

## About DR. RAJENDER (RAJ) S. VARMA



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Formerly: Chemistry Research Professor, Sam Houston State University, Texas, USA

-Project Manager, Texas Research Institute for Environmental Studies (TRIES), Texas

-Senior Scientist, Houston Advanced Research Center, The Woodlands, Texas, USA

**EDUCATION:** -B.Sc., 1970, Panjab University, India.

-M.Sc., 1972, Kurukshetra University, India.

-Ph.D., 1976, Delhi University, India, Natural Products Chemistry;

Diploma, Pulp & Paper Technology, 1977, Norwegian Institute Technology, Norway.

Postdoctoral Fellow-Robert Robinson Laboratories, University of Liverpool, England.

**PATENTS AND PUBLICATIONS:** -15 US Patents awarded some others pending.

~450 peer-reviewed papers, 7 books, 27 book chapters & 3 encyclopedia contributions.

**AREAS OF EXPERTISE:** Development of Environmentally Benign Synthetic Methods and Chemical Protocols, Greener Synthesis of Nanomaterials and Nanocomposites and their Applications in Nano-catalysis (magnetically retrievable nano-catalysts) and Sustainable Remediation of Hazardous Pollutants [e.g. contaminated sites and streams using nanoscale iron, mercury capture from coal-fired power plants, removal of sulfur (deep desulfurization) from diesel oil etc.], Natural Products; Synthetic Organic Chemistry, Methods for Immobilization of Biomolecules on Support Surfaces; Design & Synthesis of Chemopreventive anti-cancer Agents.

**ABOUT RESEARCH:** Over 40 years of research experience in management of multi-disciplinary technical programs. Extensively involved in broader aspects of chemistry that includes **development of eco-friendly synthetic methods using alternate energy input (microwave, ultrasound & mechanochemical)**. Long term goals are to contribute **broad expertise in chemistry to evaluate novel and safer environmental protocols in industrial chemistry** and its impact in human health and environmental sciences. Mentor for high school, college and university students.