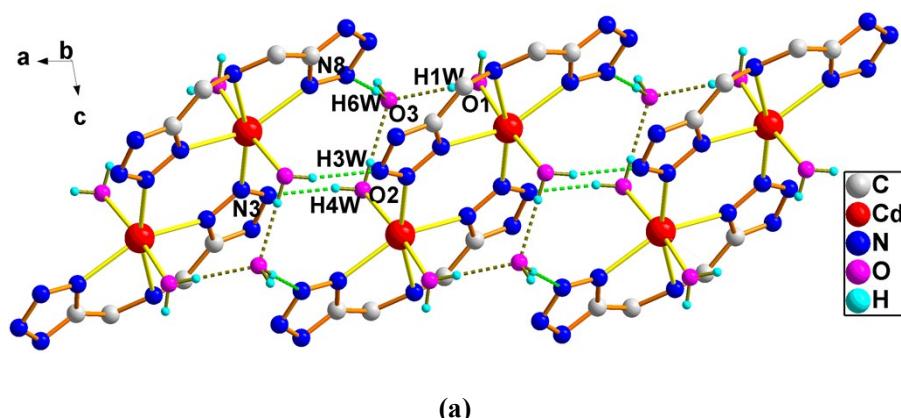


# Zinc and Cadmium Complexes Based on Bis-(1*H*-tetrazol-5-ylmethyl/ylethyl)-amine Ligands: Structures and Photoluminescence properties

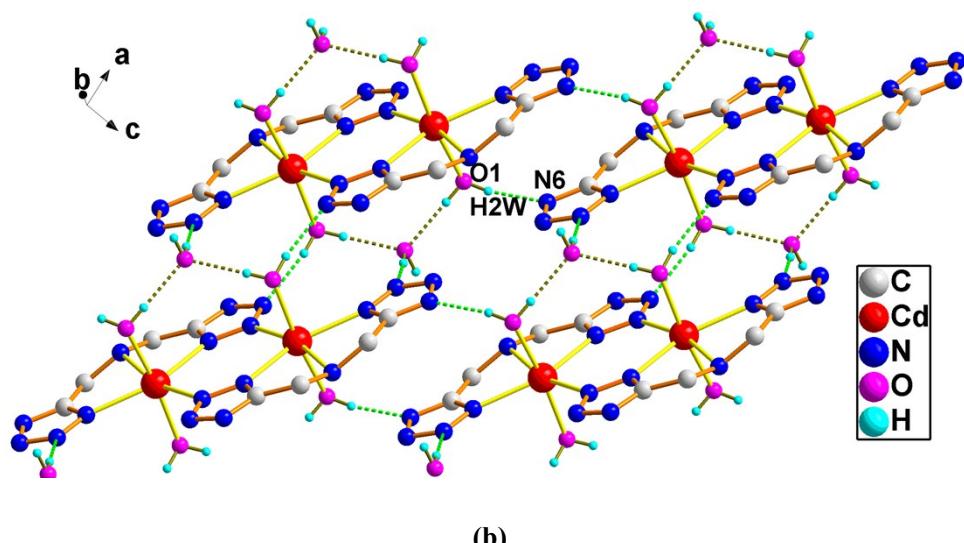
Duo-Zhi Wang<sup>\* a,b</sup>, Jian-Zhong Fan<sup>b</sup>, Dianzeng Jia<sup>a</sup> and Ceng-Ceng Du<sup>b</sup>

<sup>a</sup>Key Laboratory of Energy Materials Chemistry, Ministry of Education, Institute of Applied Chemistry, Xinjiang University, Urumqi, 830046 Xinjiang, P. R. China.

