

**2013**

**7th Annual Dasari Lecture**

**Moungi Bawendi, MIT**

**Excitons in Nanocrystal Quantum Dots: Science, Technology, and the Path to Market**

*Moungi Bawendi* was born in Paris and grew up in France, Tunisia, and West Lafayette, Indiana. He enjoys spending time with his daughter when he is not at MIT or on the road. They enjoy skiing, reading, movies, and recently indoor rock climbing. His daughter is teaching him how to unicycle.

Bawendi received his A.B. in 1982 from Harvard University and his Ph.D. in chemistry in 1988 from The University of Chicago. This was followed by two years of postdoctoral research at Bell Laboratories, working with Dr. Louis Brus, where he began his studies on nanomaterials. Bawendi joined the faculty at MIT in 1990, becoming Associate Professor in 1995 and Professor in 1996.

Bawendi has followed an interdisciplinary research program that aims at probing the science and developing the technology of chemically synthesized nanocrystals. Bawendi has been at the forefront of the science and technology of semiconductor nanocrystal quantum dots for over two decades. This work has included the development of novel methods for synthesizing, characterizing, and processing quantum dots and magnetic nanoparticles as novel materials building blocks, studying the fundamental optical properties of quantum dots using a variety of spectroscopic methods, including the development of optical tools to study single nanocrystals, and combining quantum dots with various optical and electronic device structures to study their device properties. His work has also included developing applications of quantum dots in biological and biomedical imaging and sensing, in light emitting devices, photodetection, and solar energy conversion.

Bawendi has published over 250 papers on the science and technology of quantum dots and other materials systems, and has helped four start-up companies in commercializing quantum dot technology. A fifth company spun out from Bawendi's laboratory uses knowledge gained from his work on quantum dots, applying it to a medical device.

Bawendi has won numerous awards for his work. Among these are the Raymond and Beverly Sackler Prize in the Physical Sciences, the EO Lawrence award in Materials Chemistry from the US Department of Energy, the Fred Kavli Distinguished Lecture in Nanoscience from the Materials Research Society, and the American Chemical Society Award in Colloid and Surface Chemistry.

Bawendi is a fellow of the American Association for the Advancement of Science, a fellow of the American Academy of Arts and Sciences, and a member of the National Academy of Sciences.