

Supporting information for

Separation, identification and fast determination of organophosphate pesticides methidathion in tea leaves by thin layer chromatography-surface enhanced Raman scattering

Chaoping Yao,^{a,b} Fansheng Cheng,^b Cong Wang,^b Yonghong Wang,^c Xiaowei Guo,^a Zhengjun Gong,^c Meikun Fan,^{c,*} Zhiyou Zhang^{d*}

^a Department of Optoelectronic Information, University of Electronic Science and Technology of China, Chengdu, Sichuan, 610051, China.

^b Chengdu Green Energy and Green Manufacturing R&D Centre, Chengdu, Sichuan, 610207, China.

^c Faculty of Geosciences and Environmental Engineering, Southwest Jiaotong University, Chengdu, 610031, China.

^d Institute of Nanophotonics Technology, School of Physical Science and Technology, Sichuan University, Chengdu, 610064, China

^e Center for Animal Disease Control and Prevention of Chongqing, Chongqing, 401147, China

*Corresponding authors: M. Fan, meikunfan@gmail.com; Z. Zhang, zhangzhiyou@scu.edu.cn

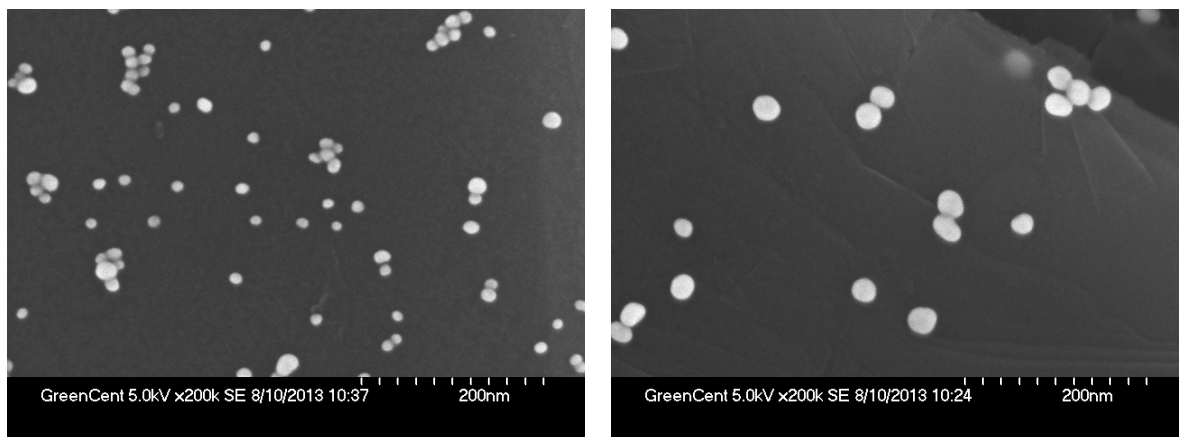


Fig. s1 SEM of gold NPs. Left, 13 nm; right, 40 nm. Scale bar is 200 nm.

