

Supplementary Figures

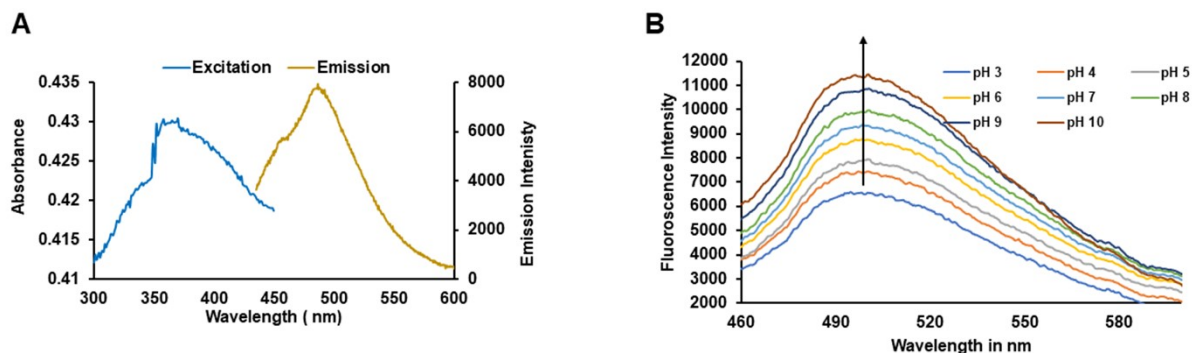


Fig S1: Optical spectra of Bare CQDs and pH response overlay of bare CQDs

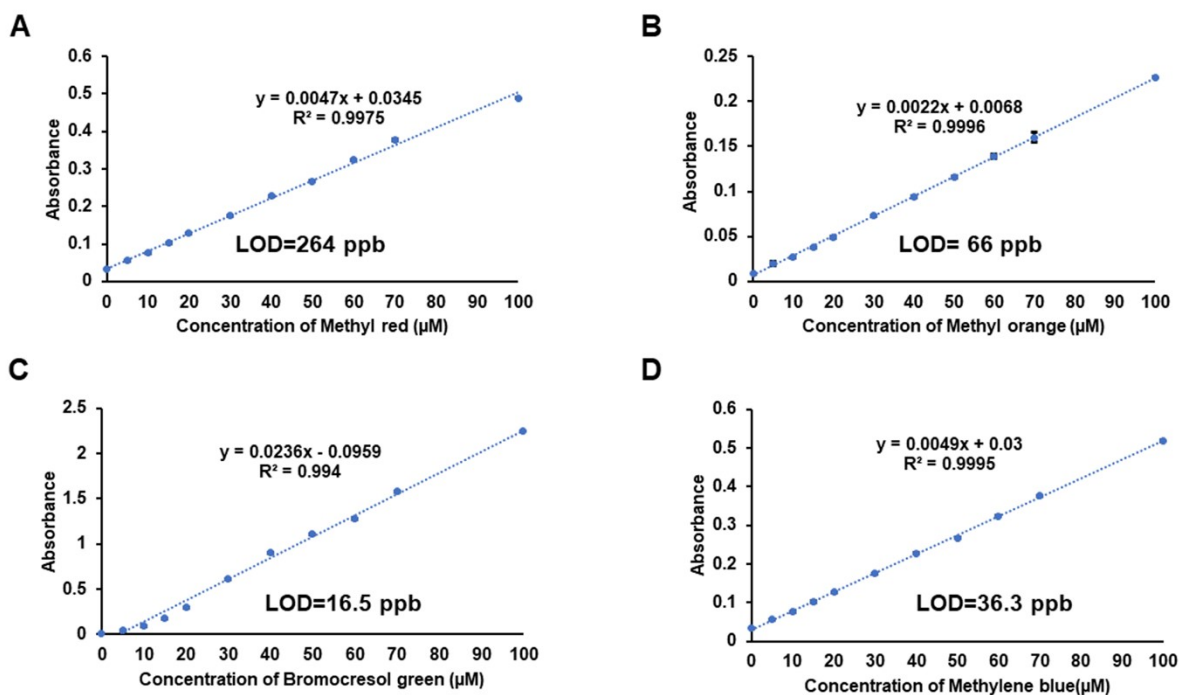


Fig. S2: Calibration curve of detection of various dyes with UV-Vis spectrometer.

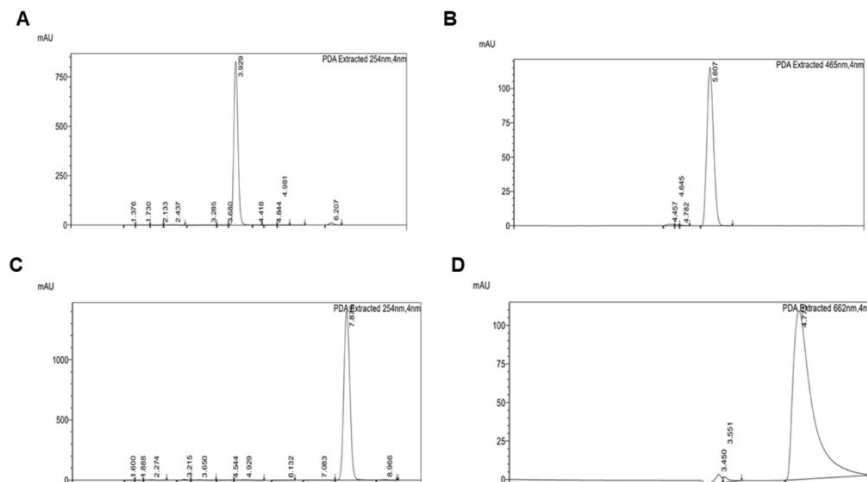


Fig. S3: HPLC retention time graph of: A) Bromocresol green, B) Methyl orange, C) Methyl red, D) Methylene blue

