Special Issue

Specialty Optical Fiber-Based Sensors

Message from the Guest Editor

Novel specialty optical fibers refer to optical fibers that have been engineered in materials and structures and undergone post-processing to yield novel functionalities and applications. Specialty optical fibers composed of different materials offer additional possibilities for improving sensor sensitivities by exploiting the properties of inserted materials (glass, metal, semiconductor, polymer, etc.). Sensor performances are furthermore improved by applying post-processing techniques to the fibers in order to enhance light–matter interactions. Extended sensing functionalities can be achieved by specialty optical fibers, accessing the space domain of light waves (few-mode fibers, multi-mode fibers, multi-core fibers, etc.). The associations of specialty optical fibers with robust and/or advanced sensing systems (fiber gratings, fiber interferometers, fiber metasurfaces, plasmonic devices, etc.) lead to new sensing possibilities. The aim of this Special Issue is to collect and highlight the lasted advances in fiber sensors based on specialty optical fibers and their applications. For more details, please visit here.

Guest Editor

Prof. Dr. Jian Wang

Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, Wuhan 430074, China

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Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

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