

Electronic Supplementary Material (ESI)

Quantum-dot light-emitting diode with ultrathin Au electrode embedded in solution-processed phosphomolybdic acid

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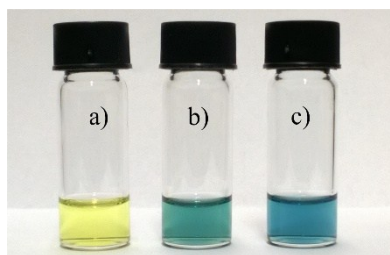


Fig. S1 (a) Fresh PMAH solution in isopropanol. PMA baked for (b) 1 h and (c) 5 h and dissolved in isopropanol.

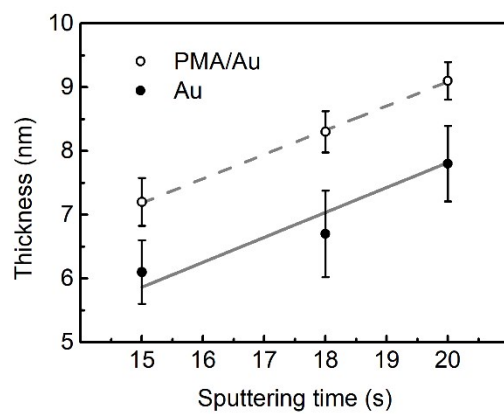


Fig. S2 Thickness of Au and PMA/Au films versus sputtering time of Au (determined by AFM).

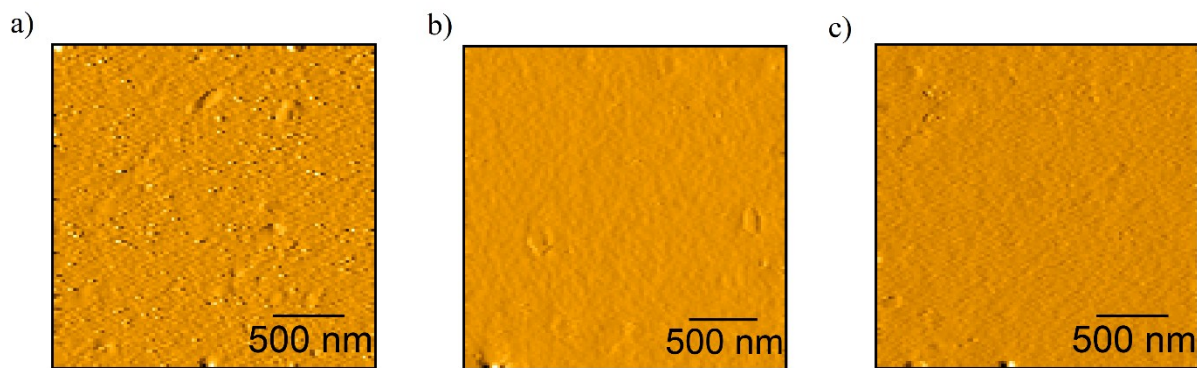


Fig. S3 AFM images of (a) Au, (b) PMA, and (c) PMA/Au.

