

Electronic Supplementary Information (ESI)

UV-patternable nanocomposite containing CdSe and PbS quantum dots as miniaturized luminescent chemo-sensors

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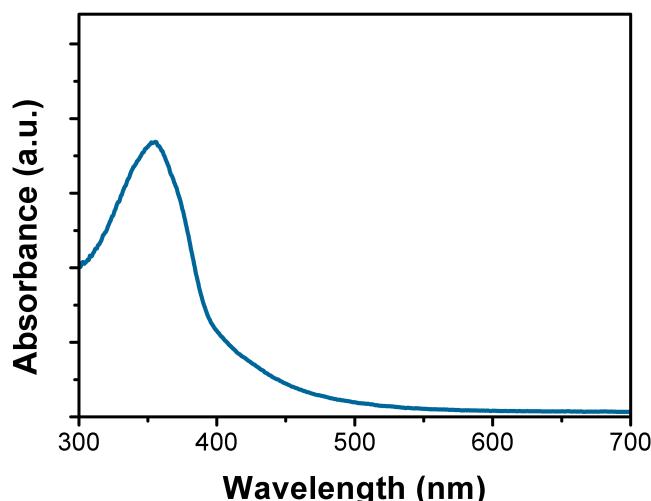


Figure S1. Absorbance spectrum of the PIP-based photoresist.

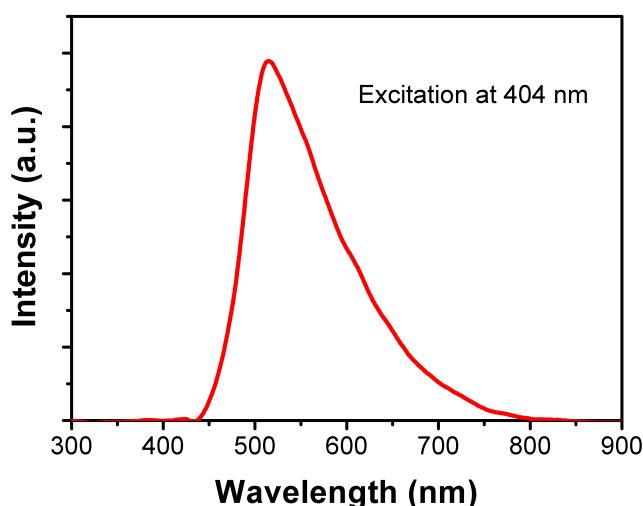


Figure S2. Emission of the bisazide molecule contained in the photoresist film under excitation at 404 nm.

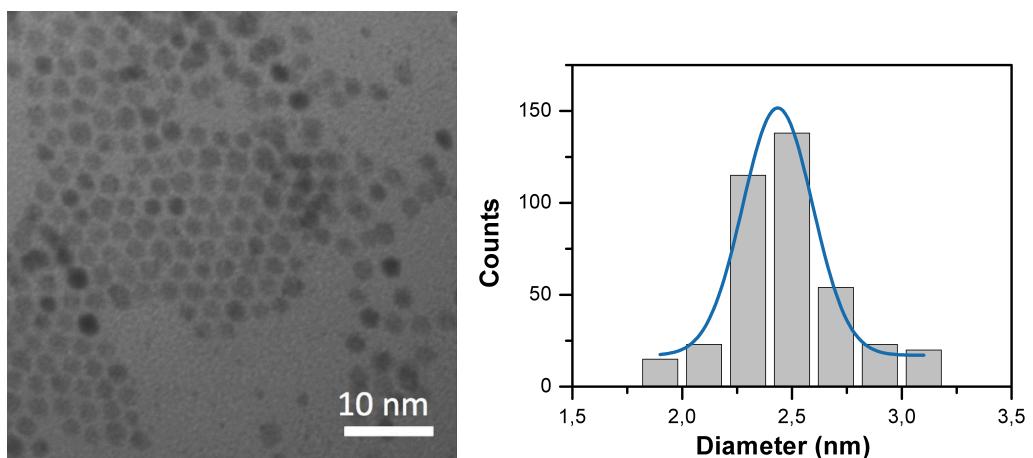


Figure S3. TEM image and nanoparticle size distribution of CdSe QDs.

