

Supporting Information for:

**Au Nanocluster Arrays on Self-assembled Block Copolymer
Thin Films as Highly Active SERS Substrates with Excellent
Re-productibility**

Yale Shen,^a YuanjunLiu,^{a,*} WeiWang,^b Fan Xu,^b Chao Yan,^b JunhaoZhang,^a Jing
Wang,^a AihuaYuan^{a,*}

^a*School of Environmental and Chemical Engineering, Jiangsu University of Science
and Technology, Zhenjiang 212003, P. R. China. Email: liyuanjun@just.edu.cn;
aihua.yuan@just.edu.cn; Tel: +86 0511-85639001*

^b*School of Material Science and Engineering, Jiangsu University of Science and
Technology, Zhenjiang 212003, P. R. China.*

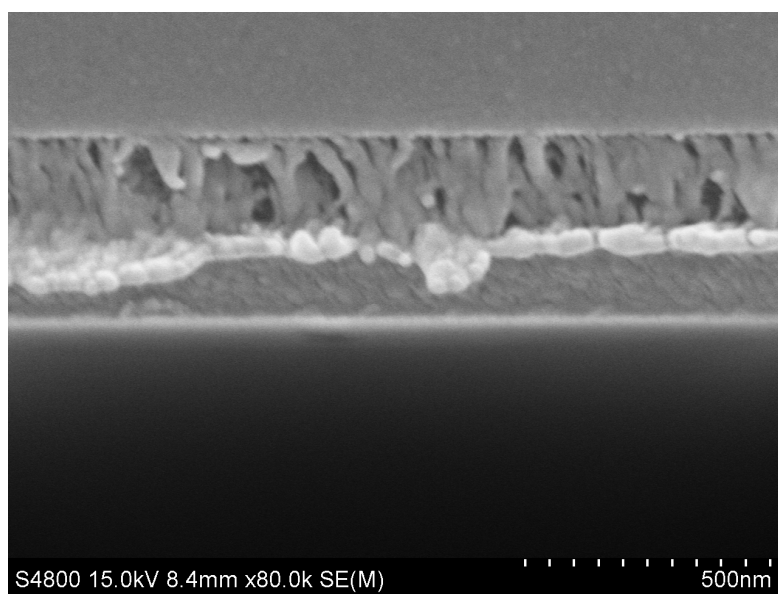


Fig. SI-1 The cross-sectional SEM image of the as-annealed PS-*b*-P4VP thin film.

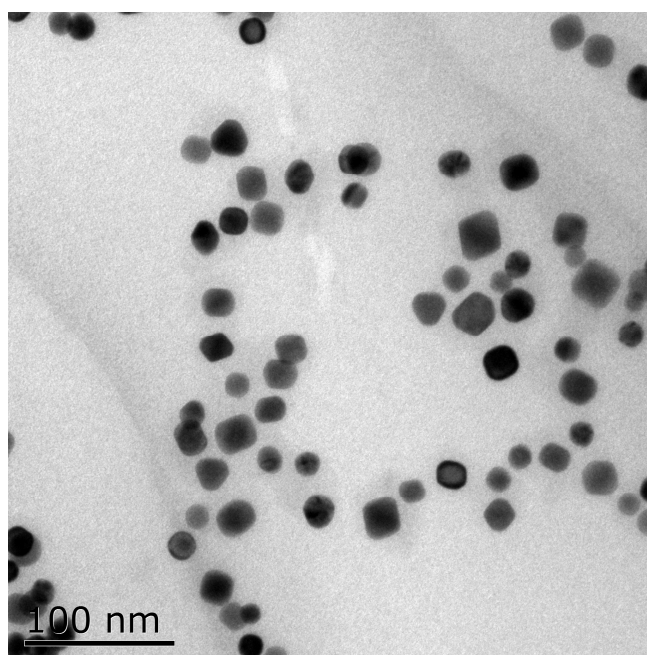


Fig. SI-2 TEM image of Au nanoparticle film prepared by heating the cluster-like array film (shown in Figure 1) at 200 °C in N₂ atmosphere for 30 min.

