Electronic Supplementary Material (ESI) for Nanoscale Horizons.

Crosslinked Conjugated Polymers as Hole Transport Layer for High Performance Quantum Dot Light Emitting Diodes

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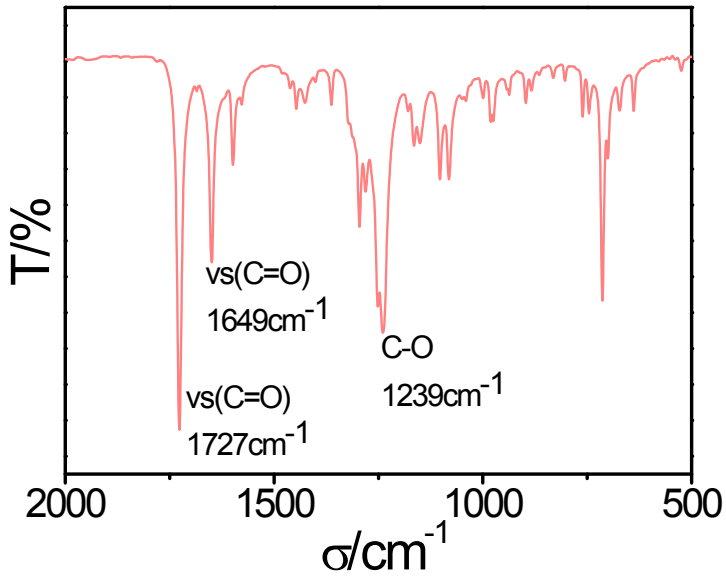

Figure S1. Fourier transform infrared (FTIR) absorption spectrum of BP-BP molecules.

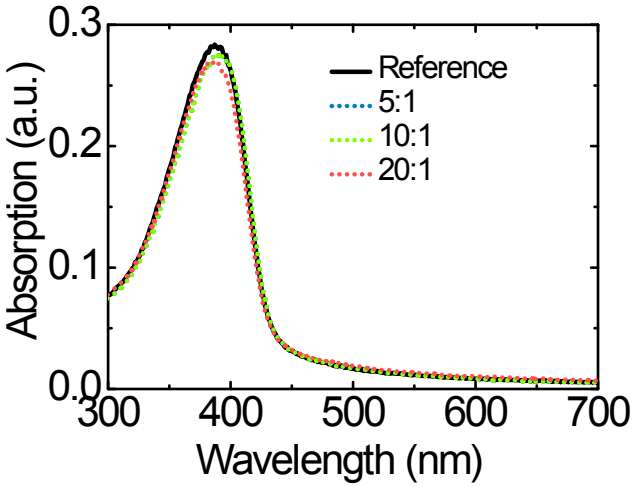

Figure S2. UV-vis absorption spectra of pristine TFB and cross-linked TFB films with different weight ratios of TFB/BP-BP after toluene washing.

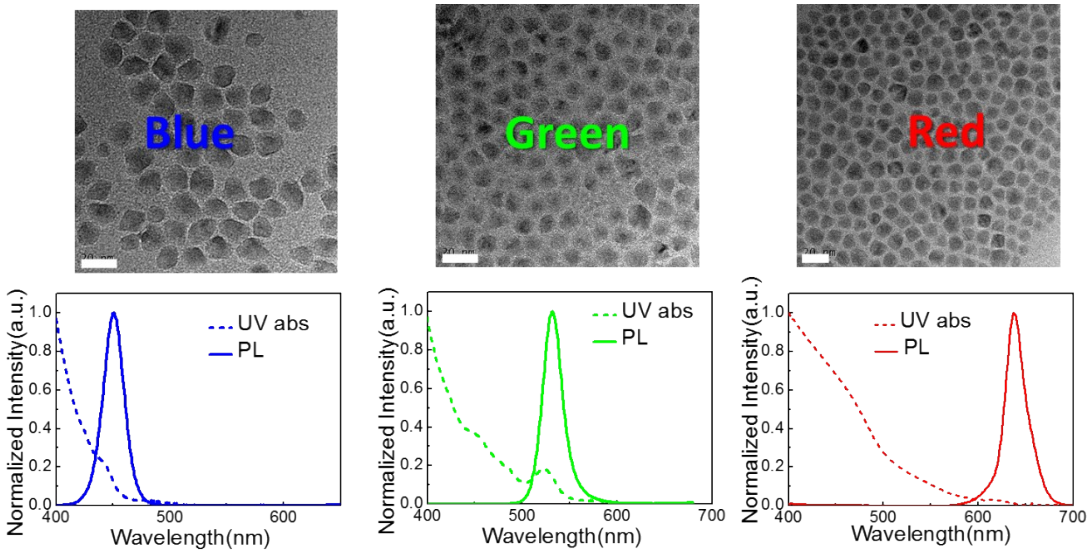

Figure S3. TEM images of (a) blue, (b) green and c) red QDs. Scale bars: 20 nm. UV-vis absorption and PL spectra of (d) blue, (e) green and (f) red QDs, respectively.

