

Supporting Information

Anisotropic Gold Nanoparticle for the Highly Sensitive Colorimetric Detection of Glucose in Human Urine

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Table of Contents:

Figures (S1-S10)

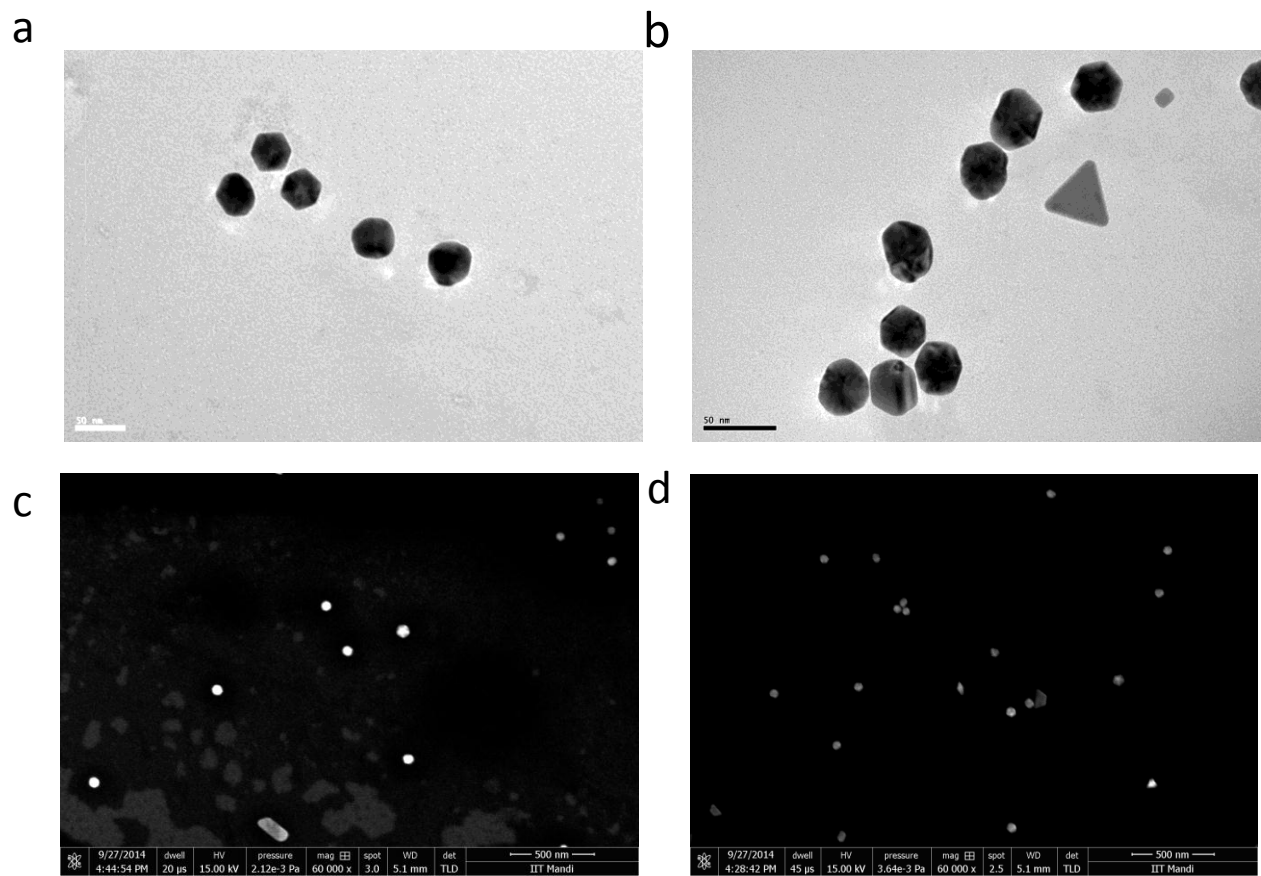


Figure S1: TEM images of the (a) as synthesized anisotropic GNPs and (b) PEDOT: PSS surface functionalized GNP. SEM images of the (c) as synthesized anisotropic GNPs and (d) PEDOT: PSS surface functionalized GNP.

