

## **NANO/MICRO PHOTONICS AND NEW APPLICATIONS**

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Recent significant successes in development of optical materials structured on a length scale comparable to the wavelength of light attracted increasingly growing interest in a broad range of disciplines. Novel concepts of ultrasmall microphotonic devices, show the great potential for revolutionizing the communications technologies at all length scales—from on-chip data communications in computing to the board level and up to the long haul communications. The advances in semiconductor nanophotonics and nanostructures have also revolutionized the fields of solid state lighting and solar cells, which have tremendous impacts for energy applications. The presentations in this section provide an overview of photonic technologies and new applications from academic and industrial perspectives. The focuses will cover both the silicon-based photonics for chip-based applications, and III-V based semiconductors for energy applications.