

SUPPLEMENTARY MATERIAL

Thermo-responsive molecularly imprinted sensor based on the surface-enhanced Raman scattering for selective detection of R6G in the water

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Experimental details

Photocatalytic degradation of R6G.

Generally, a certain amount of ZOA-TMIPs was dispersed in 10 mL of R6G solution with the concentration of 10^{-5} mol L⁻¹ in different tubes, respectively. Through adequate UV irradiation and the solutions were adequately stirred in the dark for 1.0 h to exclude the influence of self-adsorption of the ZOA-TMIPs to the R6G. A mercury lamp with the power of 15 W was used as the UV light source. The photocatalytic degradation of R6G was analyzed by recording the maximum absorbance of R6G through the UV spectrophotometer every 20 min after 1.0 h adsorption.

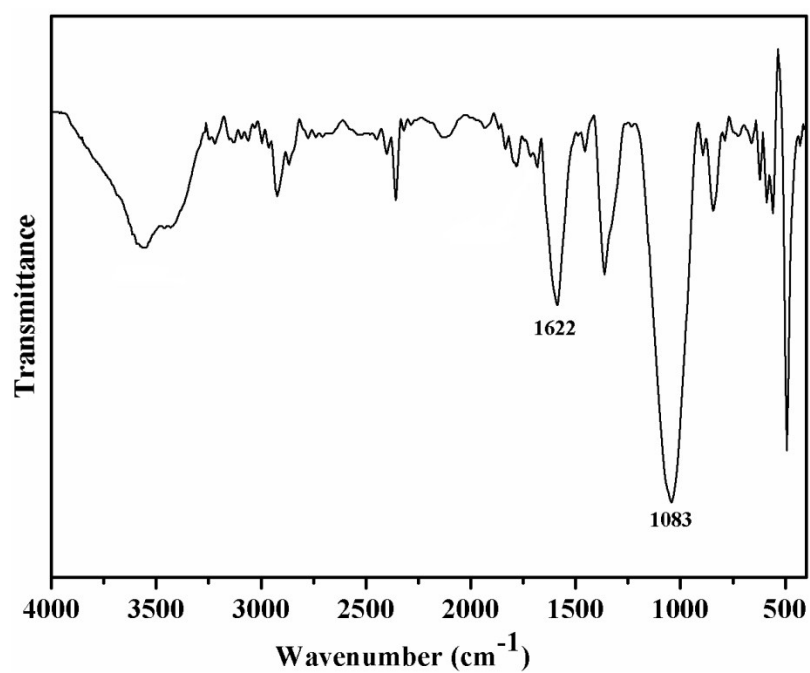
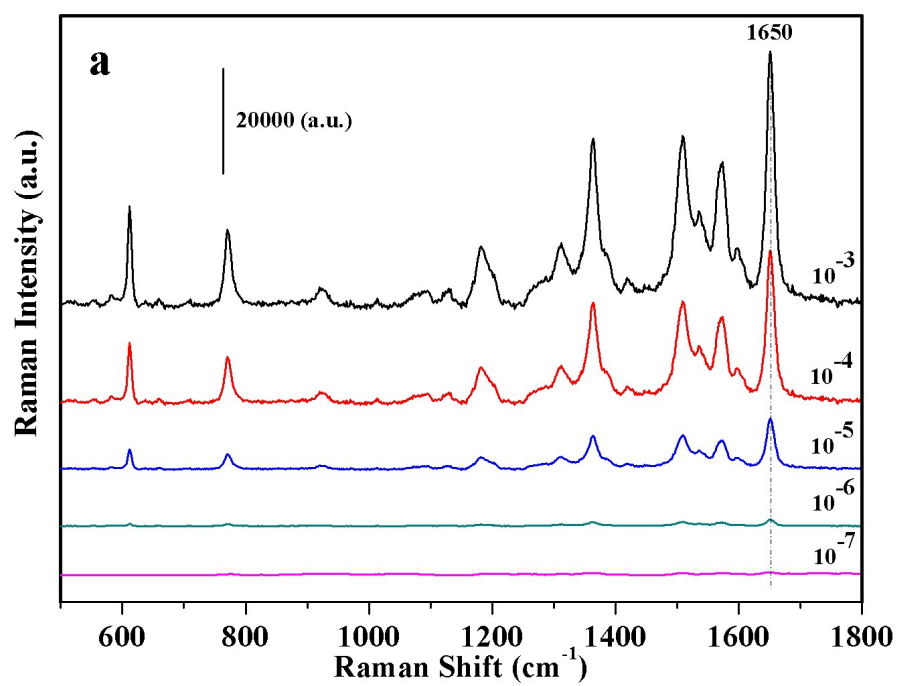


Figure S1. The FT-IR spectra of ZOA-MPS.