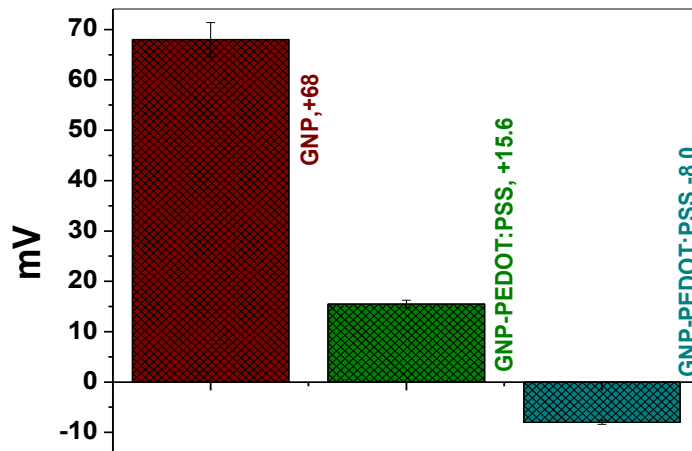


Figure S2: Zeta potential (ζ) profiles of the anisotropic GNPs surface functionalized with 1% and 2% PEDOT: PSS respectively.

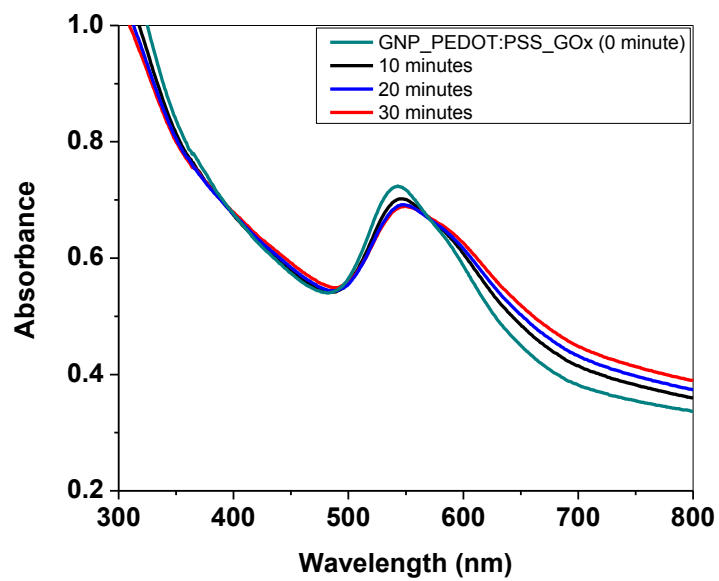


Figure S3: UV-Visible absorption spectra of GOx (3mg/mL) conjugated PEDOT: PSS functionalized anisotropic GNP shows change in SPR band even in the absence of Glucose.

