**Supplementary Materials**

**Ascorbic acid supported Carboxymethyl cellulose stabilized silver nanoparticles as optical nanoprobe for Au3+ detection in environmental sample**

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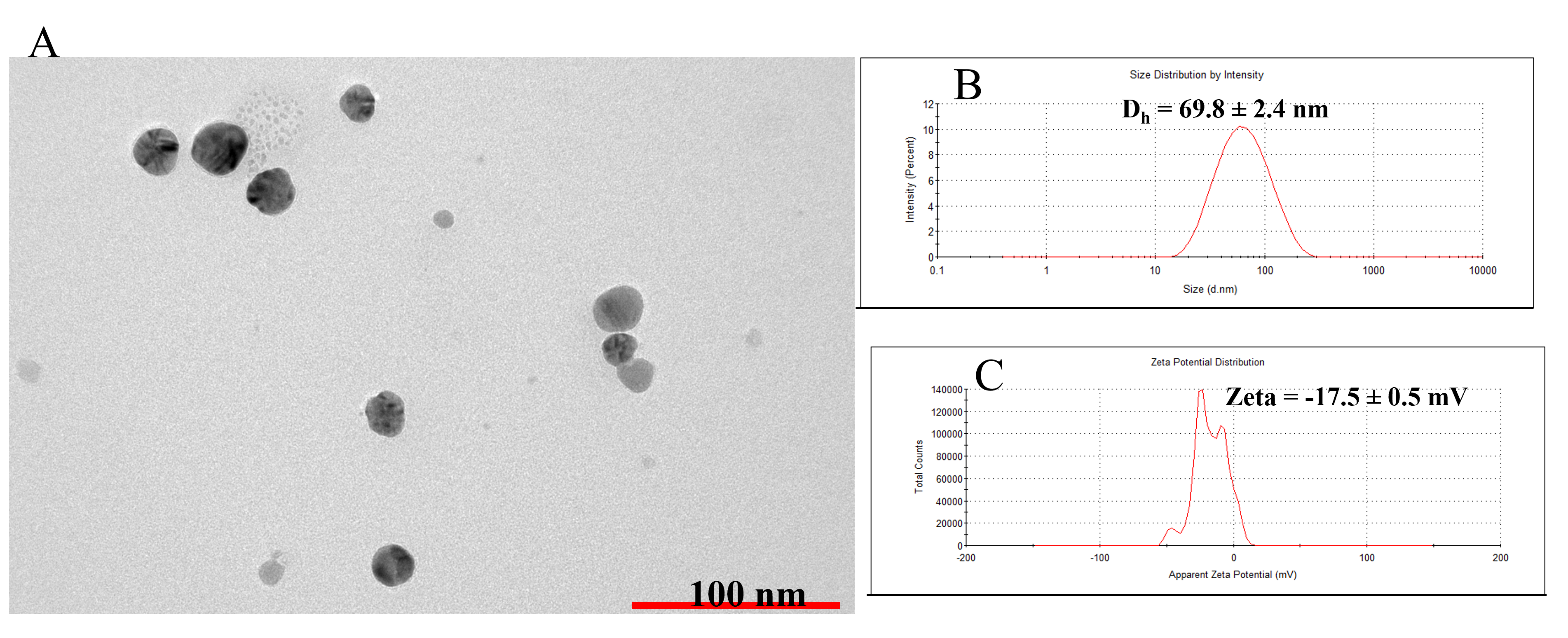
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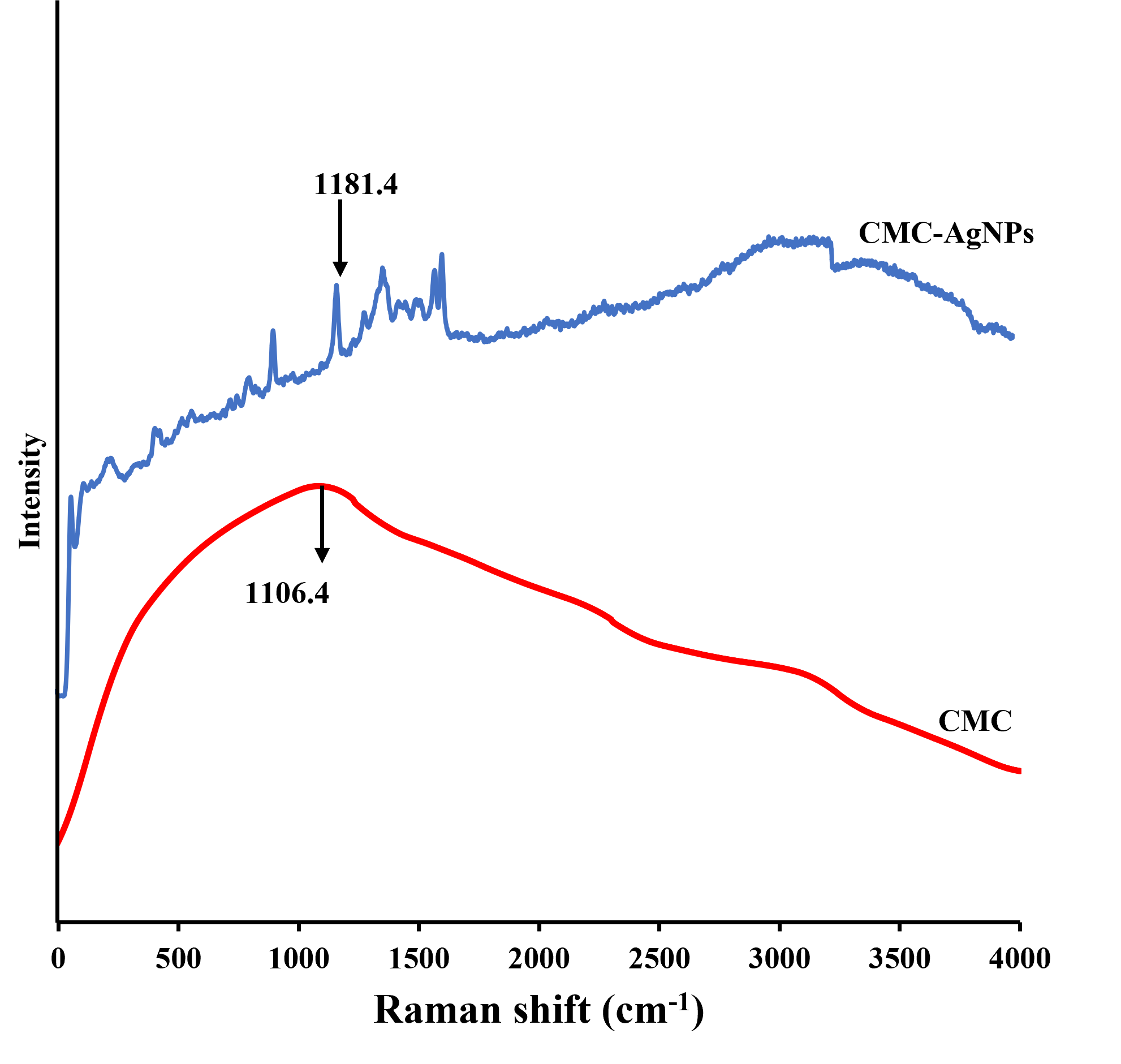


