

Dr. Joseph Mantese **Research Fellow, Sensors and Electronic Materials**



Biographical Profile

Joseph Mantese, Ph.D., is Research Fellow of the Physical Sciences Department, United Technologies Research Center (UTRC) where he is responsible for the development of next-generation electronic and functional materials, components, sensors, and packaging.

Previously, Mantese served as Project Leader, Multi-Species Chemical Sensing, UTRC; and interim Group Leader, Materials Science, UTRC. Prior to his tenure at UTRC, Mantese was Department Head of Delphi Research Laboratories (Materials, Components, and Packaging), Shelby Township, Michigan. Delphi's central research laboratory was responsible for

developing advanced technologies for automotive systems, including systems for safety, entertainment, heating/ventilation/air conditioning (HVAC), connection, and emission. Before joining Delphi in 1999, Mantese was a member of General Motors Research and Development Laboratories, Detroit, where he was Section Leader of sensor development.

Mantese has been honored twice (1990 and 1995) with General Motors' Campbell Award for scientific breakthroughs in materials science, and received national recognition through the 1997 "R&D 100" Awards for ground-breaking development of industrial scale plasma ion implantation. He is an inductee and subsequent honoree of Delphi Corporation's *Hall of Fame* (2000, 2004) for scientific research and the creation of corporate intellectual property; is the winner of the Socius Collegi Award (2004) from Wayne State University, Detroit, for collaborative research with the School of Engineering; and won UTRC's 2010 Outstanding Achievement Award for his work related to multi-species chemical sensing. In 2013, Mantese was appointed Fellow of the Connecticut Academy of Science and Engineering (CASE) and in March 2015, was inducted as a Fellow of the American Physical Society. He holds 38 patents pertaining to electronic materials, sensors, micro-electromechanical systems (MEMS), and components. Mantese has authored 100 peer-reviewed papers, including a book on the fundamentals of graded ferroelectric materials – as well as three book chapters related to electronic materials and devices – and has been invited to present talks and chair sessions at many technical symposia.

Mantese received a B.S. (summa cum laude) in physics from the University of Missouri – St. Louis, and an M.S. and Ph.D. in experimental solid state physics from Cornell University, Ithaca, New York.