Electronic Supplementary Material (ESI) for RSC Advances

Water-Soluble Gold Nanoparticles Stabilized with Cationic Phosphonium Thiolate Ligands

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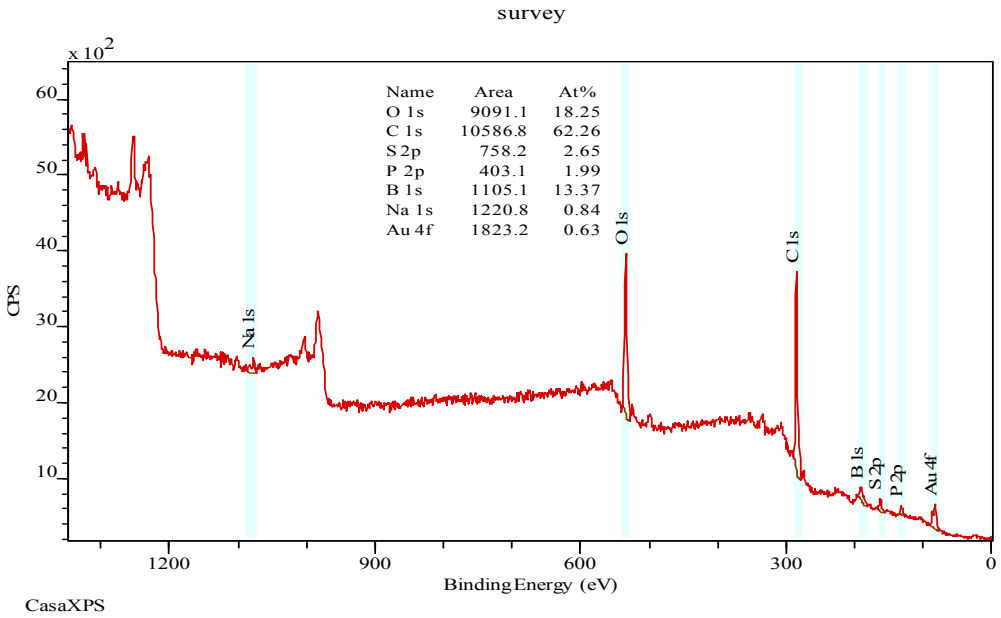
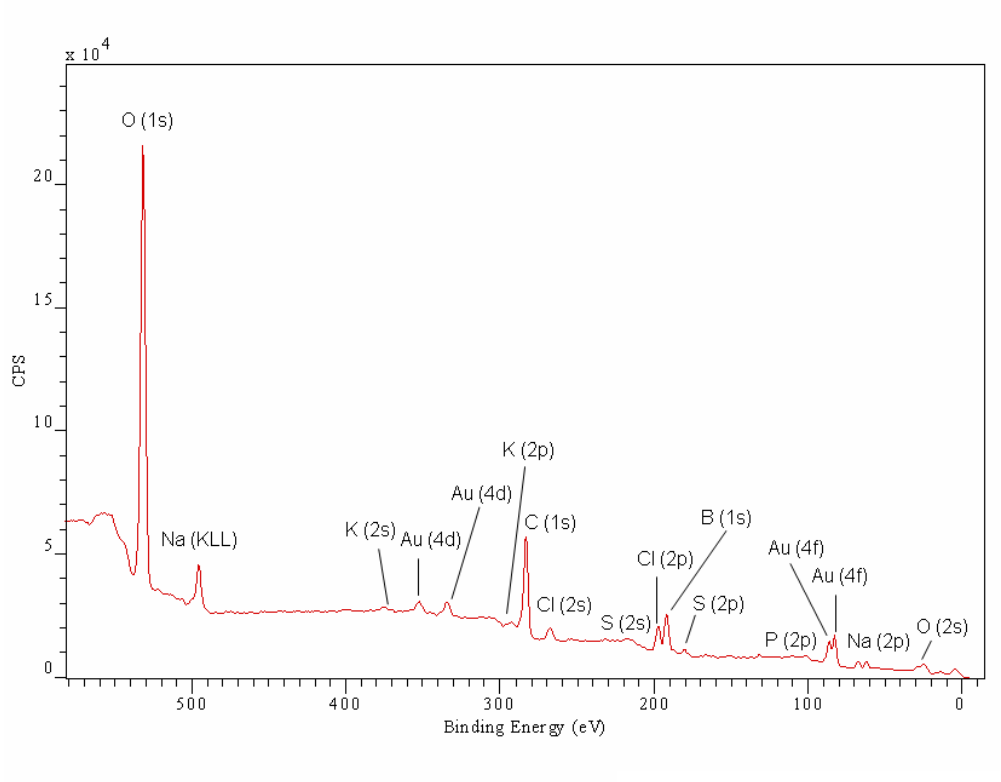
Supplementary Figures

