

# Supporting Information

## **Facilely prepared carbon dots and rare earth ions doped hybrid composites for ratio-metric pH sensing and white- light emission**

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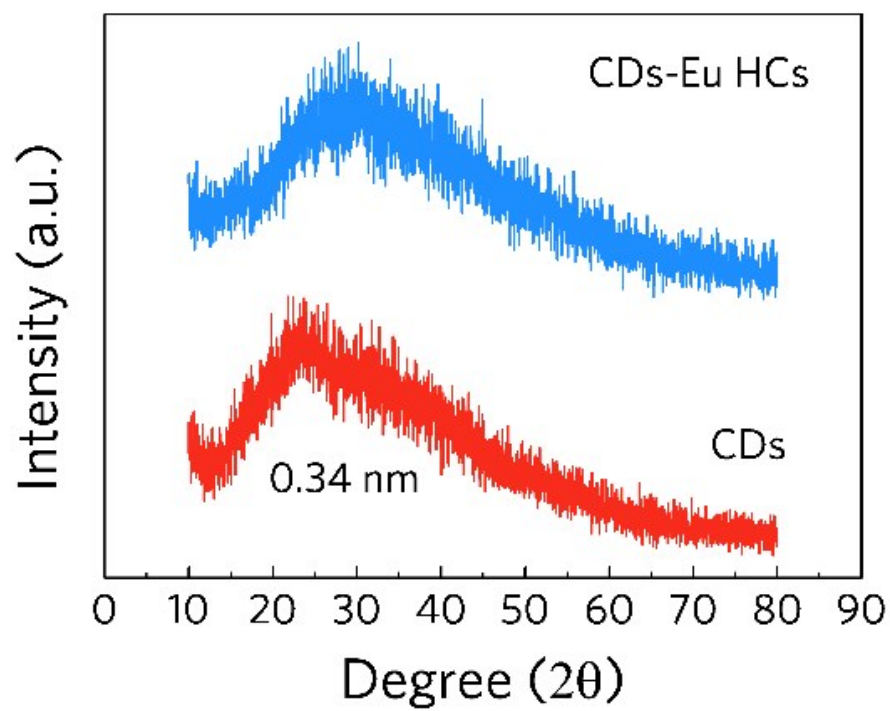


Figure S1. XRD patterns of prepared CDs-Eu-HCs composites and pure CDs.

