

Supplementary Information

Fabrication of large-area nanostructure of pine needle with dewdrop array for surface-enhanced Raman spectroscopy

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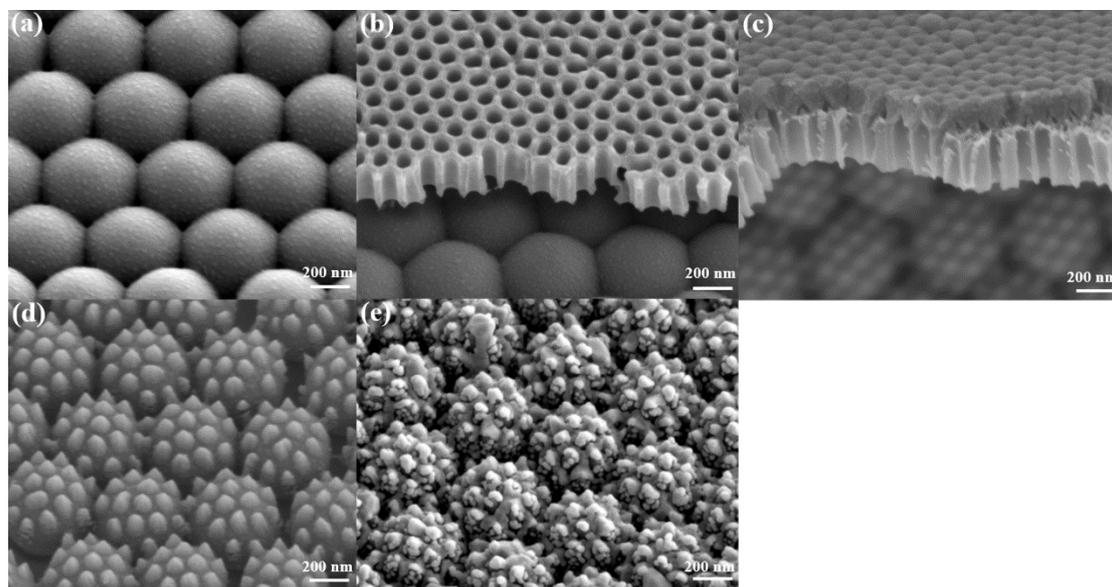


Fig. S1 The SEM pictures of the fabrication procedure of the PNDA structure by double templates. (a) 500 nm PS array. (b) UTAAO on the PS array. (c) 200 nm SiO₂ on the PS array with UTAAO on it. (d) SiO₂ nanopillars on the PS array. (e) PNDA structure. The white line is 200 nm.

