

Amine-Functionalized Graphene Quantum Dots for Fluorescence-Based Immunosensing of Ferritin

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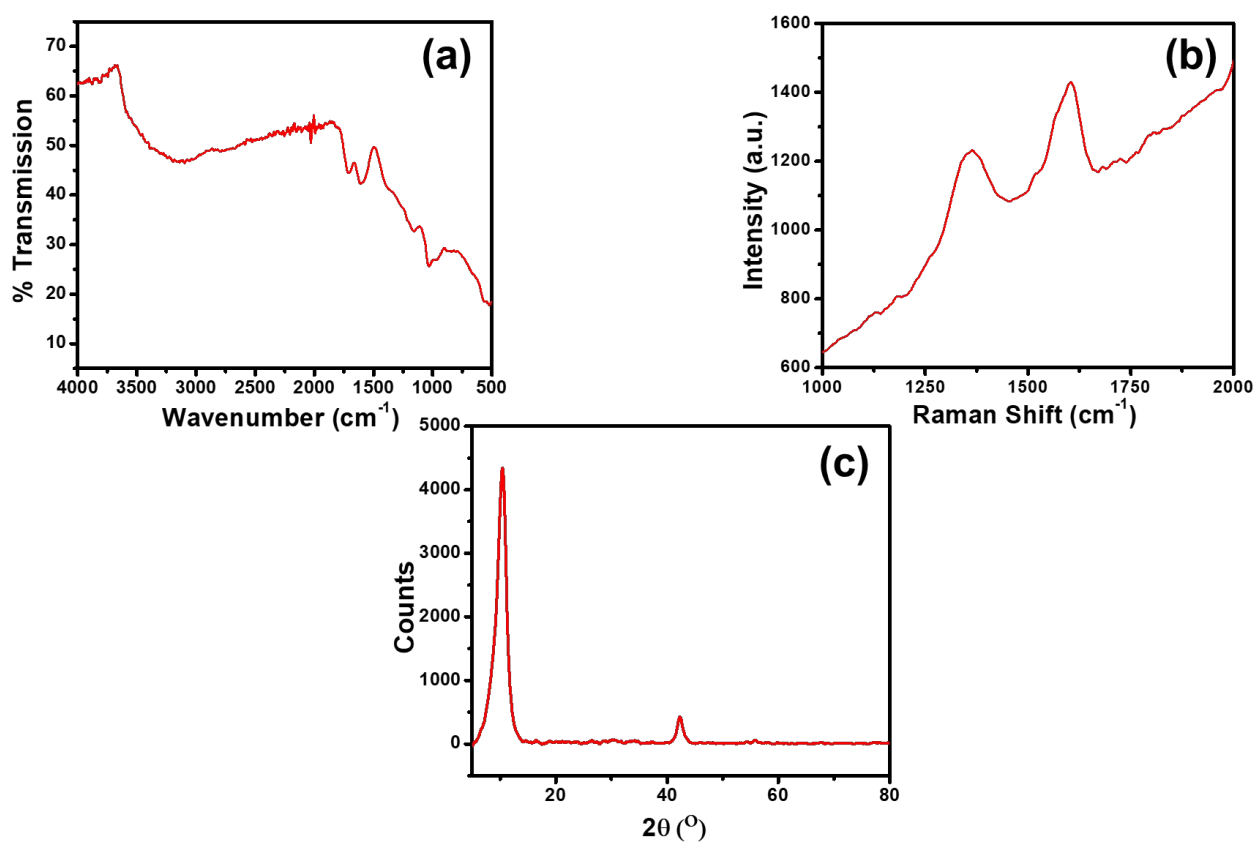


