

Supporting Information

Red room temperature phosphorescence of lead halide based coordination polymer showing efficient angle-dependent polarized emission and photoelectric performance

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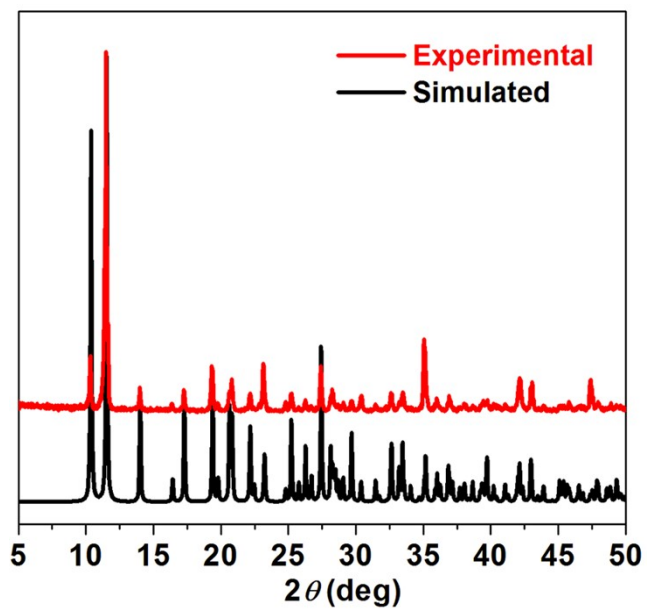


Figure S1. Simulated and experimental PXRD patterns of complex **1**.

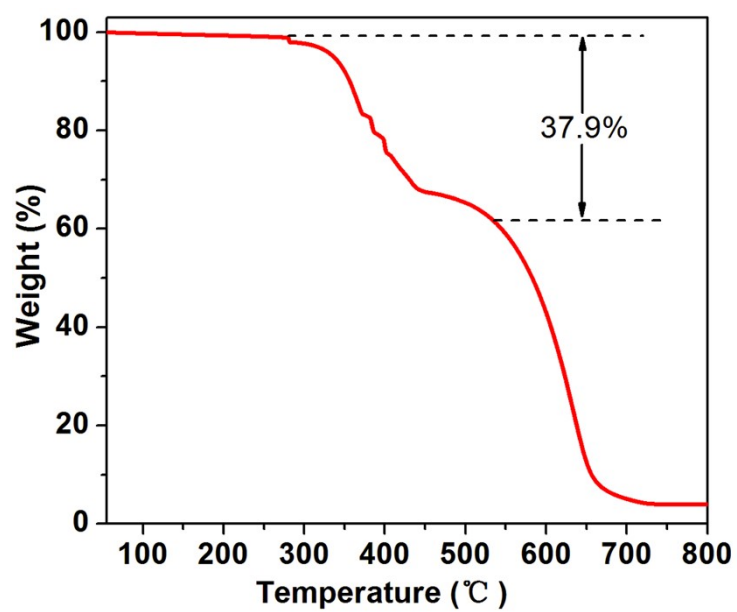


Figure S2. Thermo gravimetric analysis (TGA) curve of complex 1.

