

Murli Manghnani (1936-2023)

Murli Manghnani was born on April 4, 1936, in Karachi, India. He obtained B.S. with honors from Bihar University in India in 1957, and continued his education to graduate school, receiving a year later both M.S., and A.I.S.M. degree in Applied Geology from the Indian School of Mines in Dhanbad, for which he was also recognized with a Scholastic Award. Murli left India in 1958 on a long journey by ship, to pursue Ph.D. in Geology and Geochemistry at the Montana State University, Missoula. After defending his Ph.D. thesis in 1962, he joined the University of Wisconsin, Madison as post-doctoral fellow. He finally joined the faculty ranks at the University of Hawaii in 1963, first at the Department of Geology & Geophysics, and later at the Hawaii Institute of Geophysics and Planetology, where he remained until his retirement after almost 60 years of service in 2021.



At HIGP Murli established the High-Pressure Mineral Physics Laboratory (MPL). MPL has long been recognized among the leading facilities for high-pressure geoscience and materials science research for more than four decades, with outstanding national and international acclaim and reputation. Throughout his very productive career Murli served as principal investigator and co-principal investigator on almost 40 grants from NSF, W. M. Keck Foundation, Department of Defense, Department of Energy, Federal Highway Administration, University of Hawaii Foundation, and other agencies, with total support of ~\$18 M. In early 2000's Murli was among the founding members of the High Pressure Collaborative Access Team (HPCAT), one of the premiere high pressure synchrotron research facilities.

Among his most significant scientific accomplishments, Dr. Manghnani discovered unique properties and structures of silicate melts in Earth's mantle and core-related iron-rich liquids. Using state-of-the-art technologies such as ultrasonic interferometry, the synchrotron X-ray techniques, and an innovative high-temperature devices developed at UH Mānoa, Dr. Manghnani's research provided an explanation of anomalous behavior of these interesting mantle and core melt materials. These measurements provided fundamental understanding of the properties of small planetary cores, including properties of the Earth's liquid outer core. Murli authored and co-authored over 200 peer reviewed articles in scientific journals. He was a co-Editor of the Proceedings of the AIRAPT-17 International Conference on High Pressure Science and Technology (1999) and co-Editor of 2 Monograph Books in Materials Sciences (2005-2007).

Over a period of 20 years, between 1976 and 1996, in collaboration with the professors Akimoto, Syono and Yagi, Murli co-organized a series of 5 US-Japan seminars. This effort has now blossomed into the international conference series, attracting active participation of senior, as well as young researchers and students around the world. Since 2012 Murli also served as member of the Executive Committee of the International Symposium on Boron and Borides and Related Materials (ISBB), and chaired ISBB Conference in Honolulu in 2014.

Among his many outstanding accolades and honors, Murli was the recipient of John Simon Guggenheim Fellowship Award (1986) and Wilson Fellowship (1997), was elected Fellow of Mineralogical Society of America (1989), American Ceramic Society (2010) and American Geophysical Union (2017), and Life Fellow of the Indian Geophysical Union (2009). Murli retired and became Emeritus Professor at HIGP in 2021.

Murli passed away suddenly, on August 6, 2023, while on a trip to attend a family wedding in India. He was 87 years old. Murli was good-humored, insightful and ever enthusiastic, as well as a kind and generous host. He will be missed.