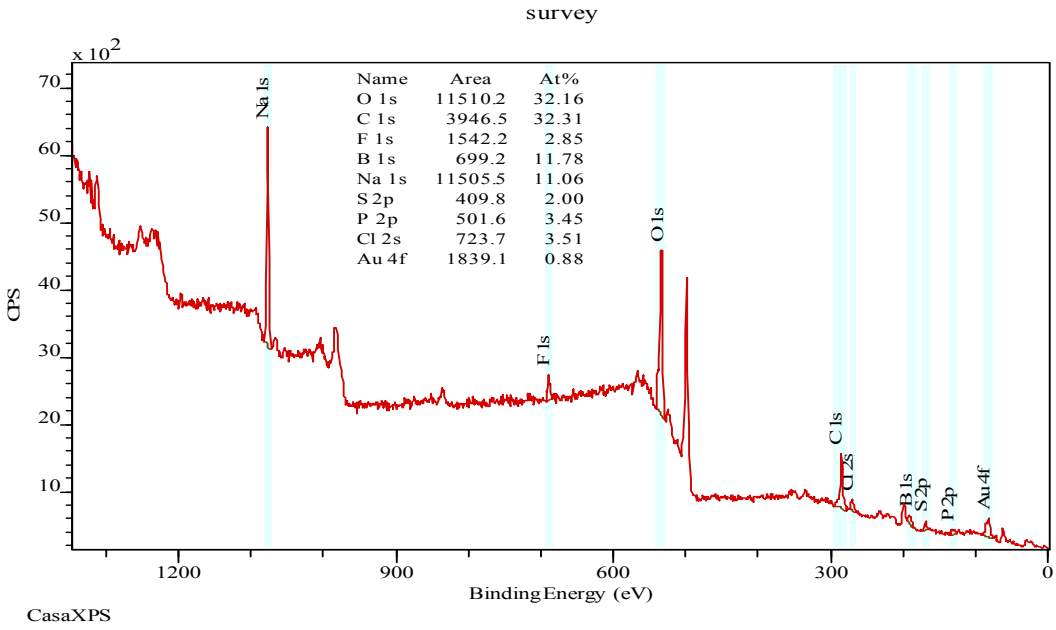


(a)



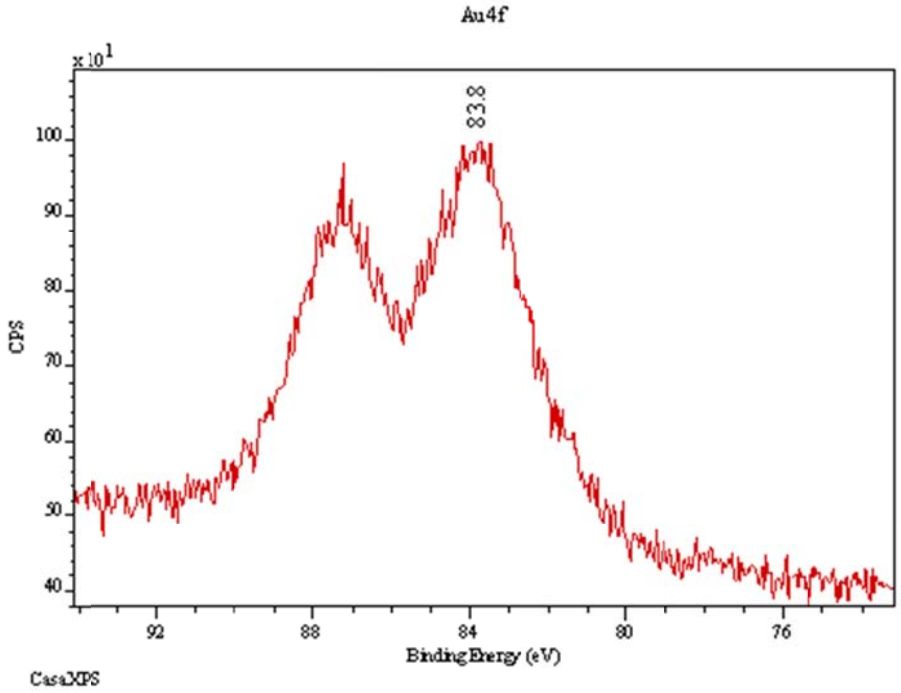
(b)

