Electronic Supplementary Material (ESI) for Journal of Analytical Atomic Spectrometry

Electronic Supplementary Information for JAAS publication:

Size and Elemental Composition of Nanoparticles Using Ion Mobility Spectrometry with Inductively Coupled Plasma Mass Spectrometry

Efthymios A. Kapellios and Spiros A. Pergantis*

Environmental Chemical Processes Laboratory, Department of Chemistry, University of Crete, Voutes Campus, Heraklion 71003, Greece. Fax: +30 2810 545001; Tel: + 30 2810 545084; E-mail: spergantis@chemistry.uoc.gr

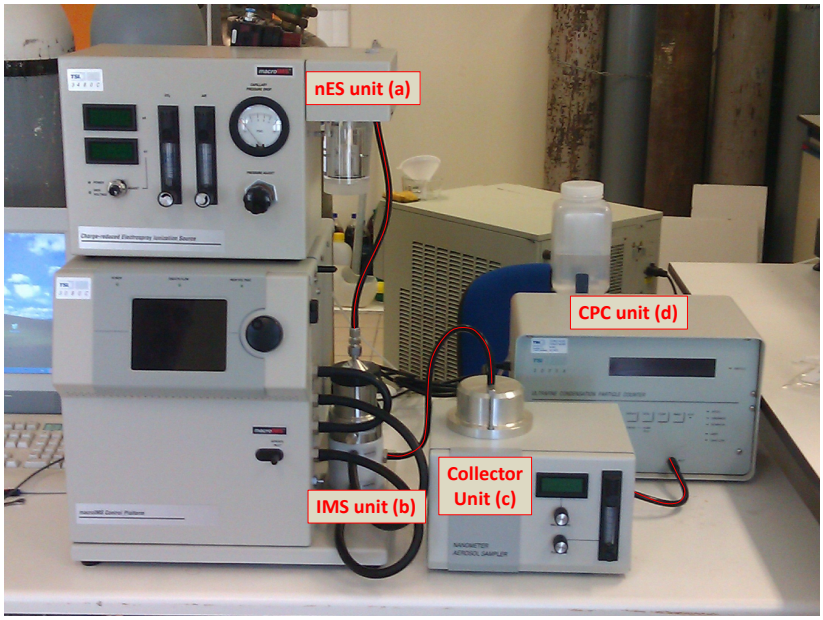

Figure S1. Nanoelectrospray (nES) (a) Ion Mobility Spectrometer (IMS) (b) with condensed particle counting (CPC) (d) detection and in series nanoparticle collector (c). Red line through rubber tubing indicates NP paths from one instrument / device to the other.

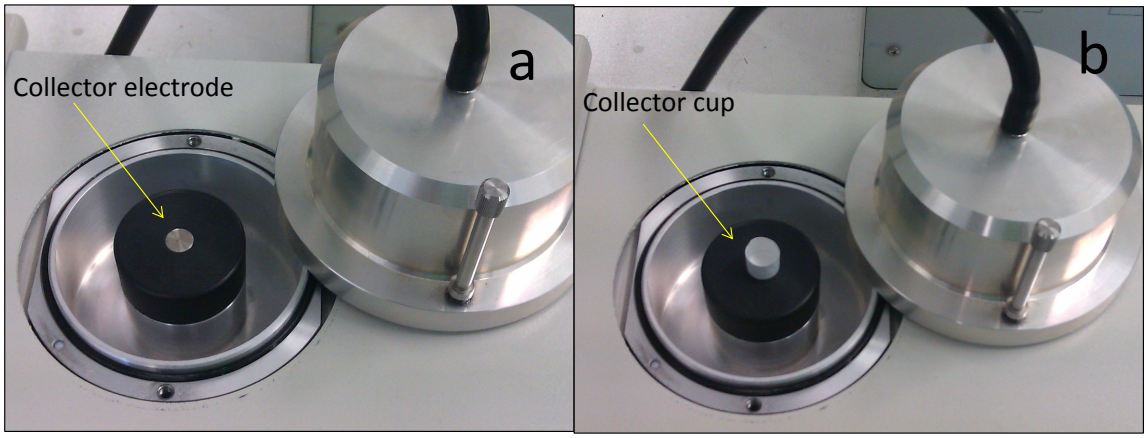

Figure S2. View of open collector chamber with collector electrode (a) and with collector cup placed over the electrode (b).

