



Fiber Optics: Internet to Biomedical Applications

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Message from the Guest Editor

As the world's population grows and lives longer, healthcare providers around the world are increasingly seeking advanced biomedical tools that enable more-efficient patient diagnosis, monitoring, and treatment. In this regard, the application of fiber optics to biomedical sensors is becoming increasingly important. At the same time, recent advances in minimally invasive surgery (MIS) require smaller disposable sensor catheters. The integration of fiber optics into the medical community has enabled safer procedures, more-efficient surgeries, faster recovery times, and better diagnostic investigations.

The topics of interest include, but are not limited to, the following: fiber optic technology: material and fabrication, microstructured fibers, and highly nonlinear fibers; pulse propagation in nonlinear optical fibers: optical solitons, pulse shaping, pulse compression, pulse broadening, nonlinear optical processes, and all-optical tunable delays; and biomedical applications: diagnostic and therapeutic devices based on fiber optics, optical fiber catheters, laparoscopic devices using fibers, selective tissue ablation, and tissue imaging with different penetration depths.





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Message from the Editor-in-Chief

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