Chip-Based Nonlinear Photonics

(Invited paper)

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ABSTRACT

Over the past decade silicon nitride has emerged as an exceptional material for nonlinear optics and has led to realization of ultrahigh-performance photonic devices in fields from data communications to medicine. I will discuss nonlinear photonics using silicon-nitride chips that can be used to create chip-based optical frequency combs via supercontinuum generation and in microresonators.

Keywords: nonlinear photonics, four-wave mixing, optical frequency combs, supercontinuum generation