Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B

Supplementary Material

Glucose Oxidase Conjugated H_2O_2 Sensitive CdTe QDs: An Effective Fluorescence Tool for Glucose Sensing

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FTIR

MPA capped CdTe QDs showed peaks at 1560 and 1367 cm^{-1} corresponds to C=O and CH_2 bending frequencies respectively of MPA molecule. GOx conjugated GNPs showed intense peaks at 1650 and 1565 cm^{-1} typical of amide I (-C=O) and amide II (N-H bending) bands of the GOx and a The broad peak at 3278 cm^{-1} was assigned the N-H/O-H stretching frequency of GOx and peak at 2971cm^{-1} corresponds to CH_2 stretching of GOx moiety.

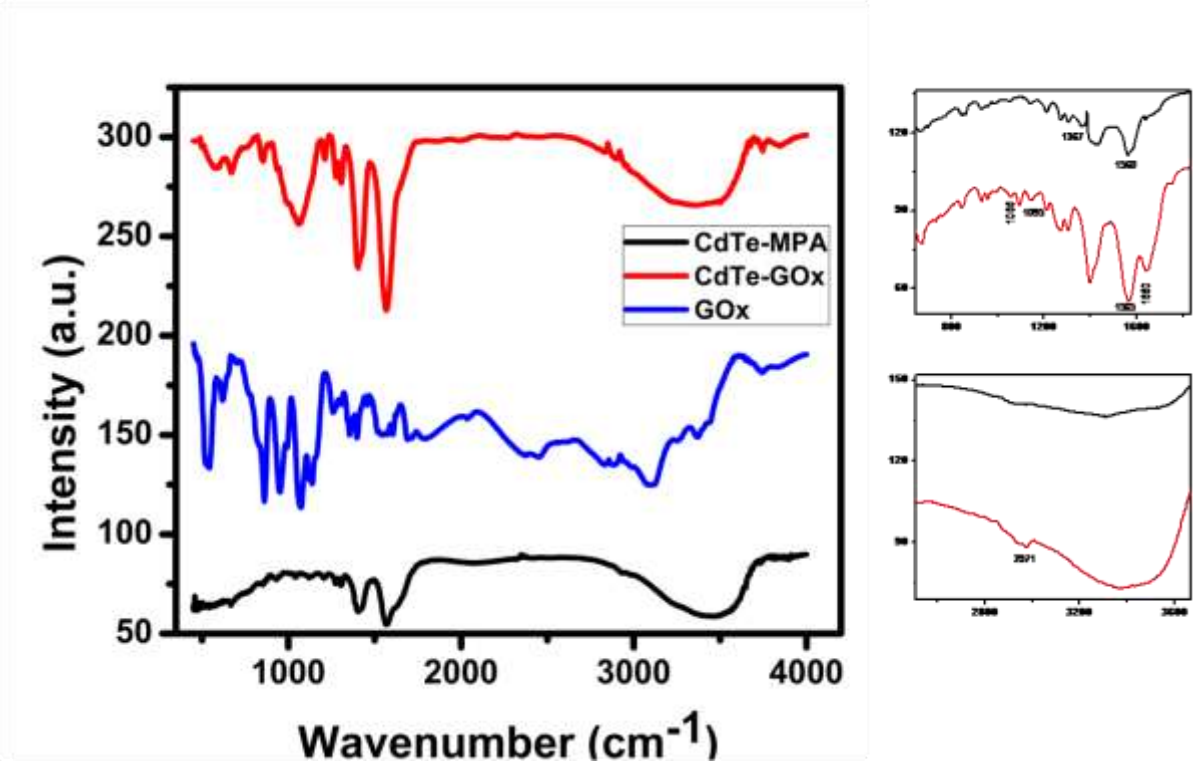

Figure S1. shows the FTIR spectra of CdTe-MPA QDs (black), CdTe-GOx QDs (red) and Gox (blue) .

Photoluminescence study

We carried out the glucose sensing with blood collected from four different individuals and from there we optimized that our CdTe-GOx sensor can sense glucose even in 10uL of blood as shown in Figure S2 and S3.

