



# Module 1: Radioactivity, Nuclear Decay and Nuclear Models

**Dr. A.V.R. Reddy**

## **ABOUT INSTRUCTOR:**

**Dr. A.V.R. Reddy** joined Nuclear Chemistry Section of Radiochemistry Division, BARC in 1977 after Training School. Obtained Ph.D in Nuclear fission and did post-doc on the extension of Periodic Table in Mainz, Germany. Till Sept 2008, he was Head, Nuclear Chemistry Section and then was Head, Analytical Chemistry Division, BARC till 31-05-2015. He worked as professor in Chemistry in V S University, Nellore, AP for an year and presently he is Chief Executive Officer of Gemmological Institute of India, Mumbai. He has worked in the International Atomic Energy Agency (IAEA), Vienna during 1999-2000 as a technical officer. His areas of research are Nuclear fission, nuclear reactions, nuclear analytical techniques, non-destructive assay methods, electroanalytical chemistry, environmental science and characterization of gems & diamonds. He has about 750 publications (journals and symposia), coauthored 4 books and edited more than 30 books / compilations.

Visited many countries in Asia, Europe and South America, delivered more than 400 lectures in nuclear analytical techniques, nuclear chemistry, general chemistry, QA/QC, analytical chemistry, spectrometric methods, organic spectroscopy, chemical safety and research methodology. He was a visiting professor in Mumbai University for 15 years and was a professor of Homi Bhabha National Institute, DAE. **Dr. Reddy** is a fellow of International Union of Pure and Applied Chemistry (IUPAC). He worked as a commission member of IUPAC for three terms. He is an active member of many Scientific Associations and held many positions like president, secretary and editor posts in Indian Association of Nuclear Chemists and Allied Scientists (IANCAS). He is now Technical Director of Asia Pacific Gemmological Association (AGA). **Dr. Reddy** worked with two funding agencies, Board of Research in Nuclear Sciences (BRNS) and Science and Engg Research Board (SERB) and was on the Editorial Board of two international journals.

## **MODULE PLAN:**

### **1. Radioactivity, Nuclear Decay and Nuclear Models - 5 Lectures**