

MSE's 30th Anniversary Colloquium Series



Promises of Nanotechnology: A Review

Professor Pulickel Ajayan

Benjamin M. and Mary Greenwood Anderson Professor of Engineering Chair, Department of Materials Science and NanoEngineering
Rice University, United States.

Abstract

The past several decades has belonged to Nanotechnology in terms of impacting scientific research. Many promises, cutting across multiple disciplines, formed the driving force for the nanotechnology revolution. After significant amount of investments and efforts, the question remains on the real impact nanotechnology has had on scientific progress, technology development and society. I will discuss, from my own experience of being in the field of materials/nanotechnology for over three decades, some of the challenges that has been relevant to the field and provide a perspective on opportunities in the field. This review will provide case studies related to key material systems, such as nanotubes, 2D materials, nanocomposites etc., that have been hallmarks of the nanotechnology effort.

Biography

Dr. Ajayan holds joint appointments in the Departments of Materials Science and NanoEngineering, Chemical and Biomolecular Engineering, and Chemistry at Rice University, Houston, Texas (USA). He is the founding and present chair of the department of Materials Science and NanoEngineering at Rice. Dr. Ajayan earned his B. Tech in metallurgical engineering from Banaras Hindu University in 1985 and Ph.D. in materials science and engineering from Northwestern University in 1989. After three years of post-doctoral experience at NEC Corporation in Japan, he spent two years as a research scientist at the Laboratoire de Physique des Solides, Orsay in France and nearly a year and a half as an Alexander von Humboldt fellow at the Max-Planck-Institut für Metallforschung, Stuttgart in Germany. In 1997, he joined the materials science and engineering faculty at Rensselaer Polytechnic Institute and in 2007, Rice University. Dr. Ajayan is one of the pioneers in the field of carbon nanotubes and was involved in the early work on the topic along with the NEC group. He has published over 1200 journal papers with more than 180,000 citations and an h-index of 200 as per google scholar. His awards include the Humboldt Prize, MRS Medal, Spiers Memorial Award, Nanosmat Prize, Lifetime Achievement Nanotechnology Award (Houston) etc.

Please register [here](#)
for the seminar



19 Apr 2022 (Tuesday)
2:00 PM (Singapore)
Lecture Theatre 4 (NS4-02-34)
(Map: <https://tinyurl.com/NTULT4>)