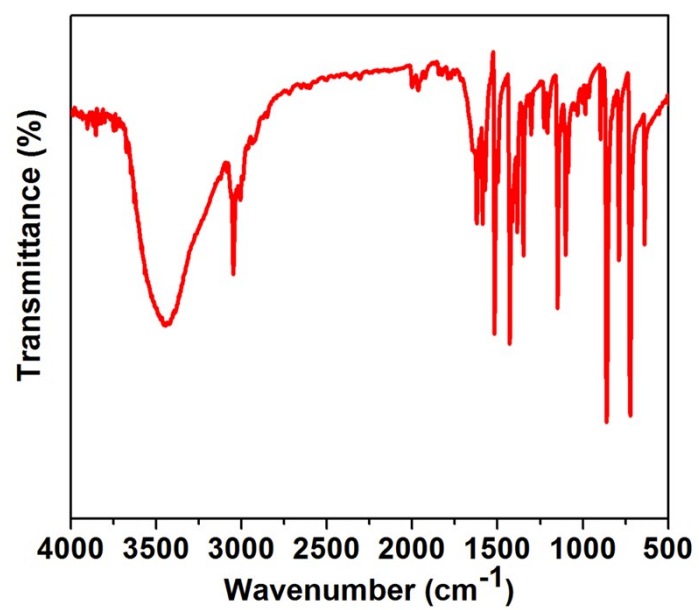
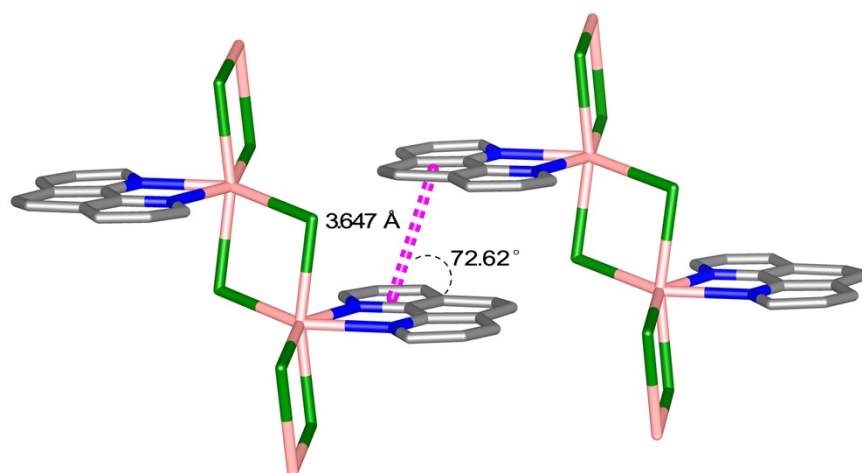
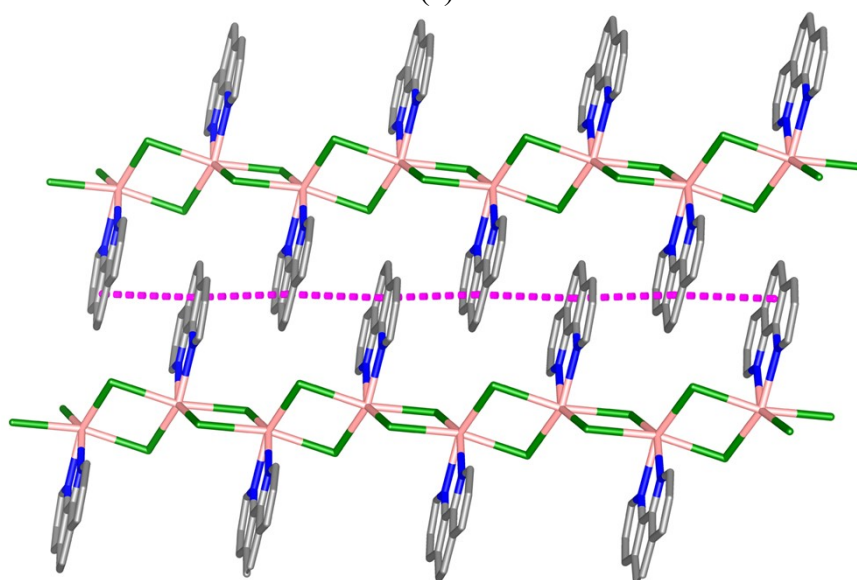


Figure S3. FT-IR spectrum of complex 1.



(a)



(b)

Figure S4. Detailed (a) and overall (b) view of dense $\pi \cdots \pi$ stacking between phen ligands with H-aggregated arrangement in complex **1**.

