Supporting Information

Surface Plasmon Enhanced Light Scattering Biosensing: Size Dependence on the Gold Nanoparticle Tag

Chih-Tsung Yang ¹, Yi Xu ^{2,3}, Mohammad Pourhassan-Moghaddam ^{4,5}, Duy Phu Tran ¹, Lin Wu ², Xin Zhou ⁶ and Benjamin Thierry ^{1,*}

- ¹ Future Industries Institute and ARC Centre of Excellence in Convergent Bio and Nano Science and Technology, University of South Australia, Mawson Lakes Campus, Mawson Lakes, 5095, Australia; chihtsung.yang@unisa.edu.au (C.-T.Y.); duy.tran@unisa.edu.au (D.T.)
- ² Electronics and Photonics Department, Institute of High Performance Computing, Agency for Science, Technology, and Research (A*STAR) 138632, Singapore; yi_xu@mymail.sutd.edu.sg (Y.X.); wul@ihpc.a-star.edu.sg (L.W.)
- ³ SUTD-MIT International Design Center & Science and Math Cluster, Singapore University of Technology and Design, 487372, Singapore
- School of Biomedical Engineering, University of Technology Sydney, Sydney, 2007, Australia; pourhassanmo@gmail.com
- Institute for Biomedical Materials and Devices (IBMD), Faculty of Science, University of Technology Sydney, NSW, 2007, Australia
- ⁶ Institute of Comparative Medicine, Yangzhou University, Yangzhou 225009, China; zhou_xin@126.com
- * Correspondence: benjamin.thierry@unisa.edu.au

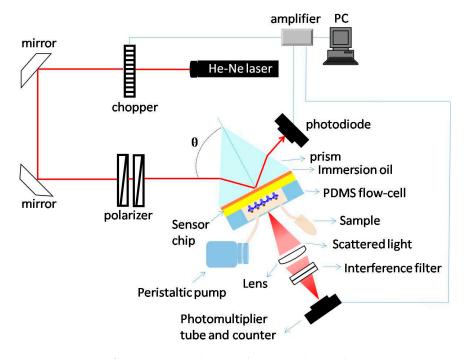


Figure S1. Optical setup of SP-LS in this study.

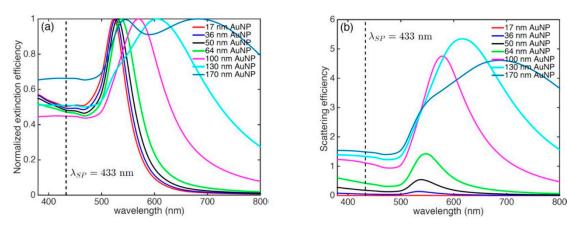


Figure S2. Calculated spectra for (a) normalized extinction efficiency Q_{ext} and (b) scattering efficiency Q_{sca} for different sized AuNPs.

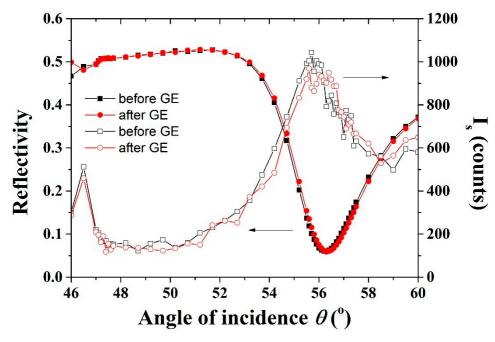


Figure S3. Control experiment for goat anti-mouse IgG functionalized SPR sensor surface exposed to GE reagent for 5 min and then measured by SP-LS. No signal enhancement is observed.