



Yoel Fink

**Director of the Research Laboratory of Electronics
Professor of Materials Science and Electrical Engineering**

Professor Fink's research focuses on extending the frontiers of fiber materials from optical transmission to encompass electronic, optoelectronic and even acoustic properties. What makes these fibers unique is the combination of a multiplicity of materials arranged in specific device architectures with features down to 10 nanometers. Fink and his group (fibers@mit) utilize two complementary approaches towards realizing sophisticated functions: on the single-fiber level, the integration of a multiplicity of functional components into one fiber, and on the multiple-fiber level, the assembly of large-scale fiber arrays and sophisticated fabrics. Multimaterial fibers offer unprecedented control over material properties and function on length scales spanning the nanometer to kilometer range.

Yoel Fink is Director of the Research Laboratory of Electronics (RLE) and Professor of Materials Science and Electrical Engineering at the Massachusetts Institute of Technology (MIT). Professor Fink received a B.Sc. in Chemical Engineering (1994) and a B.A. degree in Physics (1995) from the Technion, Haifa; in 2000 he was awarded a Ph.D. degree in Materials Science from MIT. That same year, he joined the faculty of the MIT Department of Materials Science and Engineering (DMSE), and in 2011 he was appointed RLE Director.

Professor Fink is a co-founder of OmniGuide Inc. (2000) a \$25M medical device company that has commercialized his research on photonic bandgap fibers for use in minimally invasive surgery. Fink served as the company's chief executive officer from 2007–2010, and as Chairman of the Board. To date OmniGuide fibers have been used to treat over 100,000 patients and are used in more than 650 hospitals in the US alone. He is the coauthor of over eighty scientific journal articles, and holds over forty-five issued U.S. patents on photonic fibers and devices.