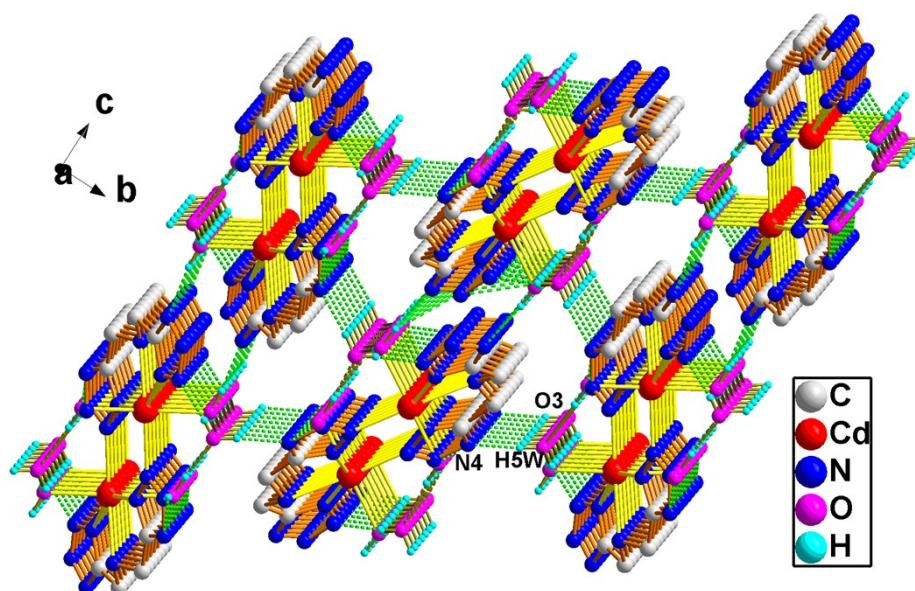
<sup>b</sup>College of Chemistry and Chemical Engineering, Xinjiang University, Urumqi 830046, P. R. China.



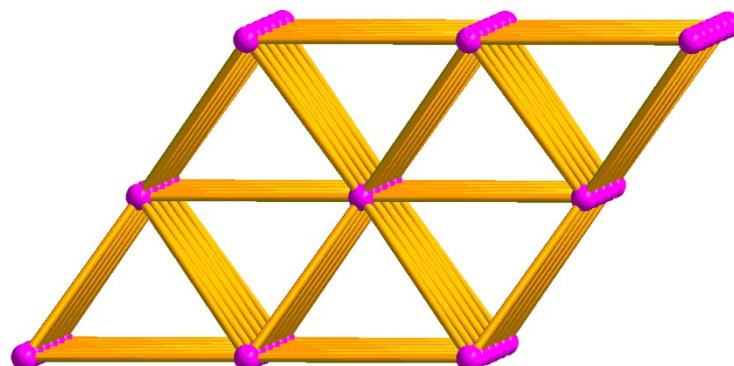
(a)



(b)

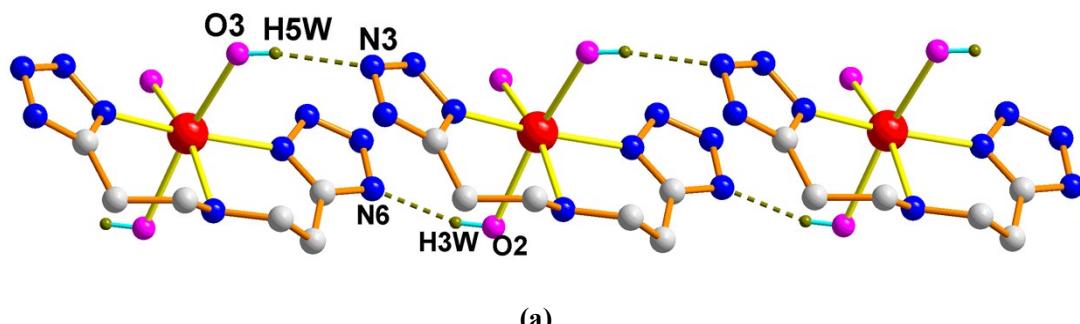


(c)

