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Fabrication of 3 Dimensional SERS substrate using block copolymer confined AAO template JIN KON KIM, DUESIK BAE, Pohang University of Science and Technology — We fabricated alternatively stacked lamellar microdomains of polystyrene (PS) and poly(methyl methacrylate) (PMMA) by confining PS-b-PMMA copolymer within anodic aluminum oxide (AAO) template modified by neutral brush. The size of stacked lamellar microdomains was easily controlled by changing the molecular weights of the block copolymers. We also deposited silver with 10 nm height selectively on the PS microdomains. The distance of neighboring silver was changed by microdomain size, height and diameter of the AAO template. The fabricated surface enhanced Raman scattering (SERS) substrates showed high sensitivity and reliablity.

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