

# **Fabrication and application of Ag@SiO<sub>2</sub>/Au core-shell SERS composite in detecting Cu<sup>2+</sup> in water environment**

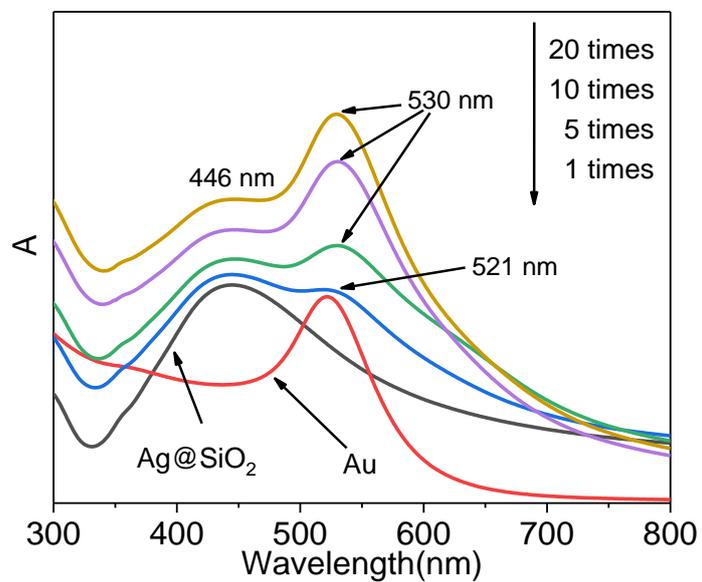
**Meizhen Zhang<sup>a</sup>, Lin Meng<sup>a,c</sup>, Kelgenbaev Kalyinur<sup>c</sup>, Siyuan Dong<sup>a,c</sup>, Chang Xinyi<sup>a</sup>, Qian Yu<sup>a</sup>, Rui Wang<sup>a\*</sup>, Bo Pang<sup>b\*</sup>, Xianming Kong<sup>a</sup>**

<sup>a</sup> School of Petrochemical Engineering, Liaoning Petrochemical University, Fushun, Liaoning 113001, P. R. China

<sup>b</sup> Department of Materials and Environmental Chemistry, Stockholm University, 10691 Stockholm, Sweden

<sup>c</sup> International Education College, Liaoning Petrochemical University, Fushun, Liaoning 113001, P. R. China

\*Corresponding author: [rwang@lnpu.edu.cn](mailto:rwang@lnpu.edu.cn); [bo.pang@mmk.su.se](mailto:bo.pang@mmk.su.se)



**Figure S1.** UV-vis spectra of Ag@SiO<sub>2</sub> and Ag@SiO<sub>2</sub>/Au composite assembled with different concentrations of Au colloid