

[ABOUT DMSE](#)[RESEARCH](#)[ACADEMICS](#)[RESOURCES](#)[FACULTY](#)[NEWS AND EVENTS](#)

---

## Yoel Fink

Professor of Materials Science

MacVicar Faculty Fellow

Joint Professor of Electrical Engineering and Computer Science

B.Sc. Chemical Engineering, Technion - Israel Institute of Technology, 1994

B.A. Physics, Technion - Israel Institute of Technology, 1995

Ph.D. Materials Science, MIT, 2000

Room 36-419

Phone: (617) 258-6113

Fax: (617) 253-1301

[yoel@mit.edu](mailto:yoel@mit.edu)

[Personal Website \(http://mit-pbg.mit.edu/\)](http://mit-pbg.mit.edu/)

---

## Research:

Professor Fink's research interests are in the theory, design, fabrication and characterization of multimaterial multifunctional fibers and fiber assemblies. Fibers are among the earliest forms of human expression, yet surprisingly have remained unchanged from ancient to modern times. Can fibers become highly functional devices? Can they see, hear, sense and communicate? Fink's research group, [fibers@mit](mailto:fibers@mit.edu), 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 disparate materials arranged in elaborate geometries with features down to 10 nanometers. Two complementary approaches towards realizing sophisticated functions are utilized: 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 fabrics. Fink's multimaterial fibers offer unprecedented control over material properties and function on length scales spanning the nanometer to kilometer range.

---

[Related News](#)[Publications](#)