Electronic Supporting Information:

Naked Eye Sensing of Melamine Using Rationally Tailerd Gold Nanoparticles: Charge-Transfer and Hydrogen-bonding Recognition

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Figure ESI1

The plots obtained from DLS measurement, illustrating the particle size distribution of (a) UCA and (b) TNBS-tailored reporters.

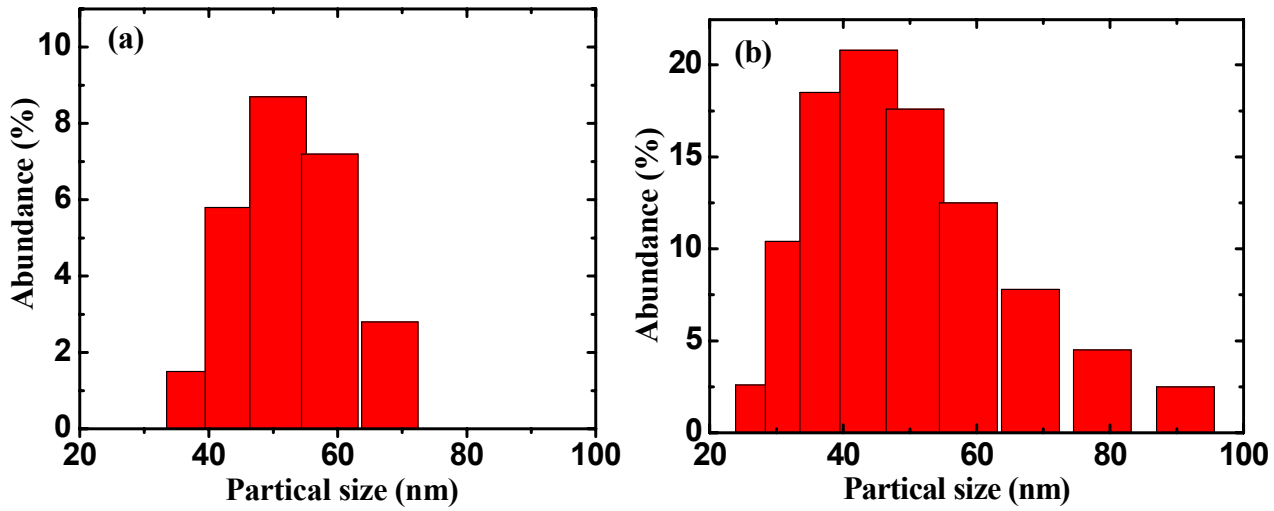

Figure ESI2

FTIR spectra of (a) UCA, (b) UCA-tailored reporters, (c) TNBS and (d) TNBS-tailored reporters.

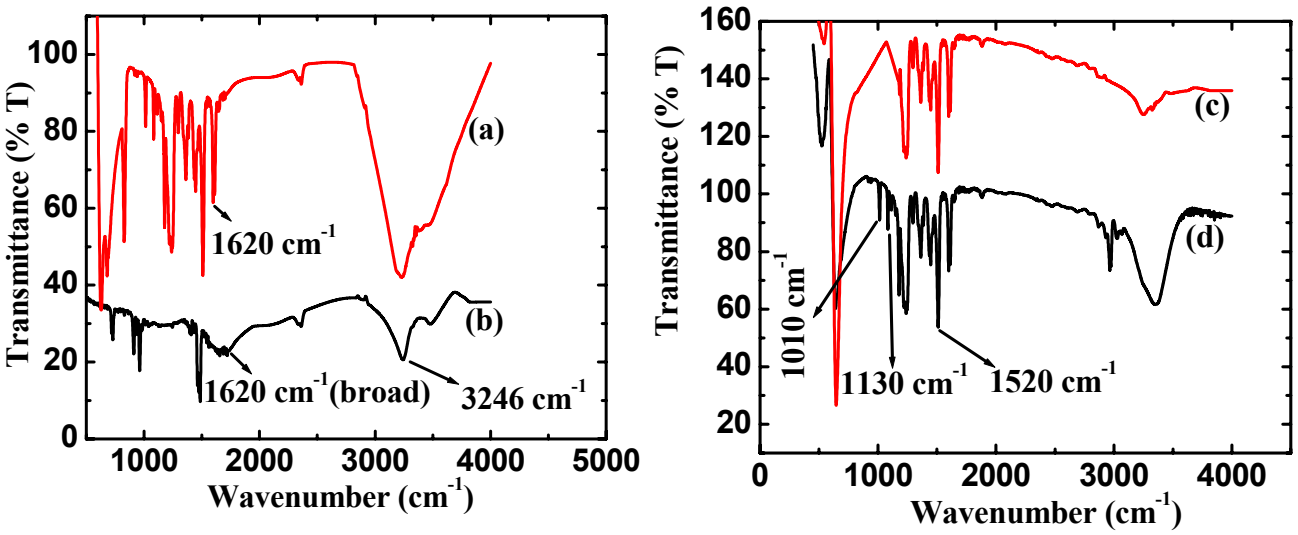

Figure ESI3

The plot obtained from dynamic light scattering measurement for the TNBS-tailored nanoparticle in presence of variable concentration of melamine.