Fig S1. Widescan XPS spectra of freeze-dried phosphonium-AuNPs; (a) obtained from PPTS ligand; (b) Nanoparticles obtained from PPTA ligand.

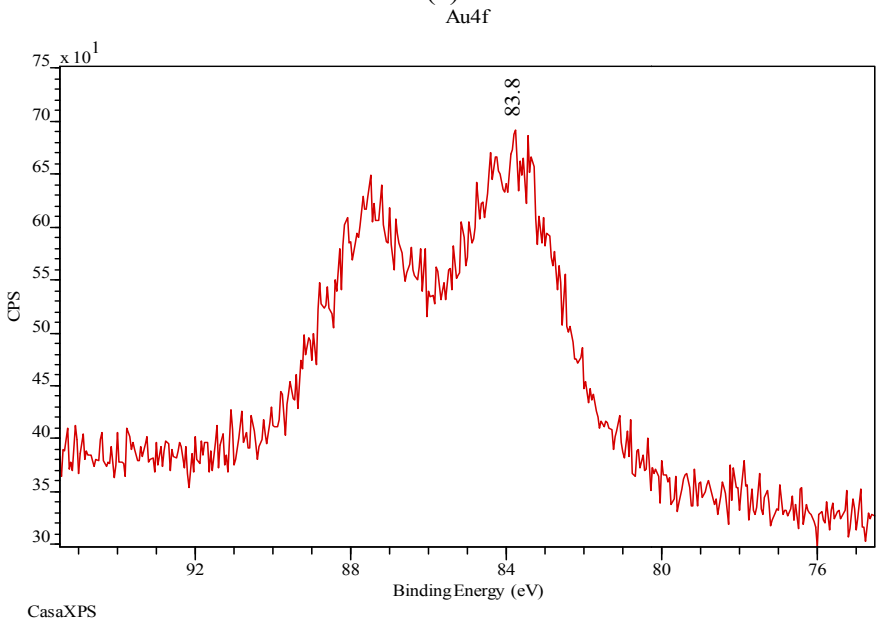


(c)

Fig S1. (c) Widescan XPS spectrum of freeze-dried phosphonium-AuNPs obtained from FPPTS ligand.



(a)



(b)

Fig S2. High resolution Au(4f) XPS spectra of freeze-dried phosphonium-AuNPs. (a) Nanoparticles obtained from PPTA ligand; (b) Nanoparticles obtained from FPPTS ligand.

