

C3PY00638G Supporting Informations for New Journal of Chemistry

A biomembrane derived porous carbon film supported Au nanoparticles for highly reproducible surface-enhanced Raman scattering

Shoujie Liu,^{a,b} Ronghui Que^c Xin-Lin Wu^{*a,b},

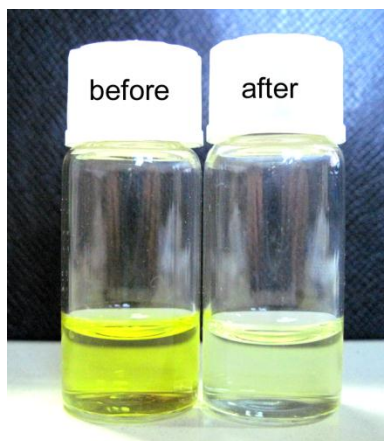


Fig. S1 The optical image of the solutions' color change before and after the fresh eggshell membrane immersing.

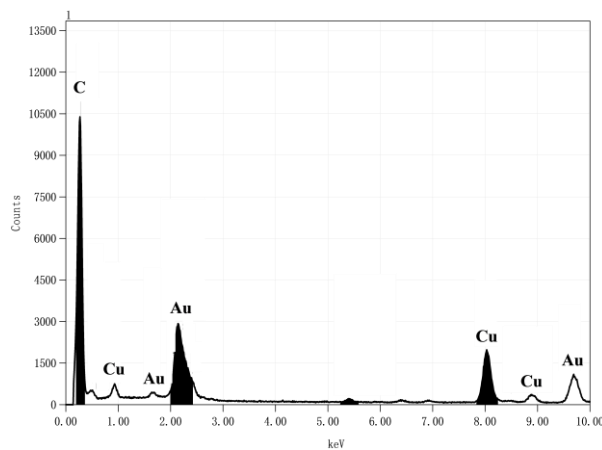


Fig. S2 EDX spectrum of Au/PC-120, Cu peak came from the TEM grid.

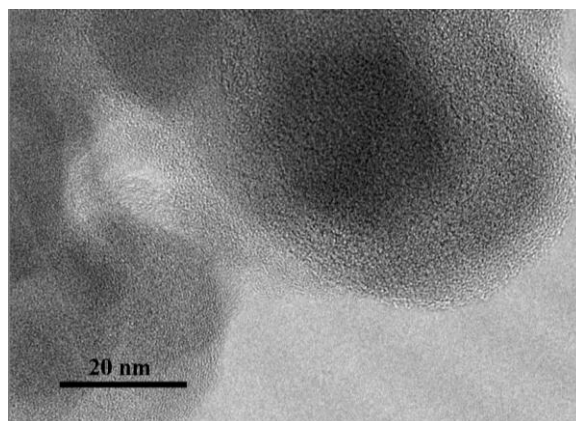


Fig. S3 HRTEM image of the porous carbon.

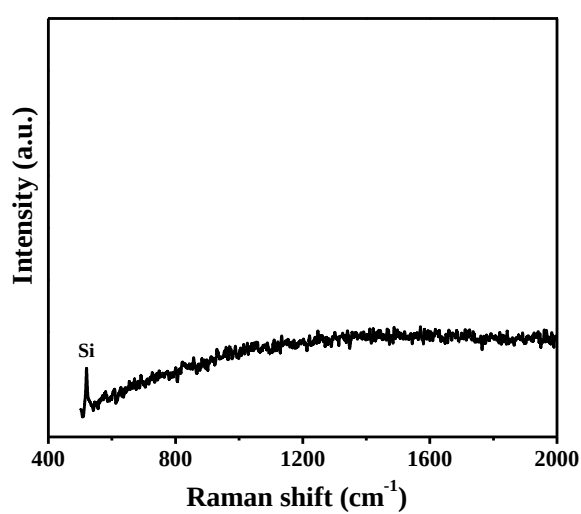


Fig. S4 Raman spectrum of the PC on silicon wafer.

