Supporting Information to: Electrospray-Surface Enhanced Raman Spectroscopy (ES-SERS) for probing surface chemical compositions of atmospherically relevant particles

Masao Gen and Chak K. Chan*

School of Energy and Environment, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong, China

*E-mail: chak.k.chan@cityu.edu.hk. Phone: +(852)-3442-5593. Fax: +(852)-3442-0688.

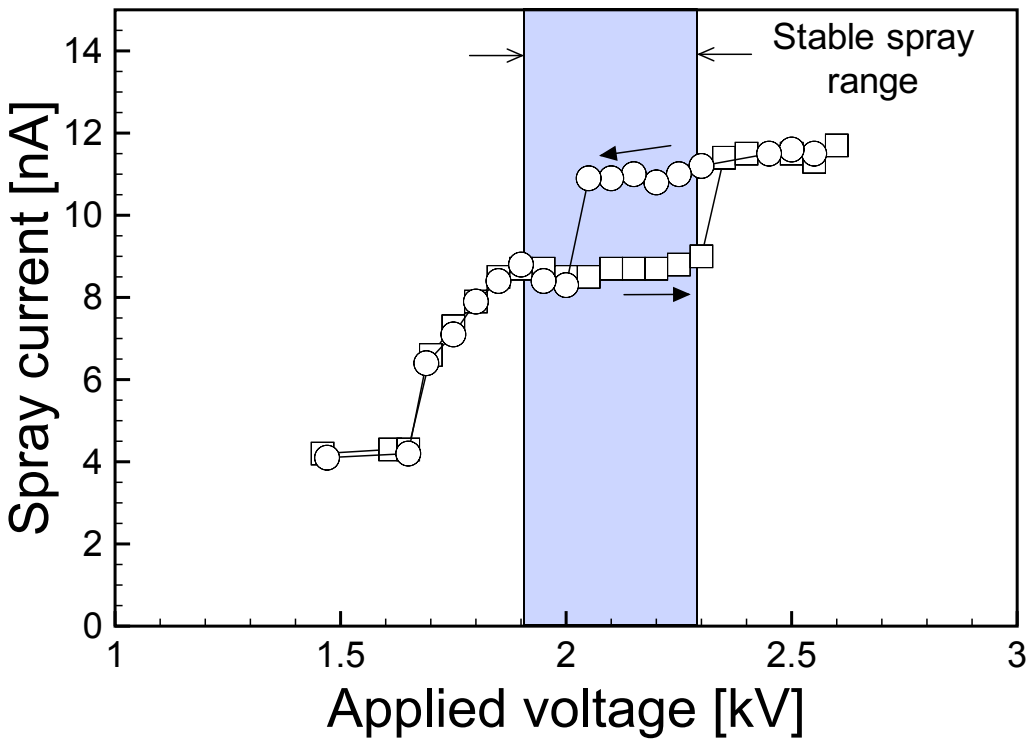

Figure S1. Plots of spray current versus applied voltage upon increasing and decreasing in the voltage.

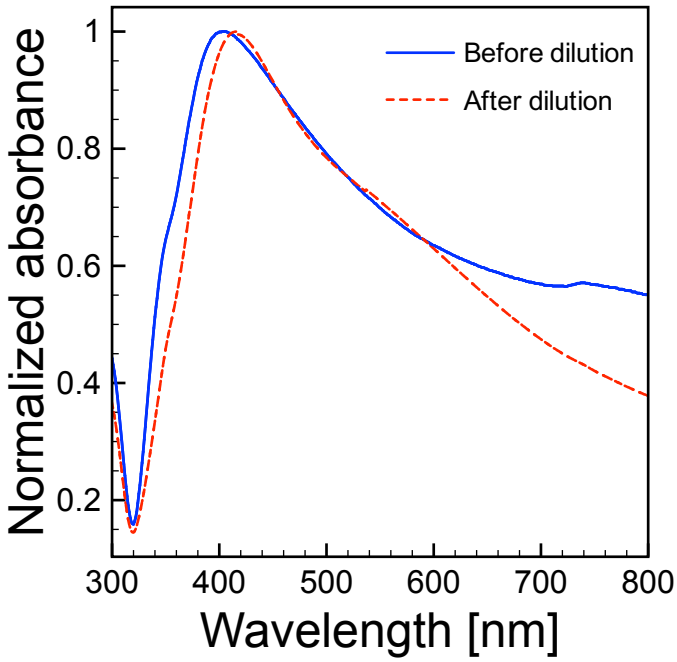

Figure S2. UV-vis spectra of Ag nanoparticle suspension before (blue solid line) and after (red dash line) dilution with ethanol at 1:1 volume ratio.