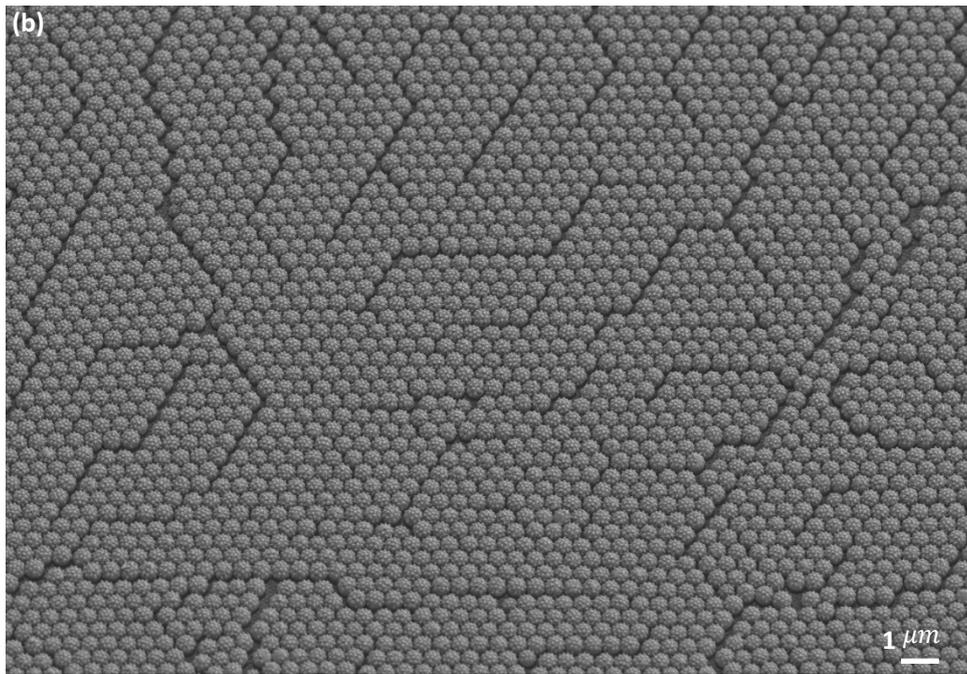
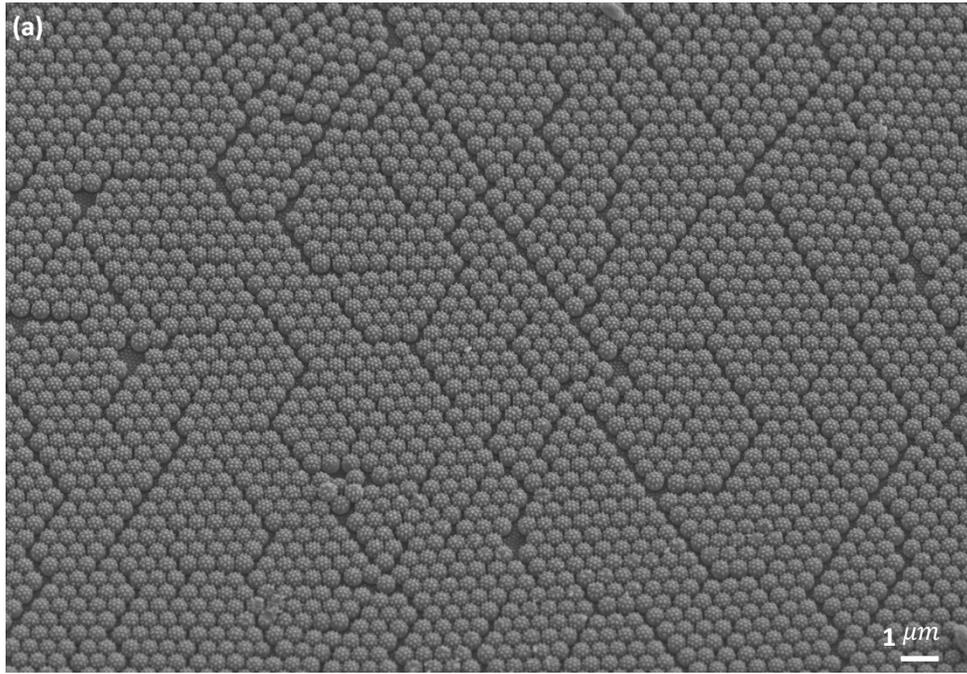


Fig. S2 The low-magnification SEM pictures of large area. (a) SiO₂ nanopillars on the PS array. (b) PNDA structure. The white line is 1 μm .

