Supplementary Information

SERS Detection of Polycyclic Aromatic Hydrocarbons on a Bowl-shaped Silver Cavity Substrate

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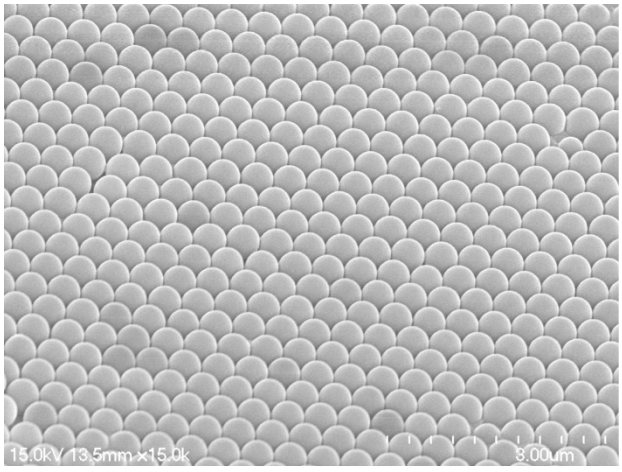

Fig. S1. SEM image of closely packed 500 nm PS spheres.

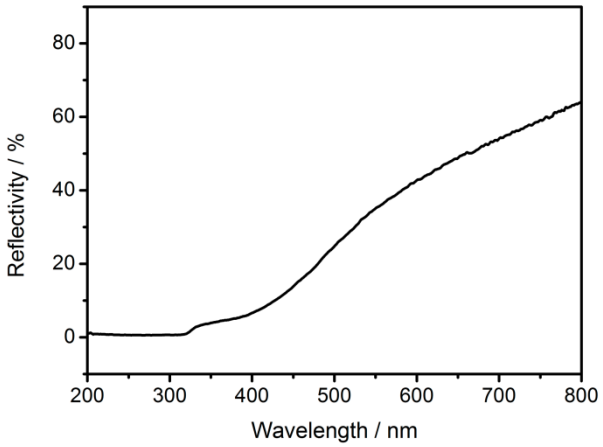

Fig. S2 Reflection spectrum of a flat Ag substrate.

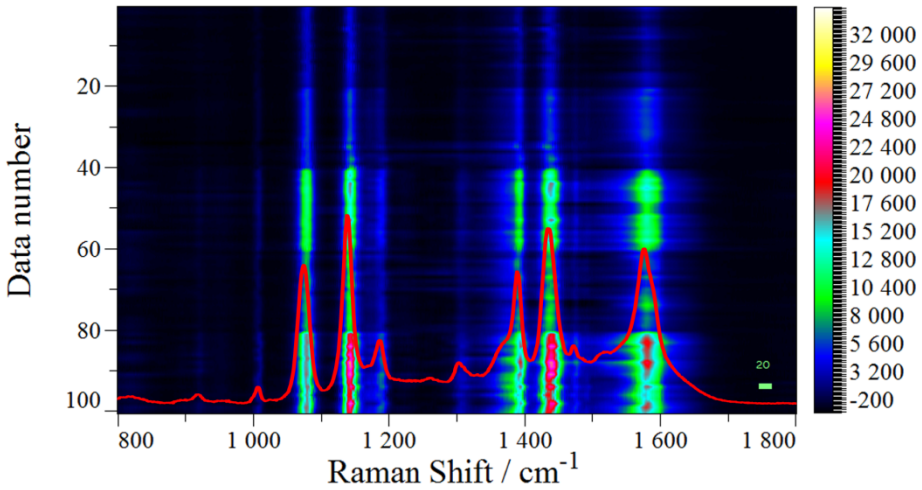

Fig. S3 Thickness-dependent spectral trajectory of PATP on BSSC thin film with 633 nm excitation, the accumulation time was 10 s. The vertical axis is different points on 5 different substrates, 1~20 represent 0.4 *R* thickness, 21~ 40 for 0.6 *R*, 41~60 for *R*, 61~80 for 1.2 R, 81~100 for 1.6 *R*. Also shown in red curve is the SERS spectrum of PATP.

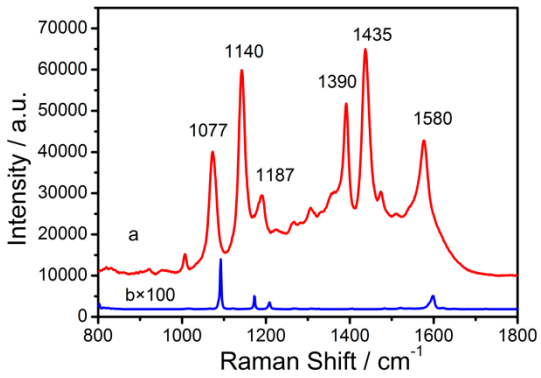

Fig. S4. (a) SERS spectrum of PATP obtained on BSSC thin film (b) normal Raman spectrum of solid PATP.

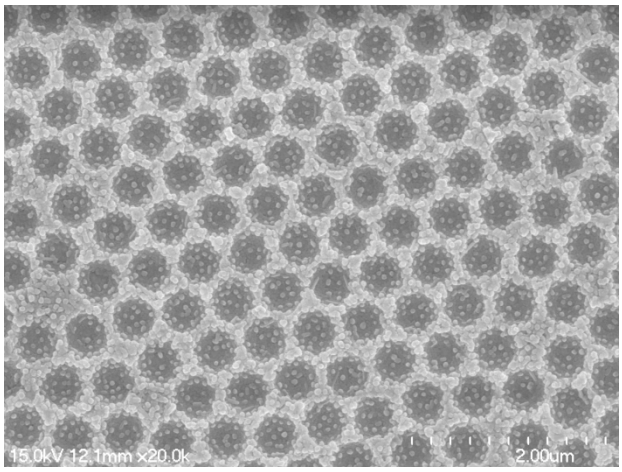

Fig. S5 SEM image of the cavity array after the introduction of the silver nanoparticles.