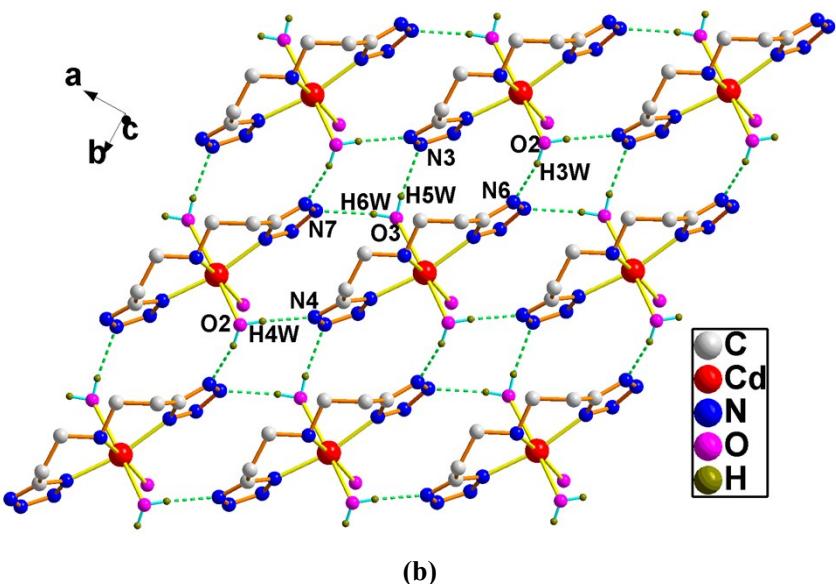


(d)

**Fig. S1.** View of (a) the 1D chain formed via the hydrogen-bonding interactions in 4; (b) the the 2D sheet structure; (c) the 3D supramolecular network formed by hydrogen-bonding interactions; (d) the  $\{3^{36} \cdot 4^{48} \cdot 5^7\}$  14-c topological net with the stoichiometry (14-c) (Some of H atoms were omitted for clarity).