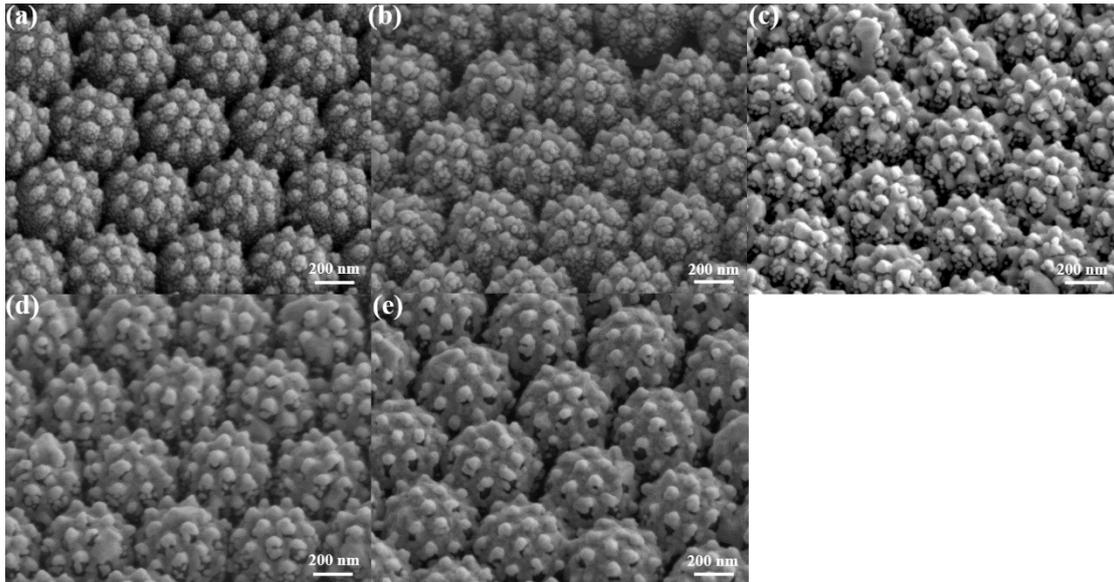


Fig. S3 The SEM pictures of five different substrates fabricated with (a) 10 nm Ag, (b) 20 nm Ag, (c) 30 nm Ag, (d) 40 nm Ag, (e) 50 nm Ag. The white line is 200 nm.

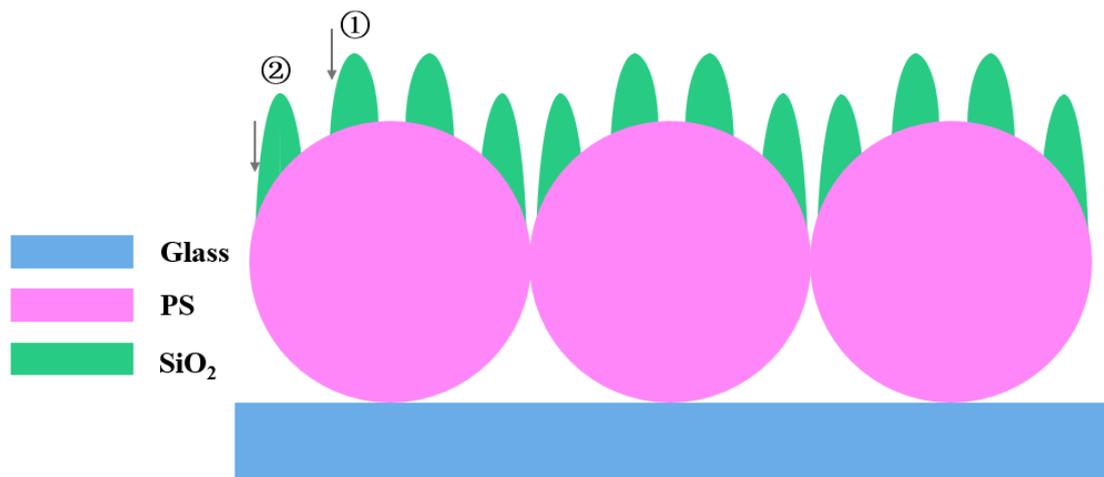


Fig. S4 The schematic diagram before Ag deposition on SiO₂ nanopillars, number one and two represent different SiO₂ nanopillars, arrows represent vertical deposition direction of Ag relative to glass slide. Because different SiO₂ nanopillars on the PS microspheres have different slopes, SiO₂ nanopillars similar like number two will shape sharper structure area and own better ability for oblique angle vapor deposition.