Special Issue

Ultra Large Mode Area Fibers and Fiber Lasers

Message from the Guest Editor

With the recent advances in high-power fiber laser techniques, there has been a growing impact on optical science and engineering of ultra large mode area (ULMA) fibers. These fibers bring the issue of nonlinear effects under control with their large mode-field area, however their large core makes single-mode operation difficult to achieve, leading to a wide variety of approaches.

Some exploit higher-order mode delocalization to achieve high-performance active double-clad fiber structures. Others manage the issues due to multi-mode propagation by selectively managing the loss of the fundamental mode with respect to the higher-order modes. Some solve the technical limits of ULMA fibers through the study and fabrication of multi-core fibers. Further novel approaches are constantly being uncovered by investigation in a field that is presently at the leading edge of fiber optics research.

This Special Issue is dedicated to the most recent progress and emerging novel applications of ULMA fibers in optics and photonics, with a special emphasis on fiber laser applications, and to the associated advances in fabrication, measurement, and modeling techniques.

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2020)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/23407

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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