





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 Controllable wavelength channels for Multiwavelength Brillouin Bismuth / Erbium based fiber Laser (Article) [Open Access](#)

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## Abstract

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We propose and demonstrate a Multiwavelength Brillouin Bismuth / Erbium Fibre Laser (MBBEFL) with the ability to control the number of wavelength channels generated. A multi-wavelength comb output is obtained using a 7.7km DCF as a non linear gain medium to generate Stokes wavelengths through the process of Stimulated Brillouin Scattering (SBS). The DCF is pumped by a Raman pump source at 400mW to lower the dispersion loss and promote the generation of the Stokes wavelengths. A 49cm long Bismuth based Erbium Doped Fibre (Bi-EDF) is used as an optical amplifier to provide the necessary gain for the Brillouin Pump and also act as the gain medium for the generated Stokes signal.

SciVal Topic Prominence 

Topic: Erbium-Doped Fiber | Ring Lasers | Thulium

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 (2011) *Optics and Laser Technology*

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 (2010) *International Journal of Physical Sciences*

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