

PUBLISHED PAPER

Journal: Microwave and Optical Technology Letters

Paper: Methodology for all-fiber optical active devices by composing the stimulated Brillouin scattering spectra

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Abstracts:

The methodology for reshaping and enlarging the Brillouin gain spectral response is proposed in this article as a technique to develop all-fiber optical active devices. It is based on the superposition of the Brillouin scattering spectra from several optical fibers, which are connected in serial, parallel, or both. Additionally, the overall Brillouin gain spectral response can be tailored or customized by tuning the temperature or the strain on the fiber. To experimentally demonstrate the method, we propose a fiber device with a tailored like $\sim W$ spectral response. The bandwidth is 19 GHz at 3 dB, centered in 10.765 GHz from the pump wavelength. VC 2010 Wiley Periodicals, Inc. Microwave Opt Technol Lett 52: 1316–1318, 2010; Published online in Wiley InterScience (www.interscience.wiley.com). DOI 10.1002/

mop.25199