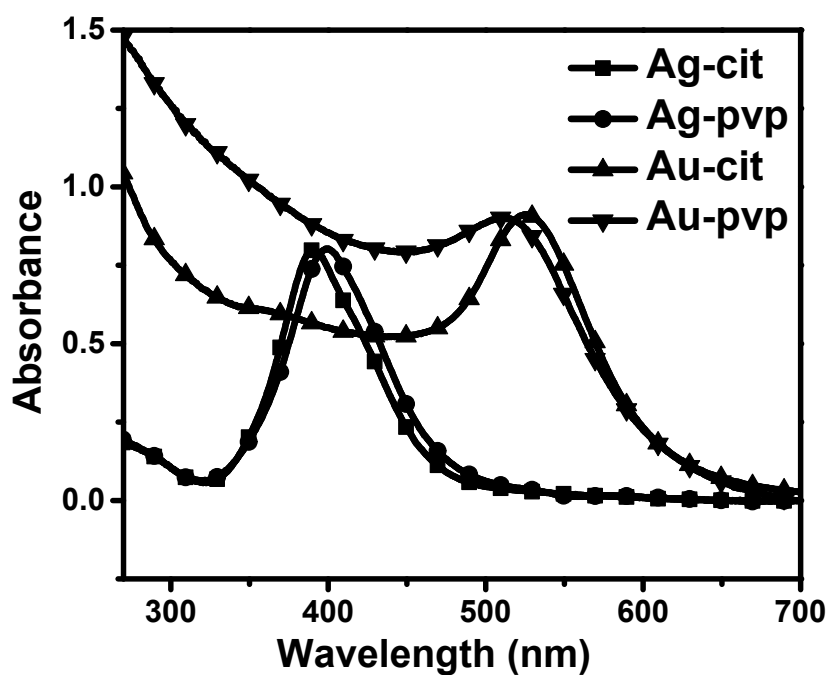


## Supporting Information

# Aminoparticles – Synthesis, Characterisation and Application in Water Purification

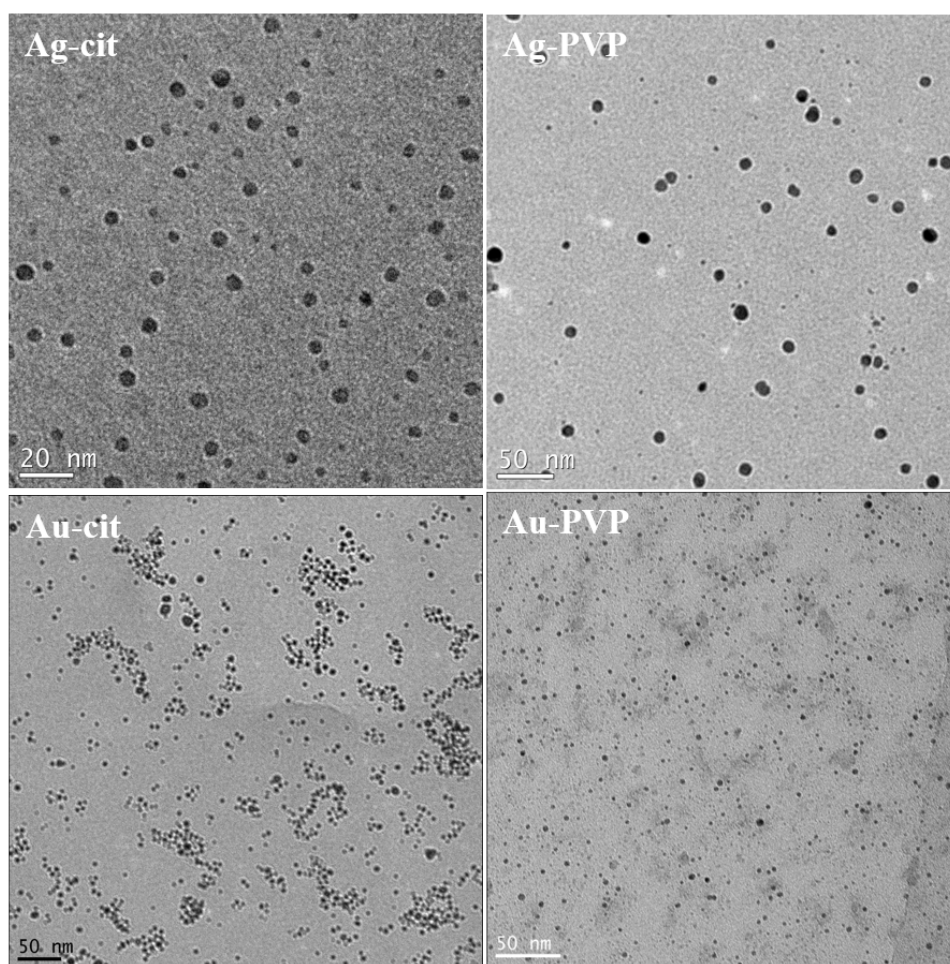
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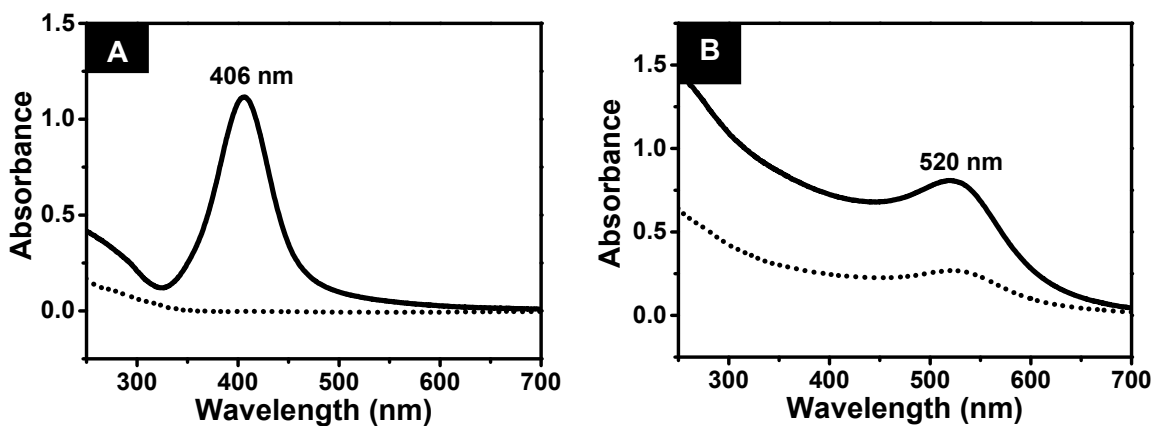
**Figure S1.** UV-visible spectra of Au and Ag NPs.

