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**Announcing the IEEE Photonics Journal Special Issue on:
Specialty Optical Fibers: Materials, Fabrication, Devices and Applications**

Nowadays optical fiber based photonic devices play an important role in modern human's life starting from high speed broad band internet to medical surgery. Indeed, they have entered across the entire spectrum of scientific, industrial and commercial applications. Specialty optical fibers with either special waveguide structures or novel material compositions become heart of all-fiber based advanced photonic devices and components. Some of the important milestones in the development of specialty optical fibers along with their universal photonic devices have occurred at the beginning of the 21st century with the invention of high power optical amplifier for cable-TV, fiber to the home, light detection ,ranging and free space communication system; high power fiber lasers for high precision metal cutting, welding and military applications; broad band supercontinuum sources for optical coherence tomography applications along with the invention of a novel fabrication technique called stack-and-draw process. The proposed topic is a multidisciplinary field covering fundamental physics and chemistry related to material science and opto-electronics.

The purpose of this issue is to document leading-edge work in the field of novel material and waveguide design based on specialty optical fibers and their photonic devices through a collection of invited papers. This special issue will be solely devoted to the most recent achievements in the development of different varieties of specialty optical fibers and serve as an universal resource for future development. The scope of the issue covers all aspects of theoretical and experimental photonic research related to the specialty optical fiber's fabrication technology, material processing, characterization, waveguide design, spectroscopic properties, and, applications with high technological impact potential.

Topics covered include, but are not limited to:

- Specialty fiber design and fabrication Technology
- Photonic crystal fibers for broadband sources and their applications
- Specialty fibers for visible light generation
- Mid-infrared fibers for MIR broadband sources and their applications
- Optical gain fibers for C and L-band amplifiers
- Intrinsically photosensitive rare-earth doped fibers and DFB fiber lasers
- Polarization maintaining optical fibers and their applications
- Multicore optical fibers and high speed communication systems
- Radiation sensitive fibers and dosimeters
- Large mode area rare-earth doped fibers and high power fiber lasers
- Metal nano-particles doped optical fibers and Biosensors
- Fiber based saturable absorbers for pulsed fiber lasers

The papers of this special issue are by invitation only by the Guest editors.. Maximum 25 numbers of Invited papers will be documented related to the above topics in this special issue. All papers need to present original, previously unpublished work and will be subjected to the normal standards and peer-review process of the journal. The standard PJ publication charges will apply to all published articles.

The Guest Editors for this issue are: **Dr. Mukul Chandra Paul** (paulmukul@hotmail.com), Central Glass and Ceramic Research Institute, **India**, **Prof. Zhipei Sun** (zhipei.sun@aalto.fi), Aalto University, **Finland**, **Prof. Alexander V. Kir'yanov**, (alejandrokir@gmail.com), National University of Science and Technology, Moscow, **Russia**, **Prof. Sulaiman Wadi Harun** (swharun@um.edu.my), University of Malaya, **Malaysia**.

Submissions by website only: <https://mc.manuscriptcentral.com/pj-ieee>

Information about journal and fees are at <https://www.photonicsociety.org/publications/photronics-journal/open-access>.

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