

**Highly selective naked eye detection of vitamin B1 in the presence of other vitamins using graphene quantum dots capped gold nanoparticles**

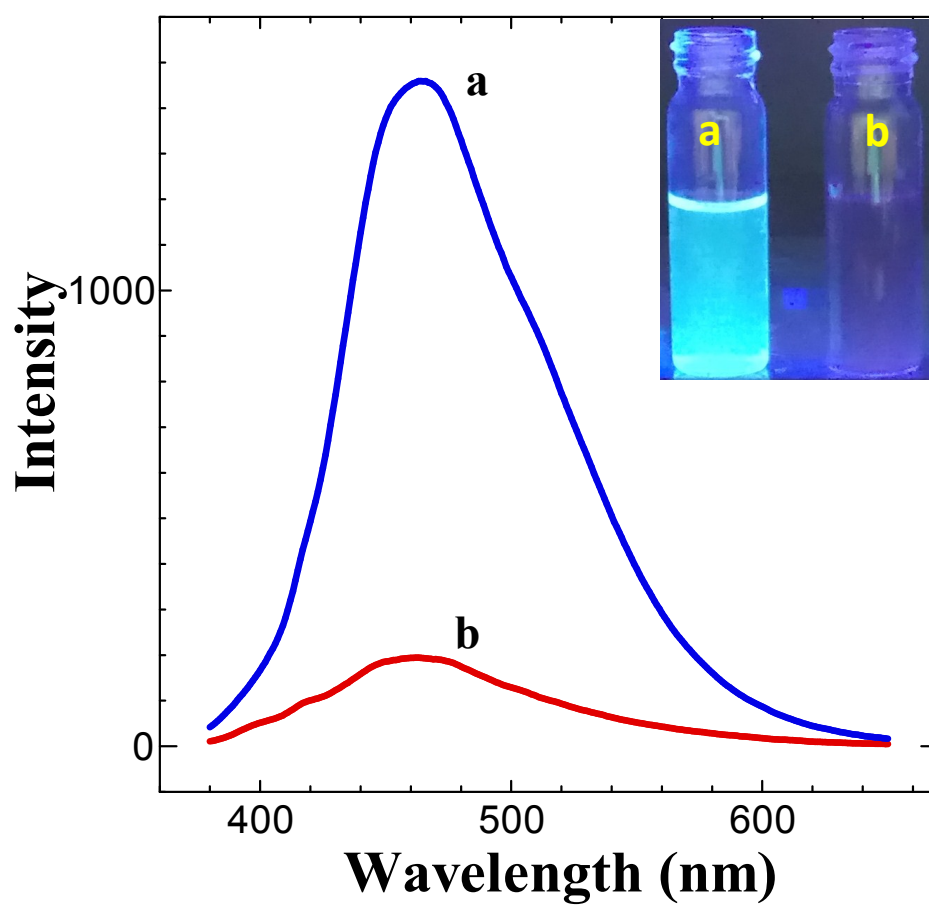
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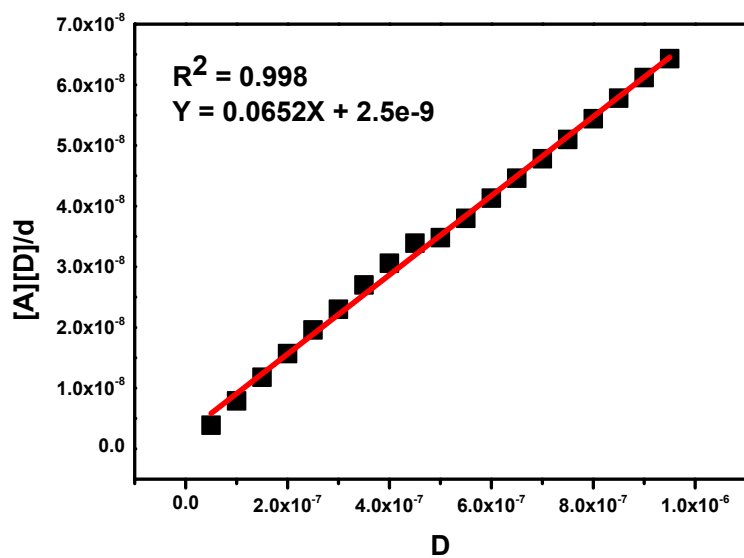
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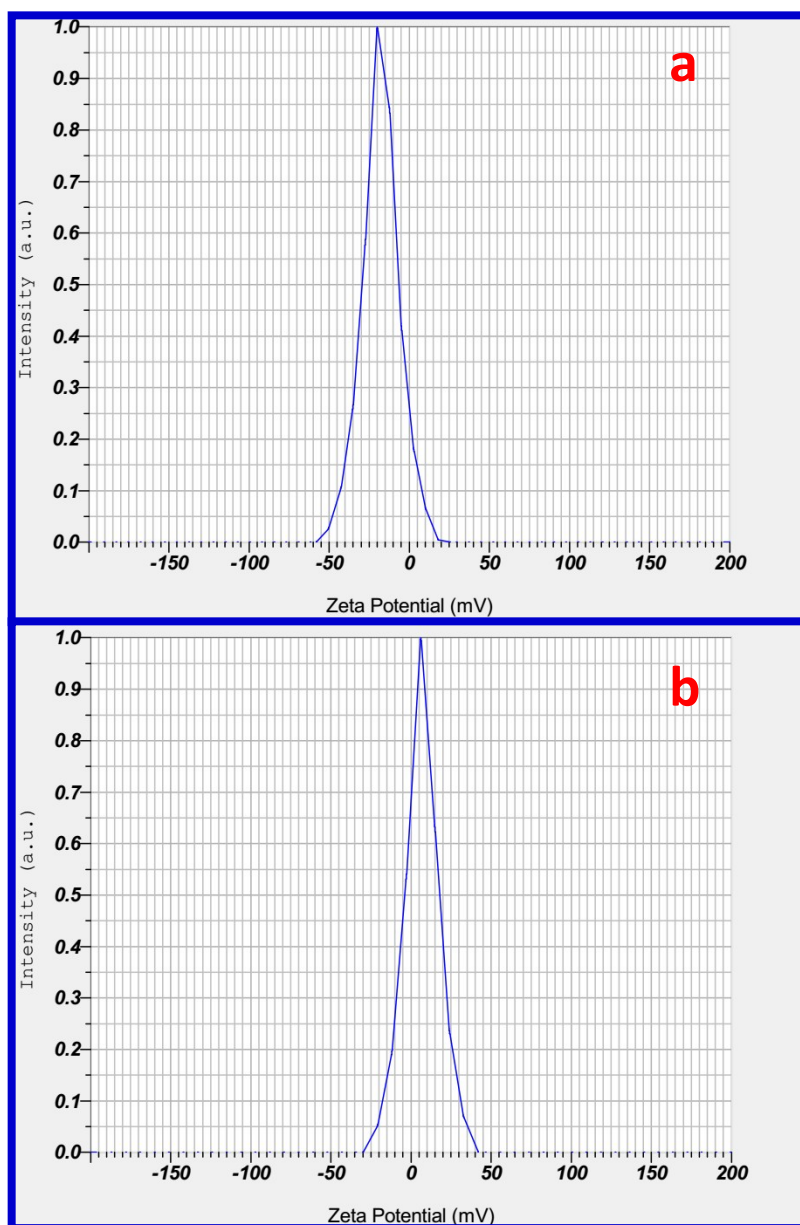