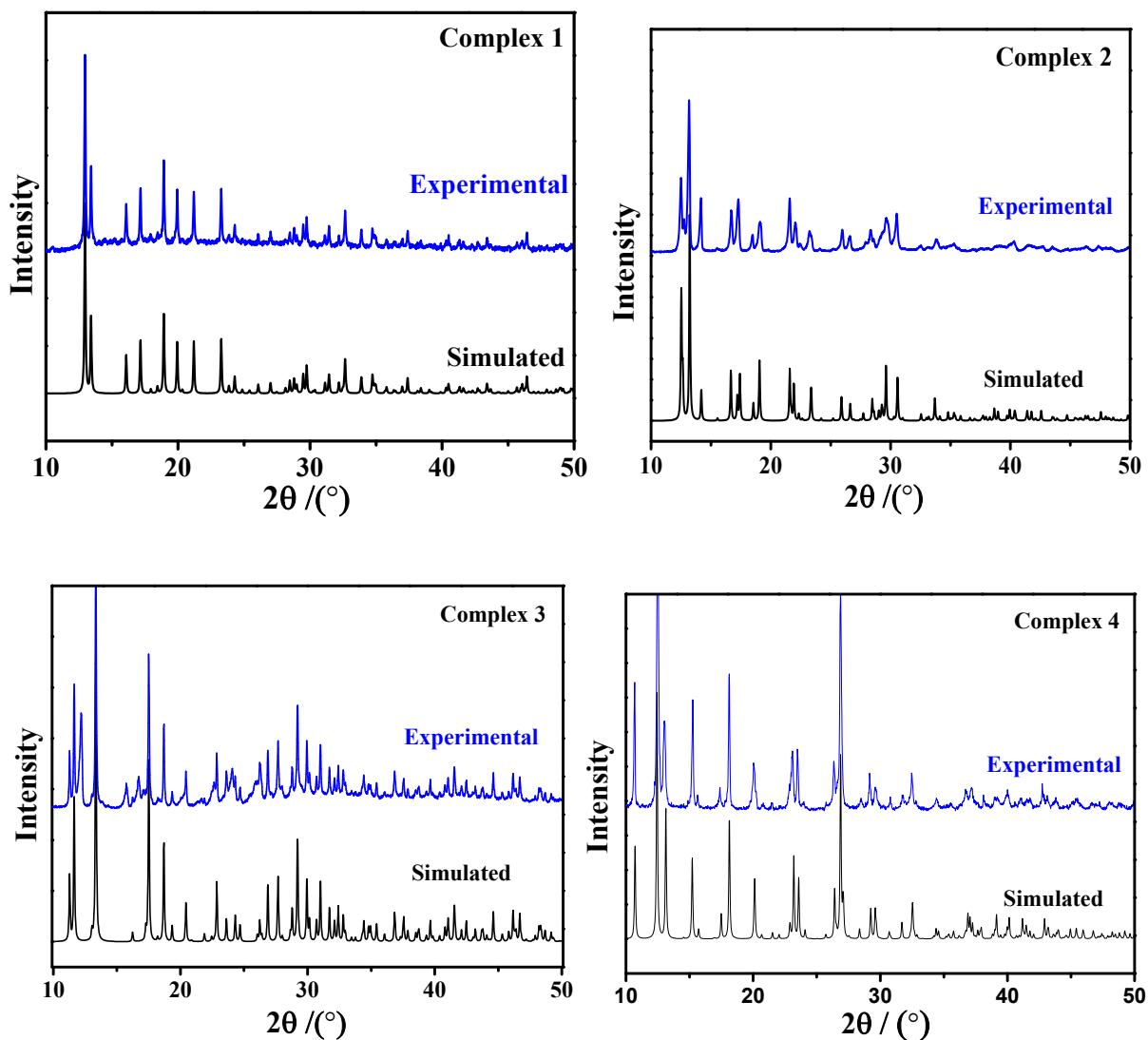


(a)



(b)

**Fig. S2.** View of (a) the 1D chain formed by the hydrogen-bonding interactions of **8**; (b) the 2D sheet structure (Some of H atoms were omitted for clarity).