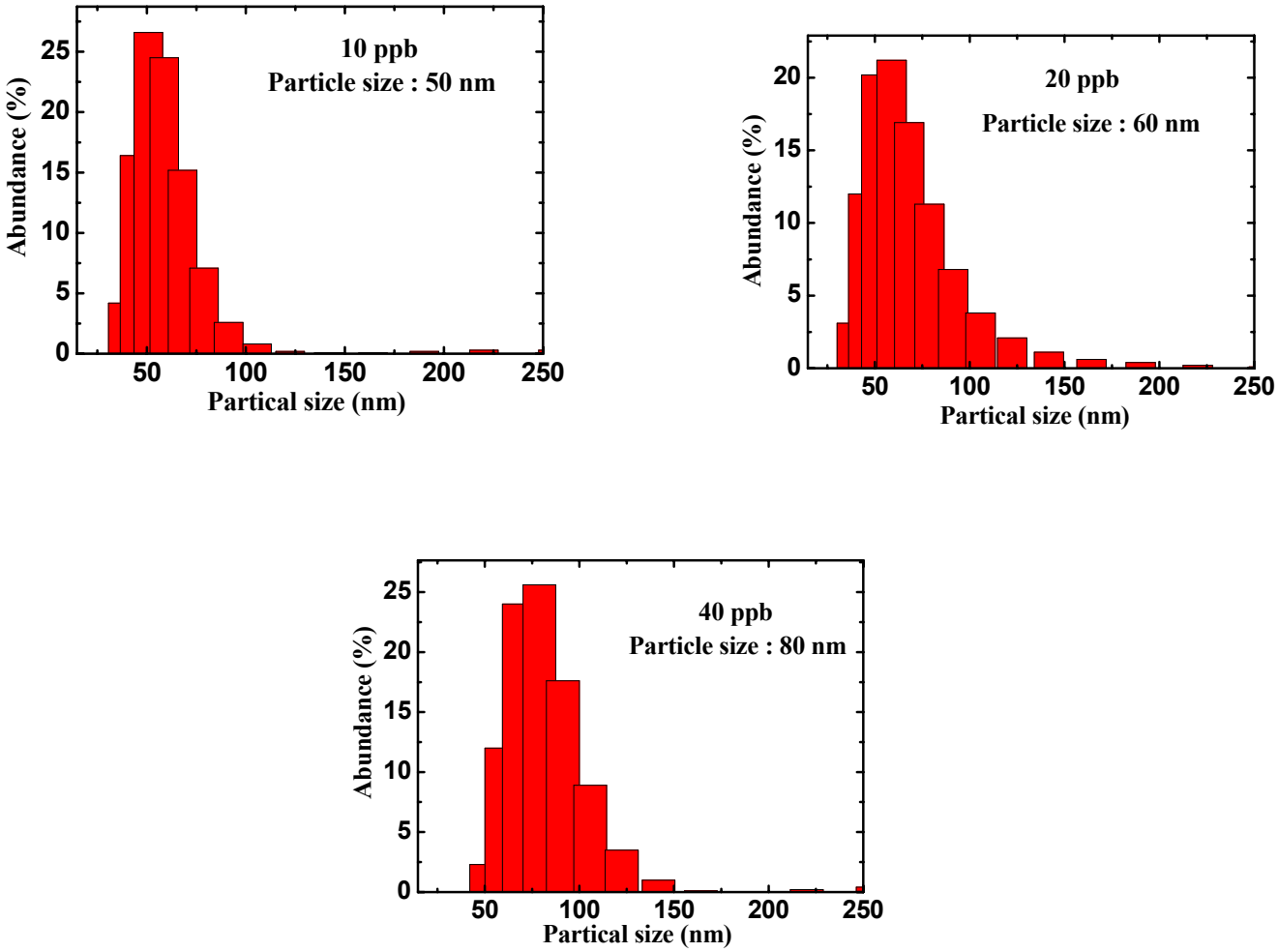

Figure ESI4

TEM image of UCA-tailored reporters in the presence of melamine (1 ppm) and inset shows the magnified TEM image.

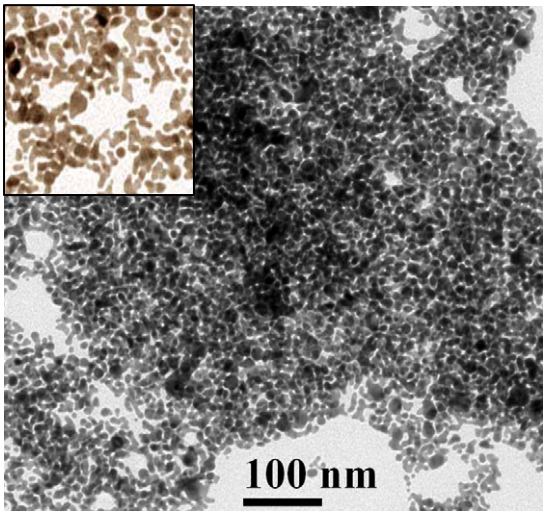

Figure ESI5

Absorption spectra illustrating the selectivity of the optical sensing method towards melamine using (a) UCA and (b) TBBS-tailored nanoparticles. In the case of UCA-tailored reporter, the selectivity assay was performed with 1 ppm of each analyte whereas the selectivity assay with TNBS-tailored nanoparticle was performed with 50 ppb of the analytes.