

Third Laureate Fundamental Research

26th Khwarizmi International Award (KIA)



- **Research Work Title:** Fluorescent Supramolecular Architectures for Sensing and Imaging
- **Researcher:** Dr. Ayyappan Pillai Ajayaghosh
- **Nationality:** Indian
- **Date of Birth:** 1962
- **Field:** Chemistry
- **Position:** CSIR Outstanding Scientist/ Professor and Dean
- **Scientific Affiliation:** CSIR-National Institute for Interdisciplinary Science and Technology

● Abstract:

Ajayaghosh's research group has been focusing on the self-assembly of fluorescent linear π -systems. A variety of supramolecular architectures of different size, shape and properties have been investigated. The fundamental understanding gathered from these studies has led to design of soft materials with tunable fluorescent properties which are useful for imaging and sensing applications. For example, fluorescent self-assembly has been developed for the thermal imaging and self-erasable writing using water as an ink which are useful as security labels for preventing fake documents and currency (patent applied). Thus, from the fundamental understanding molecular self assembly a variety functional material with exotic structures and their application to imaging and sensing have been demonstrated. These studies are not only important in terms of high quality science, as evident by the large number of high impact publications and citations, but also have great potential for practical applications.



● Biography:

Professor A. Ajayaghosh is a CSIR-Outstanding Scientist at CSIR-NIIST, Trivandrum, India since 1988. He obtained his M. Sc. (1984) and a Ph. D (1988) from Calicut University. He was the Alexander von Humboldt Fellow at the Max Plank Institute for Strahlen Chemie, Germany (96-1994). He has received several awards such as the Thomson Reuters Research Excellence Award (2009), the Outstanding Researcher Award of the Department of Atomic Energy (DAE) (2009), the Ramanna Fellowship of the Department of Science and Technology, India (DST) (2007), the Shanti Swarup Bhatnagar Prize for Chemical Sciences (2007) and Infosys Prize for physical science (2012). He is a Fellow of all the three Science Academies of India, an advisory board of Chemistry-An Asian Journal and is an Associate Editor of the Royal Society Journal PCCP. He is also the Dean of Chemical Sciences, Academy of Scientific and Innovative Research (AcSIR), CSIR, New Delhi.

