Abstract

A Brillouin fiber laser using a highly nonlinear birefringent photonic crystal fiber is reported. The core of the fiber was elliptical in shape. A single-longitudinal-mode high power fiber laser was used as a Brillouin pump and the laser produced multiwavelength output with a 0.04 nm separation. Adjusting the polarization controller plates made it possible to obtain a single wavelength laser. The effect of the small core birefringent photonic crystal fiber on the output of the laser was explored. The laser was stable and showed an intensity fluctuation of less than 0.2 dB. The output of the laser was monitored using an optical spectrum analyzer of resolution 0.01 nm.
Brillouin Fiber Laser using Nonlinear Birefringent Photonic Crystal Fiber

References


**Index Terms**

Computer Science  
Circuits and Systems

**Keywords**

Fiber Laser, Brillouin Fiber laser, photonic crystal fiber, nonlinear optics, single-mode laser