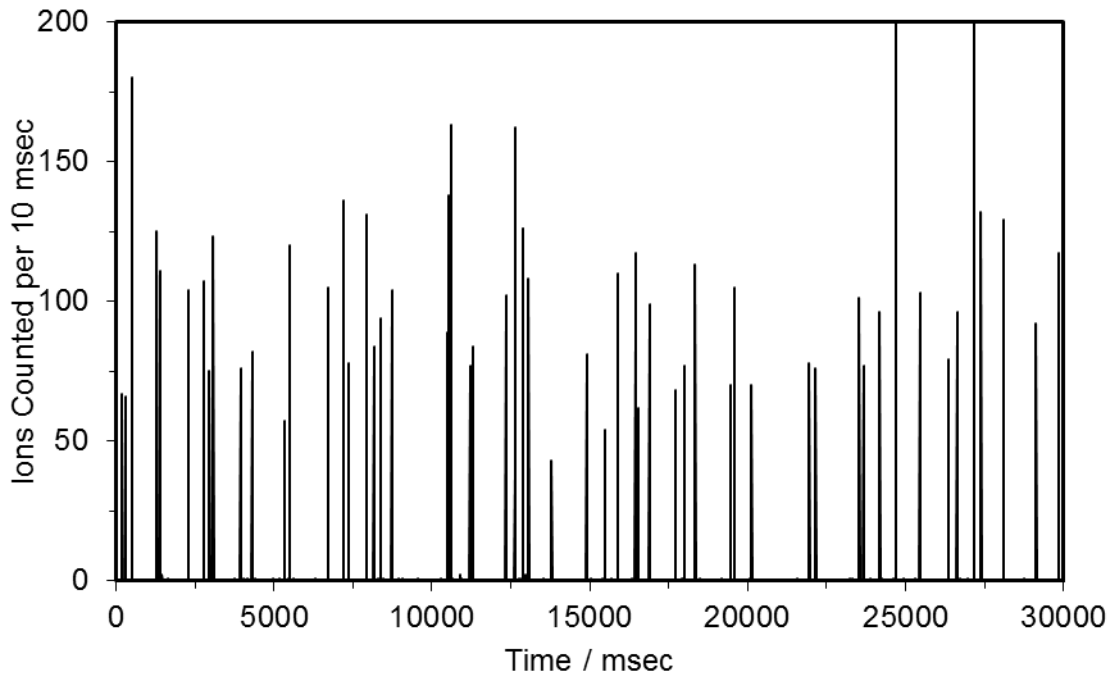

Figure S3. Single particle mode ICP-MS analysis (m/z 197, dwell time 10 msec) of a 50 ng L^{-1} (ppt) solution of 60 nm Au NPs (NIST RM 8013).

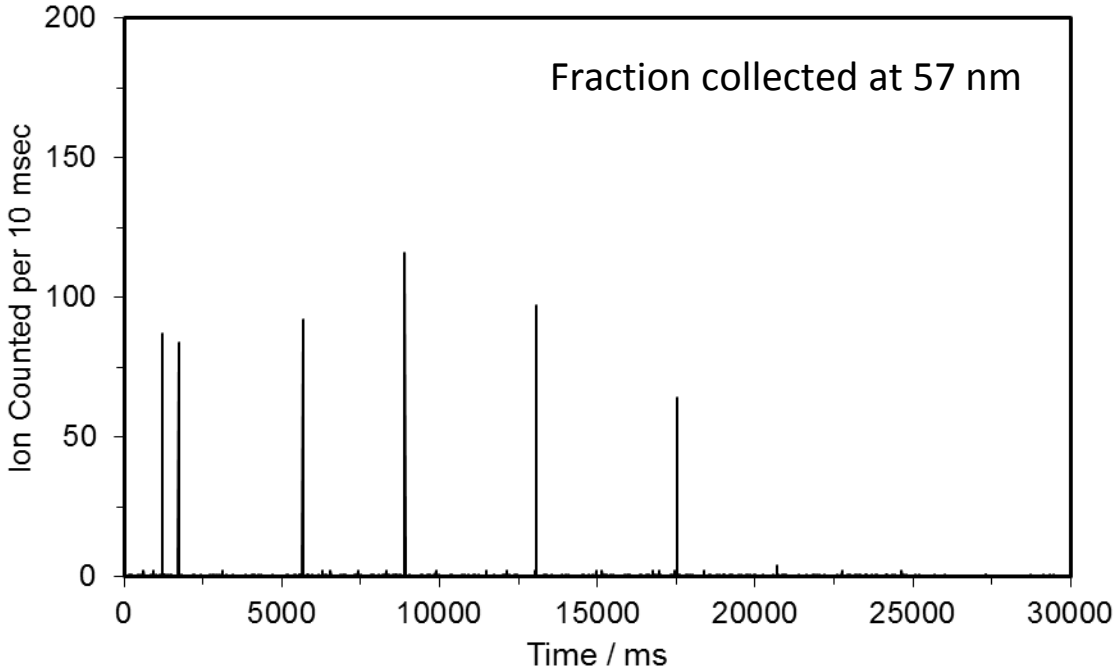

Figure S4. Single particle mode ICP-MS analysis (m/z 197, dwell time 10 msec) of the fraction collected at 57 nm following the electrospraying of Au 60 nm NPs.

