

	Name	: Prof. Ramachandra Rao M.S.
	DOB	: 15-04-1961
	Elected	: Fellow, APAS -2016 (FAPAS)
	Areas of Specialization	: Experimental Condensed Matter Physics, Advanced Materials, Oxide Electronics, Nanoscience and Nanotechnology
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Academic and Research Achievements: Prof. M.S.R. Rao received his M.Sc. and Ph.D. degrees from IIT Kharagpur. He was a Research Scientist at CNRS, Bellevue, France, Visiting Fellow at TIFR, Bombay and postdoctoral fellow at MSRC, IIT Madras. His significant research contributions demonstrated that Pr-ion had no additional effect on the T_c suppression and Abrikosov-Gorkov pair breaking was not responsible for T_c suppression in B-based superconductors. He contributed to the understanding of grain boundary physics in manganite based tunnel junctions His group has the credit for establishing PLD thin film growth technique for realizing metal-oxide thin films and nanostructures for various applications. The group could stabilize p-type ZnO useful for light emission applications. He works closely with industry in developing nano-crystalline diamond coatings for war-resistance applications. He has 21 years of teaching and 30 years of research experience. He has guided 18 students for their Ph.D. Degree and guided about 75 UG and PG students in their project work. He is presently supervising 15 Ph.D. students.

Other Contributions: The Nano Functional materials Technology Centre (NFTMC) established by Prof. Rao at IIT Madras is a world class centre carrying out research in the frontier areas of advanced materials, oxide electronic materials and Nanostructured thin films. His emphasis is on man-power training of next generation teachers and researchers. His contributions to the purification of water from arsenic contamination from simple magnetic nano-particles and capture of CO_2 using certain non-phases are commendable. He is presently the Head of Physics department. He is the board member (since 2005) and section editor (since 2015) of INTERMAT (Condensed matter, interfaces and related nanostructures) section of the J.Phys. D. Appl. Phys. (JPhysD), Institute of Physics (IoP), UK. He has been a foreign academic (since 2007) in the Erasmus Mundus Master's program where he teaches in France to the Master's students every semester. He is also a visiting professor at IISER, Trivandrum.

Publications & Patents: He has published 155 research papers in reputed national and international journals and presented 150 papers in conferences. He has 10 US patents and 4 technology transfers. He has delivered about 100 invited talks in India and abroad in the last 5 years. Prof. MSR Rao has authored a book (along with Dr. Shubra Singh) titled, "Nanoscience and Nanotechnology: Fundamentals to Frontiers" published by Wiley (India). He has also edited a book (with Prof. T. Okada) titled "ZnO Nanocrystals and Allied Materials" published by Springer.

Awards and Honors: Fellow of Institute of Physics (*FInstP*), UK; Alexander von Humboldt (AvH) fellow, Germany; JSPS, fellow, Japan. Visiting faculty at the University of Maryland, College Park, USA. Awarded DAAD STAR Professor Fellowship, Germany; 1st Place Mentor Award, University of Maryland, USA; Hostel Blues in IIT Kharagpur.

Membership in Scientific Bodies, State/National/International: Member of Materials Research Society (MRS), USA; Council member of Materials Research Society of India (MRSI), India.