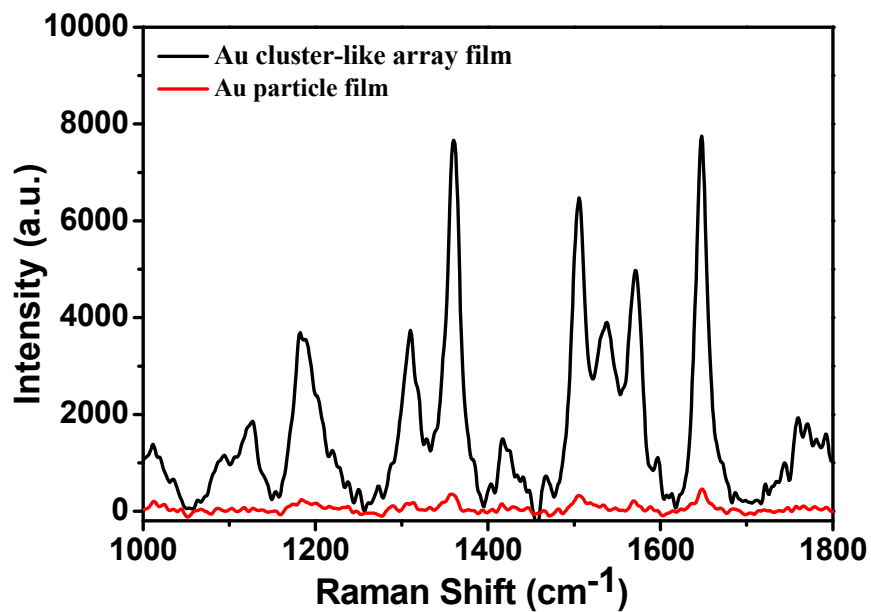


Fig.SI-3 SERS spectra of 10^{-5} M R6G methanol solution collected by the Au cluster-like array film (shown in Figure 1) and Au nanoparticle film prepared by heating the corresponding cluster-like array film at 200 °C in N₂ atmosphere for 30 min.

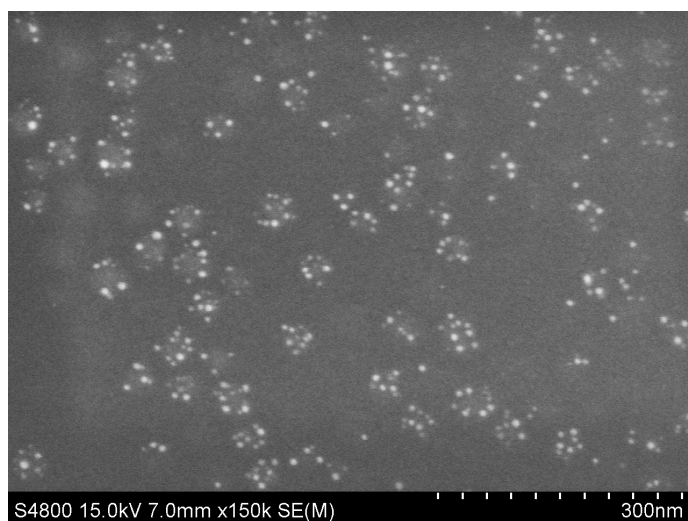


Fig.SI-4 SEM image of Au nanoparticle clusters prepared with PS-b-P4VP spherical micelle template.

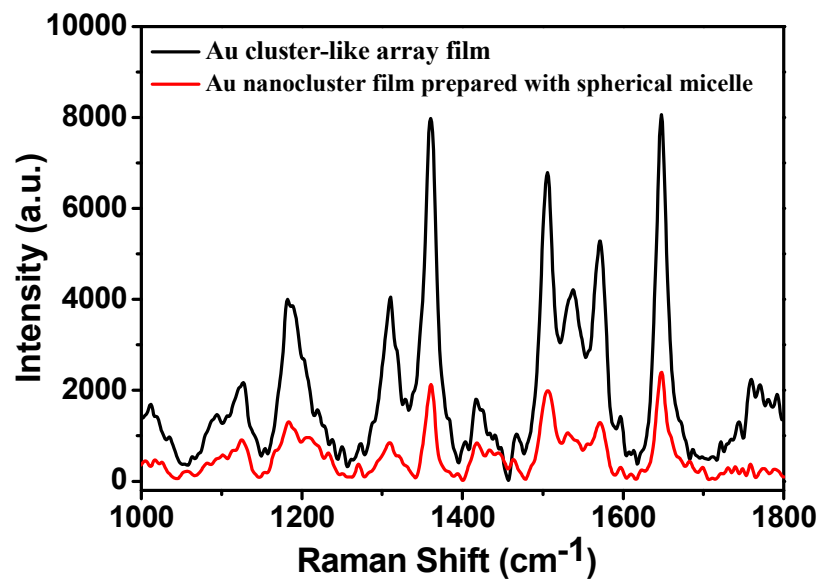


Fig.SI-5 SERS spectra of 10^{-5} M R6G methanol solution collected by the Au cluster-like array film (shown in Figure 1) and Au nanocluster film prepared with spherical micelle template.