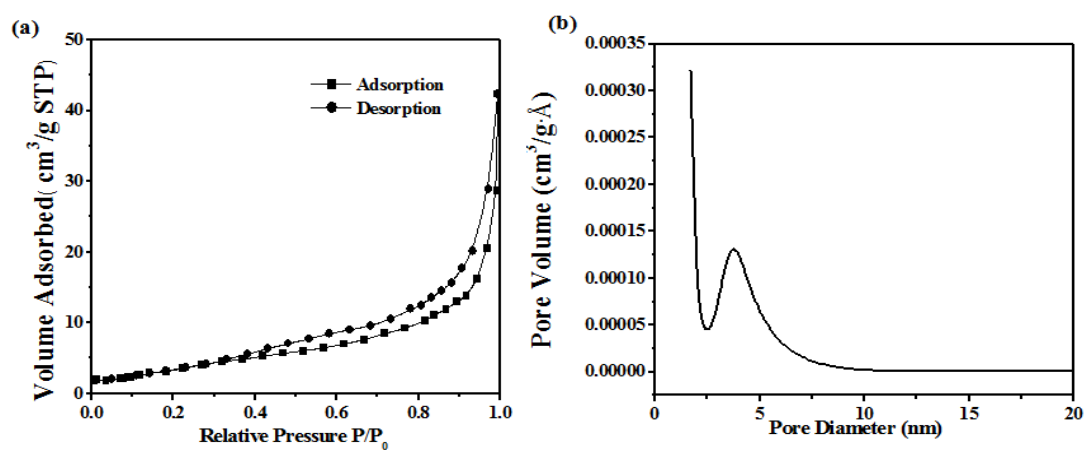


Fig. S5 (a) N₂ adsorption/desorption isotherm of Au/PC-120. (b) Pore size distribution of Au/PC-120 calculated by BJH method.

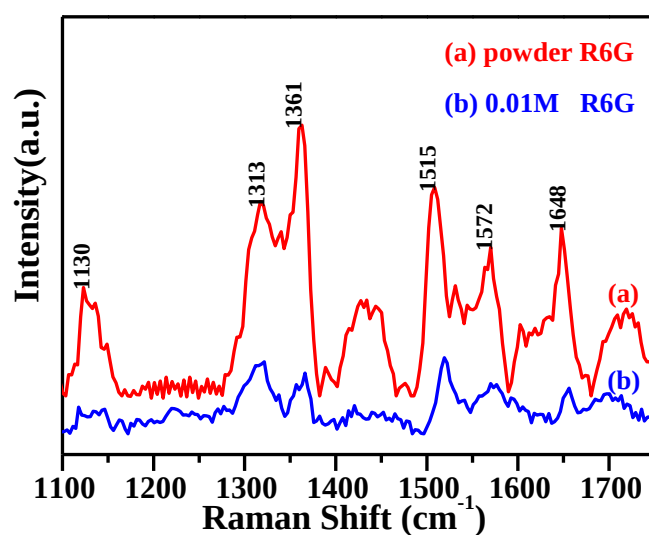


Fig. S6 (a) The normal Raman spectra of R6G dye powder and (b) 0.01 M R6G methanol solution.

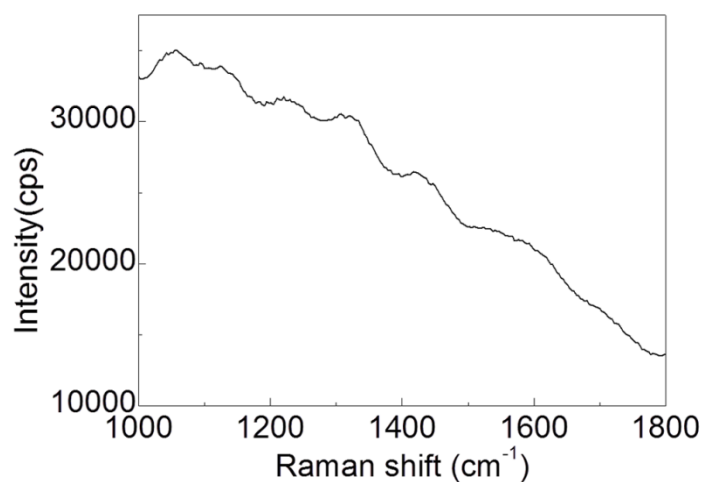


Fig. S7. The Raman spectrum of R6G collected on the substrate without Au NPs.

