

Simple fabrication of transparent superhydrophobic films by a thermally activated equilibrium reaction

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Superhydrophobic surfaces are normally obtained by means of laborious processes with various expensive materials. Here we report a facile and inexpensive strategy for the fabrication of transparent superhydrophobic films by a thermally activated equilibrium reaction. In this work, we exploited two-step fabrication methods on a transparent glass substrate. First, silica nanoparticles were spin-coated to create surface roughness on a bare glass. Next, the surface was modified by deposition of polydimethylsiloxane on the coated glass. The experimental results demonstrate the characteristic of these films in terms of both water repellency and transparency.