**Table S1.** Dynamic light scattering (DLS) for diameter and electrokinetic surface charge measurement for PVP and citrate capped Au and Ag NPs.

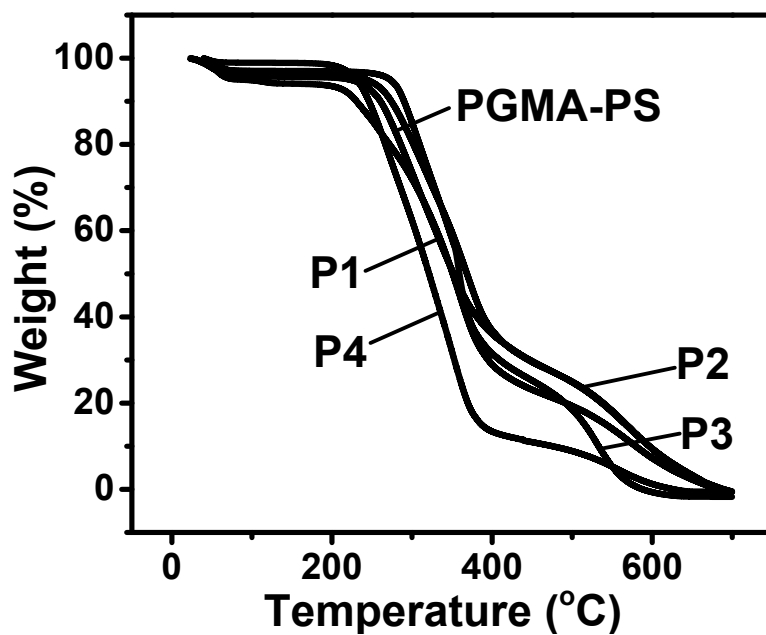
<b>Nanoparticle</b>	<b>Size (nm)</b>	<b>Zeta potential (mV)</b>
Ag – Citrate	60.33	- 40.3
Ag – PVP	40.49	- 22.9
Au – Citrate	26.38	- 37.3
Au – PVP	48.29	- 21.4