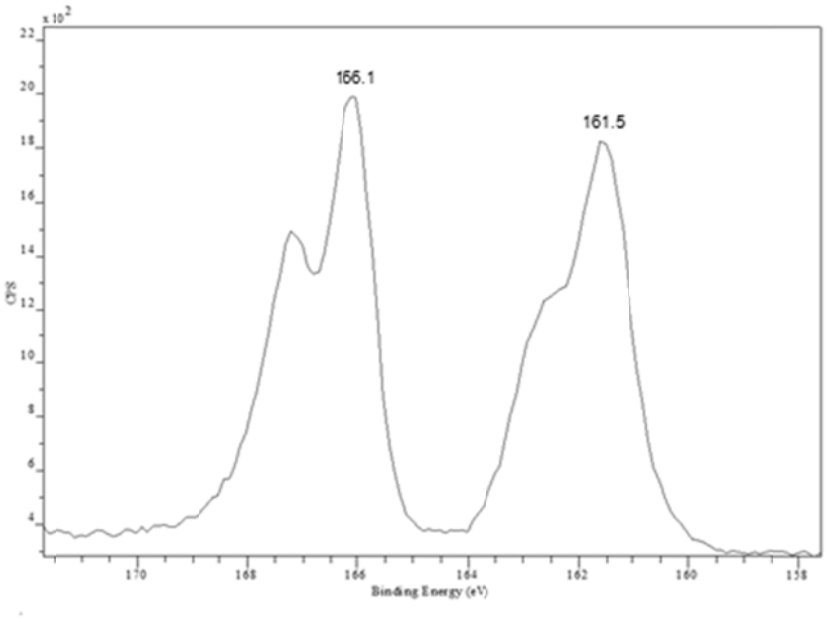
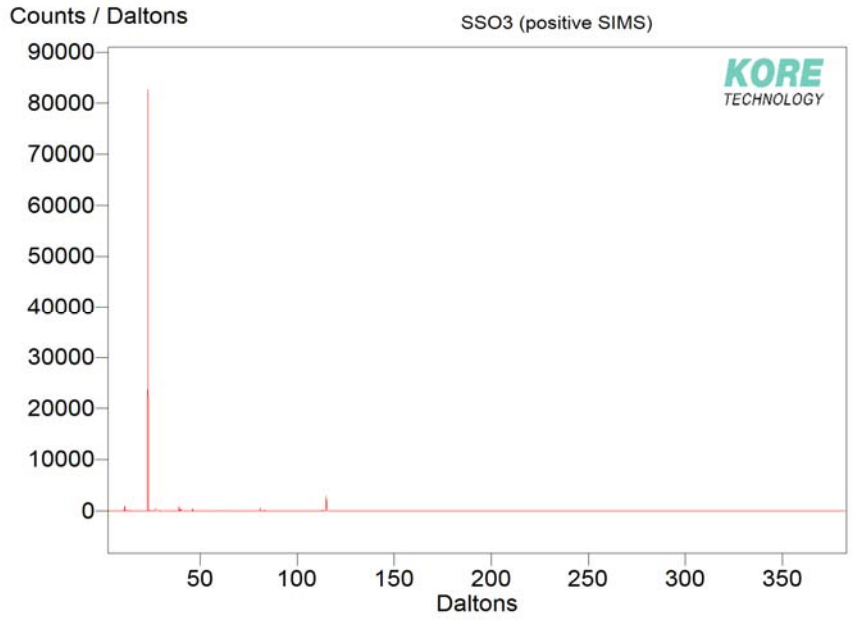
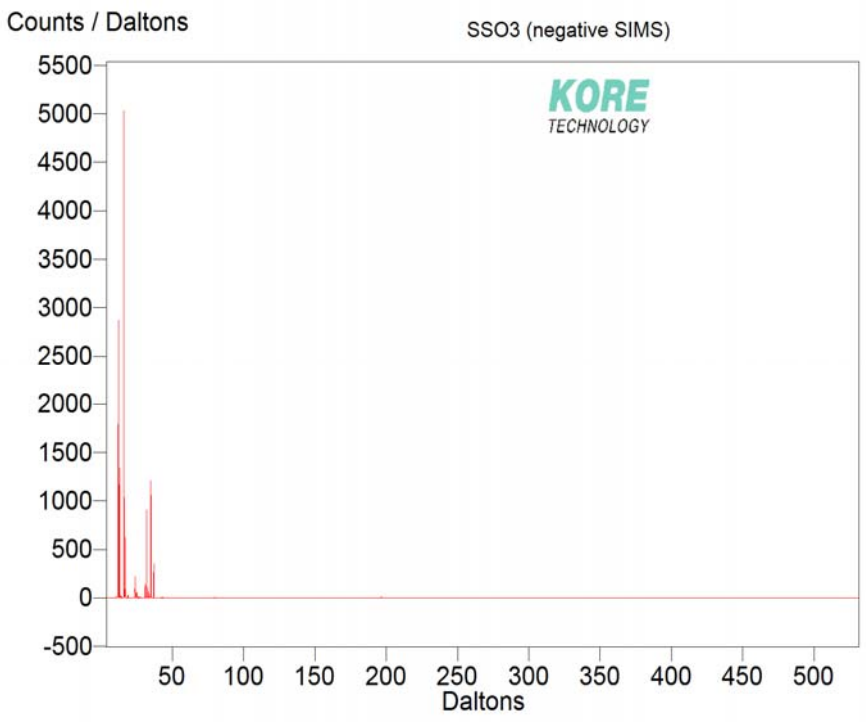


Fig S3. High resolution S_{2p} XPS spectrum of the PPTS ligand.