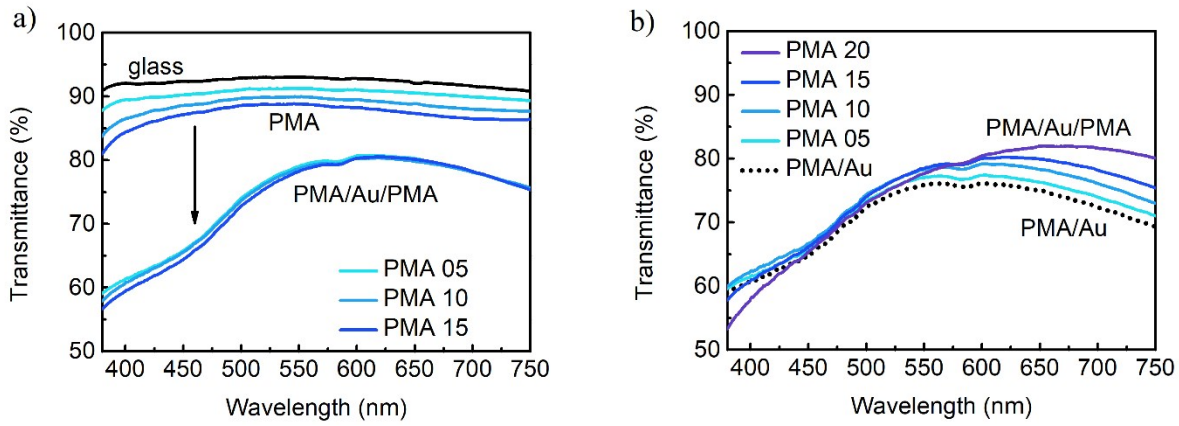


Fig. S4 PMA/Au/PMA multilayer transmittance for different thickness of (a) bottom and (b) top PMA layer spin-coated using PMA with different concentration: 5, 10, 15, and 20 mg/ml which corresponds to PMA thickness of about: 1, 4, 9, and 17 nm.

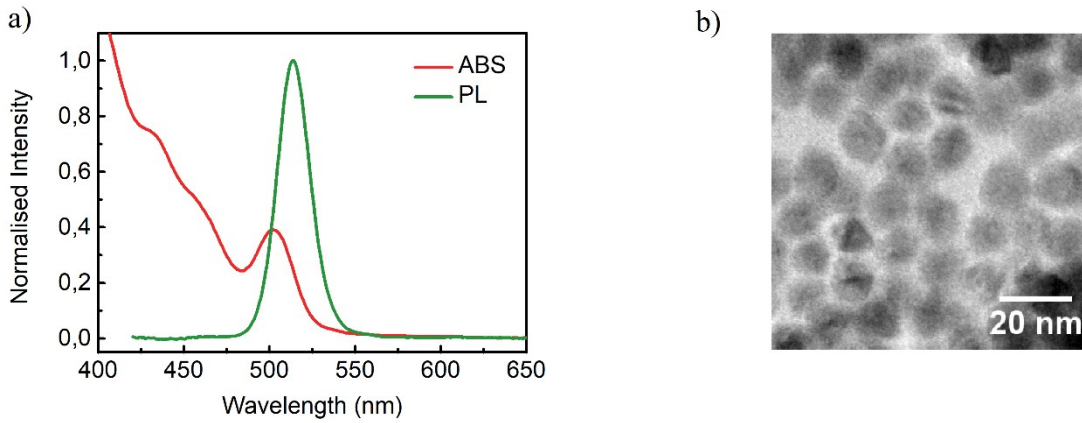


Fig. S5 (a) ABS and PL spectra of CdSe@ZnS/ZnS QDs. (b) TEM image of QDs.

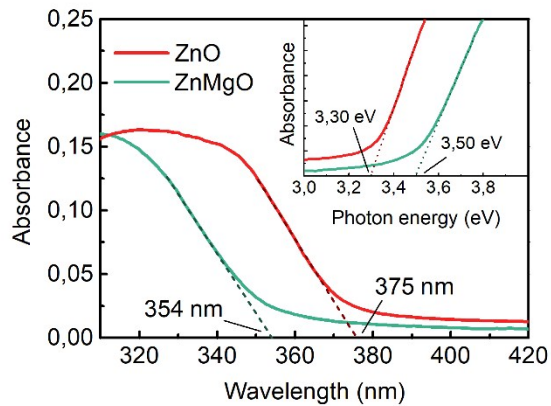


Fig. S6 ABS spectra of 30 nm thick ZnO and ZnMgO layers.

