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Advanced Solid-State and Fiber Mid-IR Lasers: Novel Materils, Components, Systems and Applications

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Message from the Guest Editors

Dear Colleagues,

Mid-IR sources and detectors operating at 2-30 micrometers have a number of applications in medicine, environmental monitoring, manufacturing process control, scientific research and special tasks. The issue addresses the development of high-efficiency, powerful and compact solid-state and fiber mid-IR lasers. Recent years have seen a significant progress in the materials and components for the mid-IR. A number of laser crystals and ceramics with improved parameters was presented. Novel high-purity optical fibers lead to promising results when creating mid-IR lasers and supercontinuum sources. Nonlinear devices operating in the mid-IR, such as optical parametric oscillators and generators have also rapidly progressed. Characteristics and parameters of the mid-IR lasers and laser systems were improved. The novel applications of the mid-IR lasers and nonlinear optical devices were demonstrated. Papers in these research areas will be presented in the coming issue.