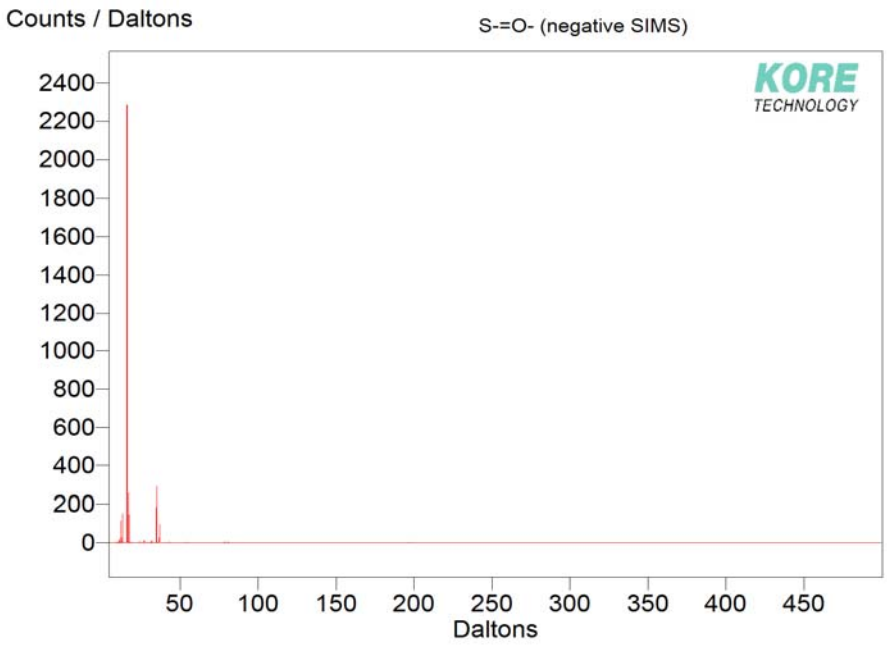


(a)

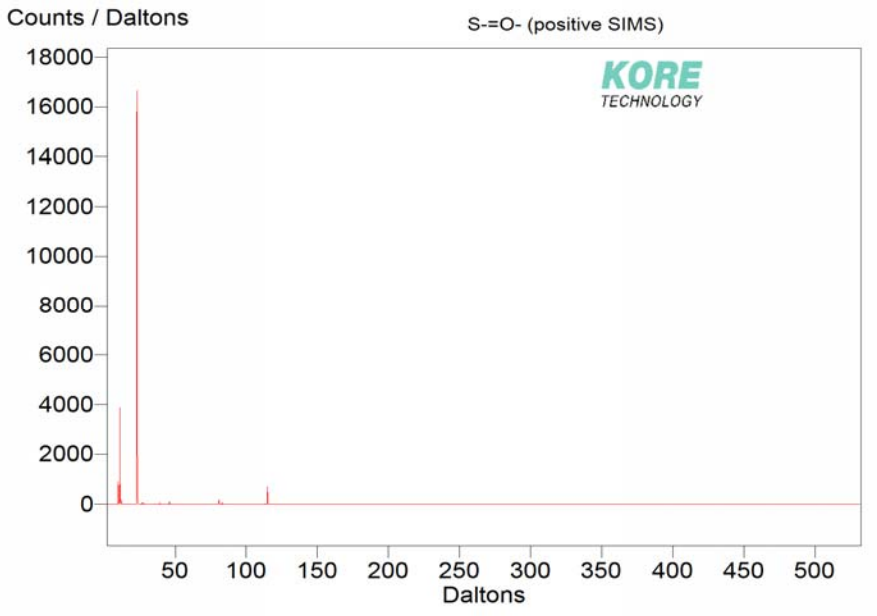


(b)

Fig S4. SIMS spectrum of phosphonium-AuNPs derived from PPTS ligands: (a) positive ion mode; (b) negative ion mode.