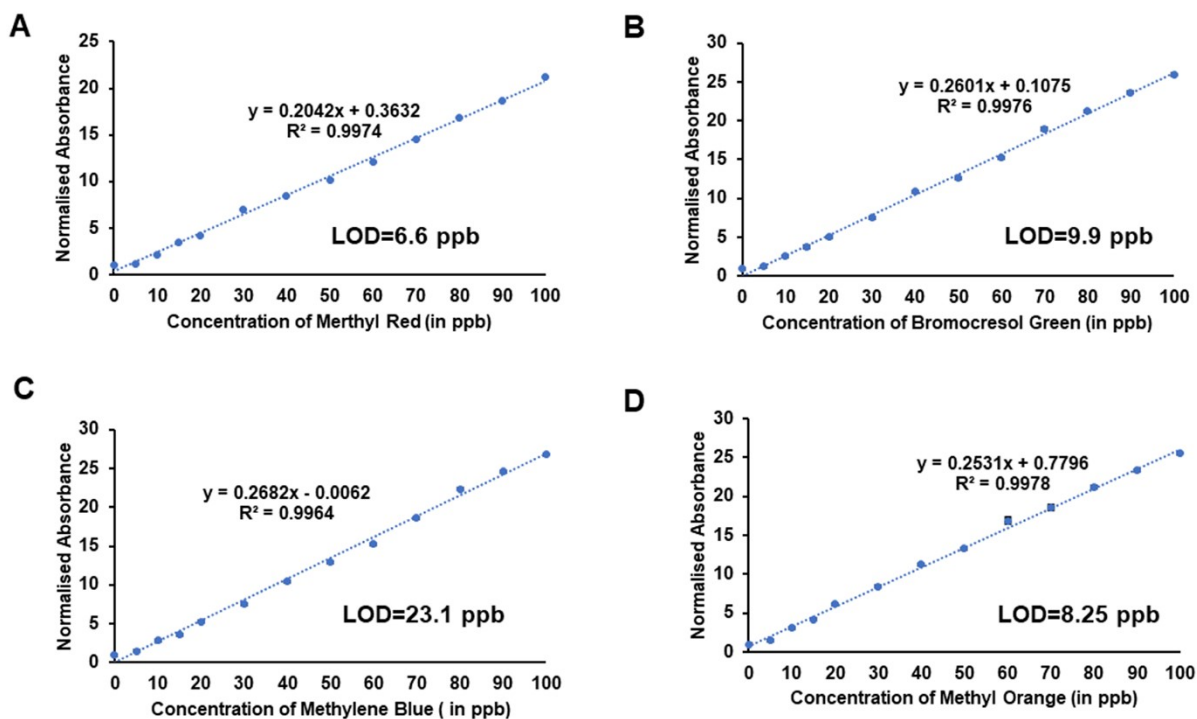


Fig. S4: Calibration curve of detection of various dyes with HPLC.

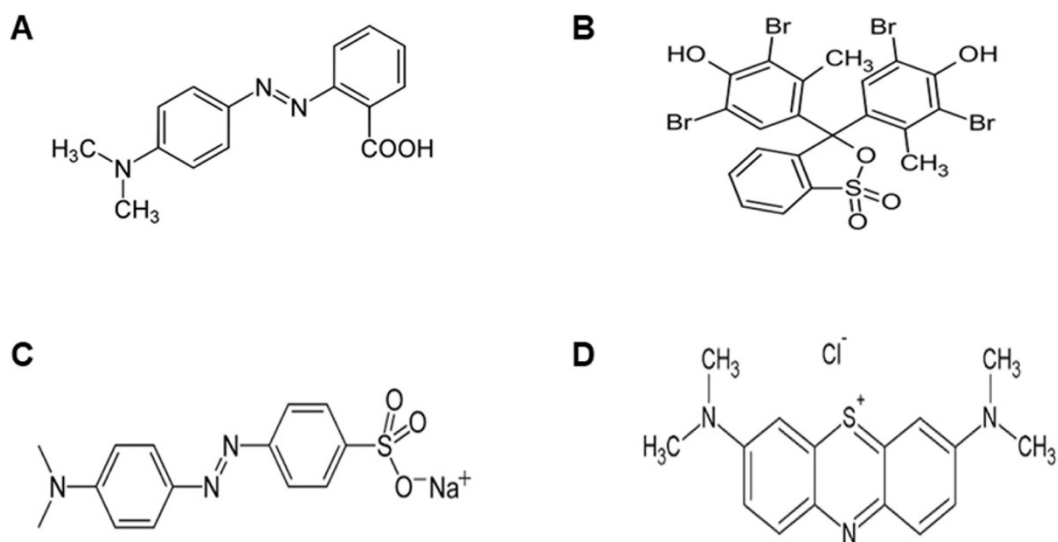


Fig. S5: Chemical structure of Dyes: A) Methyl Red, B) Bromocresol Green, C) Methyl Orange, D) Methylene Blue

- **Equation S1:**
$$Resolution = \frac{Standard\ Deviation}{Slope}$$
- **Equation S2:** $Limit\ of\ Detection\ (LOD) = 3.3 \times Resolution$
- **Equation S3:**
$$\%Recovery = \frac{Measured\ Value}{Actual\ Value} \times 100$$