Erratum

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Erratum to: Ultrafast Bessel beams: advanced tools for laser materials processing

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In the online and the printed issue of *Advanced Optical Technologies* [1] an error in Figure 2 occurred. The scale in Figure 2A, D is 3 μm . The correct figure is published here.

Figure 2: Bessel beams interaction with transparent materials [61, 63]. (A) Input surface pattern generated by a single shot tightly focused ultrashort (60 fs, 14 μJ) Bessel beam ($\theta_{\text{air}} = 22^\circ$) on fused silica; scanning electron microscope (SEM) image. The Bessel ring pattern is recognizable. (B) A high aspect ratio structure in the form of a one-dimensional void in bulk fused silica generated by a single shot ps stretched low focused Bessel beam (2 ps, 26 μJ , $\theta_{\text{glass}} = 4^\circ$), viewed as low refractive index domain by phase-contrast microscopy (PCM). (C) Positive refractive index engineering with multishot ($n = 500$) ultrashort moderately focused Bessel beam (60 fs, 1 μJ , $\theta_{\text{glass}} = 8^\circ$); PCM image [61]. Dark colors denote a positive index change and white colors a negative change, respectively. (D) Back surface (exit surface) nanoscale structure in fused silica induced by a single shot moderately-focused ps stretched laser pulse (5 ps, 14 μJ , $\theta_{\text{glass}} = 8^\circ$); SEM image. (E) Nanoscale void in sapphire (140 fs, 2 μJ , $\theta_{\text{sapphire}} = 15^\circ$) [62] drilled by a single laser pulse and viewed with SEM after FIB milling. The used energies correspond to fluence values in air (in the absence of nonlinear distortions) from several J/cm^2 up to several tens of J/cm^2 . Laser direction is marked.

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Reference

- [1] R. Stoian, M. Bhuyan, G. Cheng, G. Zhang, R. Meyer, et al., *Adv. Opt. Technol.* 7, 165–174 (2018).