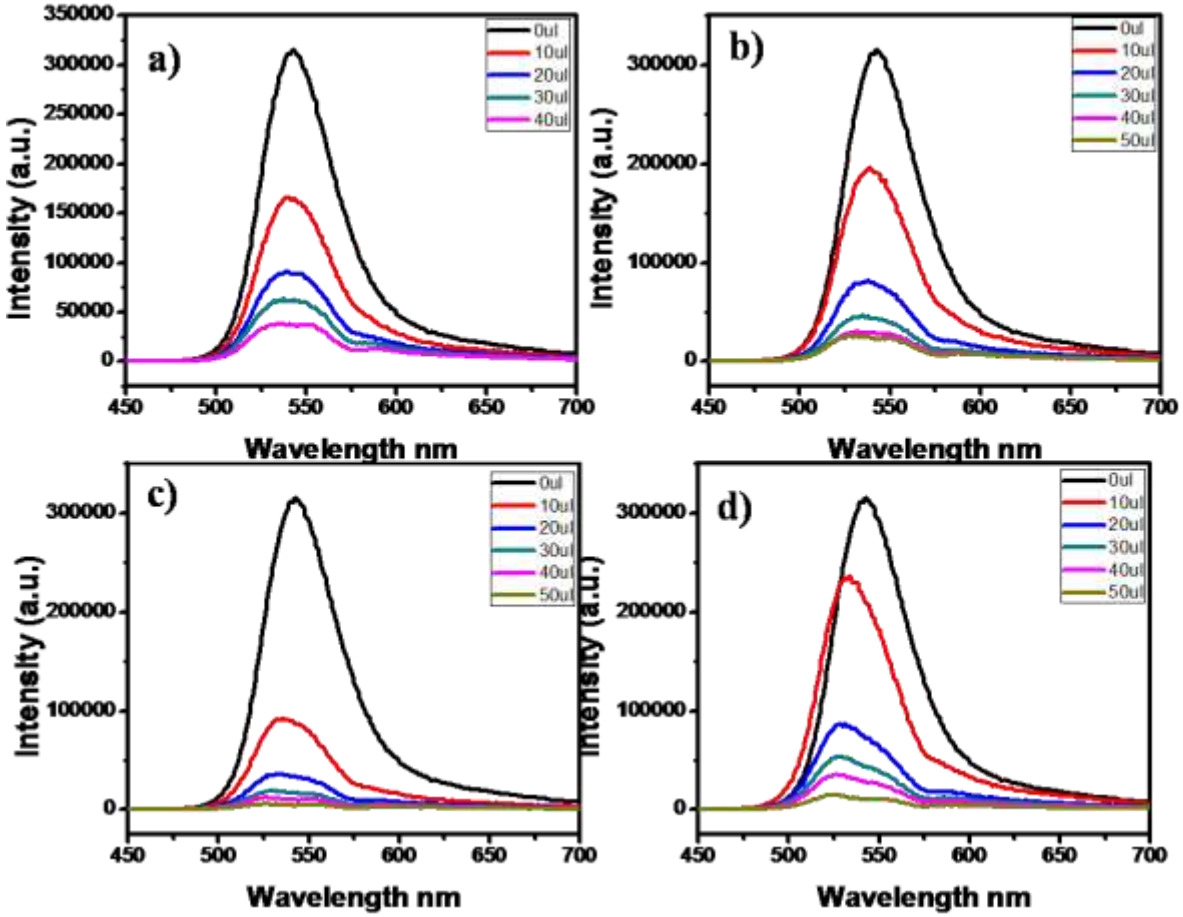

Figure S2 . Photoluminescence spectra of GOx conjugated CdTe with human blood samples.

(a-Sample1, b-Sample-2, c-Sample-3, d-Sample4)

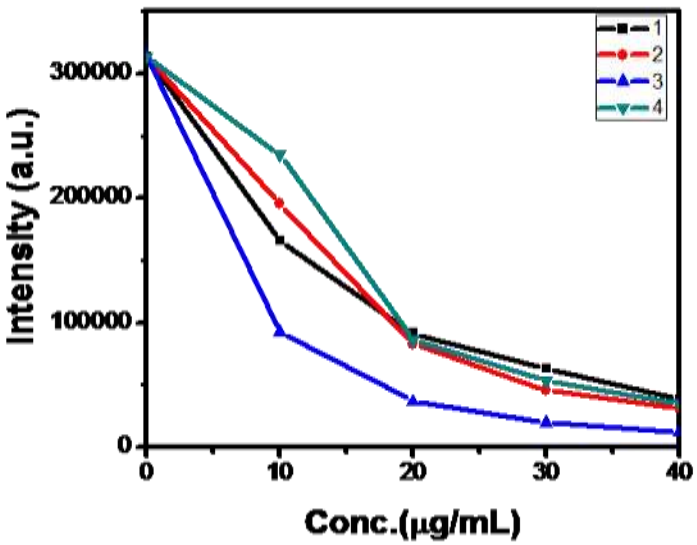

Fig S3 Calibration curve for all the blood samples tested for glucose sensing (a-d)