



C V Raman Short Biography

Chandrasekhara Venkata Raman was born at Tiruchirappalli in Southern India on November 7th, 1888. His father was a lecturer in mathematics and physics so that from the first he was immersed in an academic atmosphere. He entered Presidency College, Madras, in 1902, and in 1904 passed his B.A. examination, winning the first place and the gold medal in physics; in 1907 he gained his M.A. degree, obtaining the highest distinctions.

His earliest researches in optics and acoustics – the two fields of investigation to which he has dedicated his entire career – were carried out while he was a student.

Since at that time a scientific career did not appear to present the best possibilities, Raman joined the Indian Finance Department in 1907; though the duties of his office took most of his time, Raman found opportunities for carrying on experimental research in the laboratory of the Indian Association for the Cultivation of Science at Calcutta (of which he became Honorary Secretary in 1919).

In 1917 he was offered the newly endowed Palit Chair of Physics at Calcutta University, and decided to accept it. After 15 years at Calcutta he became Professor at the Indian Institute of Science at Bangalore (1933-1948), and since 1948 he is Director of the Raman Institute of Research at Bangalore, established and endowed by himself. He also founded the Indian Journal of Physics in 1926, of which he is the Editor. Raman sponsored the establishment of the Indian Academy of Sciences and has served as President since its inception. He also initiated the Proceedings of that academy, in which much of

his work has been published, and is President of the Current Science Association, Bangalore, which publishes Current Science (India).

Some of Raman's early memoirs appeared as Bulletins of the Indian Association for the Cultivation of Science (Bull. 6 and 11, dealing with the "Maintenance of Vibrations"; Bull. 15, 1918, dealing with the theory of the musical instruments of the violin family). He contributed an article on the theory of musical instruments to the 8th Volume of the Handbuch der Physik, 1928. In 1922 he published his work on the "Molecular Diffraction of Light", the first of a series of investigations with his collaborators which ultimately led to his discovery, on the 28th of February, 1928, of the radiation effect which bears his name ("A new radiation", Indian J. Phys., 2 (1928) 387), and which gained him the 1930 Nobel Prize in Physics.

Other investigations carried out by Raman were: his experimental and theoretical studies on the diffraction of light by acoustic waves of ultrasonic and hypersonic frequencies (published 1934-1942), and those on the effects produced by X-rays on infrared vibrations in crystals exposed to ordinary light.

In 1948 Raman, through studying the spectroscopic behaviour of crystals, approached in a new manner fundamental problems of crystal dynamics. His laboratory has been dealing with the structure and properties of diamond, the structure and optical behaviour of numerous iridescent substances (labradorite, pearly felspar, agate, opal, and pearls).

Among his other interests have been the optics of colloids, electrical and magnetic anisotropy, and the physiology of human vision.

Raman has been honoured with a large number of honorary doctorates and memberships of scientific societies. He was elected a Fellow of the Royal Society early in his career (1924), and was knighted in 1929.

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