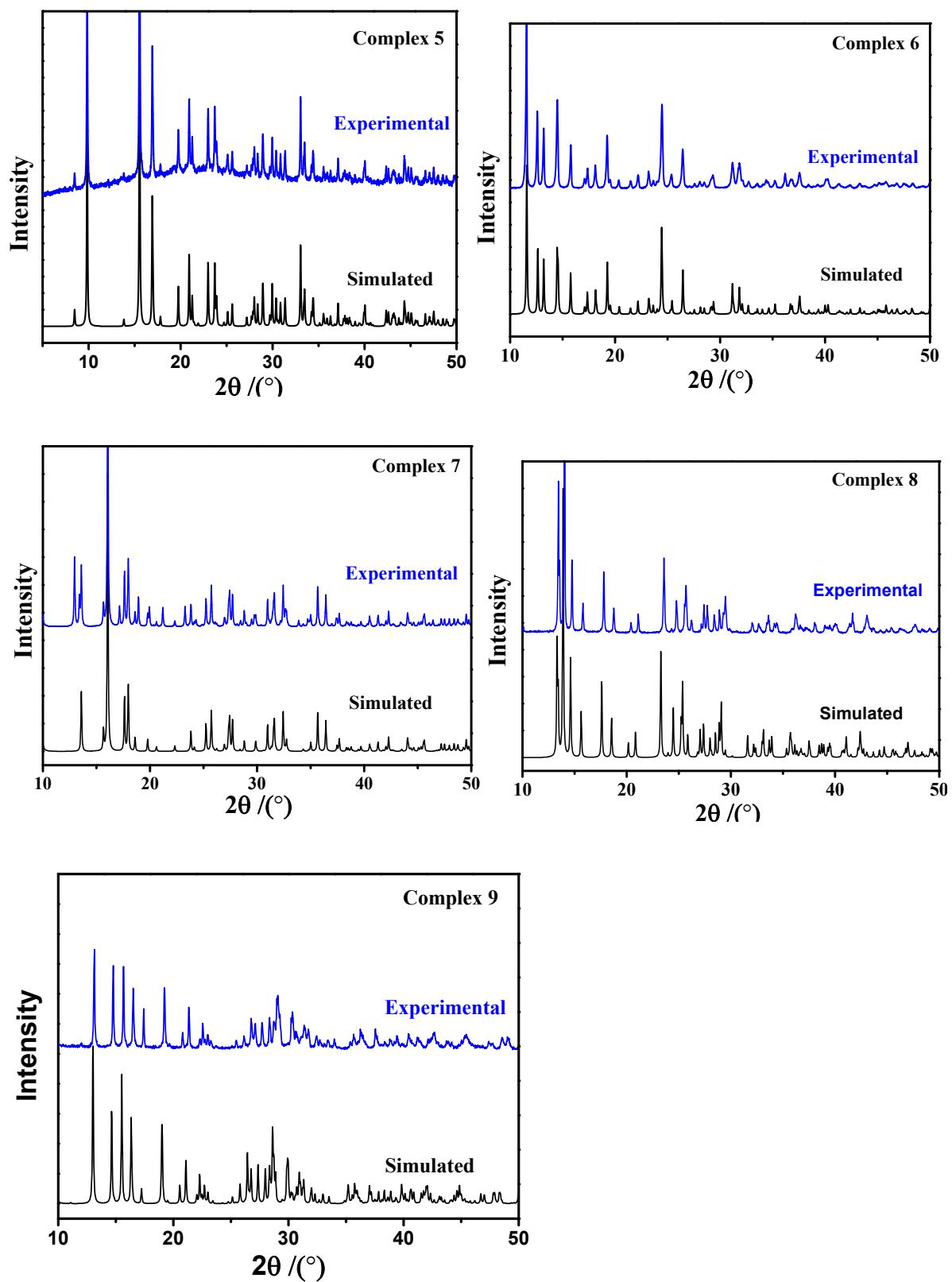
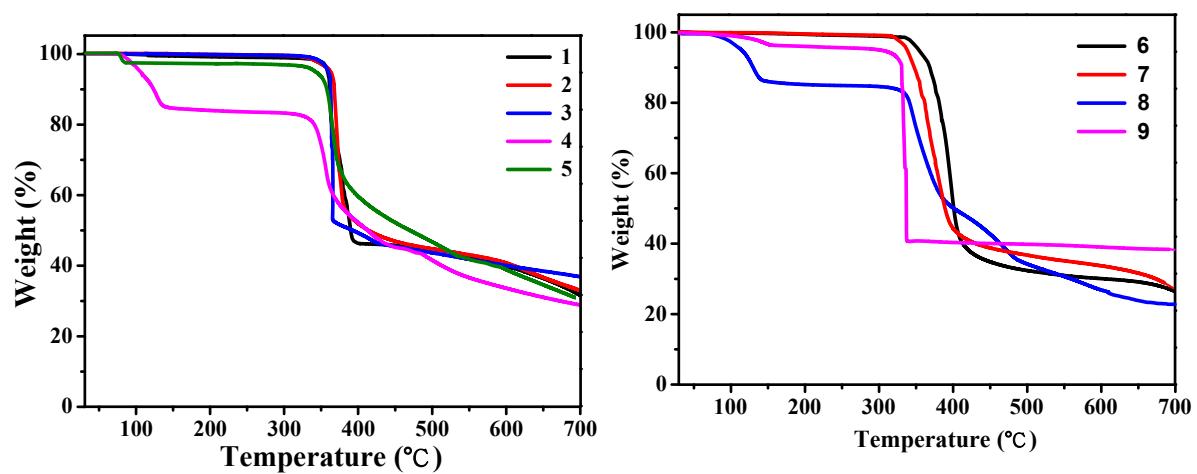
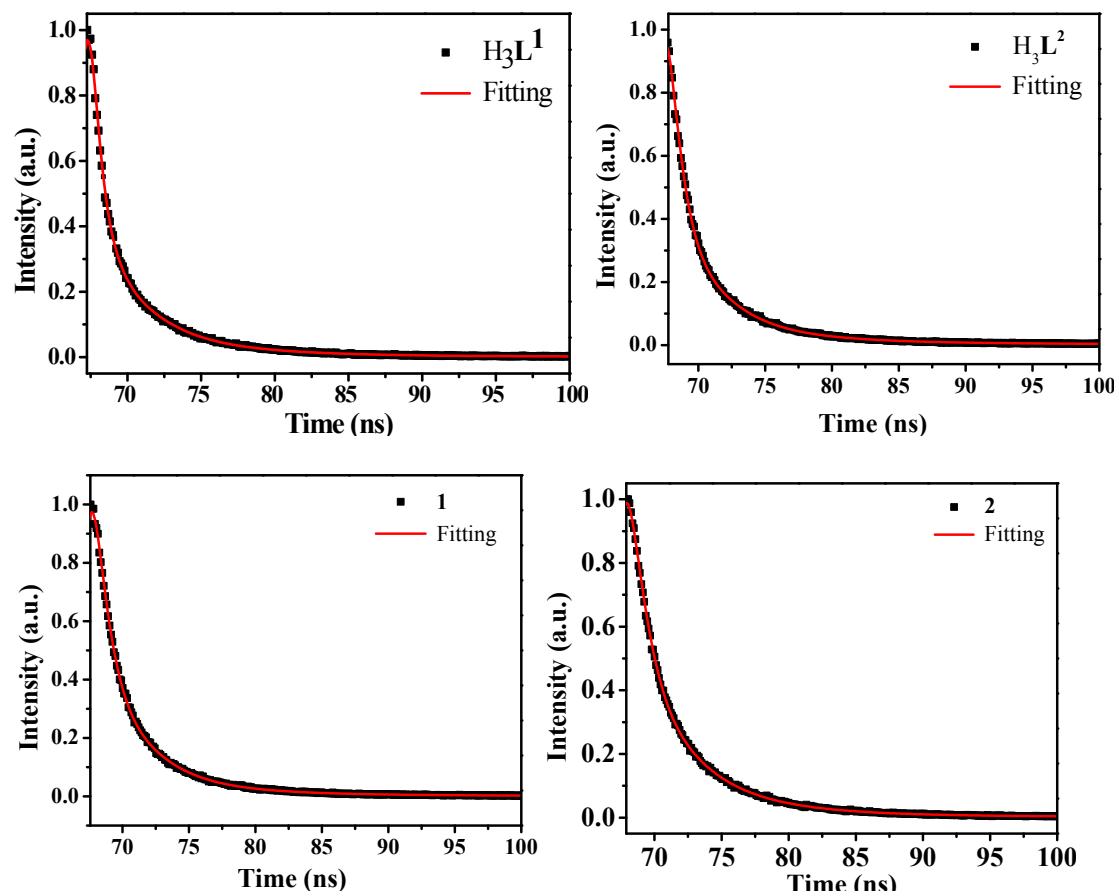