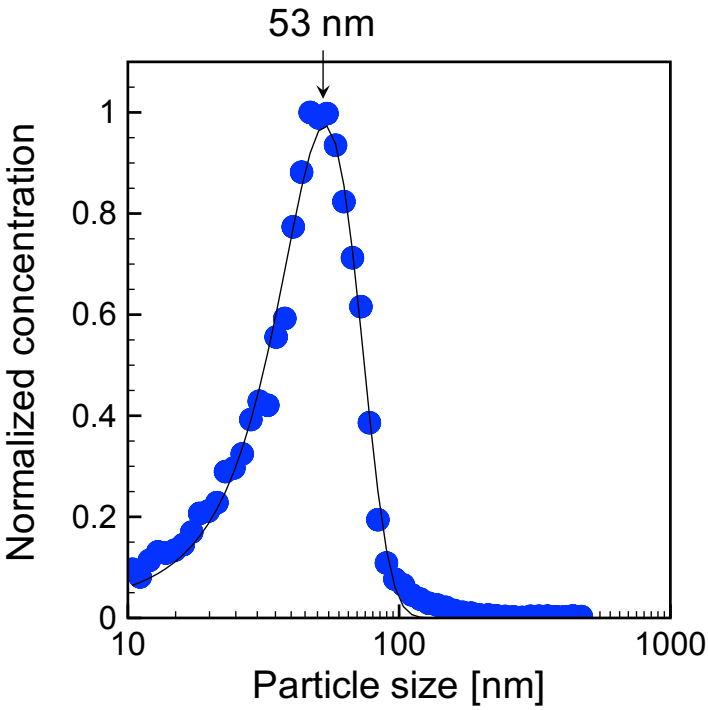

Figure S3. Electrically mobility size distribution of Ag nanoparticle aerosols in the gas phase measured by DMA + CPC. The solid line was fitted to normal distribution.

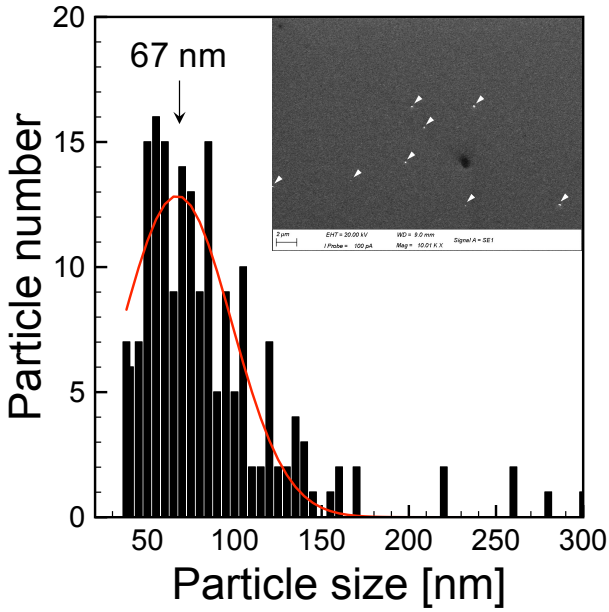

Figure S4. Projected area size distribution of Ag nanoparticles deposited on the substrate. Inset image shows typical SEM image of the deposited particles. 208 particles were totally counted to obtain the size distribution. The solid line was fitted to normal distribution.