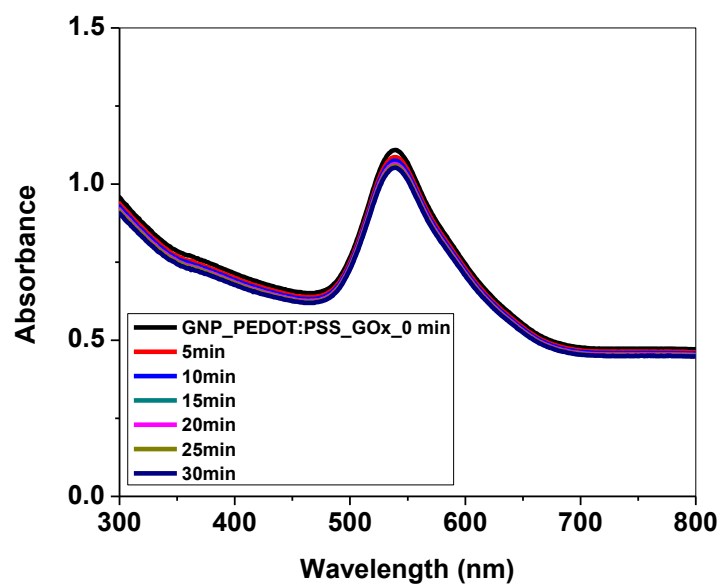


Figure S4: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized anisotropic GNPs shows no changes in SPR band in the absence of Glucose.

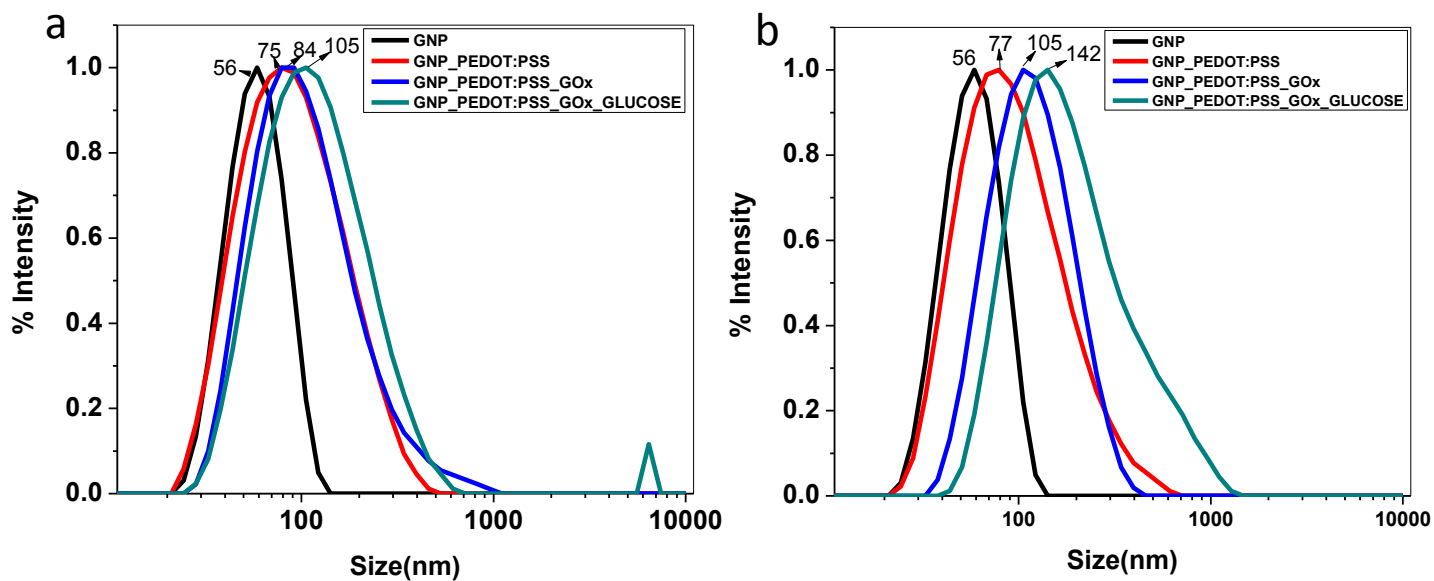


Figure S5: Hydrodynamic diameter measured using DLS for the as synthesized anisotropic GNP, with (a) 0.5% PEDOT: PSS modified GNP and GOx conjugated PEDOT: PSS surface functionalized GNPs. (b) 2% PEDOT: PSS modified GNP and GOx conjugated PEDOT: PSS surface functionalized GNPs.

