Rustom Roy (1924–2010)

Rustom Roy, a scientist of international repute, a doyen of materials science and Founder Director of the Materials Research Laboratory (MRL) at Penn State, one of the first of its kind in USA, passed away on 26 August 2010. He was elected an Honorary Fellow of the Indian Academy of Sciences, Bangalore, in 1990.

Considered as one of the top five Indian scientists in USA, a member of President Nixon's Science Advisory Council, Roy was the first Indian to be elected Fellow of the US National Academy of Engineering and Foreign Member of the Royal Swedish Academy of Engineering Science. He was the third Indian after Rabindranath Tagore and S. Radhakrishnan to be invited to deliver the Hibbert Lectures at the University of Oxford in 1979, for which he chose the title 'Experimenting with Truth'. This was also published by Pergamon Press. Roy also authored a monograph *Ternary Oxides* with O. Muller.

Born in India in 1924, Roy went to St Paul's School, Darjeeling and obtained his B Sc and M Sc in Geology from Patna University, before going to Pennsylvania State University, State College for his doctoral studies in geochemistry. He quickly rose to become one of the youngest professors. As a renowned geochemist, his pioneering research was in the study of glasses and ceramics, one of his discoveries being glass–ceramics which can withstand high temperatures. His group carried out path-breaking research in hydrothermal crystal growth and plasma deposition of diamond thin films.

I had the opportunity of working in his laboratory as a Research Associate between 1966 and 1970, first with H. K. Henisch and then with L. E. Cross, both of whom he recruited from the UK. I also audited his immensely popular lectures on 'Crystal Chemistry' which many US graduate students termed the single most influential course they ever attended. This was the time the laboratory moved into its new buildings constructed partly with Federal and partly with State funds. Roy was always concerned about the state of science and technology in India and was connected with Central Glass and Ceramic Research Institute (CGCRI), Kolkata in its initial stages. MRL Penn State had a number of Indian faculty and trained a large number of students from India.

Roy was one of the founding editors of the *Materials Research Bulletin* first published in 1966 and later the journal *Science and Society*, concerned with science education and the application of science and technology to societal needs. He was critical of science teaching as well as the downgrading of industrial research in USA and was not averse to courting controversy. The most well-known example was his strong criticism of the huge funds being spent on the Superconducting Supercollider to be located in Texas. Senate disapproval followed and led to its cancellation. This made Roy highly unpopular with the high energy and particle physics community.

His education and career in the US encompassed a life-long synthesis of disciplines and of science and religion. He served as Chairman of the US National Council of Churches Committee on Science, Technology and the Church. He was also involved with the activist avant-garde Christian community for 30 years, speaking and writing on contemporary religious issues. His wife Della Roy is a Distinguished Professor in Solid State at Penn State. Between them they discovered two minerals which are now called 'Rustomite' and 'Dellite'! He leaves behind his wife and three sons.

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