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Title:High birefringence, low loss terahertz photonic crystal fibres with zero dispersion at 0.3 THz Authors: Yin, Guo-Bing (1); Li, Shu-Guang (1); Wang, Xiao-Yan (1); Liu, Shuo (1) Author affiliation:(1) Key Laboratory of Metastable Materials Science and Technology, College of Science, Yanshan University, Qinhuangdao 066004, China Corresponding author:Li, S.-G.(shuguangli@ysu.edu.cn) Source title: Chinese Physics B Abbreviated source title: Chin. Phys. Volume:20 Issue:9 Issue date:September 2011 Publication year:2011 Article number:090701 Language:English ISSN:16741056 Document type: Journal article (JA) Publisher:Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom Abstract: A terahertz photonic crystal fibre (THz-PCF) is designed for terahertz wave propagation. The dispersion property and model birefringence are studied by employing the finite element

method. The simulation result reveals the changing patten of dispersion parameter versus the geometry. The influence of the large frequency band of terahertz on birefringence is also discussed. The design of low loss, high birefringence THz-PCFs with zero dispersion frequency at 0.3 THz is presented.

Number of references:18