Supplementary Information

Antireflective Silica Nanoparticle Array Directly Deposited on Flexible Polymer Substrates by Chemical Vapor Deposition

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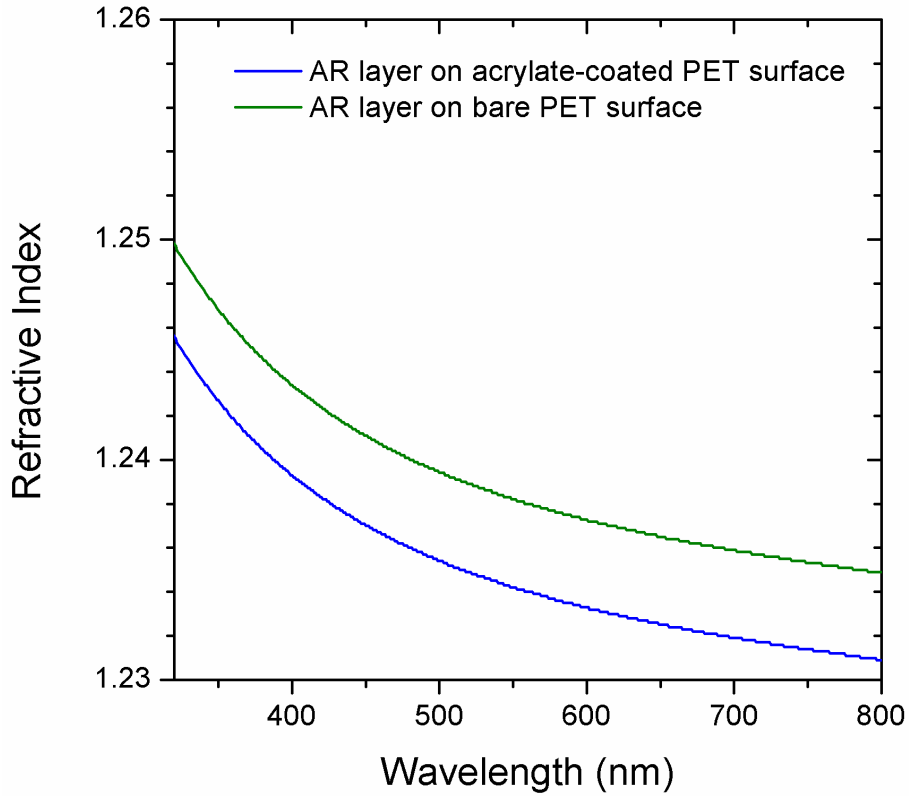

Fig. S1 Refractive indices of 90 nm-thick silica nanoparticle AR layers coated on acrylate and bare PET surfaces pretreated for 3 min.

