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Applied Optics
Volume 53, Issue 29, 10 October 2014, Pages 6944-6949

Tunable single Stokes extraction from 20 GHz Brillouin fiber laser using ultranarrow bandwidth optical filter (Article)

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Abstract

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The individual extraction of a Brillouin Stokes line from a 20 GHz comb generated from the compact configuration of a multiwavelength Brillouin fiber ring laser configuration has been achieved using an ultranarrow bandwidth (UNB) optical filter. The narrowest bandwidth transmission of a UNB optical filter that is 50 pm is used in order to get particular Stokes. The Stokes filtered is in the wavelength range of 1549.768-1551.016 nm. High SNR within the range of 54.97-11.73 dB with almost nil peak power loss being obtained was monitored by a 0.16 pm optical spectrum analyzer, giving convincing results. Relatively, the proposed configuration could provide wide tunability and narrow selection of the Brillouin Stokes. © 2014 Optical Society of America.

SciVal Topic Prominence

Topic: Erbium-Doped Fiber | Ring Lasers | Thulium

Prominence percentile: 92.917

Indexed keywords

Engineering controlled terms: Bandpass filters, Bandwidth, Extraction, Fiber lasers, Light transmission, Optical filters, Ring lasers, Spectrum analyzers

Engineering uncontrolled terms: Brillouin fiber laser, Brillouin fiber ring laser, Brillouin Stokes, Individual extractions, Optical spectrum analyzer, Ultra-narrow bandwidth, Wavelength ranges, Wide tunability

Engineering main heading: Microwave filters

ISSN: 1559128X
CODEN: APOPA
DOI: 10.1364/AO.53.006944
Document Type: Article

Source Type: Journal
Original language: English
Publisher: OSA - The Optical Society

References (15)

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1 Song, Y.J., Zhan, L., Ji, J.H., Su, Y., Ye, Q.H., Xia, Y.X.
Self-seeded multiwavelength Brillouin–erbium fiber laser

(2005) *Optics Letters*, 30 (5), pp. 486-488. Cited 81 times.
doi: 10.1364/OL.30.000486

View at Publisher

2 Zhang, Z., Zhan, L., Xia, Y.
Tunable self-seeded multiwavelength Brillouin-Erbium fiber laser with enhanced power efficiency

(2007) *Optics Express*, 15 (15), pp. 9731-9736. Cited 55 times.
http://www.opticsexpress.org/DirectPDFAccess/FB1E1C0A-BDB9-137E-C1C8AE81D222DCB7_139977.pdf?da=1&id=139977&seq=0&CFID=49089004&CFTOKE
doi: 10.1364/OE.15.009731

View at Publisher

3 Ahmad, H., Zulkifli, M.Z., Hassan, N.A., Harun, S.W.
S-band multiwavelength ring Brillouin/Raman fiber laser with 20 GHz channel spacing

(2012) *Applied Optics*, 51 (11), pp. 1811-1815. Cited 29 times.
http://www.opticsinfobase.org/view_article.cfm?gotourl=http%3A%2F%2Fwww%2Eopticsinfobase%2Eorg%2FDirectPDFAccess%2F53CD30D4%2DE15D%2DD5AA%2DCC506E0F09838346%5F231798%2Ep
doi: 10.1364/AO.51.001811

View at Publisher

4 Shahabuddin, N.S., Harun, S.W., Zulkifli, M.Z., Thambiratnam, K., Ahmad, H.
Bismuth-based Brillouin/erbium fiber laser

(2008) *Journal of Modern Optics*, 55 (8), pp. 1345-1351. Cited 14 times.
doi: 10.1080/09500340701652303

View at Publisher

5 Cowle, G.J., Stepanov, D.Y.
Hybrid Brillouin/erbium fiber laser

(1996) *Optics Letters*, 21 (16), pp. 1250-1252. Cited 177 times.
http://ol.osa.org/Issue.cfm
doi: 10.1364/OL.21.001250

View at Publisher

6 Liu, Y.-g., Wang, D., Dong, X.
Stable room-temperature multi-wavelength lasing oscillations in a Brillouin-Raman fiber ring laser

(2008) *Optics Communications*, 281 (21), pp. 5400-5404. Cited 32 times.
doi: 10.1016/j.optcom.2008.07.081

View at Publisher

by multiple four-wave mixing processes

Tang, J. , Sun, J. , Zhao, L.
(2011) Optics Express

Multi-wavelength Brillouin-Raman fiber laser generation assisted by multiple four-wave mixing processes in a ring cavity

Shirazi, M.R. , Mohamed Taib, J. , Dimyati, K.
(2013) Laser Physics

Multiwavelength Brillouin/erbium fiber laser with adjustable wavelength spacing

Zhang, Z. , Wu, J. , Xu, K.
(2009) Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS

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