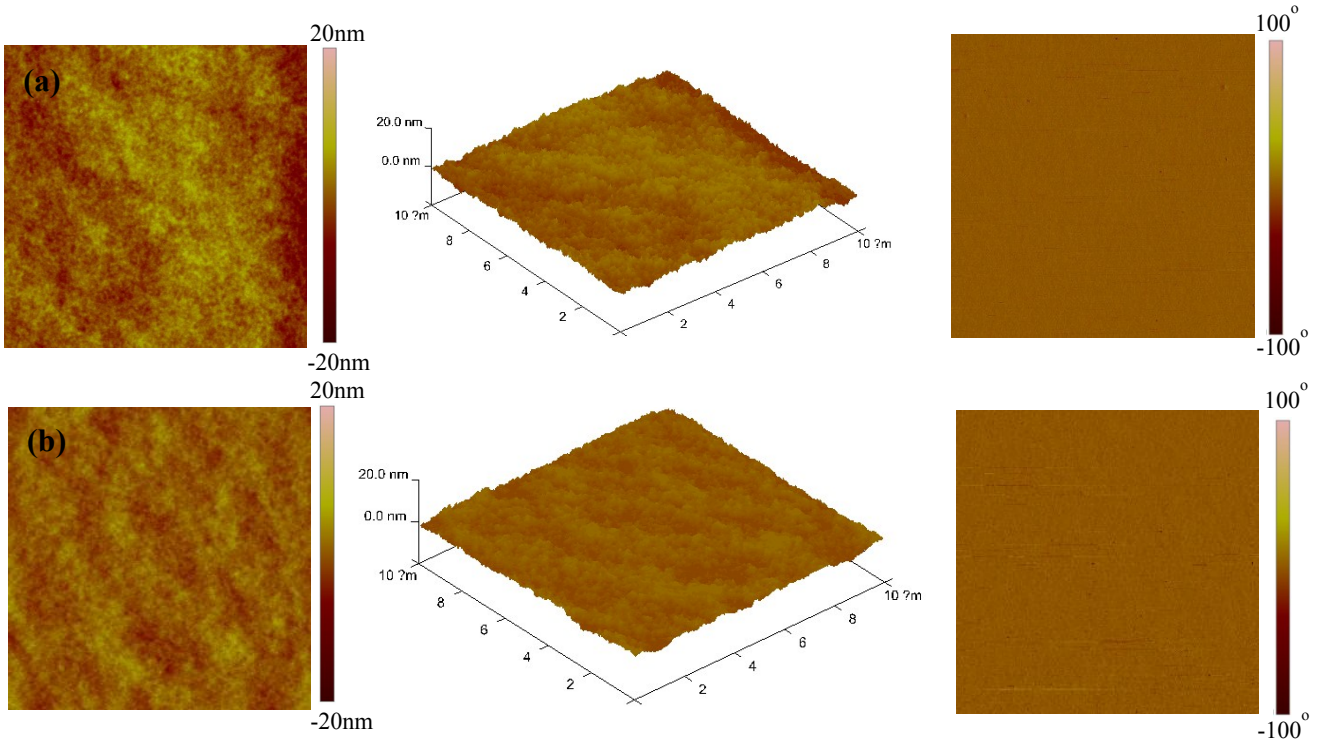

Figure S4. AFM topography images of TFB layers spin-coated from toluene: (a) height topography image of pristine TFB layer, (b) height topography image of cross-linked TFB layer. The corresponding 3D and phase images are presented at right.

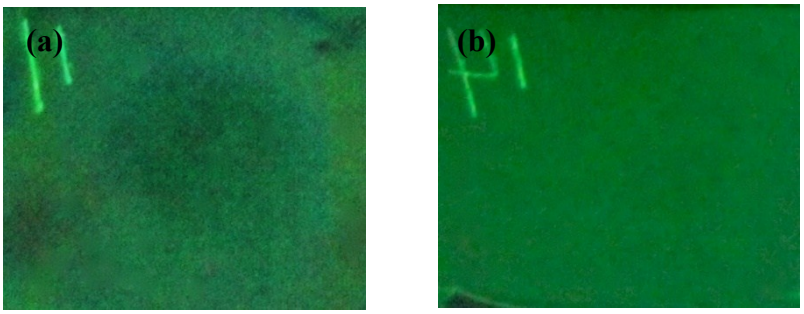

Figure S5. Photoluminescence optical microscopy images of QDs films on different TFB layers. (a) On pristine TFB layer. (b) On crosslinked TFB layer.

