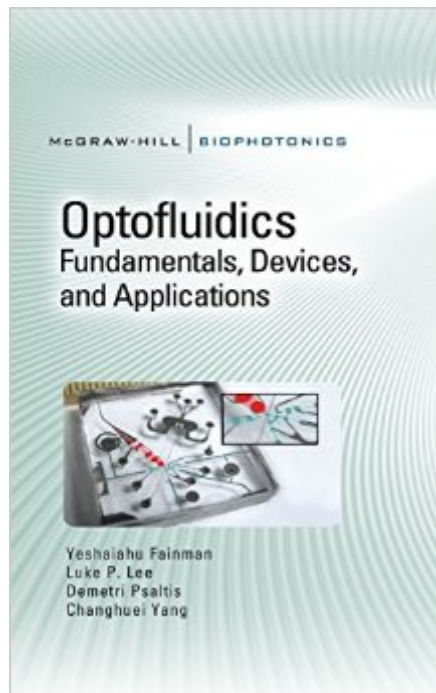


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# Optofluidics: Fundamentals, Devices, And Applications (McGraw-Hill Biophotonics)



## Synopsis

Cutting-Edge Optofluidics Theories, Techniques, and Practices Add novel functionalities to your optical design projects by incorporating state-of-the-art microfluidic technologies and tools. Co-written by industry experts, *Optofluidics: Fundamentals, Devices, and Applications* covers the latest functional integration of optical devices and microfluidics, as well as automation techniques. This authoritative guide explains how to fabricate optical lab-on-a-chip devices, synthesize photonic crystals, develop solid and liquid core waveguides, use fluidic self-assembly methods, and accomplish direct microfabrication in solutions. The book includes details on developing biological sensors and arrays, handling maskless lithography, designing high-Q cavities, and working with nanoscale plasmonics. Research outcomes from the DARPA-funded Center for Optofluidics Integration are also discussed. Discover how to:

- Work with optofluidic sources, lenses, filters, switches, and splitters
- Use dielectric waveguiding devices to input, move, and manipulate fluids
- Integrate colloidal crystals and fibers with microfluidic systems
- Develop bio-inspired fluidic lens systems and aspherical lenses
- Deploy miniaturized dye lasers, microscopes, biosensors, and resonators
- Analyze microfluidic systems using flow injection and fluorescent spectroscopy
- Build optofluidic direct fabrication platforms for innovative microstructures
- Accomplish optofluidic liquid actuation and particle manipulation

## Book Information

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