Fig. S1: (a) FTIR, (b) Raman spectra and (c) XRD pattern of graphene oxide

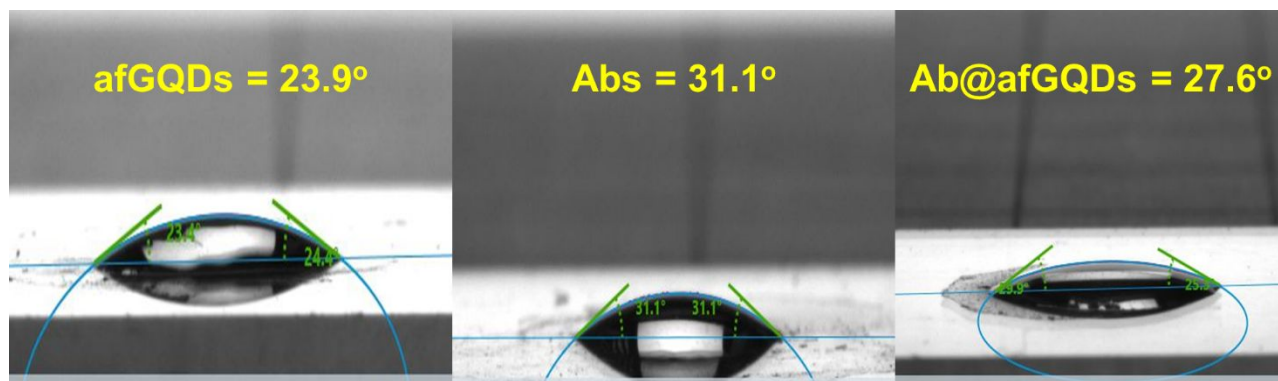


Fig. S2: Contact angle measurements of afGQDs, antibodies (Abs) and antibody immobilized on afGQDs (Ab@afGQDs)

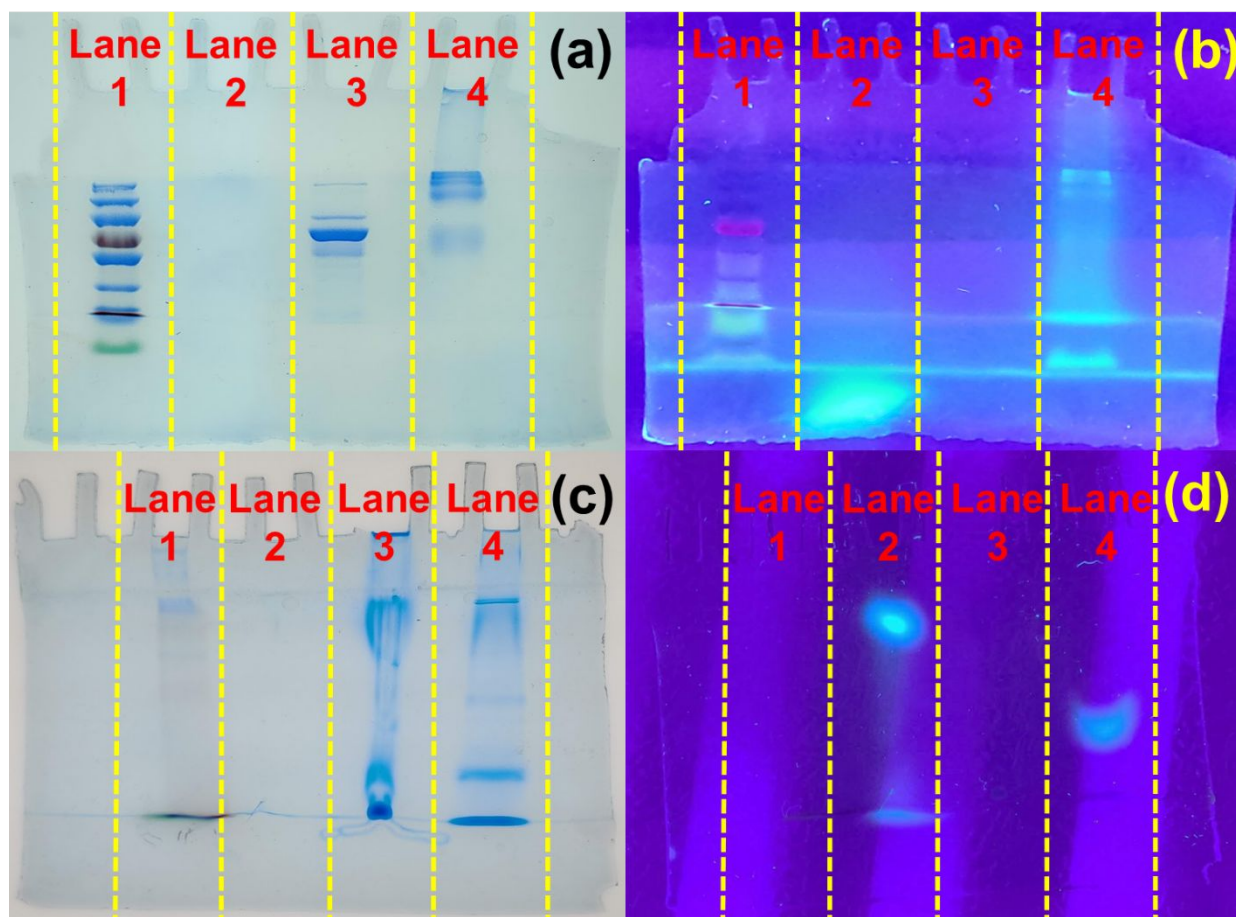


Fig. S3: (a) Image showing the bands obtained after SDS-PAGE. Lane 1: Protein Ladder; Lane 2: afGQDs; Lane 3: antibodies; Lane 4: Ab@afGQDs under visible light and (b) showing the same bands under UV light (c) Image showing the bands obtained after Native-PAGE. Lane 1:

