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

Supporting Information:

Good's Buffer Derived Highly Emissive Carbon Quantum Dots: Excellent Biocompatible Anticancer Drug Carrier

Aneeya K. Samantara, [a,b] Santanu Maji,[c,d] , Arnab Ghosh, [e] Bamaprasad Bag,[a,b] Rupesh Dash,[c*] Bikash Kumar Jena[a,b*]

[a] CSIR-Institute of Minerals and Materials Technology, Bhubaneswar 751013, Odisha, India

[b]Academy of Scientific & Innovative Research (AcSIR), 2 Rafi Marg, New Delhi-110 001, India

[c] Institute of Life Sciences, Bhubaneswar 751023, Odisha, India

[d] Manipal University, Karnataka, India

[e] Institute of Physics, Bhubaneswar 751005, Odisha, India

*****Corresponding author: CSIR-Institute of Minerals and Materials Technology, Bhubaneswar 751013, Odisha, India; Institute of Life Sciences, Bhubaneswar 751023, Odisha, India

Email: bikash@immt.res.in; rupesh.dash@gmail.com

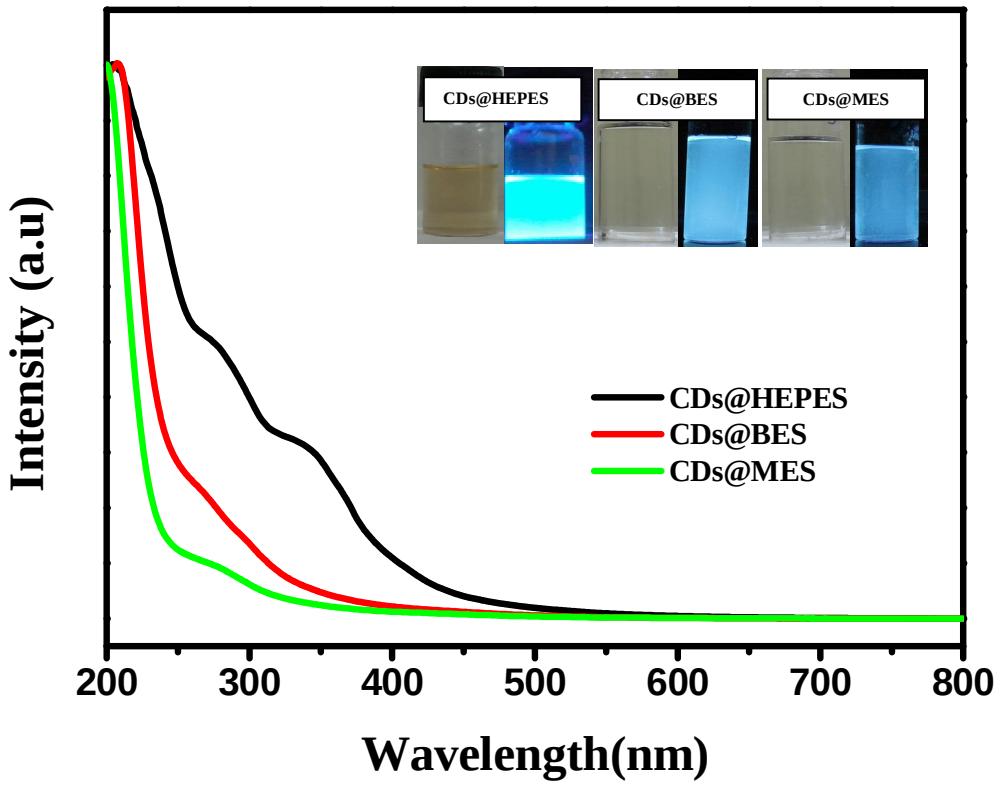

Figure S1. UV-Visible spectrum of CDs@HEPES CDs@MES and CDs@BES CDs. The inset is the optical photographs in absence and presence of UV light (365nm) irradiation.