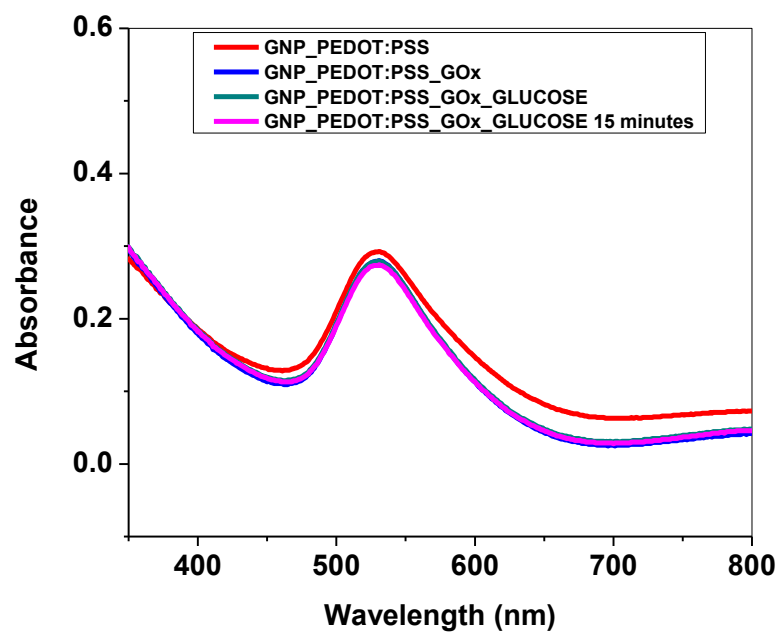


Figure S6: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized spherical GNPs showed no red shift on reacting with 10 μ g/mL of Glucose standard within 0- 15 minutes of incubation time.

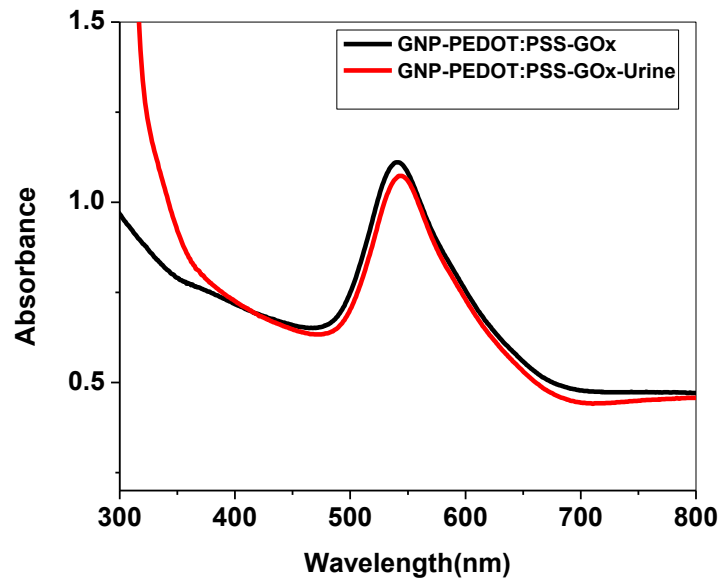


Figure S7: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized anisotropic GNPs (without addition of Glucose) showed no red shift on reacting with Urine sample at neutral pH.