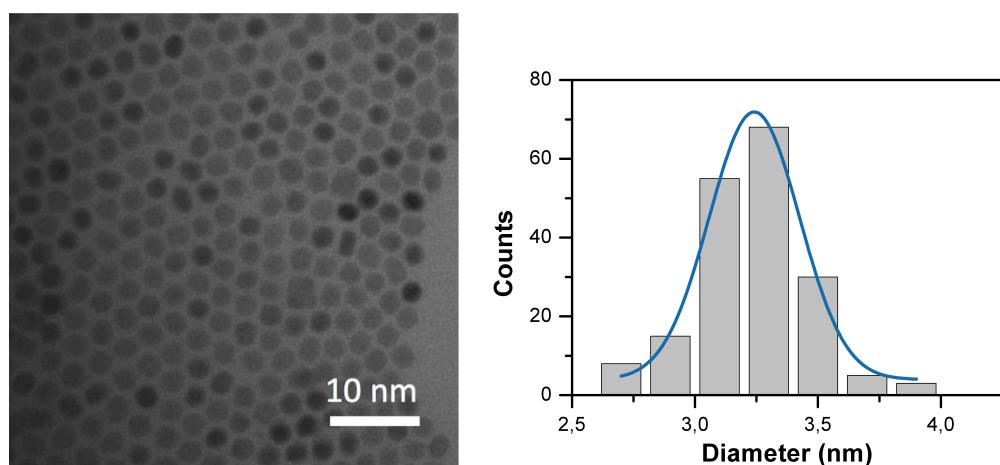


Figure S4. TEM image and nanoparticle size distribution of PbS QDs.

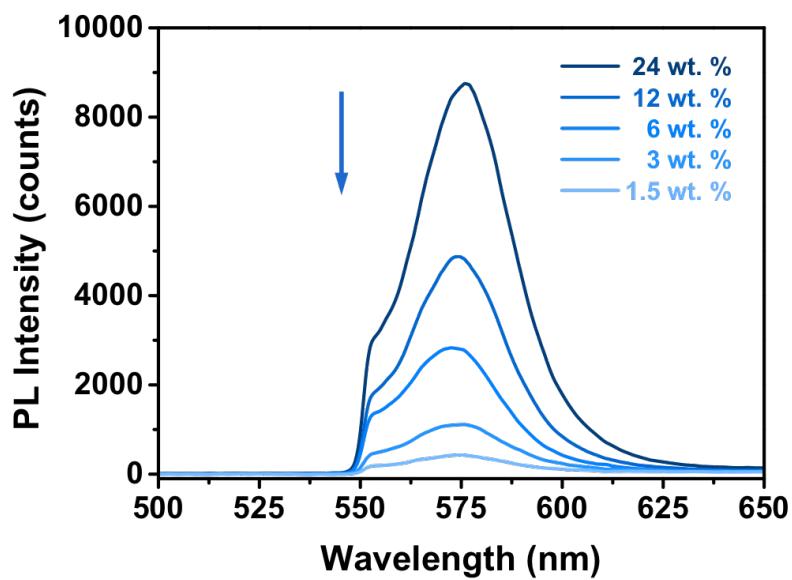


Figure S5. PL spectra of miniaturized CdSe-PIP sensor containing different CdSe QD wt. %.

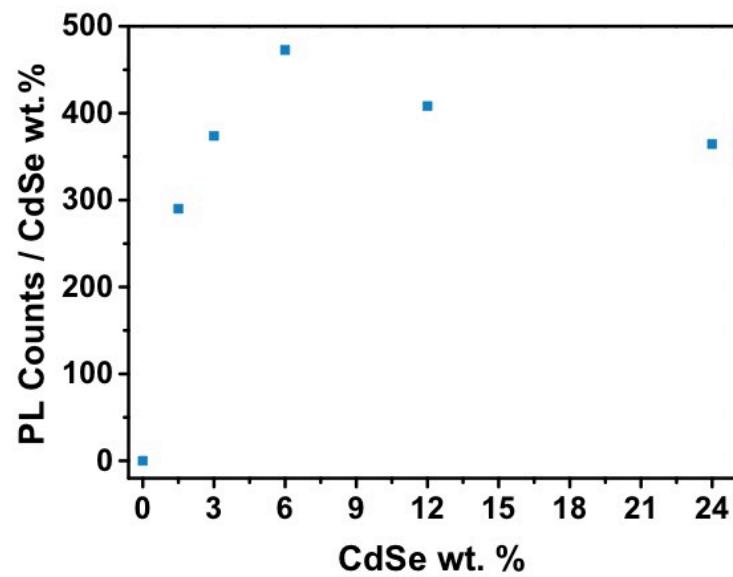


Figure S6. The ratio of PL intensity to QD wt. % versus CdSe wt. % in PIP.

