Nikhil Koratkar

Professor of Mechanical, Aerospace, and Nuclear Engineering at Rensselaer Polytechnic Institute

Troy, NY, US

World Renowned, Highly Cited Expert in Battery Energy Storage

Biography

Nikhil Koratkar joined the faculty of the Mechanical Engineering Department at Rensselaer Polytechnic Institute in January 2001 as an Assistant Professor. He was promoted to Associate Professor in 2006 and to Full Professor in 2009. In 2011, Koratkar was also appointed a Full Professor in the Department of Materials Science and Engineering at Rensselaer. In 2012, Koratkar was appointed the John A. Clark and Edward T. Crossan Chair Professor in Engineering at Rensselaer Polytechnic Institute. Professor Koratkar is a winner of the NSF CAREER Award (2003), RPI Early Career Award (2005), the Electrochemical Society's SES Young investigator Award (2009), American Society of Mechanical Engineering (ASME) Gustus L. Larson Memorial Award (2015) and the IIT-Bombay Distinguished Alumnus Award (2019). In 2016, Koratkar was elected a Fellow of the ASME. He has published a book on graphene as an additive in composite materials and over 200 archival journal papers (> 21,000 Citations, H-Index = 68). His publications include one in Science, one in Nature, one in PNAS, three in Nature Materials, four in Nature Communications, nine in Advanced Materials, fourteen in ACS Nano, six in Nano Letters, seven in Advanced Functional Materials and eight in Small. In 2018, Clarivate Analytics named him in their highly cited researchers list (top 1% by citations). Koratkar has obtained over $10 Million in research grants from several agencies including NSF, NYSERDA, ONR, ARO, AEC and Industry. In 2010, Koratkar was appointed Editor of CARBON (Elsevier). Professor Koratkar's research has focused on the synthesis, characterization, and application of nanostructured materials. This includes graphene, carbon nanotubes, transition metal dichalcogenides, phosphorene, tellurene, perovskites as well as metal and silicon nanostructures produced by a variety of techniques such as mechanical exfoliation, chemical vapor deposition, and oblique angle sputter and e-beam deposition. He is studying the fundamental mechanical, electrical, thermal and optical properties of these one-dimensional (1D) and two-dimensional (2D) materials and developing a variety of composites, coating and device applications of these low dimensional materials. He serves as scientific advisor to two start-up companies aimed at commercializing next-generation energy storage solutions.

Areas of Expertise

Energy Storage, Batteries, Nanostructured Materials, Nano-Composites, Nano-Coatings

Education

University of Maryland at College Park
Ph.D.

IIT-Bombay
B.Tech

University of Maryland at College Park
M.S.