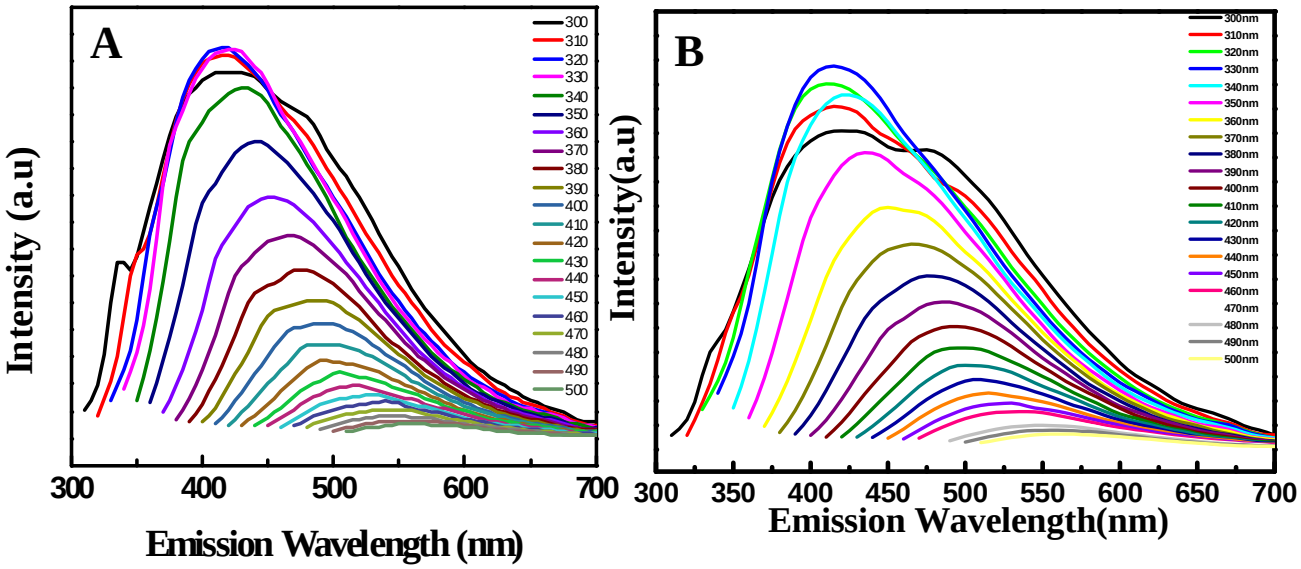

Figure S2. Photoluminescence emission spectrum (E_{ex}=300-500nm) of (A) CDs@MES and (B) CDs@BES.

Name	PLQY (%)	Avg. Life Time(ns)
CDs@HEPES	47.39	5.51
CDs@MES	34.84	5.13
CDs@BES	30.5	3.90

Table 1. Photoluminescence quantum yield and lime time decay of CDs@HEPES, CDs@MES and (B) CDs@BES.

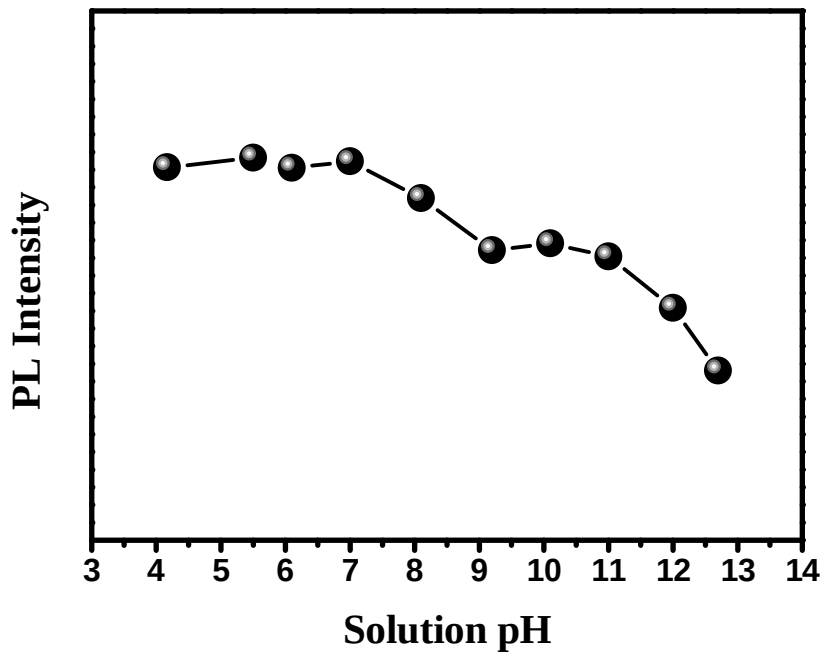

Figure.S3 (A) Photoluminescence emission spectrum (E_{ex}=340nm) at different pH (from 4 to 13) of CDs@HEPES.