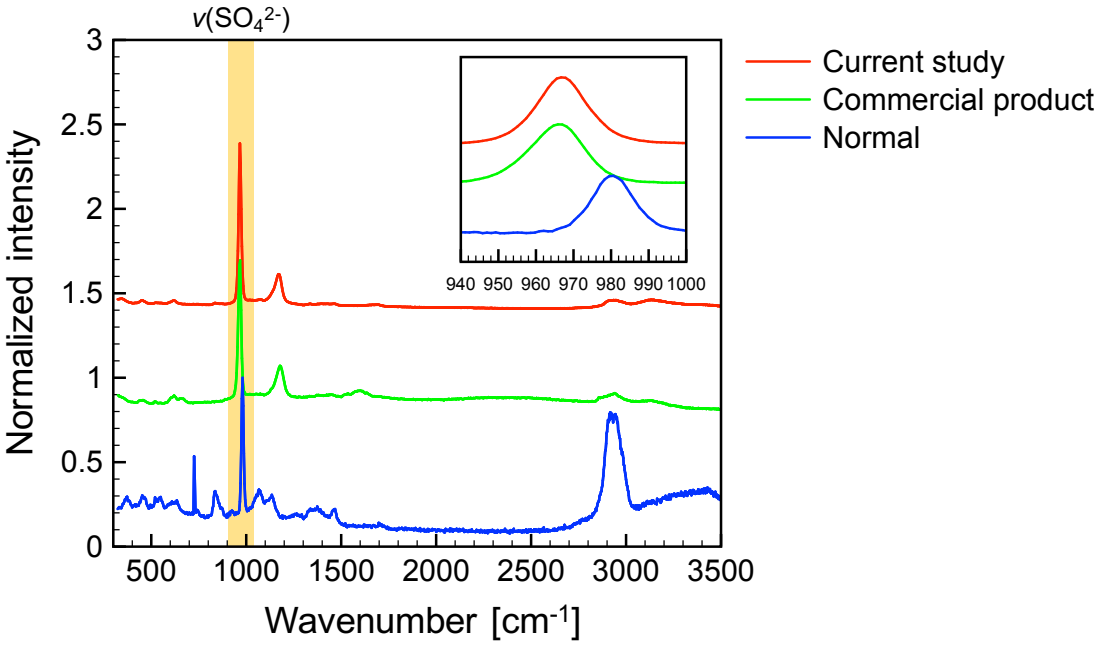

Figure S5. Normal (blue) and enhanced (green, commercial product; red, current SERS) Raman spectra of the AS/sucrose particles. Inset frame is an enlarge view of spectra at 940-1000 cm^{-1}.

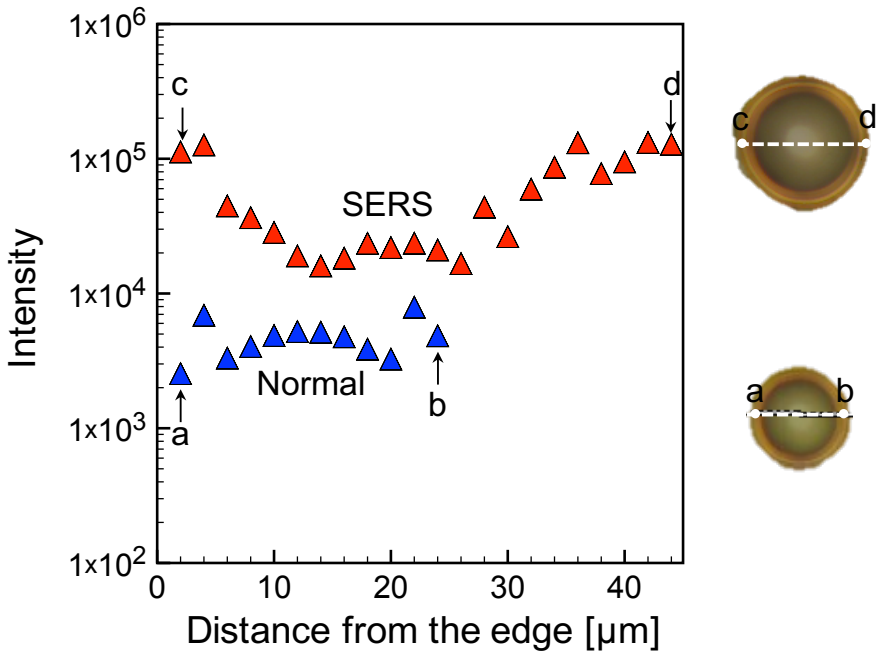

Figure S6. Raman intensity as a function of distance from edge to edge of the AS/sucrose particles: point a to b for normal Raman (blue) and point c to d for SERS (red) measurements. Optical images of corresponding particles were also shown.