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Spectral response of distributed-feedback resonators with a continuously distributed phase shift

C.C. Ko1, N. Ismail1, E. Bernhardi1, F. Laurell2, and M. Pollnau3
1Department of Applied Physics, Royal Institute of Technology, Stockholm, Sweden; 2Department of Materials and Nano Physics, Royal Institute of Technology, Kista, Sweden; 3Visiting Scientist, Department of Materials and Nano Physics, Royal Institute of Technology, Kista, Sweden; 4Advanced Technology Institute, University of Surrey, Guildford, United Kingdom

We present a tunable distributed feedback resonator with a phase shift due to light intensity decaying into a material grating responsible.

All-Bi Bi-doped laser continuously tunable from 1317-1375nm

N.K. Thippurapu, S. Wang, A.A. Uminov, P. Barua, and J.K. Sahu, University of Southampton, SOUTHAMPTON, United Kingdom

We demonstrate a tunable Bi-doped fiber laser covering 1317-1375nm with a maximum power of 57mW. With further amplification, the output reached more than 100mW over 52nm bandwidth with an OSNR of >40dB.

Switching Dynamics of Dark Solitons in Kerr Microresonators

B.N. Zozouline1, A.P. Füle1, D.O. Hamadouche1,2, O.B. Hebling1, P. Grützmacher1,2, E. Bogomolov1,2, S. Bonhote1,2, and J. Faist1,2
1Swiss National Centre of Competence in Research 'Quantum Science and Technology', University of Basel, Switzerland; 2EPFL, Lausanne, Switzerland

We present a novel polarization-sensitive phase modulator for light modulated with spatially periodic (integrated) photonic circuitry to design Mach-Zehnder modulators for silica photonic circuits with improved modulation efficiency and reduced energy dissipation per bit.

Refuting observer-independence in quantum theory

M. Droste1, L. Frank1, F. Fröbe1, S. Grimm2, J. Hack2, and M. Pütz3
1Institute for Quantum Optics and Quantum Information, Austrian Academy of Sciences, Vienna, Austria; 2 Faculty of Mathematics and Physics, University of Vienna, Austria; 3Institute for Quantum Optics and Quantum Information (IQOQI), Austrian Academy of Sciences, Vienna, Austria

We present a new phase with no static counterpart: the Floquet topological metal. Two types of such phase are found in scattering-type scanning tunneling microscopy, where it is used to manipulate the intermodal phase differences of a mid-IR QCL comb, resulting in a train of pulses with 12 ps FWHM and peak-to-average ratio exceeding 40.