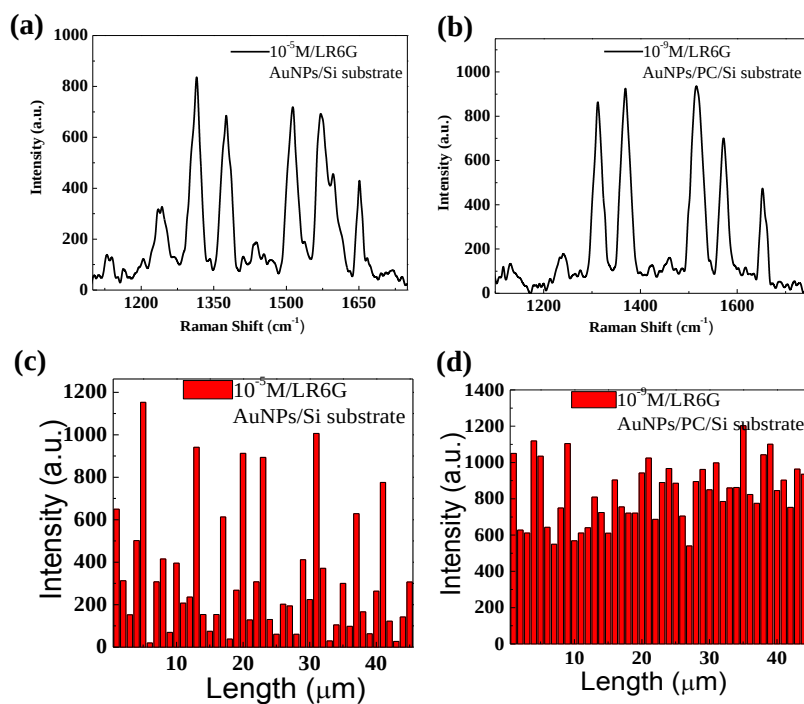


Fig. S8 (a) The Raman spectrum of R6G methanol solution (1×10^{-5} M) on Au/Si substrate; (b) The Raman spectrum of R6G methanol solution (1×10^{-9} M) on Au/PC/Si substrate; (c) and (d) The intensities of the main Raman vibrations of R6G in 45 spots SERS line-scan spectra collected on the Au/Si and Au NPs-C/Si substrate, respectively.

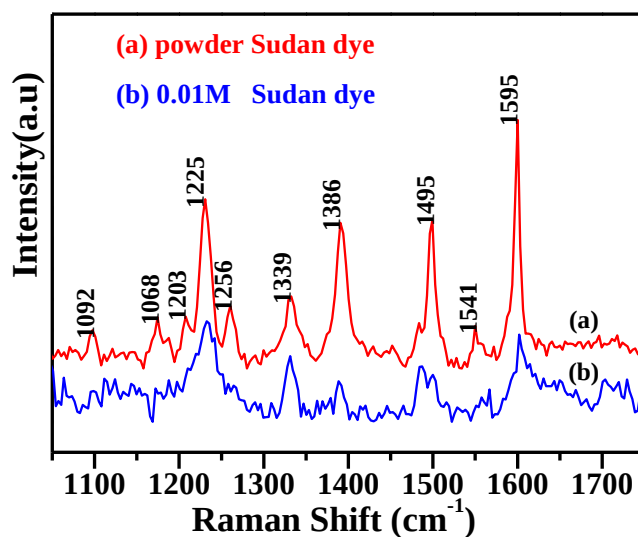


Fig. S9 (a) the normal Raman spectra of Sudan dye powder and (b) 0.01 M Sudan dye methanol solution.