Optics Letters

Large refractive index modulation based on a BDK-doped step-index PMMA optical fiber for highly reflective Bragg grating inscription: supplement

XUEHAO HU,^{1,2,*} D XIAOYU YUE,^{1,2} XIN CHENG,³ D SHIXIN GAO,⁴ RUI MIN,⁵ HENG WANG,⁴ HANG QU,^{1,2} AND HWA-YAW TAM³

This supplement published with The Optical Society on 11 June 2021 by The Authors under the terms of the Creative Commons Attribution 4.0 License in the format provided by the authors and unedited. Further distribution of this work must maintain attribution to the author(s) and the published article's title, journal citation, and DOI.

Supplement DOI: https://doi.org/10.6084/m9.figshare.14610741

Parent Article DOI: https://doi.org/10.1364/OL.427042

¹Research Center for Advanced Optics and Photoelectronics, Department of Physics, College of Science, Shantou University, Shantou, Guangdong 515063, China

²Key Laboratory of Intelligent Manufacturing Technology of MOE, Shantou University, Shantou, Guangdong 515063, China

³Photonics Research Centre, Department of Electrical Engineering, The Hong Kong Polytechnic University, Kowloon, Hong Kong SAR, China

⁴College of Science, Shenyang Aerospace University, Shenyang 110136, China

⁵Center for Cognition and Neuroergonomics, State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University at Zhuhai, Zhuhai, Guangdong 519087, China

^{*}Corresponding author: xhhu3@stu.edu.cn

Large refractive index modulation based on BDK-doped step-index PMMA optical fiber for highly reflective Bragg grating inscription: supplemental document

The evolutions of gratings inscribed with single pulse energies of 1.4 mJ and 2.4 mJ are shown in Fig. S1 and Fig. S2, respectively.

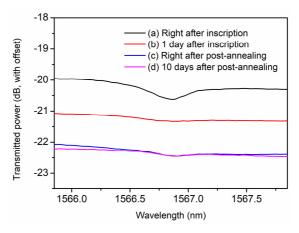


Fig. S1. Transmitted FBG spectra with a pulse energy of 1.4 mJ in a 4-mm-long FBG: (a) right after inscription, (b) one day after inscription, (c) right after post-annealing at 80°C for one day, and (d) ten days after post-annealing.

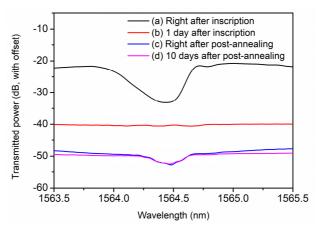


Fig. S2. Transmitted FBG spectra with a pulse energy of 2.4 mJ in a 4-mm-long FBG: (a) right after inscription, (b) one day after inscription, (c) right after post-annealing at 80°C for one day, and (d) ten days after post-annealing.