**Fig.S1.** (A) TEM images (B) Hydrodynamic diameter from DLS machine (C) Zeta potential of CMC-AgNPS.

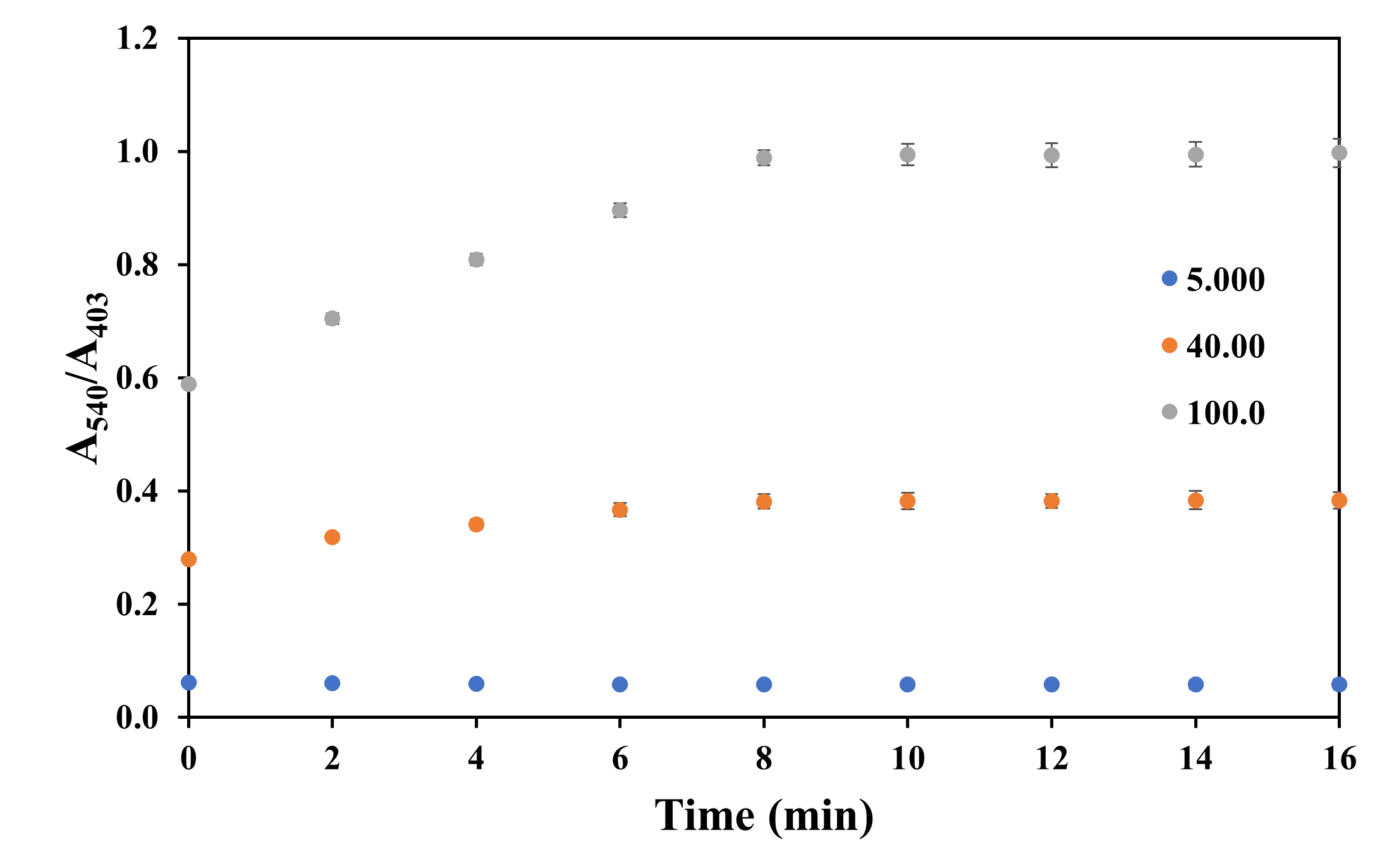
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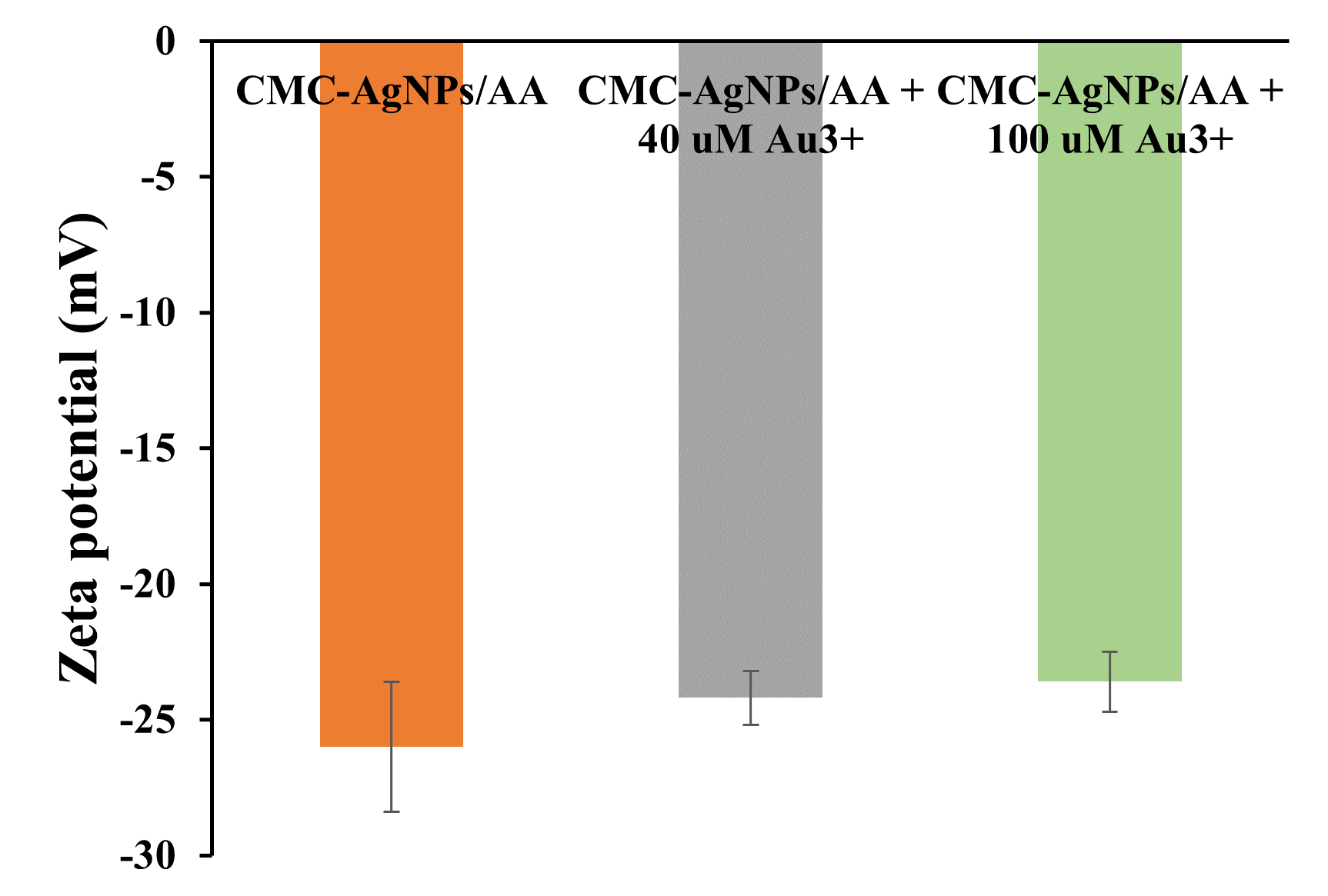
