Special Issue

Active Optical Fibers and Broadband Fiber-Based Devices

Message from the Guest Editors

We are pleased to invite you to publish your research in this Special Issue on "*Active Optical Fibers and Broadband Fiber-Based Devices*" in *Micromachines*. Active fibers are optical fibers that have one or more laser-active dopants in the fiber core. In most cases, they are rare-earth-doped fibers, with dopants like ytterbium, erbium or thulium. Due to those dopants, they can be used as laser gain media, also for realizing fiber amplifiers. In the past twenty years, the traditional rare-earth doped fibers plus newly invented or created laser-active fibers have revolutionized the field of fiber-based devices, which are widely applied to optical-fiber communication, medicine, imaging and optical sensing, etc. This Special Issue aims to solicit relevant work in broadband doped fiber devices (superluminescent sources, fiber amplifiers, fiber lasers) based on traditional or newly developed laser-active medium. The broadband active fiber devices can be flexibly applied to all areas of "internet of things (IoT)", including fiber-optic communication systems, astrophysics, optical sensing, imaging, and medicine.

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