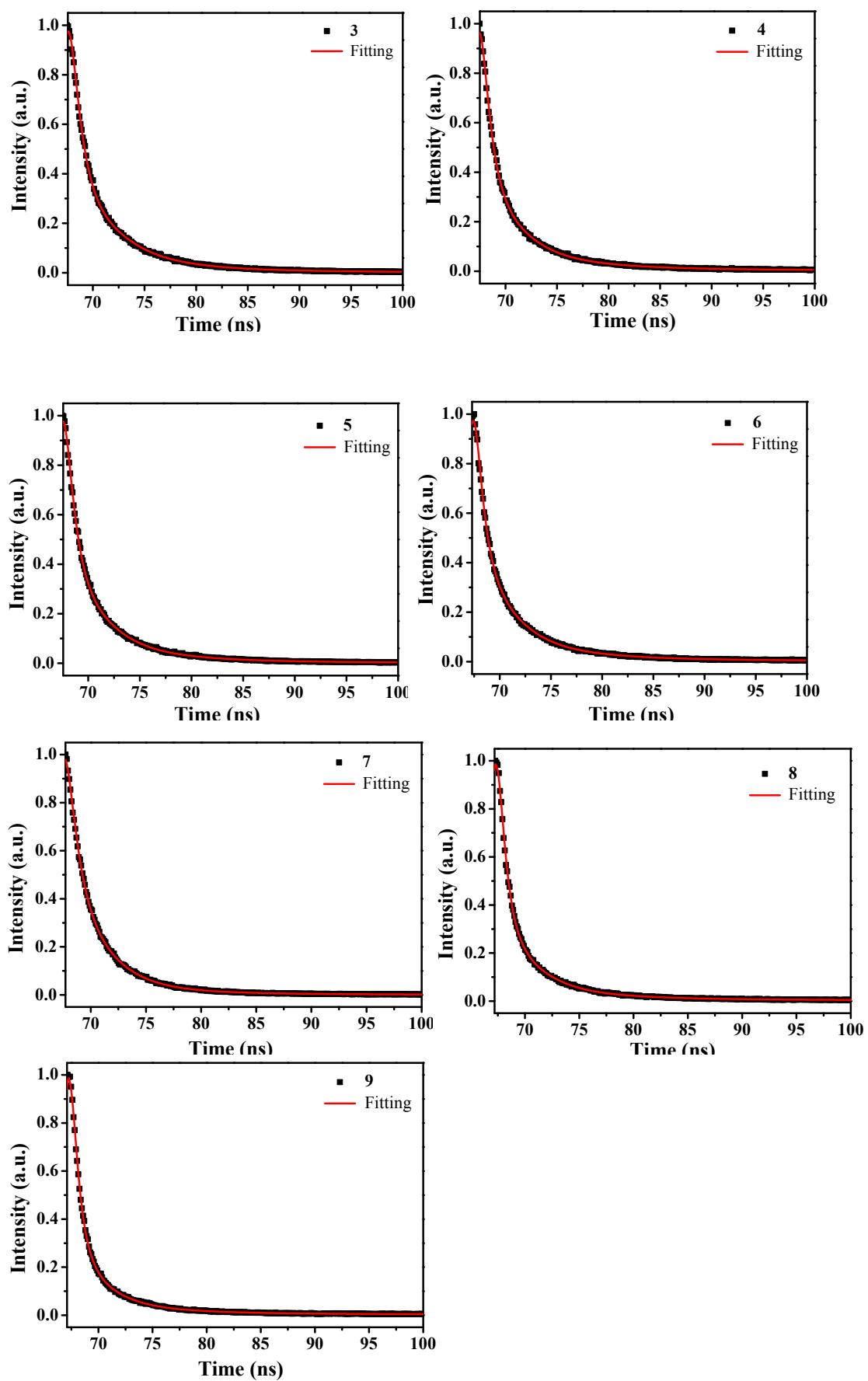


Fig. S3. PXRD patterns of 1–9.



**Fig. S4.** TGA curves of complexes 1–9.





**Fig. S5.** Fluorescence lifetime measurements for powder samples of  $\text{H}_3\text{L}^1$ ,  $\text{H}_3\text{L}^2$ , **1–9** at excitation of 340 nm