

Supporting Information

Eu³⁺ Functionalized CQDs Hybrid Material: Synthesis, Luminescent Properties and Sensing Application for the Detection of Cu²⁺

Ying Li¹, Dan Liu¹, Ya-Qi Wang¹, Fang-Fang Wang², Han-xun Qiu^{1,*}

¹ School of Materials Science & Engineering, University of Shanghai for Science and Technology,
Shanghai 200093, P. R. China

² The National Facility for Protein Science in Shanghai (NFPS), Shanghai 201210, P. R. China

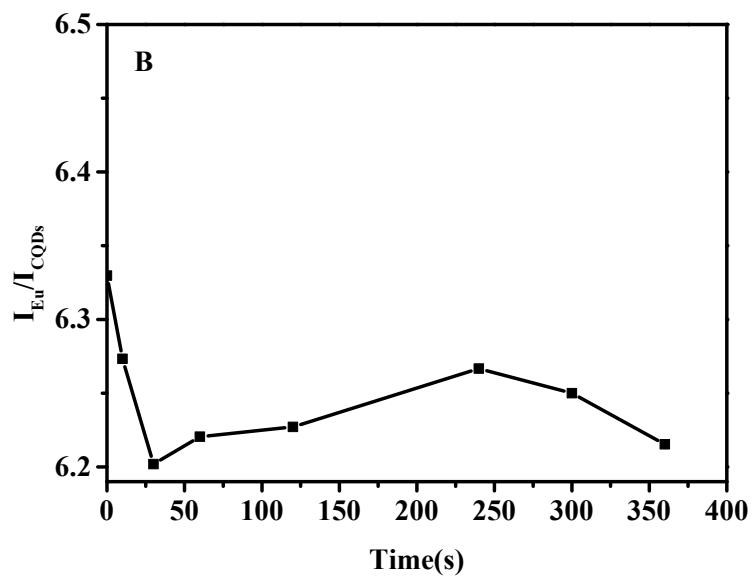
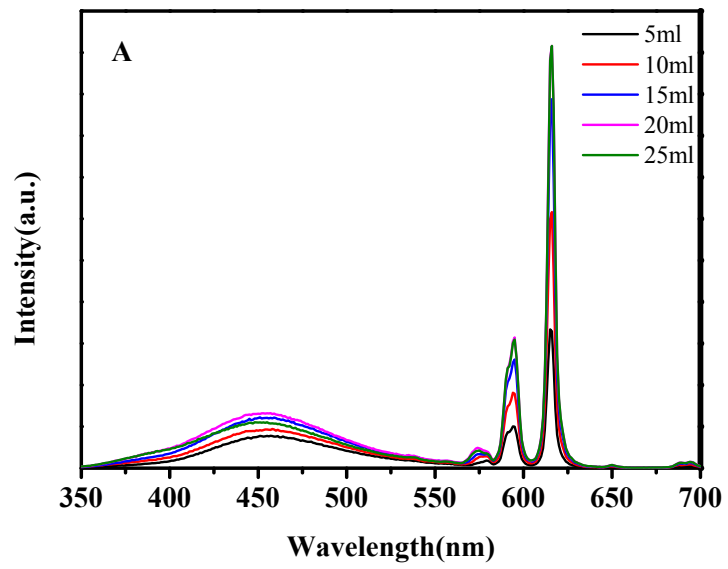


