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Title:	High-fidelity large area nano-patterning of silicon with femtosecond light sheet
Authors:	Sidhu, M.S. (/jspui/browse?type=author&value=Sidhu%2C+M.S.) Munjal, P. (/jspui/browse?type=author&value=Munjal%2C+P.) Singh, K.P. (/jspui/browse?type=author&value=Singh%2C+K.P.)
Keywords:	Ultrashort Laser Pulses Nanostructures Electron microscopy images Nano Patterning
Issue Date:	2018
Publisher:	Springer-Verlag
Citation:	Applied Physics A: Materials Science and Processing, 124(1)
Abstract:	We employ a femtosecond light sheet generated by a cylindrical lens to rapidly produce high-fidelity nano-structures over large area on silicon surface. The Fourier analysis of electron microscopy images of the laser-induced surface structures reveals sharp peaks indicating good homogeneity. We observed an emergence of second-order spatial periodicity on increasing the scan speed. Our reliable approach may rapidly nano-pattern curved solid surfaces and tiny objects for diverse potential applications in optical devices, structural coloring, plasmonic substrates and in high-harmonic generation
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