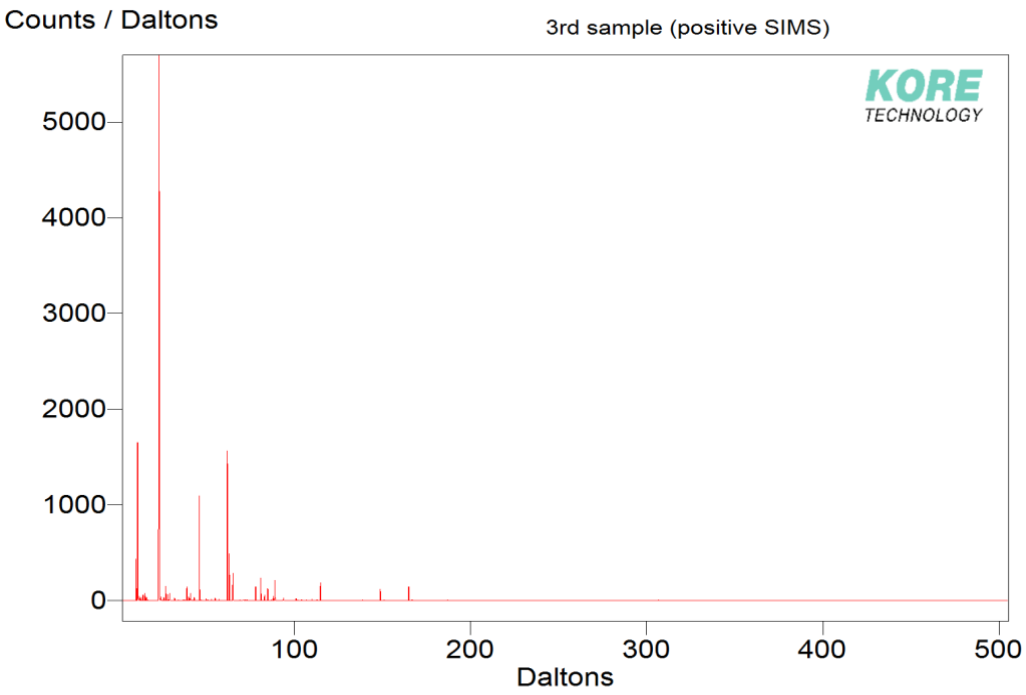


(a)

