and inorganic-organic hybrid assemblies) for next generation solar cells, (3) Utilization of carbon nanostructures (SWCNT and graphene) as conducting scaffolds to collect and transport charge carriers in solar cells and fuel cells, and (4) Environmental remediation using advanced oxidation processes and chemical sensors.

He has directed DOE funded solar photochemistry research for the past 30 years. In addition to large multidisciplinary interdepartmental and research center programs, he has actively worked with industry-sponsored research. He has served on many national panels on nanotechnology and energy conversion processes. He has published more than 450 scientific papers that have been well received by the scientific community (51000+ citations) and he has an h-index of 120. Science Watch of ISI included him among the Top 100 chemists of the decade 2000-2010 and Most Cited Chemists in 2014 and 2016.

In 2016, Kamat was named by the American Chemical Society as the Editor-in-Chief of ACS Energy Letters. Previously he served as deputy editor of the Journal of Physical Chemistry Letters. He is a member of the advisory board of scientific journals, Chemical Reviews, Research on Chemical Intermediates, Journal of Colloid and Interfacial Science and Applied Electrochemistry. He was awarded Honda-Fujishima Lectureship award by the Japanese Photochemical Society in 2006 and CRSI medal by the Chemical Research Society of India in 2011. He is a Fellow of the Electrochemical Society, American Association for the Advancement of Science (AAAS), and the American Chemical Society (ACS). He is a Pravasi Fellow of the Indian National Science Academy.