

Supplementary Information

Porous metallic nanocone arrays for high-density SERS hot spots via solvent-assisted nanoimprint lithography of block copolymer

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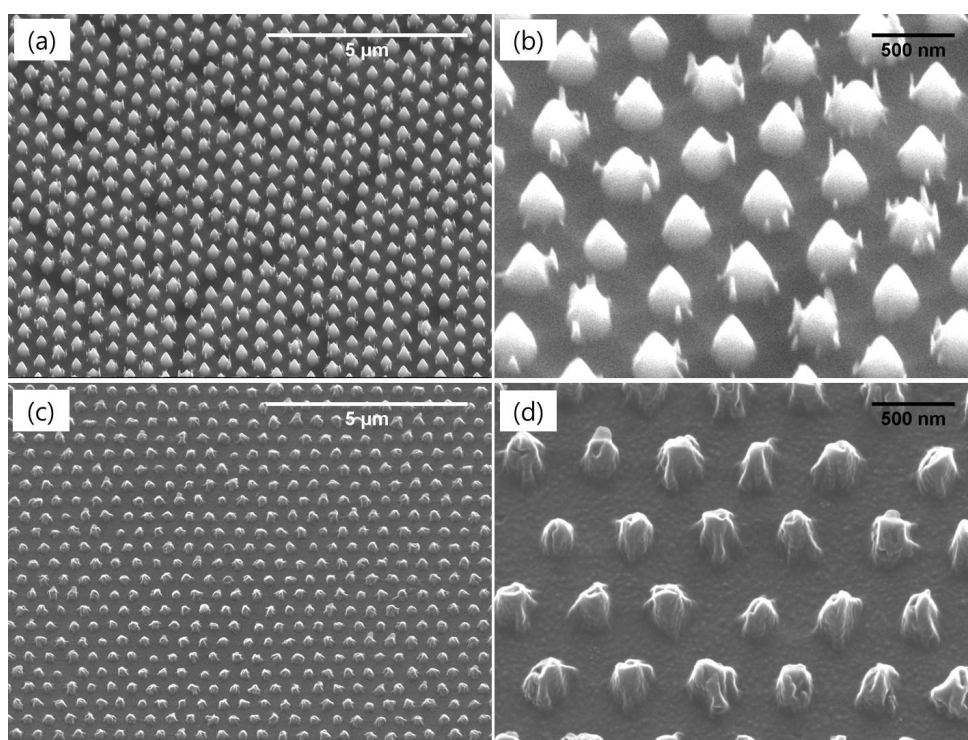


Figure S1. SEM images of (a),(b) Si master mould and (c),(d) imprinted polymer pattern, 30°-tilt view.

Imprinted polymer nanocones were replicated with about ~ 260 nm base diameter, ~ 300 nm height and ~ 500 nm period. The shape of nanocone is distorted from the original shape of the master mould, which could be induced from the distortion of PDMS soft mold during the solvent-assisted nanoimprint ¹.

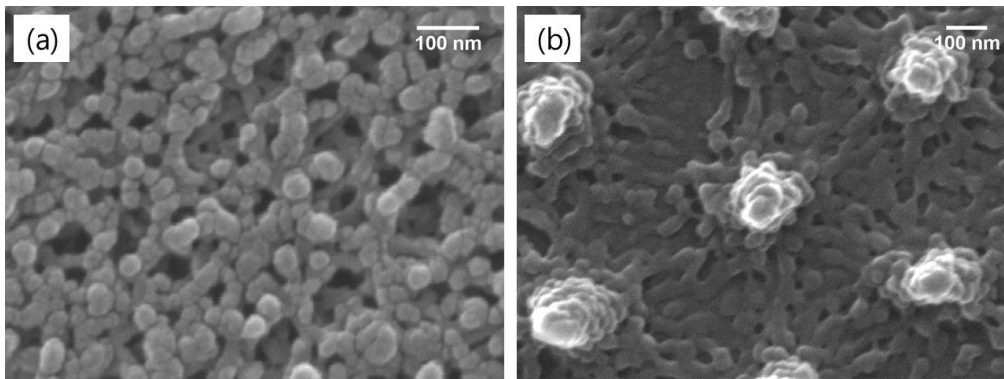


Fig. S2 SEM images of porous polymer structures fabricated by selective removal of PMMA domain from PS-b-PMMA block-copolymer (BCP). (a) Spin-coated thin film, (b) Nanocone-shape which is resulted from nanoimprinting of BCP thin film.

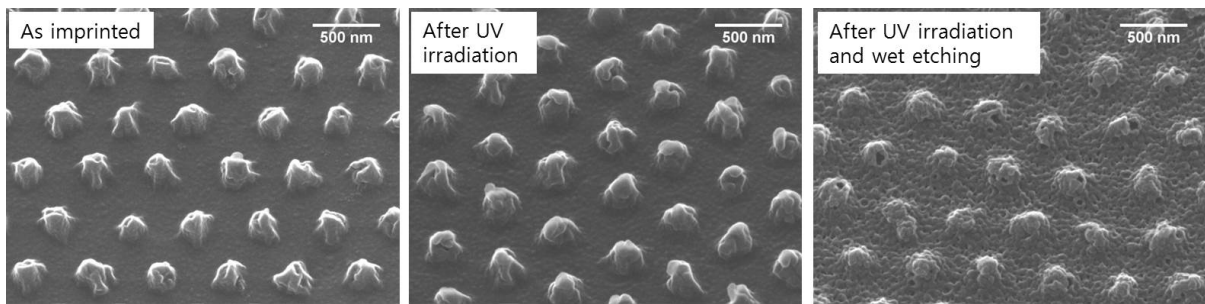


Figure S3. The variation of the cone shape at three steps: (1) As imprinted, (2) after UV irradiation, (3) after UV irradiation and wet etching in acetic acid. Shrink of the nanocones by UV irradiation was negligible but the nano-cones collapsed after wet etching step.

References for supplementary information

¹ K L Lai, M H Hon and I C Leu, Journal of Micromechanics and Microengineering , 2011, **21**,075013