

Mildred Dresselhaus

Professor Mildred Dresselhaus is a native of the Bronx, and attended New York City public schools through junior high school, and Hunter College High School. She began her independent career in 1960 as a member of the research staff at the MIT Lincoln Laboratory after her PhD at the University of Chicago (1958) and a two-year postdoc at Cornell University. During that time she switched from research on superconductivity to magneto-optics, and carried out a series of experiments that led to a fundamental understanding of the electronic structure of semi-metals, especially graphite. This led to her appointment as an MIT faculty member and eventually to appointment as an Institute Professor in the departments of Physics and Electrical Engineering. She served as the Director of the Office of Science at the U.S. Department of Energy in 2000-01, and has been an officer in many national organizations in physics, engineering, and related areas. Honors and awards include 36 honorary doctorates worldwide, and the National Medal of Science, the Nicholson Medal for Humanitarian Service, the Compton Award, the Fermi Prize, the Kavli Prize, and the U.S. Presidential Medal of Freedom.

Professor Dresselhaus's research over the years has covered a wide range of topics in condensed matter and materials physics. She is best known for her work on carbon science and carbon nanostructures, as well as nanoscience and nanotechnology more generally. She is also one of the researchers responsible for the resurgence of the thermoelectrics research field through her early work on low-dimensional thermoelectricity in the early 1990s. She co-chaired a Department of Energy study on "Basic Research Needs for the Hydrogen Economy" in 2003 and more recently co-chaired the National Academy Decadal Study of Condensed Matter and Materials Physics. She has co-authored more than 1700 publications including books, book chapters, invited review articles, and peer-reviewed journal articles. Professor Dresselhaus remains involved in activities that promote the increased participation of women in science and engineering. She is an enthusiastic chamber music player where she plays violin and viola, and enjoys spending time with her husband, four children, and five grandchildren.