**Figure S2.** TEM images of Au and Ag NPs.



**Figure S3.** Representative UV spectra of the aqueous solutions (A) Ag-PVP and (B) Au-PVP NP's before (solid line) and after (dotted line) extraction using aminoparticles, **P1**.



**Figure S4.** TGA traces for all aminoparticles recorded in nitrogen atmosphere.

**Table S2.** Extraction details of metal nanoparticles by aminoparticles **P1 – P4**.

	<b>Amino particl es</b>	<b>P1</b>		<b>P2</b>		<b>P3</b>		<b>P4</b>	
<b>NP's</b>	<b>Time (min)</b>	<b>Initial conc (ppm)</b>	<b>Qe (mg/g)</b>	<b>Initial conc (ppm)</b>	<b>Qe (mg/g)</b>	<b>Initial conc (ppm)</b>	<b>Qe (mg/g)</b>	<b>Initial conc (ppm)</b>	<b>Qe (mg/g)</b>
<b>Ag citrate</b>	0	20.27	0	18.75	0	20.27	0	18.75	0
	2	14.03	62.40	14.42	43.27	11.60	43.33	12.26	32.40
	5	13.41	68.63	13.76	49.87	10.42	49.23	11.54	36.01
	10	13.04	72.30	13.65	50.97	10.25	50.06	11.17	37.85
	20	12.56	77.13	13.64	51.03	10.26	50.01	11.05	38.45
	30	11.59	86.83	13.68	50.63	10.01	51.27	11.04	38.50
	60	11.32	89.53	13.54	52.03	9.94	51.63	10.25	42.43
	120	11.15	91.27	13.55	51.97	9.88	51.95	9.36	46.92
<b>Ag- PVP</b>	0	19.30	0	19.30	0	19.30	0	19.30	0
	2	14.50	24.02	14.64	23.28	16.46	14.2	16.69	13.06
	5	14.46	24.22	14.53	23.85	16.09	16.06	16.5	13.98
	10	13.80	27.52	14.42	24.38	15.91	16.97	16.24	15.28
	20	13.57	28.67	14.09	26.07	15.78	17.58	16.13	15.84
	30	13.13	30.85	13.86	27.20	15.57	18.67	15.94	16.80
	60	12.26	35.22	13.75	27.73	15.06	21.18	15.59	18.53
	120	12.31	34.97	13.56	28.72	15.08	21.11	15.21	20.46
<b>Au- citrate</b>	0	31.63	0	31.63	0	28.05	0	28.05	0
	2	x	x	16.16	77.33	x	x	16.55	57.50
	5	16.48	75.75	16.03	77.99	17.67	51.89	16.75	56.49
	10	14.43	86.00	15.57	80.29	16.69	56.79	16.61	57.19
	20	12.63	95.03	x	x	16.31	58.68	x	x
	30	12.49	95.73	15.66	79.86	16.73	56.56	16.69	56.76
	60	10.95	103.4	15.73	79.50	16.40	58.24	16.39	58.30
	120	9.45	110.8	14.58	85.25	14.87	65.89	13.31	73.66

	0	33.96	0	33.96	0	21.45	0	21.45	0
	2	31.77	10.95	31.71	13.90	x	x	x	x
	5	30.57	16.99	31.69	13.90	19.18	5.67	19.10	5.85
<b>Au-</b>	10	x	x	x	x	19.07	5.94	18.45	7.49
<b>PVP</b>	20	29.04	24.64	31.15	14.08	x	x	x	x
	30	28.34	28.10	x	x	18.10	8.35	17.50	9.85
	60	27.47	32.48	31.18	13.90	18.35	7.73	17.49	9.88
	120	27.54	32.10	31.18	13.90	18.43	7.55	17.52	9.80

(x denotes no readings were taken)