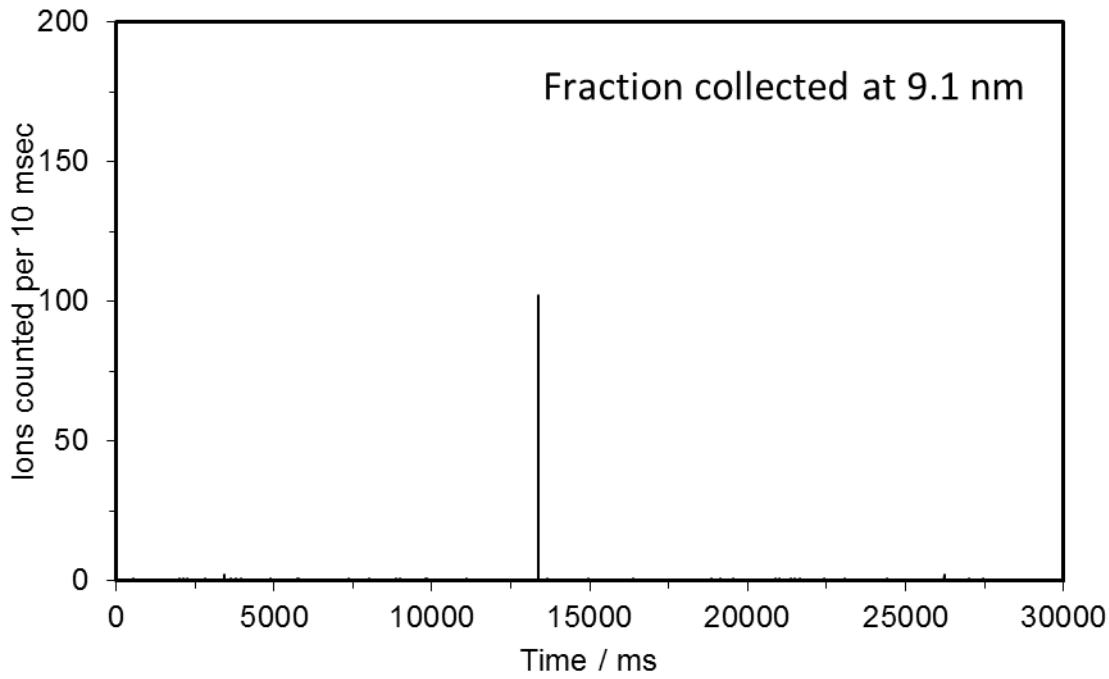

Figure S5. Single particle mode ICP-MS analysis (m/z 197, dwell time 10 msec) of the fraction collected at 9.1 nm following the electrospraying of Au 60 nm NPs.

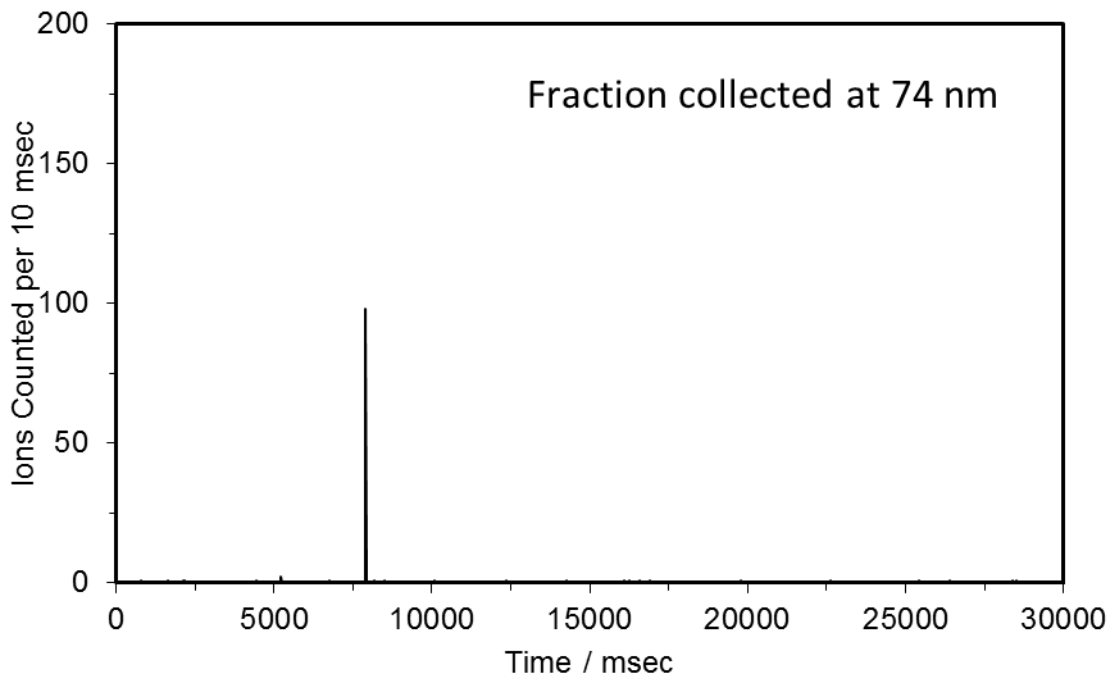

Figure S6. Single particle mode ICP-MS analysis (m/z 197, dwell time 10 msec) of the fraction collected at 74 nm following the electrospraying of Au 60 nm NPs.