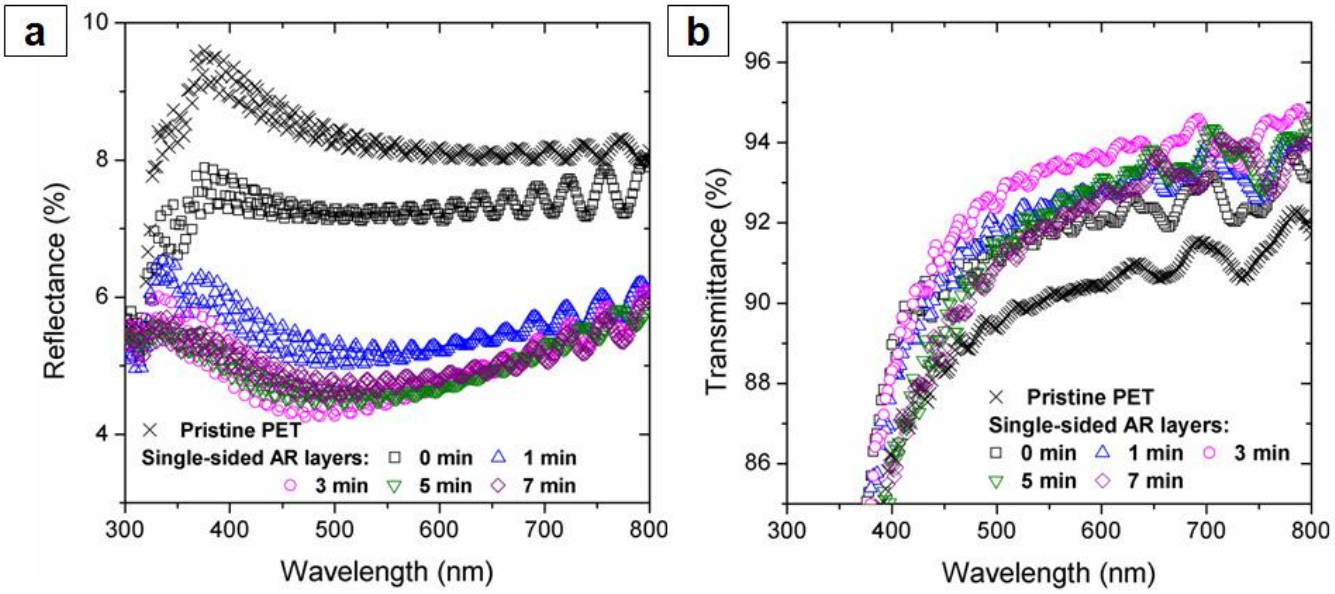

Fig. S2 (a) Specular reflection and (b) transmission spectra of 90 nm-thick silica nanoparticle AR layers coated on bare PET surfaces pretreated for different times. The bare PET surfaces were treatment time

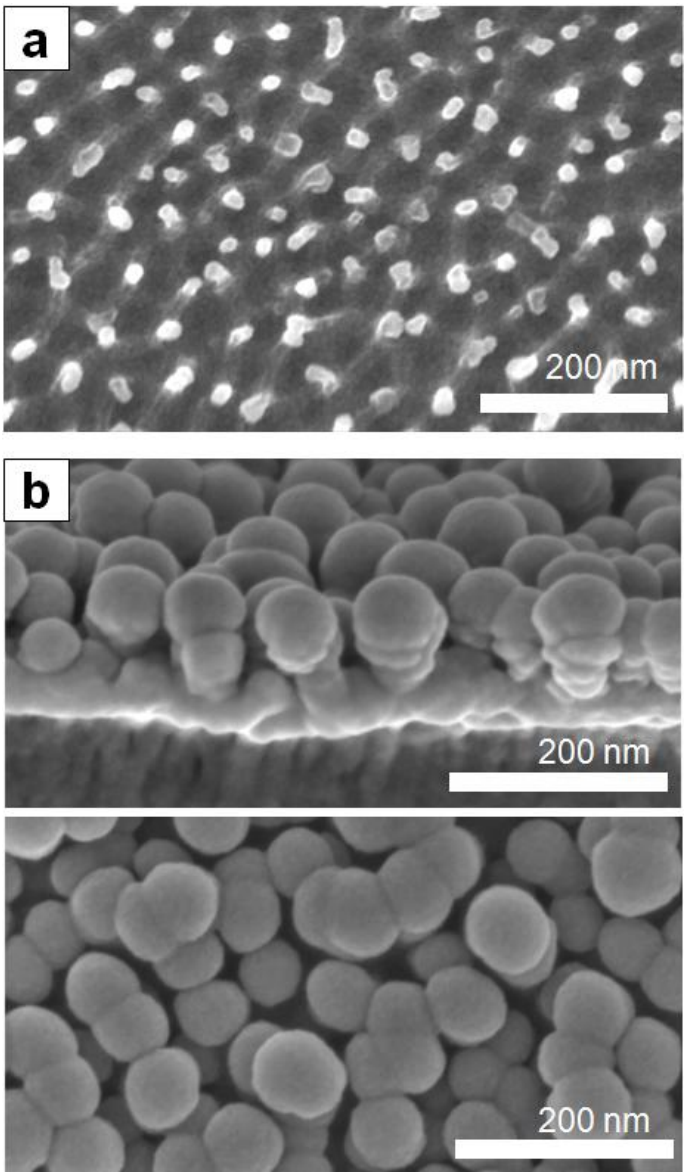

Fig. S3 FE-SEM images of (a) polymer protrusions developed on a 3 min-treated bare PET surface and (b) 90 nm-thick silica nanoparticles coated subsequently on the bare PET surface.