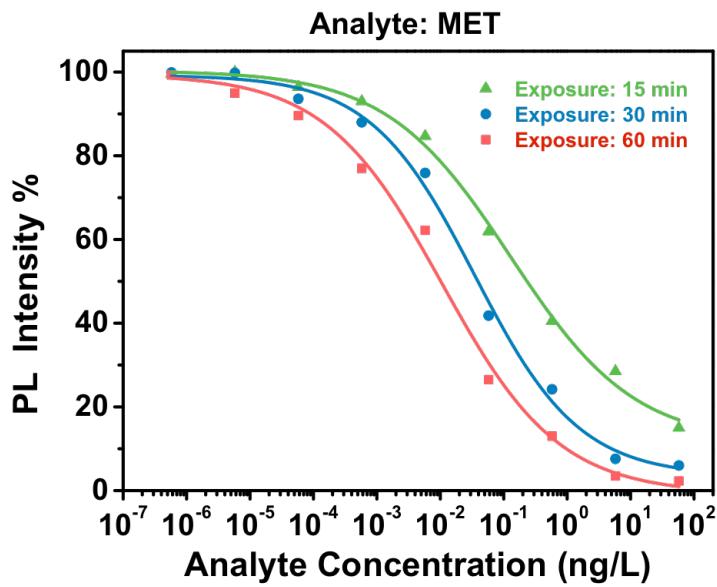


Figure S7. PL decay responses of CdSe-nanocomposite miniaturized sensor as a function of the mass concentration of MET in the vapour phase for exposure times of 15, 30, and 60 min, respectively.

Table S1: Limit of detection (LOD), binding affinity constant (K_A), and sensitivity of the QD-PIP sensor exposed to MET vapour for different times.

Exposure time [min]	LOD [ng / L]	K_A [ng / L]	Sensitivity [%]
15	10^{-3}	7.75	16.6
30	10^{-4}	28.24	18.7
60	10^{-5}	93.32	18.3

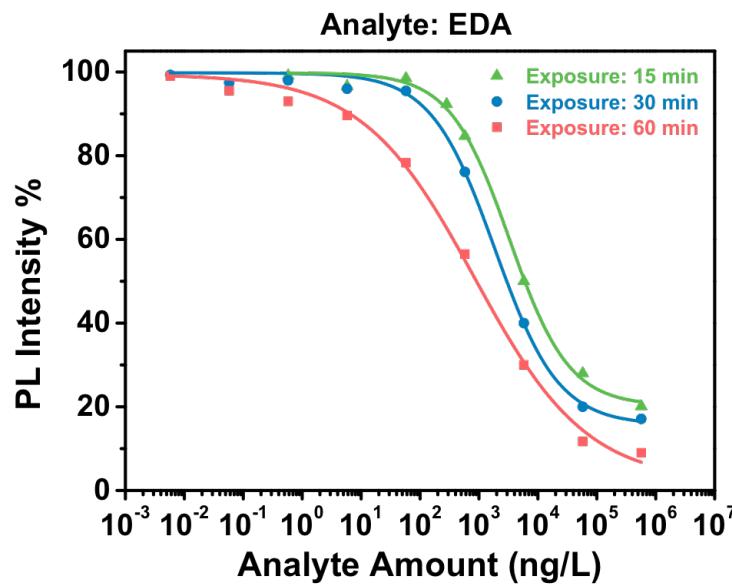


Figure S8. PL decay response of CdSe-nanocomposite miniaturized sensor as a function of the mass concentration of EDA in the vapour phase for exposure times of 15, 30, and 60 min, respectively.

Table S2: Limit of detection (LOD), binding affinity constant (K_A), and sensitivity of the QD-PIP sensor exposed to EDA vapour for different times.

Exposure time [min]	LOD [ng / L]	K_A [ng / L]	Sensitivity [%]
15	125	$3.03 \cdot 10^{-4}$	22.2
30	10^{-4}	$5.38 \cdot 10^{-4}$	21.3
60	10^{-5}	$1.18 \cdot 10^{-3}$	20.4