Brillouin Scattering in Multimode Fibers

Here, we explored a highly multimode fiber amplifier in which stimulated Brillouin scattering was greatly suppressed due to a reduction of light intensity in a large fiber core and a broadening of ...

Strongest suppression is achieved with selective mode excitation that gives the broadest Brillouin spectrum. Our method is efcient, robust, and fi applicable to continuous waves and pulses.

The key challenge for high-power delivery through optical fibers is overcoming nonlinear optical effects. To keep a smooth output beam, most techniques for mitigating optical nonlinearities ...

In high power applications of multimode optical fibers such as high power beam delivery and optical phase conjugation, the estimation of critical power of stimulated Brillouin scattering is important.

Here, we present a simple theoretical formalism describing SBS interaction between two individual optical modes selectively excited in an ...

Here we propose and demonstrate an efficient method of suppressing SBS in standard multimode fibers while maintaining narrow linewidth and high output-beam quality, via wavefront ...

Moving out of the single-mode paradigm, we show experimentally that wavefront-shaping of coherent input light to a highly multimode fiber can increase the power threshold for stimulated...

We propose an efficient method of maintaining high beam quality of a highly multimode fiber amplifier by full-field wavefront shaping of a coherent seed. This approach strongly suppresses the stimulated ...

Highly multimode excitation of fibers has been proposed as a novel route toward efficient SBS suppression. Here, we develop a detailed, quantitative theory which confirms this proposal and ...

Here, we present a simple theoretical formalism describing SBS interaction between two individual optical modes selectively excited in an acoustically isotropic multimode optical fiber.

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