

## Ravindra Kumar Lal (1936–2014)

Ravindra Kumar Lal, former Professor of Geology and INSA Senior Scientist at Banaras Hindu University (BHU), Varanasi passed away on 19 October 2014. He was born on 14 October 1936 at Darbhanga in Bihar. In a well-knit joint family of 7 brothers and 3 sisters, Lal was the eldest. His father, K. N. Lal was a noted agricultural scientist at the then College of Agriculture and later served BHU as Registrar. It is because of this background that Lal received his early education including Bachelor's (1956) and Master's degrees (1958) from BHU.

Lal began his academic career as a Lecturer in the Department of Geology, BHU in 1958. He then went to the University of Toronto, Canada under the Canadian Commonwealth Scholarship and earned a doctorate in metamorphic petrology in 1966 working with W. W. Moorhouse. After returning to India, Lal became Reader in 1972 and later Professor in 1982 at the BHU Geology Department. He served as the Head of the Geology Department from 1986 to 1990 and continued after his superannuation in 1996 as CSIR Emeritus Scientist (1997–2001) and as INSA Senior Scientist (2003–2005). Lal thus had a very long association with BHU, a premier centre of learning in India.

Lal had an encyclopaedic knowledge of metamorphic petrology. He taught metamorphic petrology, mineralogy, experimental petrology and thermodynamics, Precambrian stratigraphy, etc. to the graduate and postgraduate students with great clarity. He had a very productive career and authored over 100 research papers in peer-reviewed journals. He was also a keen field geologist. Some of his publications set a benchmark in petrology. The salient research contributions of Lal and his co-workers include: (i) 'Res-tite' origin of the high-grade K-deficient cordierite–gedrite rocks of Fishtail Lake, Ontario, Canada; (ii) detailed petrological characteristics including geothermobarometry of the classic example of the Barrovian type progressive metamorphism of meta-pelites from Sini, Singhb-

hum, Jharkhand and Takdah, Darjeeling Himalaya; (iii) petrology of the low-pressure andalusite–sillimanite type of regional metamorphism of the Khetri Copper Belt, Rajasthan, and (iv) chemographic relationships of the high-grade silica-deficient sapphirine-bearing rocks of Sonapahar, Meghalaya.



Lal was a recipient of Alexander von Humboldt Fellowship. The Indo-German research collaboration between BHU and the Universities of Kiel and Bonn on the southern Indian high-grade metamorphic rocks was his brain child. This collaboration expanded with time as a sustained collaborative research programme from which IIT Kharagpur, Jadavpur University and Mysore University also greatly benefited. From this point onwards, Lal focussed mainly on the detailed geothermobarometry of granulites of the Southern Granulite Belt (SGB), Dharwar Craton of Karnataka and Tamil Nadu. He made a brave attempt to formulate new chemical potential diagrams to explicitly demonstrate the observed sequence of reaction textures during the metamorphic evolution of Mg–Al quartz-absent sapphirine granulites of Kiranur and Ganguvarpatti areas of Tamil Nadu and sapphirine–spinel–quartz granulites of Paderu area in Andhra Pradesh, and calibration of several new internally consistent geothermobarometers. His

remarkable breadth of geological vision and an enviable talent for lucid exposition are clearly reflected in his pioneering researches. These qualities made him a top-rated scientist, influential across a range of fields. He was also an inspirational teacher and a warm-hearted human being, to whom generations of students have reason to be grateful. He was also well known for his simplicity and patience.

Lal has been well received by the geological community for his outstanding contributions. He received the La Touche Medal of the Mining Metallurgical and Geological Institute, Kolkata (1958); was the first recipient of Professor M.R. Srinivasa Rao Award by the Geological Society of India, Bangalore (1985); and the National Mineral Award of the Ministry of Steel and Mines, Government of India (1995). He was elected a Fellow of the Indian Academy of Sciences, Bangalore (1986), of National Academy of Sciences (India), Allahabad (2001) and of Indian National Science Academy, New Delhi (1994). He also served on numerous committees and panels for INSA, the Shanti Swarup Bhatnagar Prize, Wadia Institute of Himalayan Geology (Dehradun) and the Geological Society of India (Bangalore). He can be described as one of the most distinguished petrologists of his generation.

I remember well the last time I met Lal at his residence in October 2013. He looked frail, but still active and thoughtful as ever. Not many people would know that he was an avid cricket player during his college days and Mrs Sudha Lal, a great cricket fan. His sad demise is a great loss to the entire metamorphic petrology community. He will be deeply missed by a large number of his colleagues, contemporaries and his family. He is survived by his wife (Sudha Lal), son (Ashesh Kumar Lal) and daughters (Sujla Narain and Subhra Sahay),

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