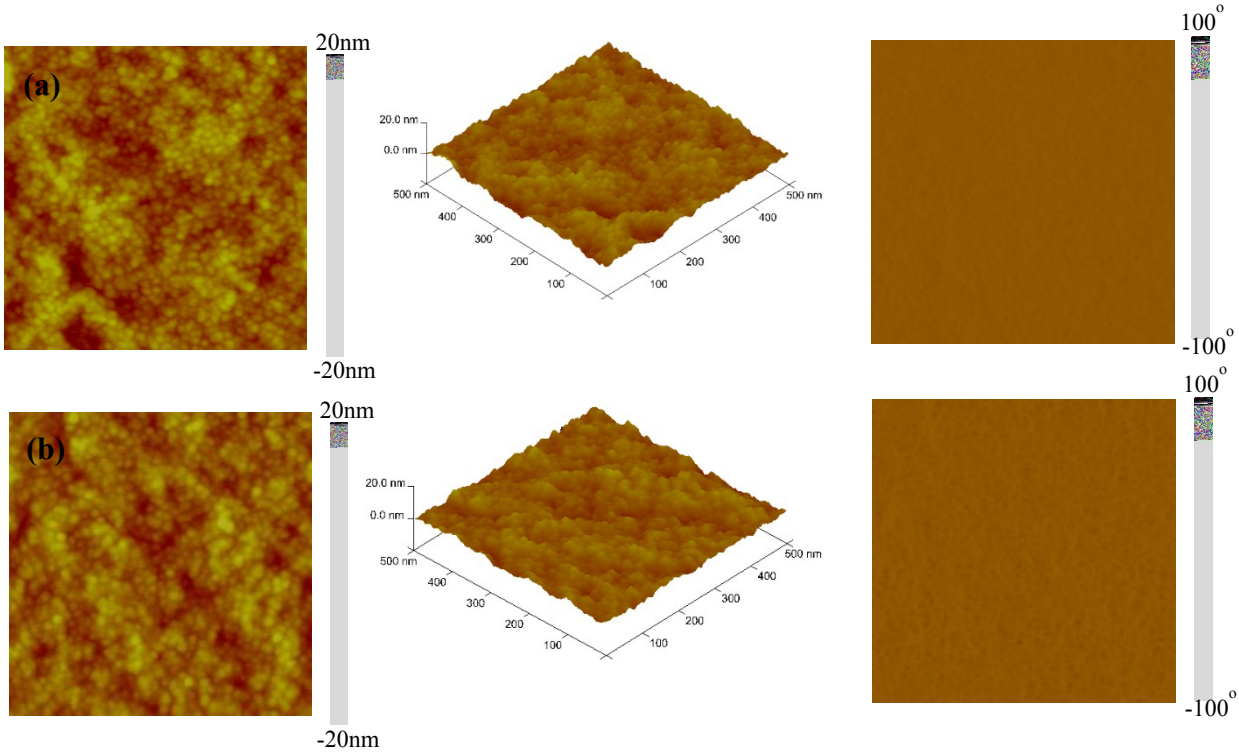

Figure S6. AFM topography images of QDs on different TFB layers: (a) height topography image of QDs on pristine TFB layer. (b) Height topography image of QDs on crosslinked TFB layer. The corresponding 3D and phase topography images are presented at right.

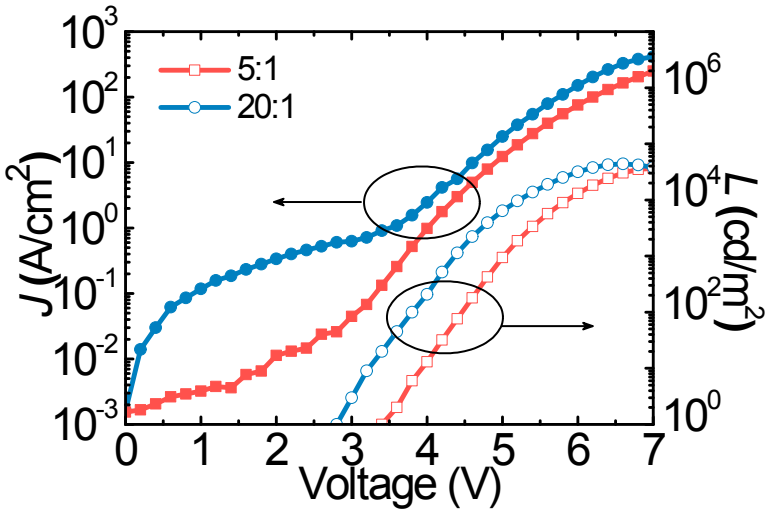

Figure S7. *J-V-L* curve of devices based on cross-linked TFB layers with diferent TFB/BP-BP ratios of 20:1 (blue) and 5:1 (red).

Table S1. Electrical output characteristics of the devices based on cross-linked TFB layers with diferent TFB/BP-BP ratios.

TFB/BP-BP	V_T(V)	L_{max}(cd m^{-2})	η_P(lm W^{-1})	η_A(cd A^{-1})	η_{EQE}(%)
5:1	3.4	36560	15.39	25.47	5.89
20:1	2.8	47761	16.15	27.22	6.61