

National Award for Geoscience & Technology

Dr. N. V. Chalpathi Rao



Dr. N.V.Chalpathi Rao carried out an enduring research on petrology and geochemistry of kimberlites, lamproites, lamprophyres, their xenoliths and mafic dykes which has culminated in establishing, rather single handedly, an important school of deeper mantle petrology and geochemistry in India. His research combine field, petrography, petrology, geochemistry (including isotopes) and geophysical information to tackle various aspects of sub-continental lithospheric mantle evolution. He demonstrated as to how small-volume melt products such as kimberlites, lamproites and lamprophyres and their xenoliths can shed insights into large-scale geodynamic aspects; such as global link between kimberlites, flood basalts and mantle plumes, non-terrestrial source for the anomalous Ir enrichment at K-Pg boundary, origin and original spatial extent of the Proterozoic (Purana) sedimentary basins and the Deccan basalts, Mesoproterozoic mantle heterogeneities and chemical geodynamics in southern India, supercontinental (e.g., Rodinia) reconstructions, delineation of Neoproterozoic subduction event(s) in the eastern Dharwar craton, time scales of alkaline magmatic emplacement and diamond prospectivity. These results have been published high impact and best of journals in this domain of earth sciences such as Journal of Petrology, Precambrian Research, Lithos, Contributions to Mineralogy and Petrology, Mineralogy and Petrology, Earth Science Reviews, Journal of Geology, Canadian Mineralogist, International Journal of Earth Sciences, Tectonophysics, Geological Journal etc and testifies his credentials. As a PI of one of the major grants ever received in Earth Sciences, he bagged a Rs 13.85 crore individual project from DST-SERB on 'Deep mantle petrology' and had set up state-of-the art EPMA (in April, 2016) and SEM (in April, 2018) laboratories at BHU. The EPMA lab at BHU has emerged as one of the leading and productive facilities of the country pursuing world-class petrological research helping scores of researchers and students.

In recognition to his outstanding contributions in the field of Geoscience and Technology, Ministry of Earth Sciences (MoES) honours Dr.N.V.Chalpathi Rao with the "National Award in the field of Geoscience and Technology" for the year 2020.