Fig.S1

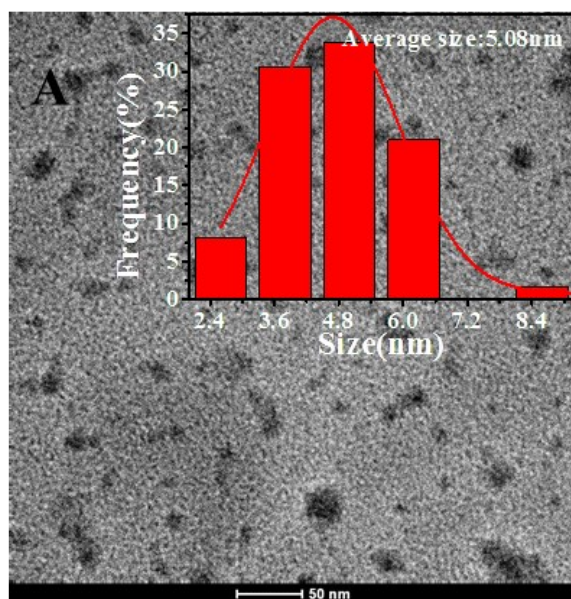


Fig.S2

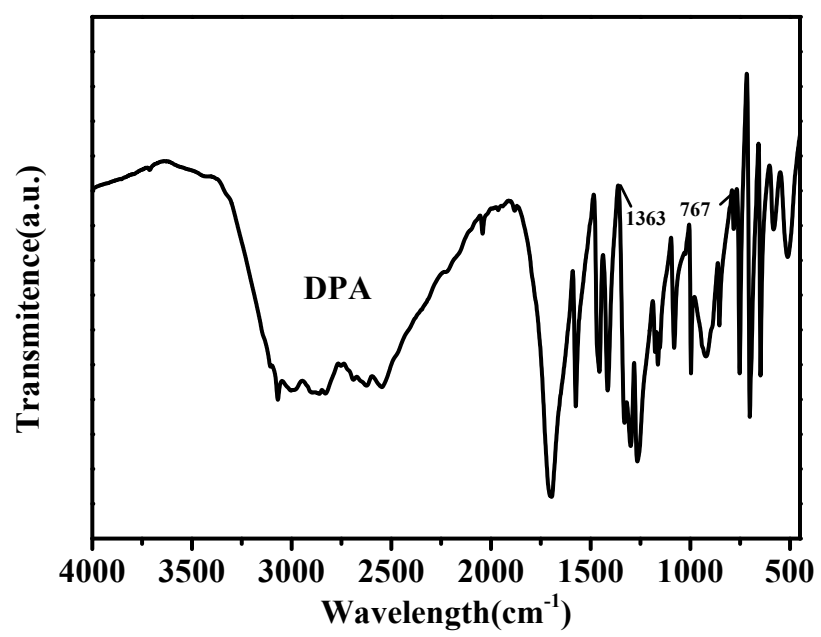


Fig.S3

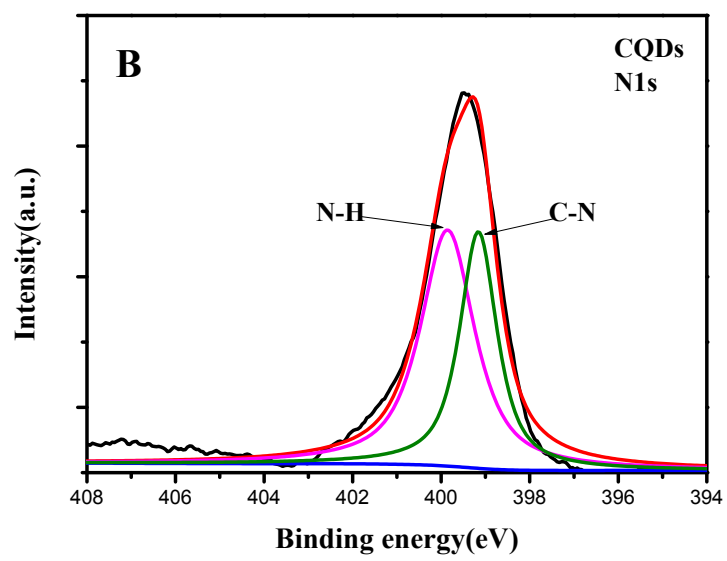
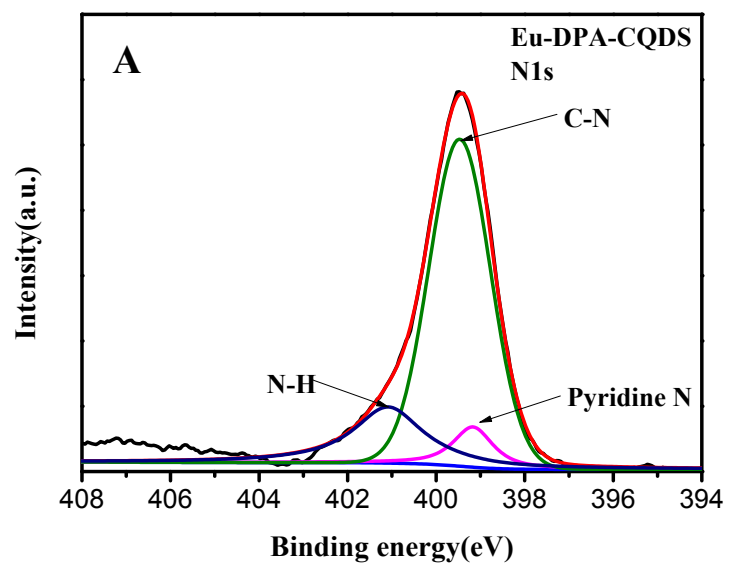