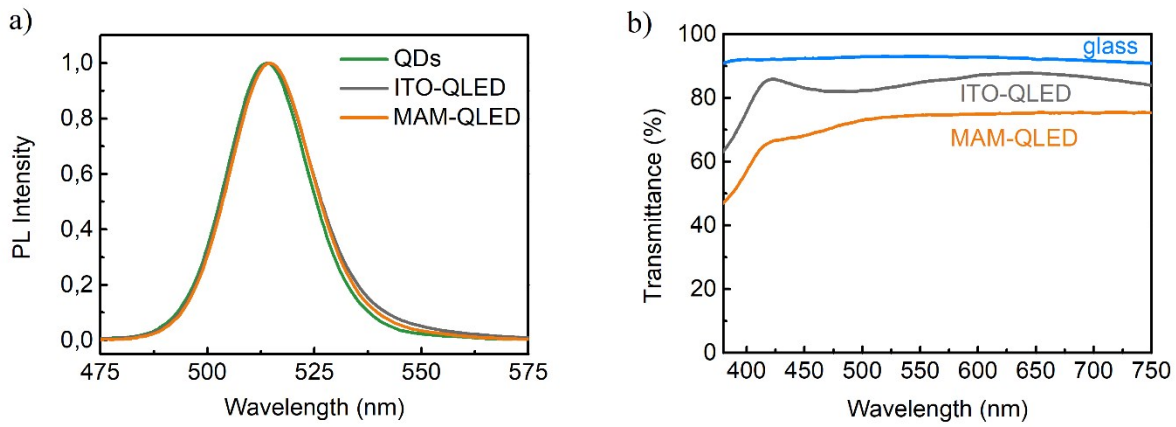


Fig. S7 (a) EL spectra and (b) transmittance of QLED with ITO or MAM electrode.

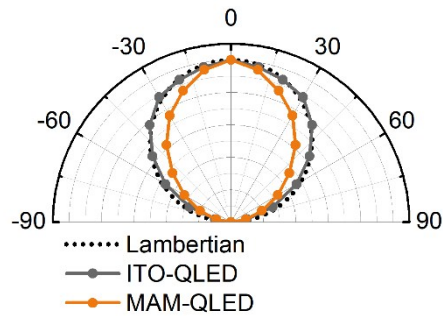


Fig. S8 Angular emission pattern of QLED with ITO or MAM electrode.

Bending machine

Bending tests of conductive flexible substrates were performed using rotary bending machine. A flexible substrate is stuck to elastic belt with double-sided tape and is wrapped around the roller with different radius. The general operation mechanism consists in moving the substrate by the rotary actuator back and forth. The speed of bending cycles might reach up to 200 cycles/min which enables considerably fast measurement of thousands of cycles to be performed.

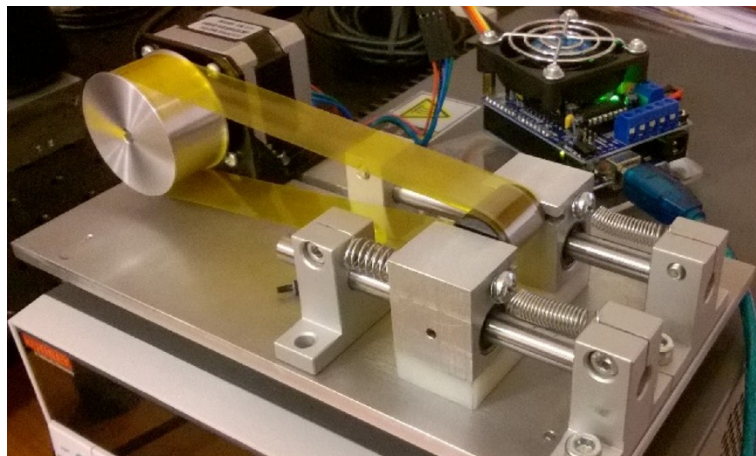


Fig. S9 Image of rotary bending machine.