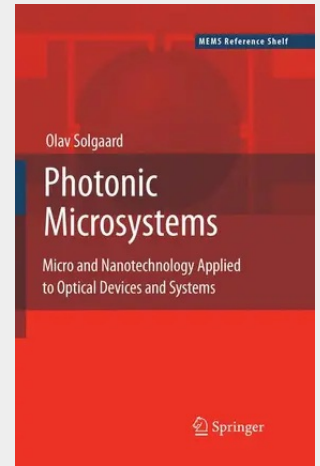


Photonic Microsystems

Micro and Nanotechnology applied to Optical Devices and Systems

Photonic Microsystems: Micro and Nanotechnology Applied to Optical Devices and Systems describes MEMS technology and demonstrates how MEMS allow miniaturization, parallel fabrication, and efficient packaging of optics, as well as integration of optics and electronics. Explained here is how the characteristics of MEMS enable practical implementations of a variety of applications, including projection displays, fiber switches, interferometers, and spectrometers. Photonic Microsystems also describes the phenomenon of Photonic crystals (nanophotonics) and demonstrates their ability to enable synthesis of materials with optimized optical characteristics. This provides control over optical fields over sub-wavelength distances, leading to devices with improved scaling and functionality compared to traditional optics. Photonic Microsystems concludes with an up-to-date discussion of the need for the combination of MEMS and Photonic crystals by demonstrating that practical photonic-crystal devices leverage MEMS technology for integration and packaging.

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