Fig.S4

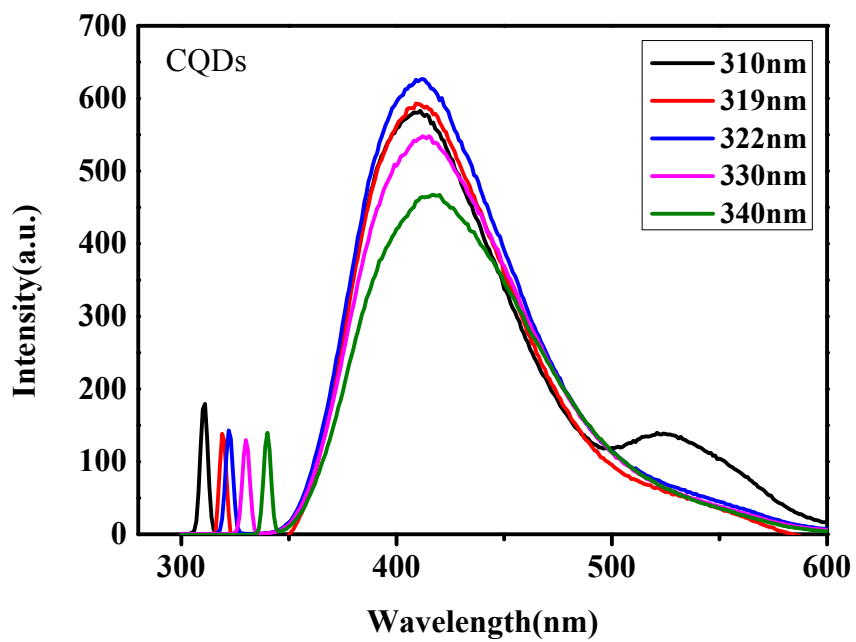


Fig.S5

Table S1. Comparison of analytical methods for Cu²⁺ detection

Fluorescent probe	Applications	Lod(nmol/L)	Read out	Linear range(umol/L)	Refs
Lys-BSA-F-CNPs	tap water	0.58 pM	Turn-off	0.002–1.5 nM	Liu et al., 2012a ³³
TPEA-F-CNPs	Cells	10 nM	Turn-off	1–100 μM	Qu et al., 2012a ³⁴
CdSe/ZnS QDs	Cells	1 μM	Ratiometric	1–100 μM	Zhu et al., 2012 ³⁵
Amino-GQDs	Cells	6.9 nM	Turn-off	0–100 nM	Sun et al., 2013 ³⁶
BPEI-CQDs, MOFs	River water	80 pM	Turn-off	2–1000 nM	Lin et al., 2014 ³⁷
GQDs	Synthetic water samples	0.226 μM	Turn-off	0–15 μM	Wang et al., 2014 ³⁸
Cs ₃ Bi ₂ Br ₉ :Eu ³⁺	water	10 nM	Turn-off	5 nM-3 μM	Ding et al., 2019 ³⁹
Eu-DPA-CQDs	Synthetic water samples	6 nM	Ratiometric	0-125 μM	this work