**Fig.S2.** EDS Spectra of CMC-AgNPs, inset shows the percent elemental composition



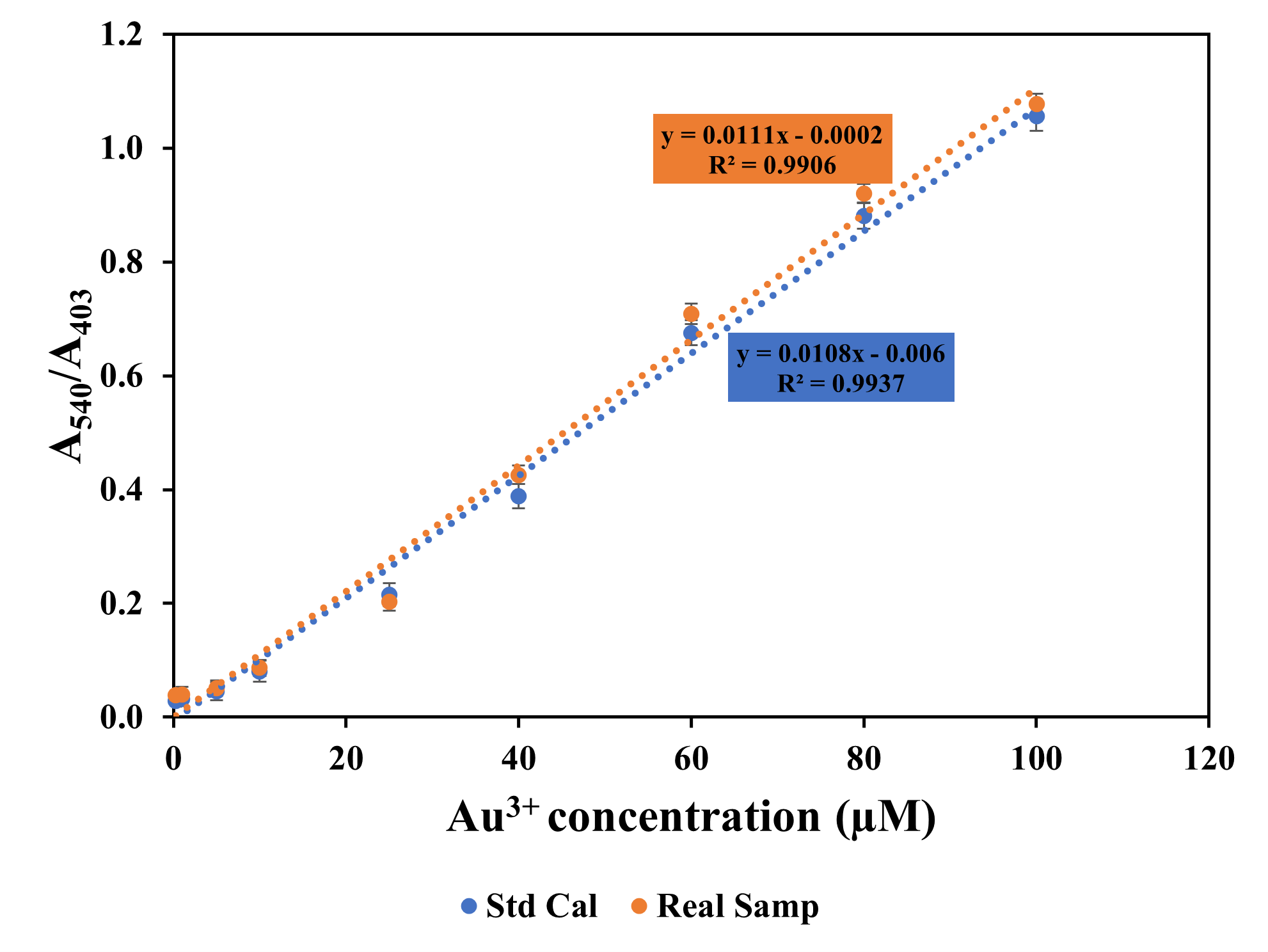
**Fig.S3.** Raman spectra of CMC (red) and CMC-AgNPs (blue)



**Fig.S4.** Plot of A540/A403 against time at 2 min interval



**Fig.S5.** Zeta potential of CMC-AgNPs under Au3+ injection at 0.00, 40.0 and 100.0 µM.



**Fig.S6.** Plot of A540/A403 vs Au3+ concentrations from 0.25 to 100.0 µM, comparing response for the calibration plot and in wastewater sample.