

Obituary: Prof. Palle Rama Rao (30 June 1937 – 3 October 2026)

DAE deeply mourns the passing of Prof. Palle Rama Rao, Member of the Atomic Energy Commission and Former Secretary, Department of Science and Technology, and one of India's distinguished metallurgists, scientific leaders and institution builders, who passed away at the age of 89 in Hyderabad, Telangana 3rd October 2026.

Prof. Rama Rao made outstanding contributions to the development of physical and mechanical metallurgy in India. His distinguished academic career began at the Indian Institute of Science, where he joined the Department of Metallurgy in 1960. He subsequently moved to the Institute of Technology, Banaras Hindu University, where he became Professor of Physical Metallurgy. His academic and research career was complemented by postdoctoral work at the University of Pennsylvania.

His research encompassed X-ray diffraction, structural imperfections in crystalline materials, high-temperature mechanical behaviour, fracture and fatigue, and the development of advanced alloys. During his tenure at the Defence Metallurgical Research Laboratory, Hyderabad, he contributed to important alloy-development programmes, including the development of an ultrahigh-strength, high-fracture-toughness low-alloy steel. His scientific work resulted in several journal papers, several edited volumes and numerous conference publications.

Prof. Rama Rao also played a significant role in strengthening India's scientific and technological institutions. He contributed to the establishment of major facilities and programmes including the Heavy Alloy Penetrator Plant at Tiruchirapalli, the International Advanced Research Centre for Powder Metallurgy and New Materials and the Non-Ferrous Materials Technology Development Centre in Hyderabad, as well as the National Institute of Ocean Technology and the Safety Research Institute. He served in several important positions in the Government of India, including Secretary, Department of Science and Technology and Ocean Development, and Chairman of the Atomic Energy Regulatory Board.

A scientist of exceptional distinction, Prof. Rama Rao received numerous national and international honours, including the Shanti Swarup Bhatnagar Prize, Padma Shri, Padma Bhushan and Padma Vibhushan. He was also elected Fellow of several leading national and international academies and served as President of prominent scientific bodies including the Indian Academy of Sciences, Indian National Academy of Engineering and Indian Institute of Metals.

Prof. Rama Rao's legacy extends far beyond his scientific publications and honours. His contributions to materials science, technological self-reliance, institution building and the nurturing of scientific talent have left an enduring imprint on India's scientific enterprise. His commitment to excellence and nation-building will continue to inspire generations of scientists, engineers and technologists.

The Department of Atomic Energy extends its deepest condolences to his family, friends, and the entire scientific community.