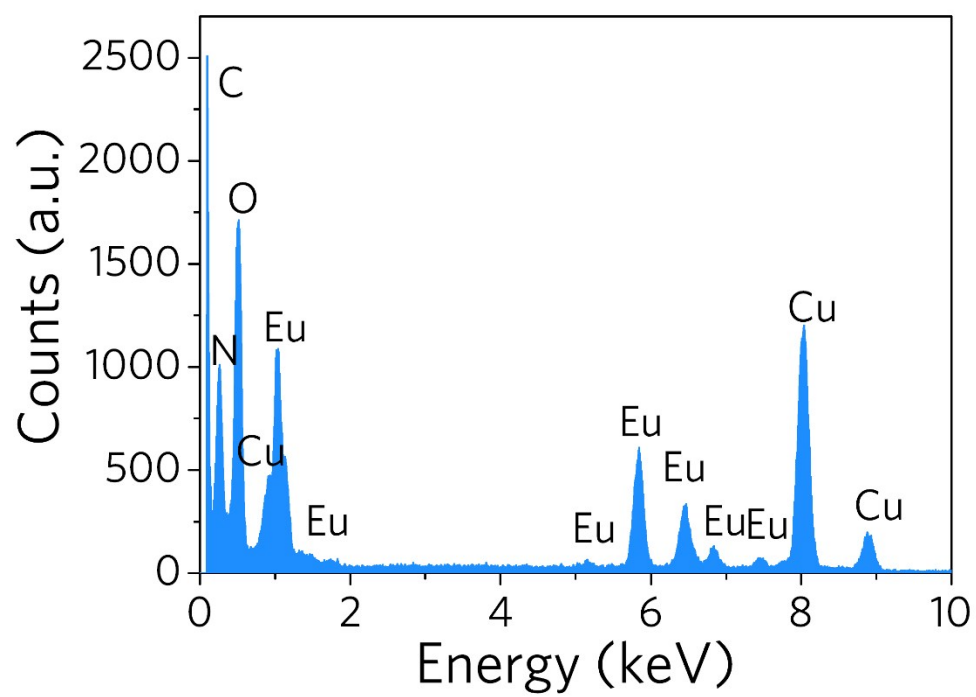


Figure S2. The EDX elements integral distribution of CDs-Eu-HCs.

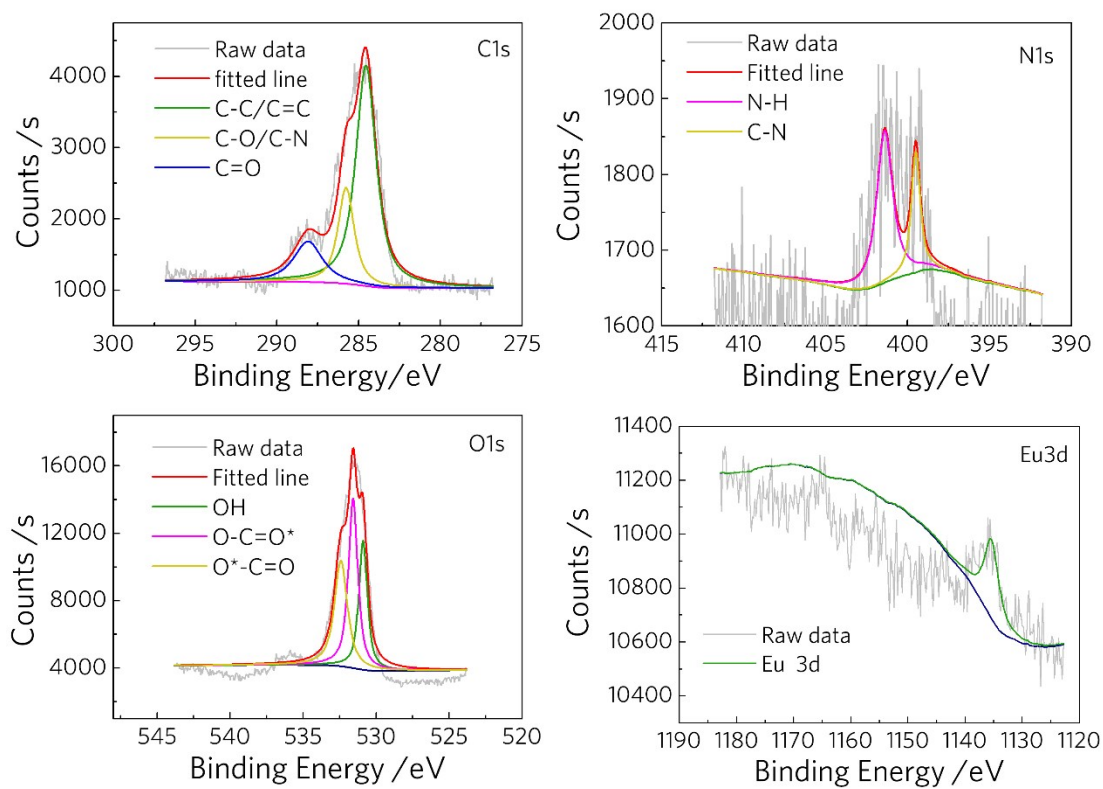


Figure S3. High resolution XPS spectra of (a) C1s, (b) N1s, (c) O1s and (d) Eu 3d of CDs-Eu-HCs, respectively.



Figure S4. The digital photos of the prepared CDs-TbEu<sub>0.2</sub> composites in solid states under the UV light (365 nm).