Protein Ladder; Lane 2: afGQDs; Lane 3: antibodies; Lane 4: Ab@afGQDs under visible light and (d) showing the same bands under UV light [UV image enhanced: Brightness: 0% (Normal), Contrast: -40% for better visualization]

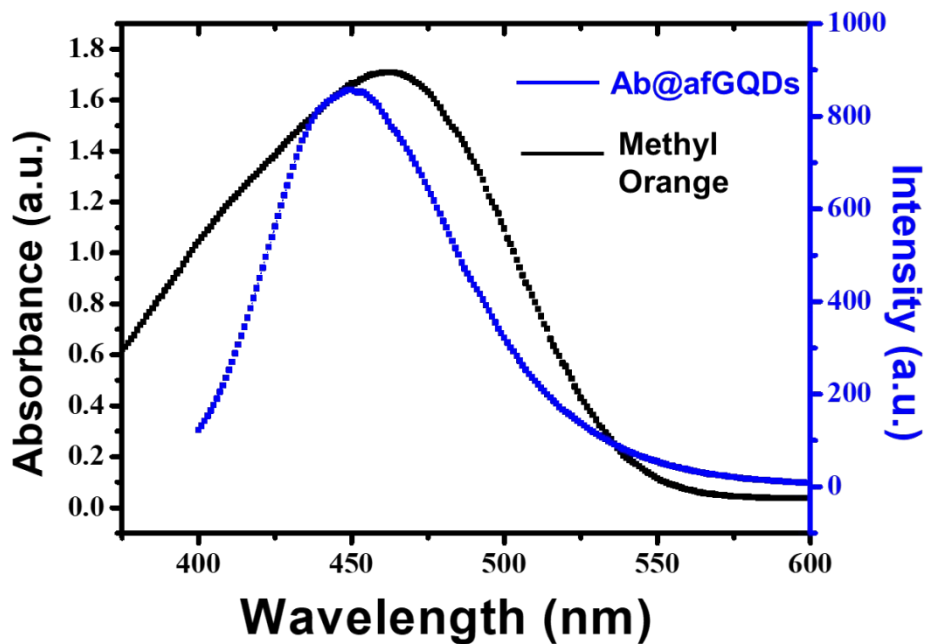


Fig. S4: Spectral overlap of absorption spectrum of methyl orange and emission spectrum of Ab@afGQDs

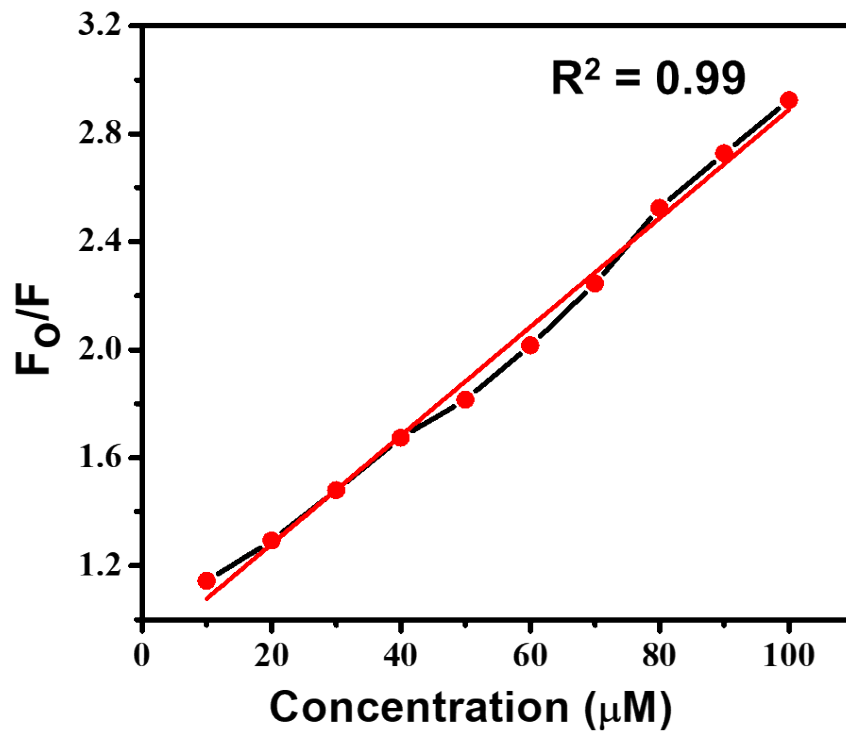


Fig. S5: Stern-Volmer Plot of Ab@afGQDs in the presence of increasing methyl orange concentrations [F_0 and F is the fluorescence intensity of Ab@afGQDs in the absence and presence of methyl orange respectively]