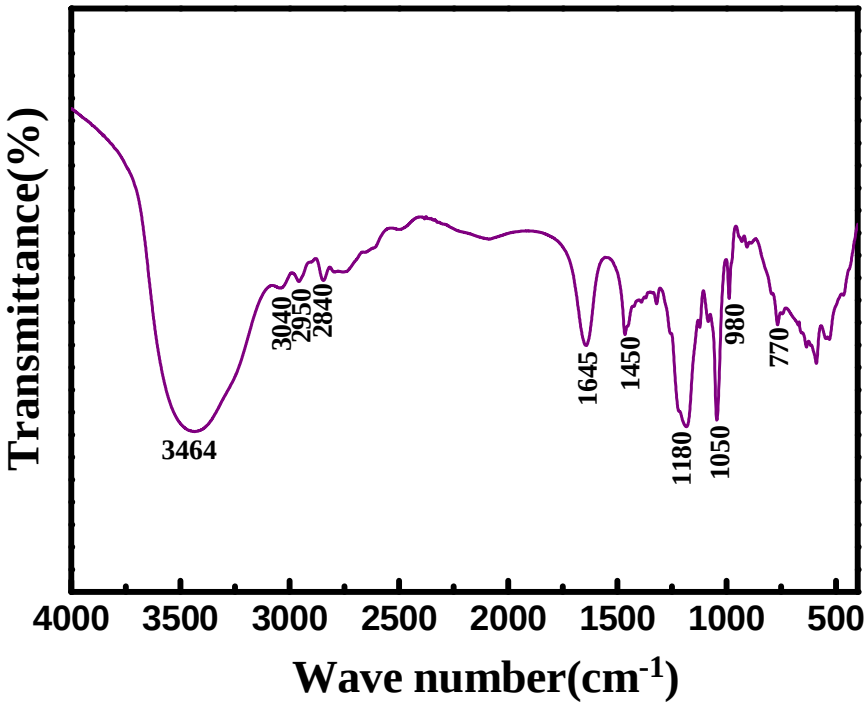

Figure.S4 FTIR spectrum of CDs@HEPES.

