



S. RAMASESHAN (*born 10 October 1923*)

DEDICATION

Professor S Ramaseshan attained the age of 60 on October 10, 1983. Ramaseshan is known to the scientific community in India not only for his scientific contributions, but also for his dedicated service to this Academy. He has served the Academy in various capacities for the past several years. His contribution to the Academy, especially as Editor of Publications and as the Chief Editor of *Pramana* (a journal of physics), have been invaluable. There is little doubt that much of the credit for strengthening and enlarging the publications activity of the Academy goes to Ramaseshan. He is now the President of the Academy.

Sivaraj Ramaseshan was born in Calcutta and had his early education at Nagpur, obtaining his B.Sc(Hons) degree in 1943. He joined the Indian Institute of Science soon after to carry out research work with Professor Sir C V Raman and obtained the Associateship of the Institute in 1948 and the D.Sc., degree from the University of Nagpur in 1951. He was a member of the faculty of the Physics Department of the Indian Institute of Science between 1948 and 1962 and then moved to the Indian Institute of Technology, Madras, as head of the Physics Department. He returned to Bangalore in 1966 to found a new division devoted to materials science in the National Aeronautical Laboratory. The Materials Science Division of this laboratory soon became well known as an outstanding research centre. He returned to the Indian Institute of Science as Joint Director in 1979 and became Director in 1981.

Ramaseshan has contributed to a variety of areas in Crystallography, Physics of Solids, Optics and Materials Science. His sharp intellect and clarity of understanding can be readily seen from his varied research publications. During the early years of his research career, Ramaseshan carried out studies on the crystallography of diamond and magneto-optic rotation. He evolved criteria which determine cleavage planes in diamond and based on surface energies of crystallographic planes, he could explain many characteristic features of the curved morphology of Indian diamonds. He then developed a model to calculate the actual Faraday rotation from the measured, apparent rotation. He studied the effect of stress on optical activity where he showed that the piezo-rotation tensor was an actual tensor of the fourth rank. His interest in Faraday rotation and birefringence led him to study the concept of Poincare representation of polarized light. Ramaseshan later investigated optical and magneto-optical activity in x-rays and neutrons and the Borrmann effect in optics.

One of the major contributions of Ramaseshan has been the application of anomalous scattering of x-rays and neutrons to crystal structure analysis. This