



Scientific Misconduct: the Good, the Bad, and the Ugly

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This non-technical talk is designed to explore the increasingly common problem of misconduct in the scientific community. All of us are normally guided in our work by ethical principles that we have learned through the years both at home and in our workplace. Yet scientific misconduct continues to plague our course work, publications, and decisions that we make in our professional lives. My interest in this subject comes from some personal experiences in scientific publishing and my efforts to establish the first ethics policy for SPIE-The International Society for Optical Engineering. Some surprising and very regrettable examples of scientific misconduct as it relates to the publication of scientific papers will be presented. Have you heard of the organic yellow laser, element 118, and outright plagiarism by a top Indian scientist of a paper on high energy theory done originally at Stanford University? All are glaring examples of fraud in science. While these examples are extreme there are many lesser avenues of misconduct that we must avoid. Many examples will be given along with some lessons learned along the way. The taxonomy of misconduct is complex as is the punishment for the crime.

Dr. James A. Harrington is Professor of Material Science and Engineering at Rutgers University. He received his Ph.D. in Physics from Northwestern University in 1970. He has over thirty years of research experience in the area of optical properties of solids mostly in the field of infrared fiber optics. His research interests include fabrication, characterization, and applications of specialty fiber optics for use in the delivery of laser power in surgical and industrial applications and for use as chemical and temperature fiber optic sensors. His book on Infrared Fiber Optics and Their Applications, SPIE Press, Bellingham, WA, 2004 describes the many specialty fibers that transmit in the infrared. Prof. Harrington is a fellow and Past President of SPIE, a fellow of OSA and a member of APS. In 2005-2006 he served as a Jefferson Science Fellow at the Department of State working on export control.