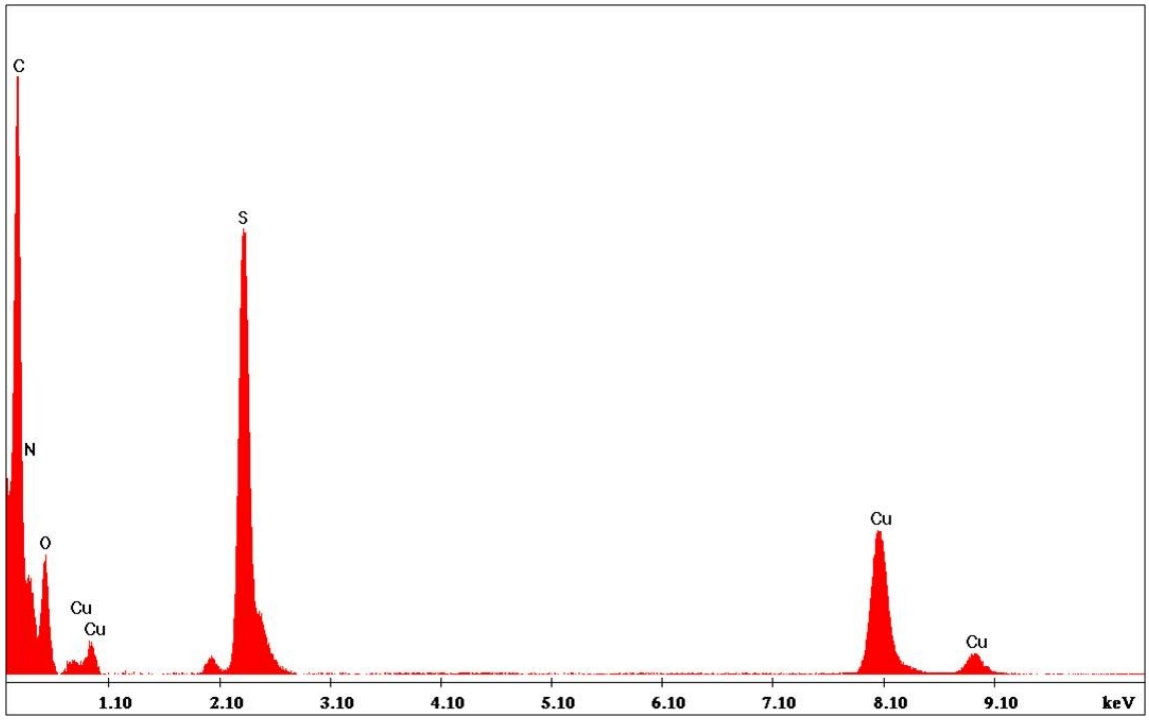

Figure.S5 EDX spectra showing the elemental composition of CDs@HEPES

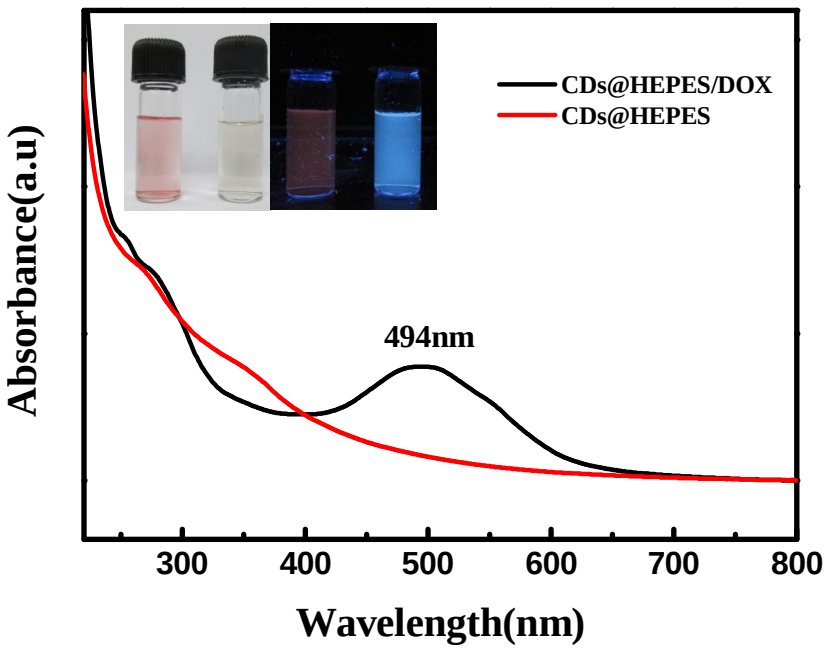

Figure.S6 UV-Visible absorbance spectrum of CDs@HEPES and CDs@HEPES/DOX. Inset is the optical photograph of CDs@HEPES and CDs@HEPES/DOX in room light and 365nm UV-light illumination.

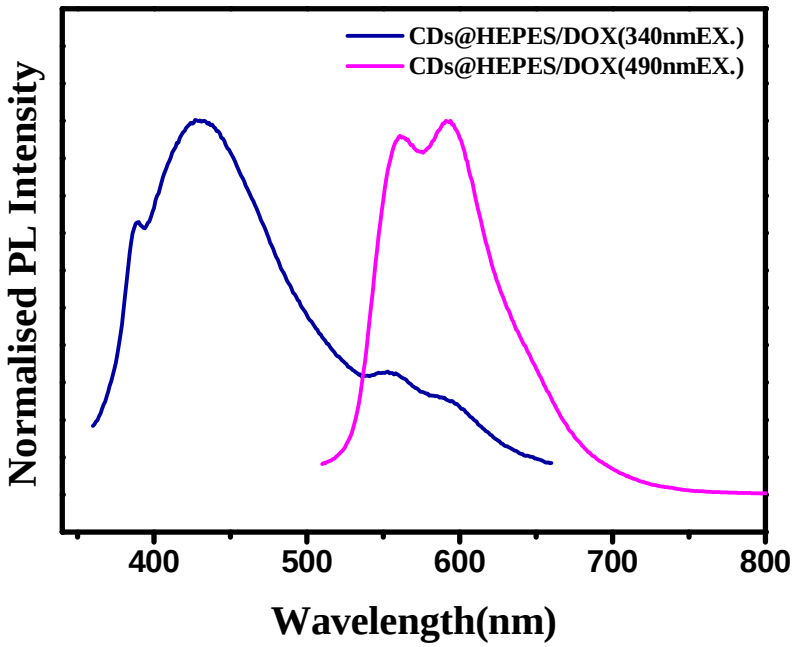

Figure.S7 Normalised photoluminescence emission spectra of CDs@HEPES/DOX at 340nm and 490 nm excitation.