Prof. Pulickel M. Ajayan

Pulickel M. Ajayan is the Benjamin M. and Mary Greenwood Anderson Professor of Engineering in the Department of Mechanical Engineering and Materials Science at Rice University, Houston, Texas. Before joining Rice University, Ajayan was the Henry Burlage Jr. Professor of Materials Sciences and Engineering at the Rensselaer Polytechnic Institute. Ajayan's early education was in Kerala, India. He graduated from Loyola in 1977. In 1985, Ajayan earned a B. Tech. degree in Metallurgical Engineering from Institute of Technology, Banaras Hindu University, Varanasi, India. He earned PhD in Materials Science and Engineering from Northwestern University, Evanston, Illinois in 1989.

He has over 350 publications with over 25,000 citations (h-index ~ 80). His research interests include Carbon Based Materials (Carbon Nanotubes, Nanodiamond, Graphene), Nanostructured Materials (Nanoparticles, Self-assembled Nanoscalearchitectures), Nanocomposites, Nanoscale Electrical Interconnects and Devices, Nanomaterials Enabled Energy Storage Systems, Electron Microscopy & Electron Spectroscopy, and Nanostructures of Natural and Biological Origin.

Ajayan is a pioneer in nanotechnology and his work has resulted in significant advances in carbon nanotube science and technology. Between 1991-1993, during his stay at the NEC corporation, Tsukuba, Japan, he was involved in the early seminal works on carbon nanotubes, along with Prof. Sumio Iijima. He has two Guinness book of world records to his credit; one for creating the smallest brush and two for inventing the darkest material. In 2007, he along with several other researchers developed the world's first paper battery, which utilizes carbon nanotubes embedded within paper. In 2008, Ajayan's team created the darkest material known to man — a carpet of carbon nanotubes that reflects only 0.045% of the light.

Ajayan has received several awards including the Helmoltz-Humboldt Senior Award (2008), MRS medal (2006), Scientific American 50 recognition (2006), RPI Senior Research Award (2003) and Burton award from Microscopic Society of America (1997). He is on the advisory editorial board of several leading journals and on the boards of several nanotechnology companies.