University of Mumbai - Department of Atomic Energy

CENTRE FOR EXCELLENCE IN BASIC SCIENCES

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मौलिक विज्ञान प्रकर्ष केन्द्र

TUESDAY COLLOQUIUM

Radiations : Discovery and Historical Developments

Dr. R.K. Vatsa
Visiting Professor, CEBS
Ex. Officiating Director, CEBS

Abstract: The lecture will present an account of discovery and historical developments of different types of radiations, electromagnetic (visible, infrared, ultraviolet, radiowaves and X-rays) as well as particle. Some of the greatest findings from the beginning of 19th century and the basic idea behind, will be discussed with specific emphasis on the power of observation and the power of quantification leading to new scientific discoveries. Few examples of serendipity will be referred to stressing upon the fact how important it is to follow unexpected results in scientific research, in line with the famous quote of Enrico Fermi "Experimental confirmation of a prediction is merely a measurement. An experiment disproving a prediction is a discovery."

Bio: Dr. R.K. Vatsa is currently Foreign Secretary of National Academy of Sciences, India (NASI) and a visiting Professor at UM-DAE CEBS. He superannuated as Outstanding Scientist of DAE. Dr. Vatsa has been associated with CEBS since its inception and he also served as Officiating Director of UM-DAE CEBS for a period of one year. He has held many important positions in DAE such as Spokesperson of DAE, DAE Officer for periodic interaction with Hon'ble Minister of State, Department of Atomic Energy and Minister of State in the Department of Space, Shri Jitender Singh, single point of contact for interaction with Sansad TV, Nodal Officer of DAE for Azadi Ka Amrit Mahotsav Celebration lasting for 75 weeks during 12th March 2021 till 15 August 2023 and many others. Dr. Vatsa's field of interest is kinetics and dynamics of gas phase reactions, single and multiphoton spectroscopy, laser induced chemistry, atomic and molecular clusters, generation, photoionization and Coulomb explosion in gas phase, mass spectrometry, synthesis of nanomaterials and their applications for cancer diagnosis and therapy. He has published more than 200 research papers in internationally reputed journals with high impact factors.

Tuesday, March 18, 2025 at 2:30 @ S.M. Chitre Hall, CEBS