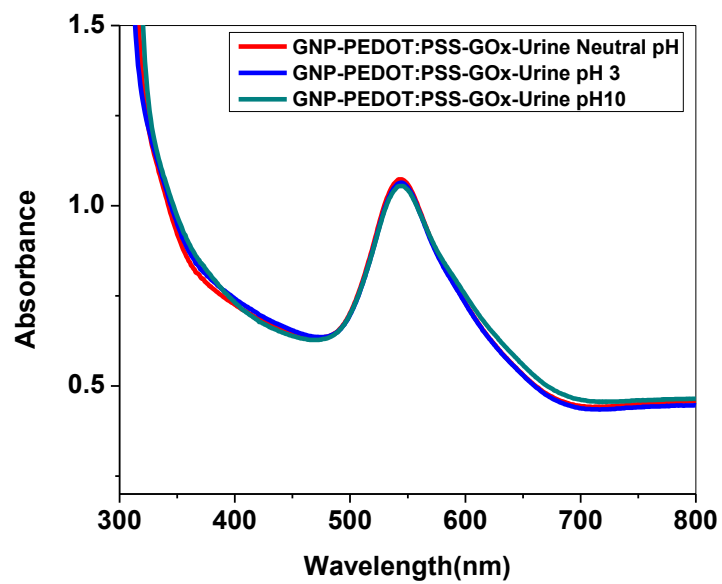


Figure S8: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized anisotropic GNPs showed no red shift on reacting with Urine at acidic (pH-3) and basic pH (pH-10).

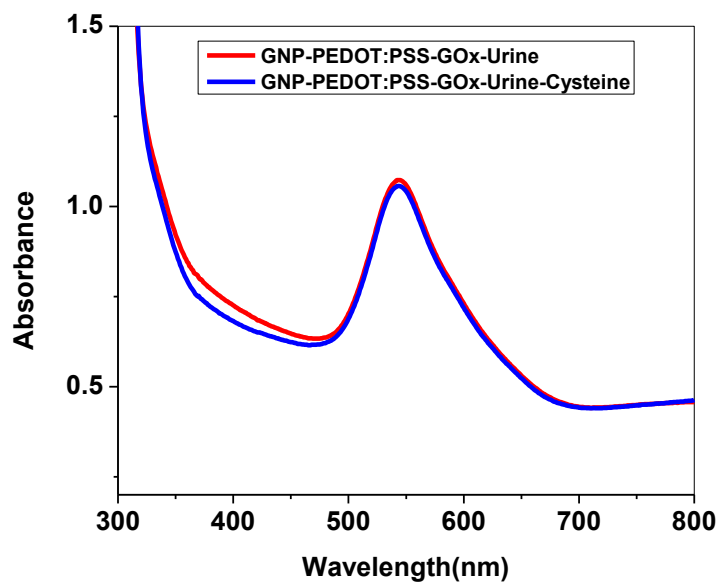


Figure S9: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized anisotropic GNPs shows no red shift on reacting with urine sample spiked with 200 μ M cysteine.

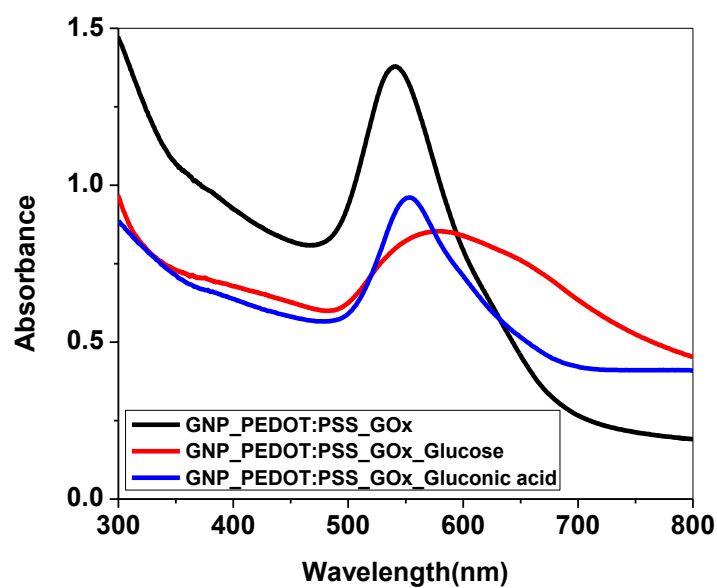


Figure S10: UV-Visible absorption spectra of GOx conjugated PEDOT: PSS functionalized anisotropic GNPs showed considerable red shift in the SPR band on reacting with Gluconic acid.