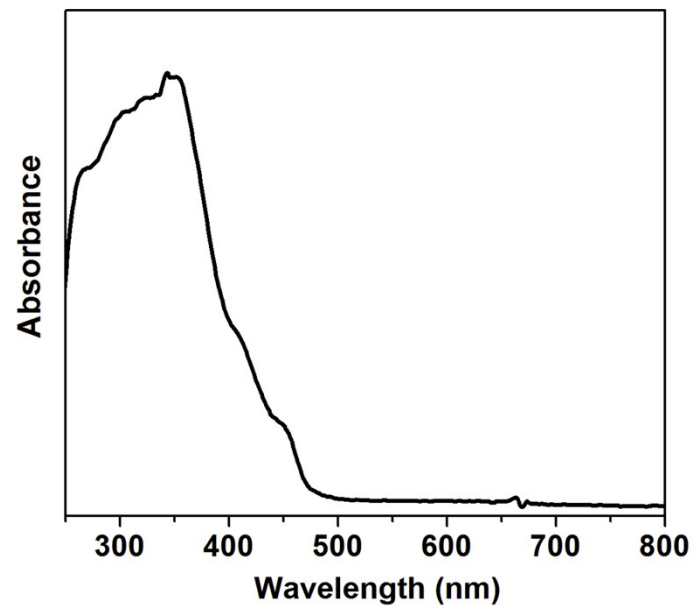


Figure S5. UV-vis absorption spectrum of complex **1** in solid state.

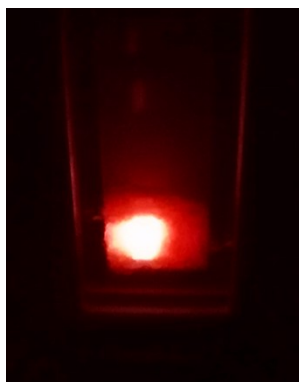


Figure S6. Photograph of the solid sample of **1** under and UV (365 nm) light.

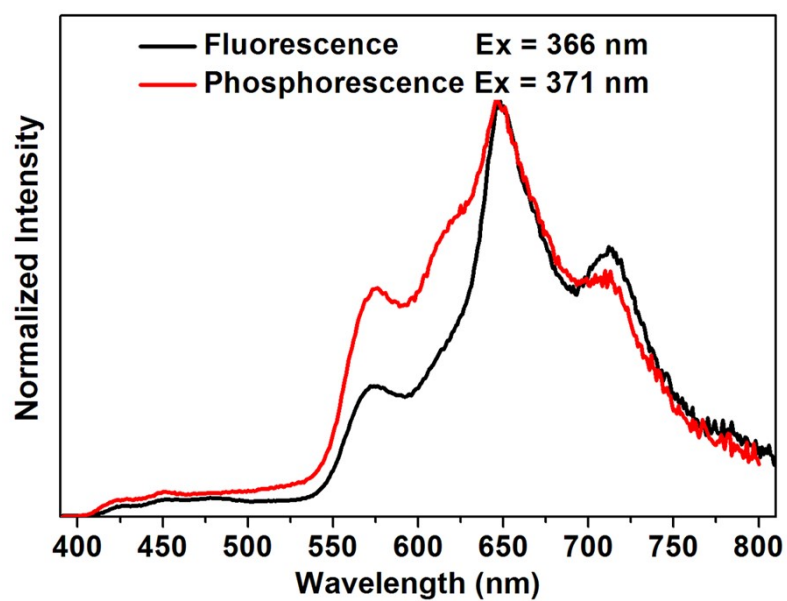


Figure S7. Normalized fluorescence (black) and phosphorescence (red) spectra of **1** in solid state measured at room temperature.