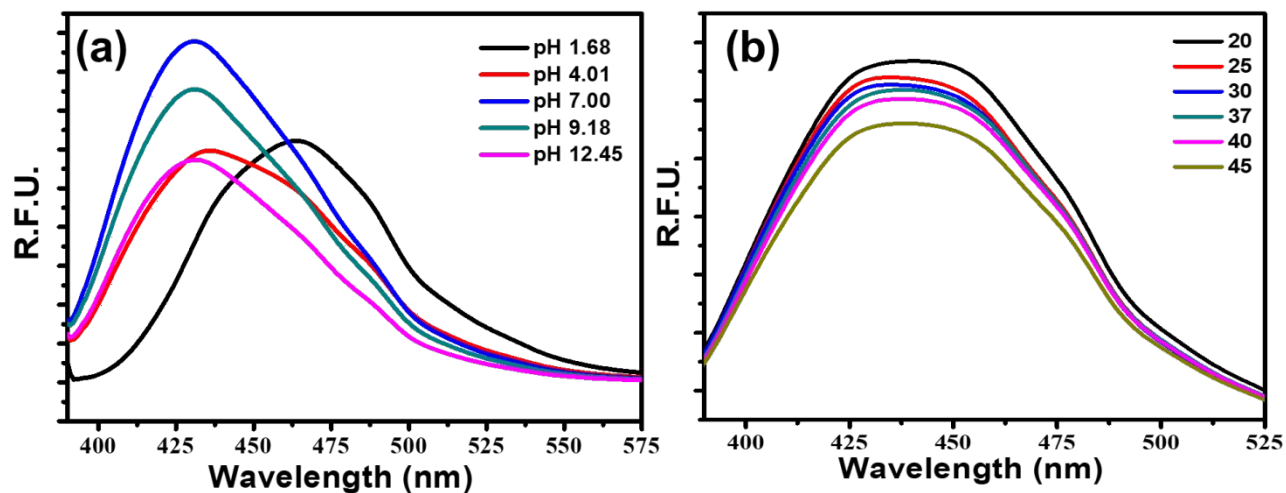


Fig. S6: (a) Effect of pH and (b) Effect of temperature [R.F.U.: Relative Fluorescence Units]

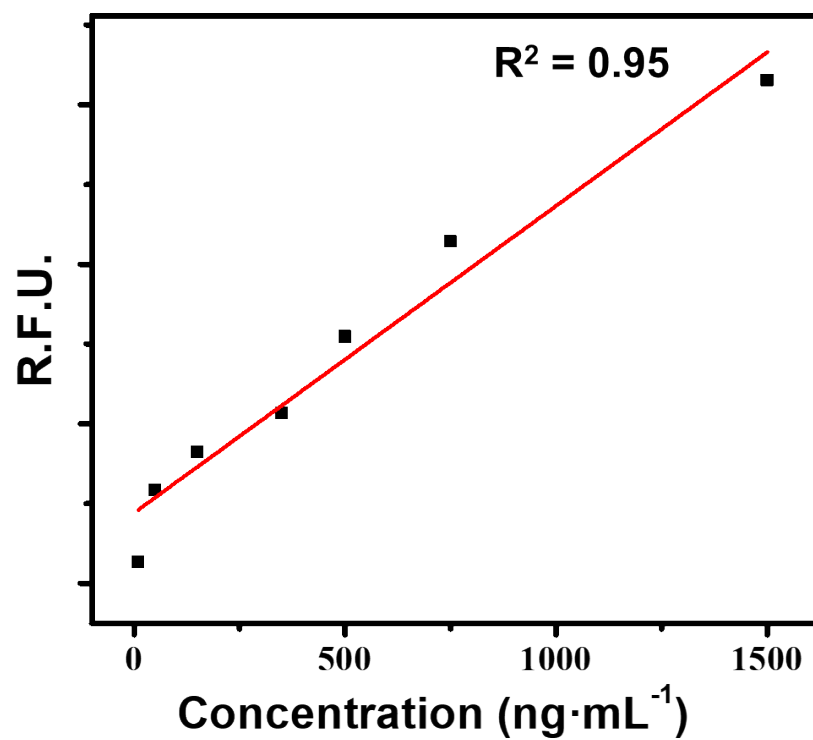


Fig. S7: Calibration curve for ferritin sensing in serum samples [R.F.U.: Relative Fluorescence Units]