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Title:Surface relief structures for a flexible broadband terahertz absorber
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Abstract:Terahertz (THz) absorbers with surface relief structures (SRSs) were designed and fabricated on a flexible polydimethylsiloxane(PDMS) substrate by using a stamping method. The silicon mold used for the stamping process was prepared by using a crystallographic wet etching method with 45% KOH solution at 80°C. The flexible THz absorber consisting of micropyramids with a base width of 240 μm, demonstrated nearly perfect absorbance higher than 99% owing to the dramatically reduced surface reflectance of the SRS. The reflectance of the PDMS with the SRS was less than 1%, which is only 1/100th of that measured from a bare PDMS at frequency higher than 1 THz. ©2012 Optical Society of America.
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