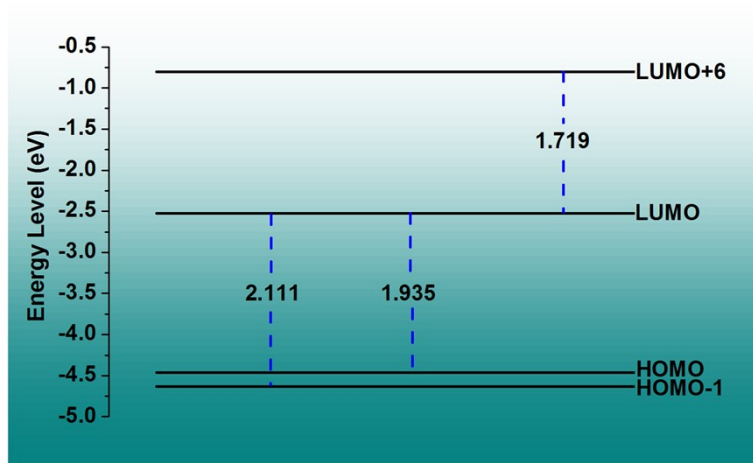
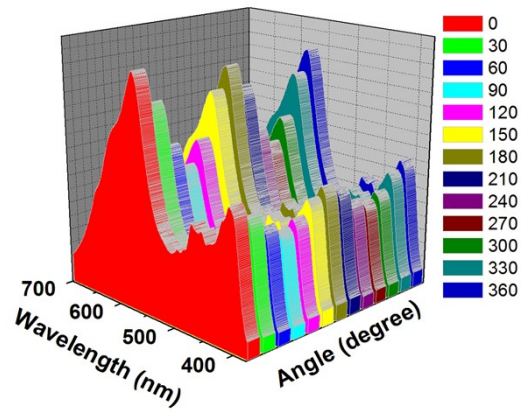
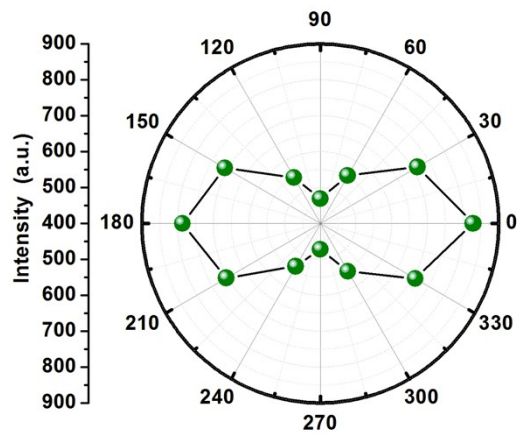


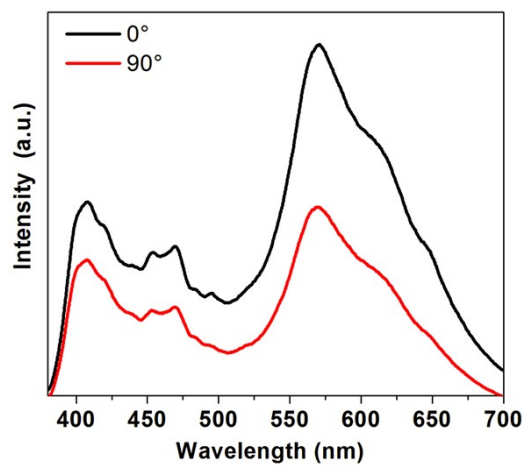
Figure S8. The calculated energy levels and energy gaps for selected molecular orbitals of **1**.



(a)



(b)



(c)

Figure S9. (a) 3D view of angle-dependent fluorescence emission of the CP based film. (c) Fluorescence intensity of the film as a function of the polarized angle. (d) fluorescence spectra of the film measured at a polarized angle of 0 and 90°.

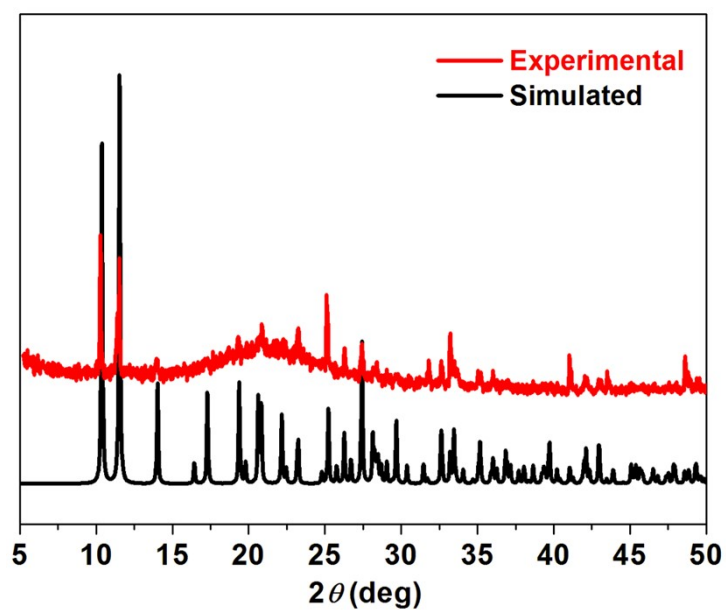


Figure S10. Simulated and experimental PXRD patterns of complex **1** after long-term photoelectronic measurements.