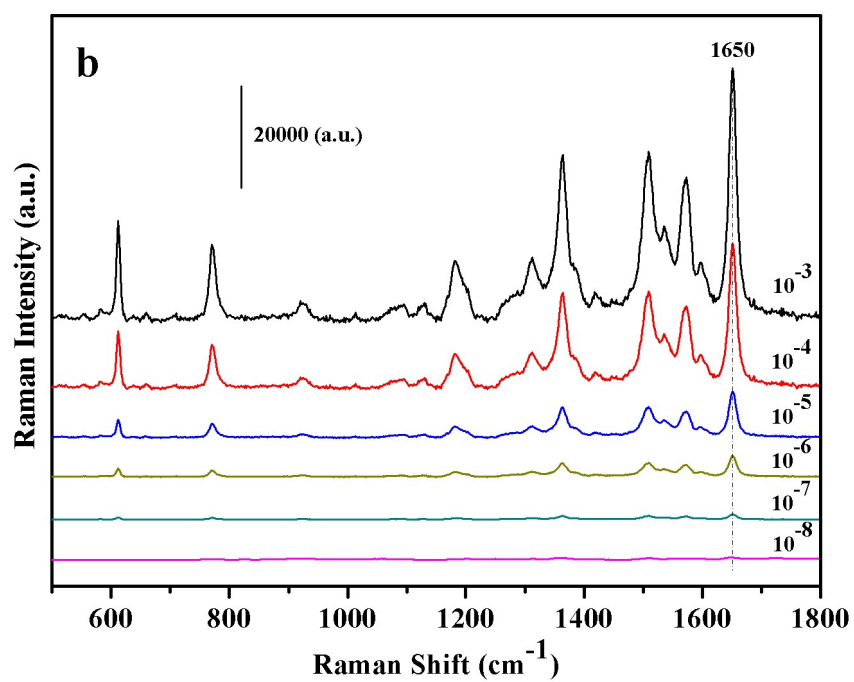


Figure S2. The SERS spectra of different concentrations of R6G obtained from Ag NPs (a) and ZnO/Ag heterostructures (b).

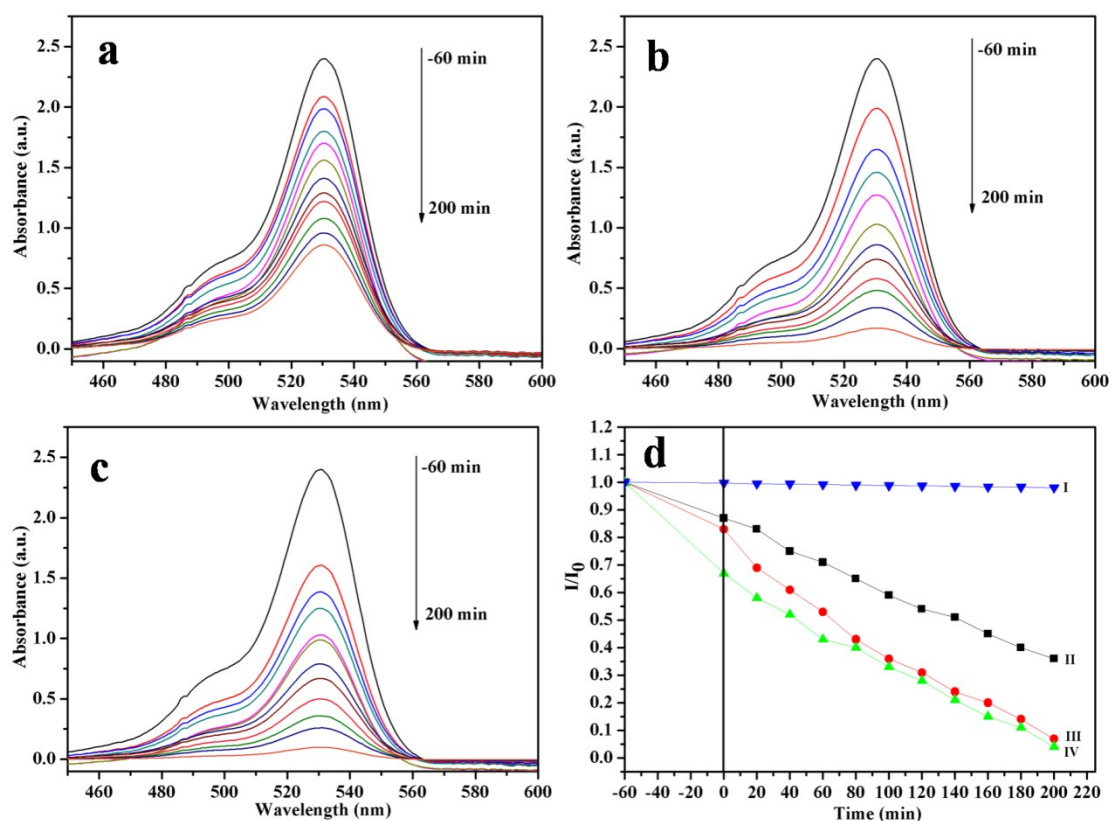


Figure S3. UV-vis absorption spectra showing UV-degradation of 10^{-5} mol L $^{-1}$ R6G using the ZnO NRs catalyst (a), ZnO-Ag heterostructures catalyst (b) and ZOA-TMIPs catalyst (c). Evolution of R6G concentration versus UV irradiation time in the presence of different catalysts: Blank test (I), ZnO NRs (II), ZnO-Ag heterostructures (III), ZOA-TMIPs (IV).