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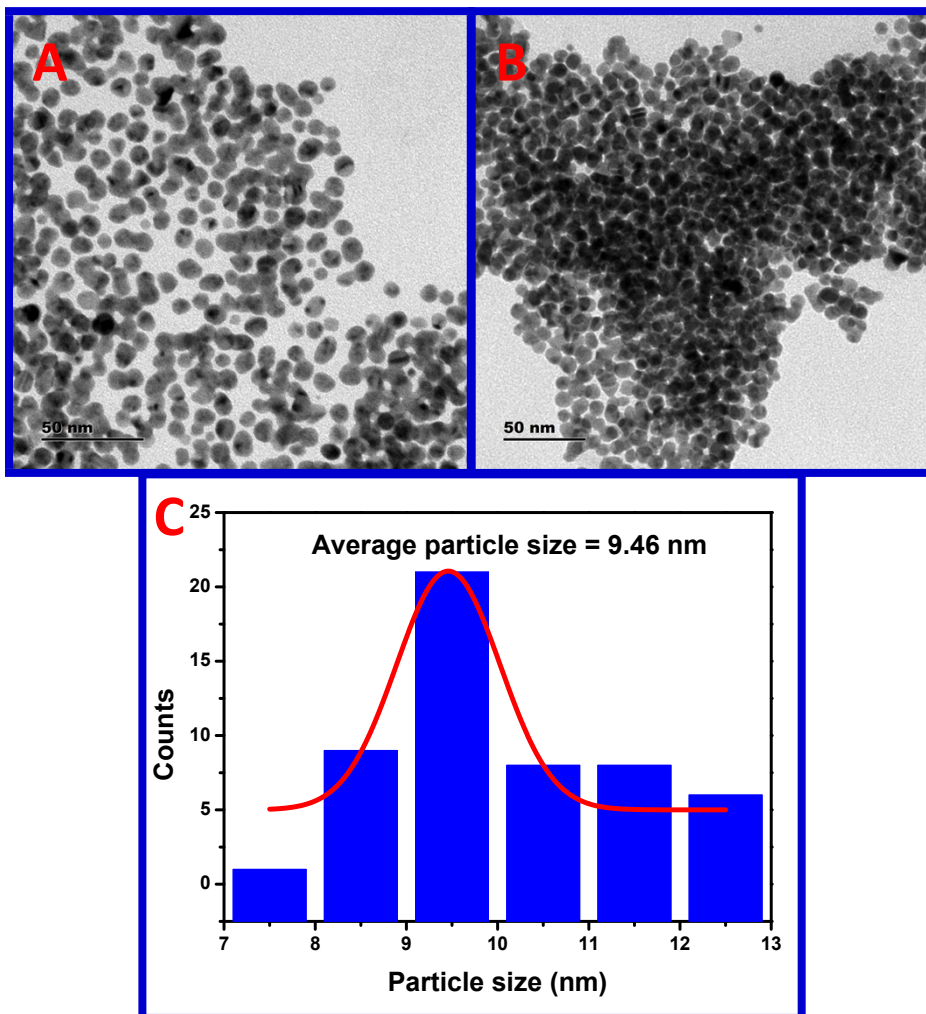
**Fig. S1.** Emission spectra of (a) GQDs and (b) Au-GQDs. Inset: photographs of GQDs and Au-GQDs under UV illumination.



**Fig. S2.** Association constant plot for spectrophotometric determination of thiamine using Au-GQDs.



**Fig. S3.** Zeta potential graphs of (a) Au-GQDs + 0.5  $\mu\text{M}$  and (b) 0.5  $\mu\text{M}$  thiamine



**Fig. S4.** HR-TEM images of Au-GQDs: (A) before (B) after the addition of thiamine and (C) particle size distribution in the presence of thiamine.

**Table S1**

Determination of thiamine in blood serum samples

<b>Blood serum</b>	<b>Thiamine added <math>\mu\text{M}</math></b>	<b>Thiamine found <math>\mu\text{M}</math></b>	<b>Recovery (%)</b>
Sample 1	-	-	-
Sample 2	3	2.98	99.3
Sample 3	6	5.97	99.5
Sample 4	9	8.93	99.2