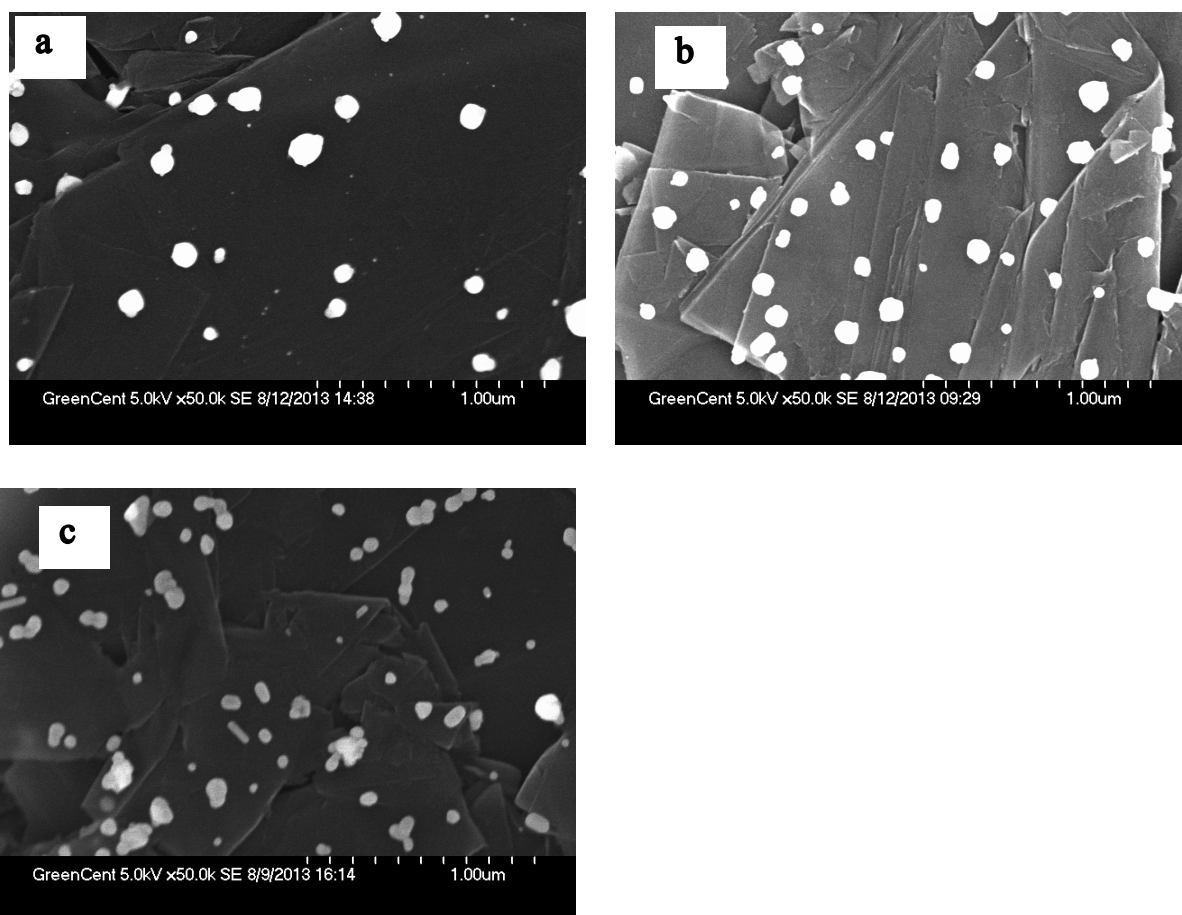


Fig. s2 SEM images of Ag NPs. a, 0.5 mM; b, 1 mM; c, 2 mM. Scale bar is 1 μm.

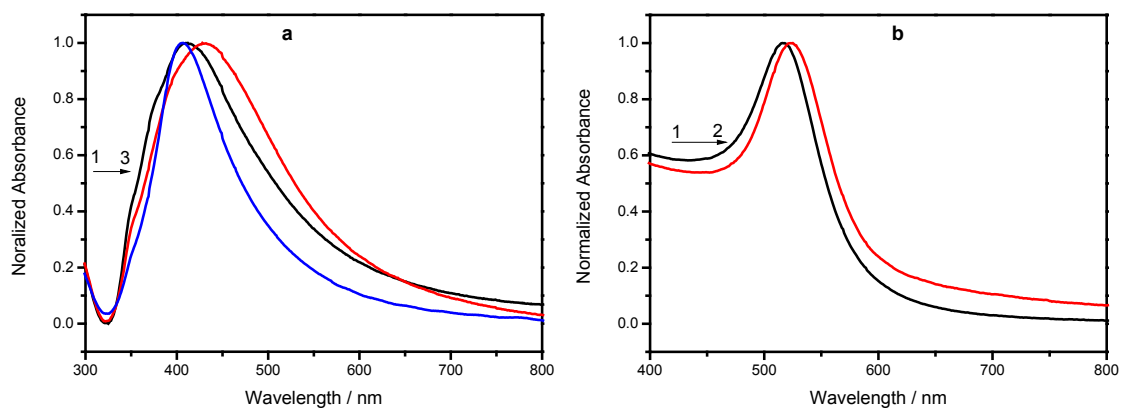


Fig. s3 UV-vis absorption of NPs prepared. a, 1-3 are 0.5, 1, 2 mM, respectively; b, 1, 13 nm Au, 2, 40 nm Au.

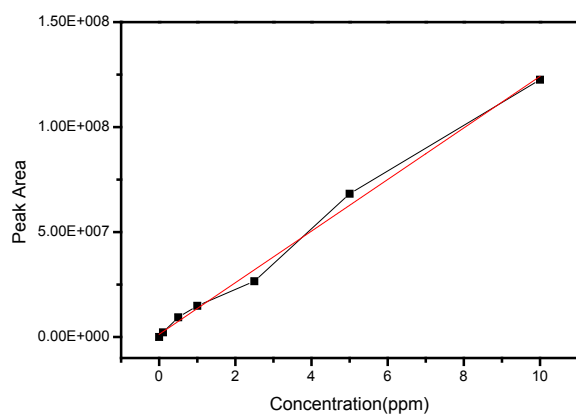


Fig. s4 Calibration curve for detection methidathion in tea samples with GC-MS technique. $Y=1.22853E7x+1.3103E6$, $R^2=0.99315$.

Table s1 Test of spiked tea samples by GC-MS

Tea brand	Jasmine	Oolong	Green tea
Spiked (ppm)	5.00	5.00	5.00
detected(ppm)	4.94	5.36	5.43
Recovery (%)	98.7	107	109