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Specialty Optical Fiber-Based Sensors

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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 latest advances in fiber sensors based on specialty optical fibers and their applications.

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Special Issue



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Message from the Editor-in-Chief

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