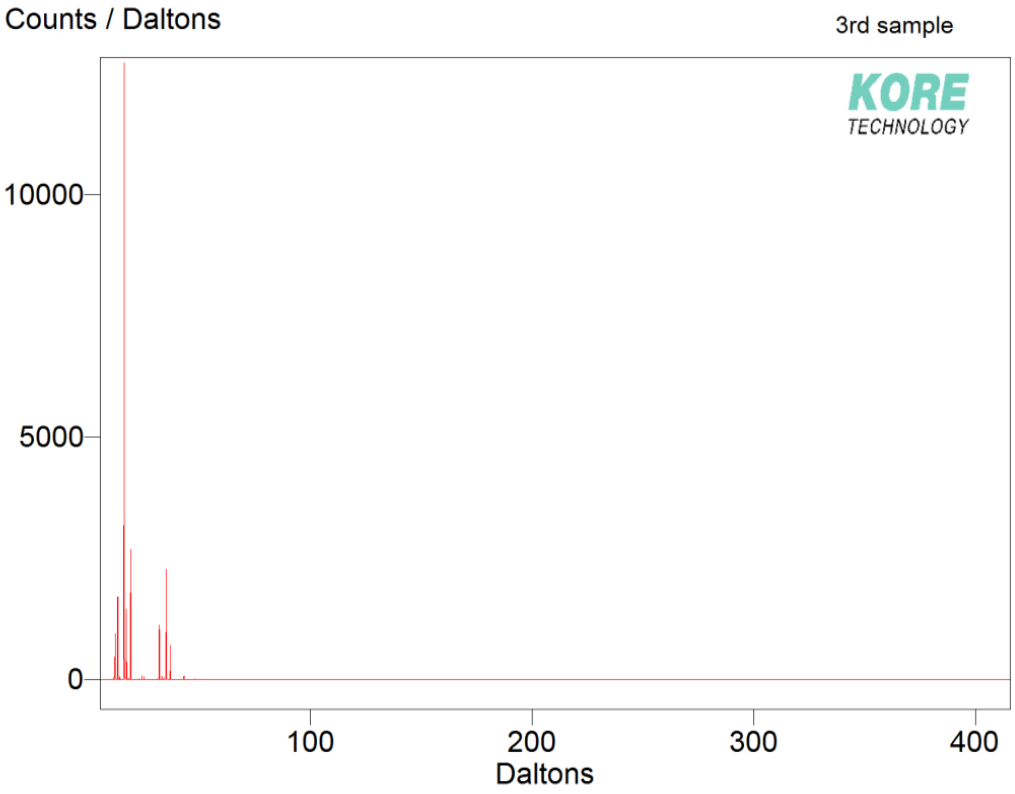


(b)

Fig S5. SIMS spectrum of phosphonium-AuNPs derived from PPTA ligands: (a) positive ion mode; (b) negative ion mode.



(b)



(a)

Fig S6. SIMS spectrum of phosphonium-AuNPs derived from FPPTS ligands: (a) positive ion mode; (b) negative ion mode.

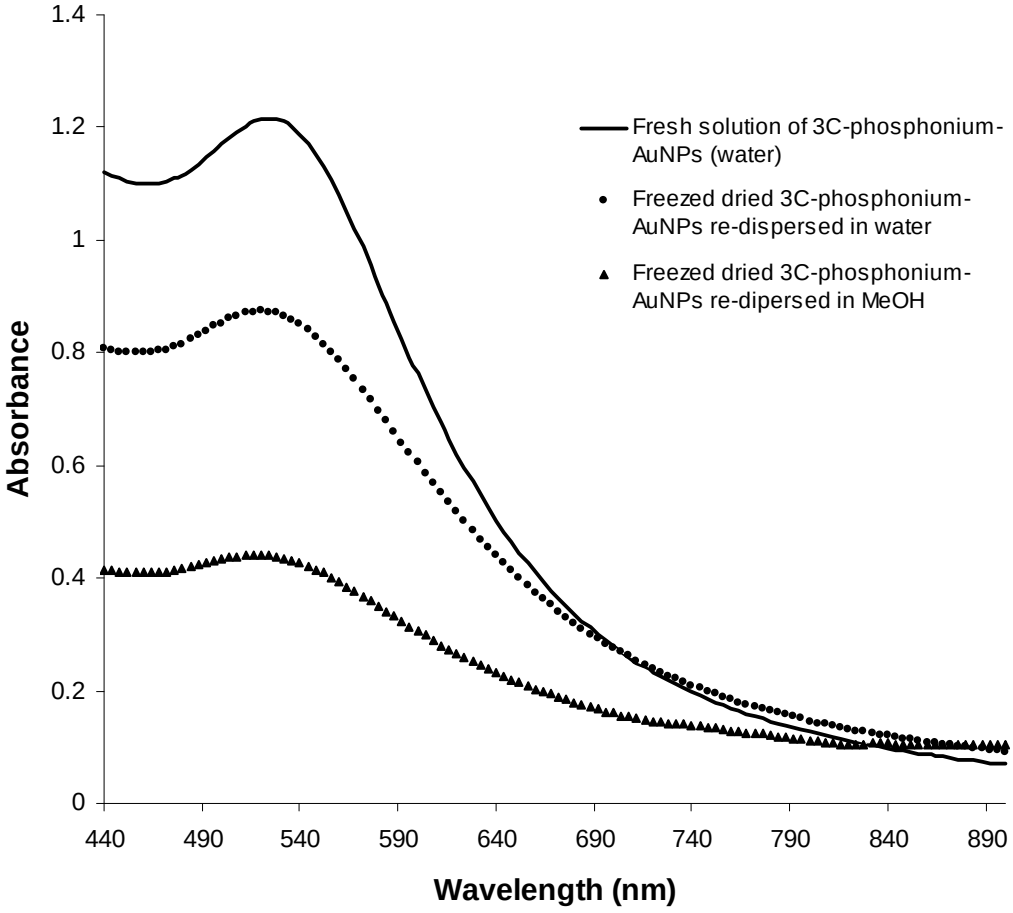


Fig.S7 UV-visible spectra of a fresh solution of phosphonium-AuNPs prepared using PPTS ligand (□) and the freeze-dried nanoparticles re-suspended in water (•) and methanol (▲).