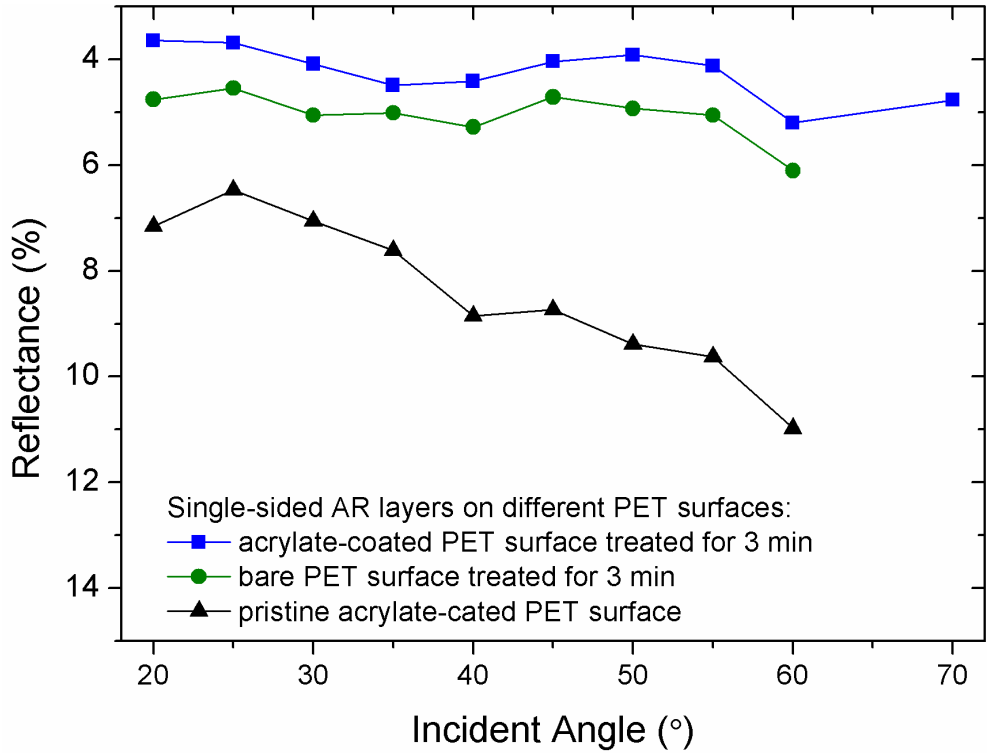

Fig. S4 Effects of the angle of incidence at a wavelength of 600 nm on the AR characteristics of PET substrates overcoated with 90 nm-thick silica nanoparticle AR layers. The AR layers were coated on three different PET surfaces: (i) an acrylate-coated PET surface that was plasma-treated for 3 min, (ii) a bare PET surface that was plasma-treated for 3 min, and (iii) a pristine acrylate-coated PET surface without any plasma pretreatment.

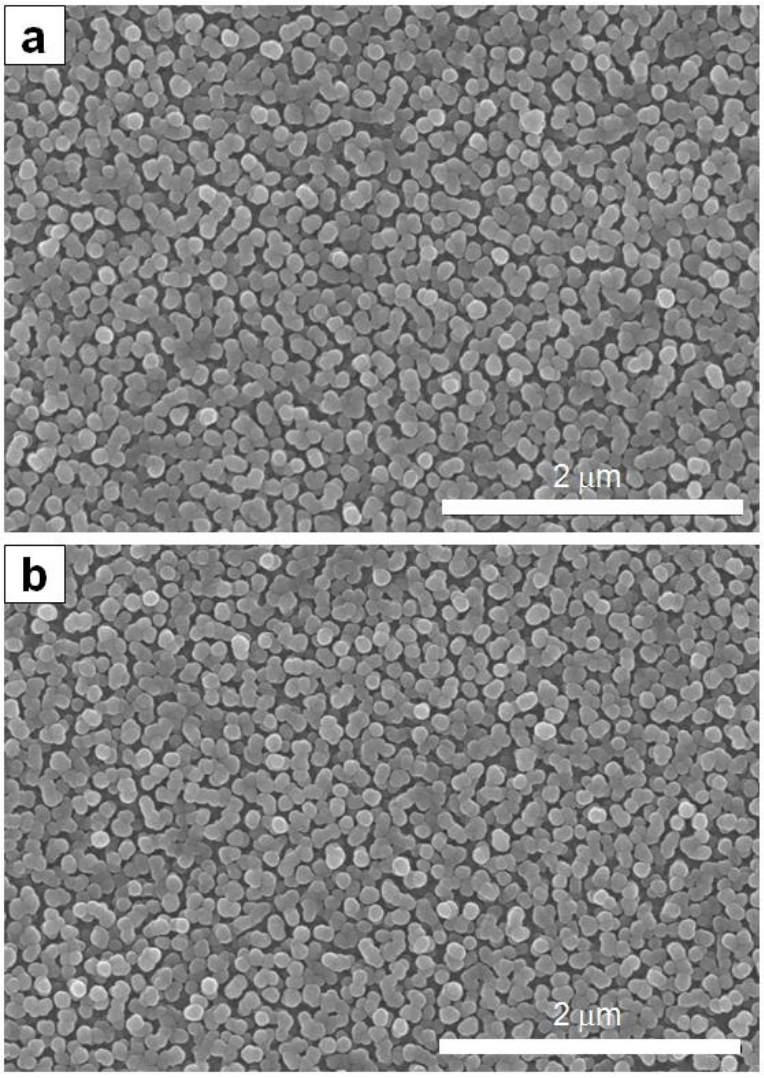

Fig. S5 FE-SEM images of a 90 nm-thick silica nanoparticle AR layer coated on an acrylate-coated PET surface that was plasma-treated for 3 min (a) before and (b) after exposing the AR layer to 3000 cycles of curvature-imposed tensile strain.