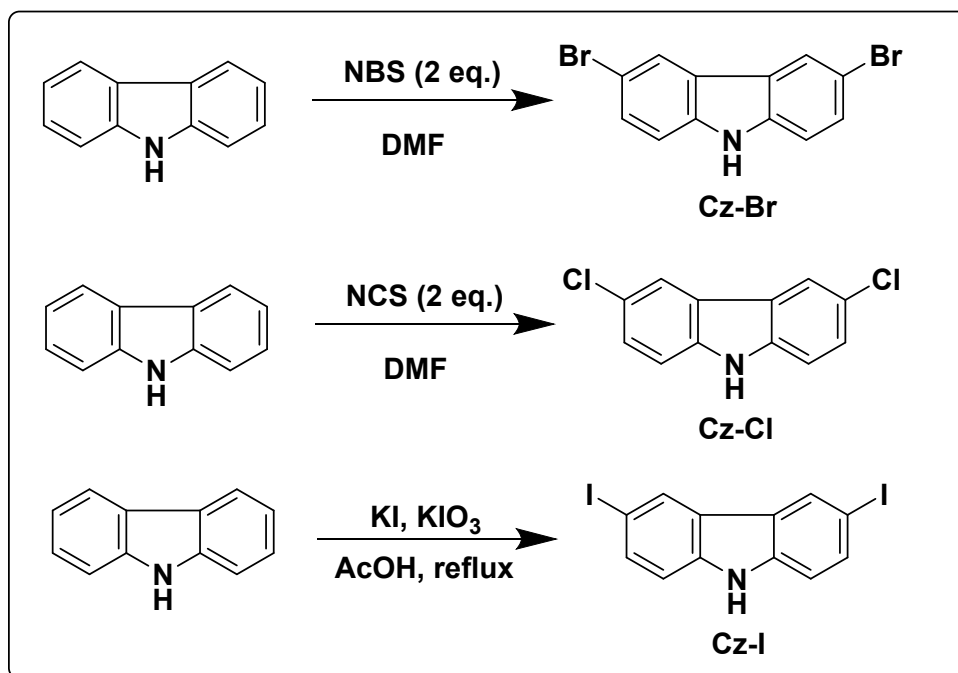
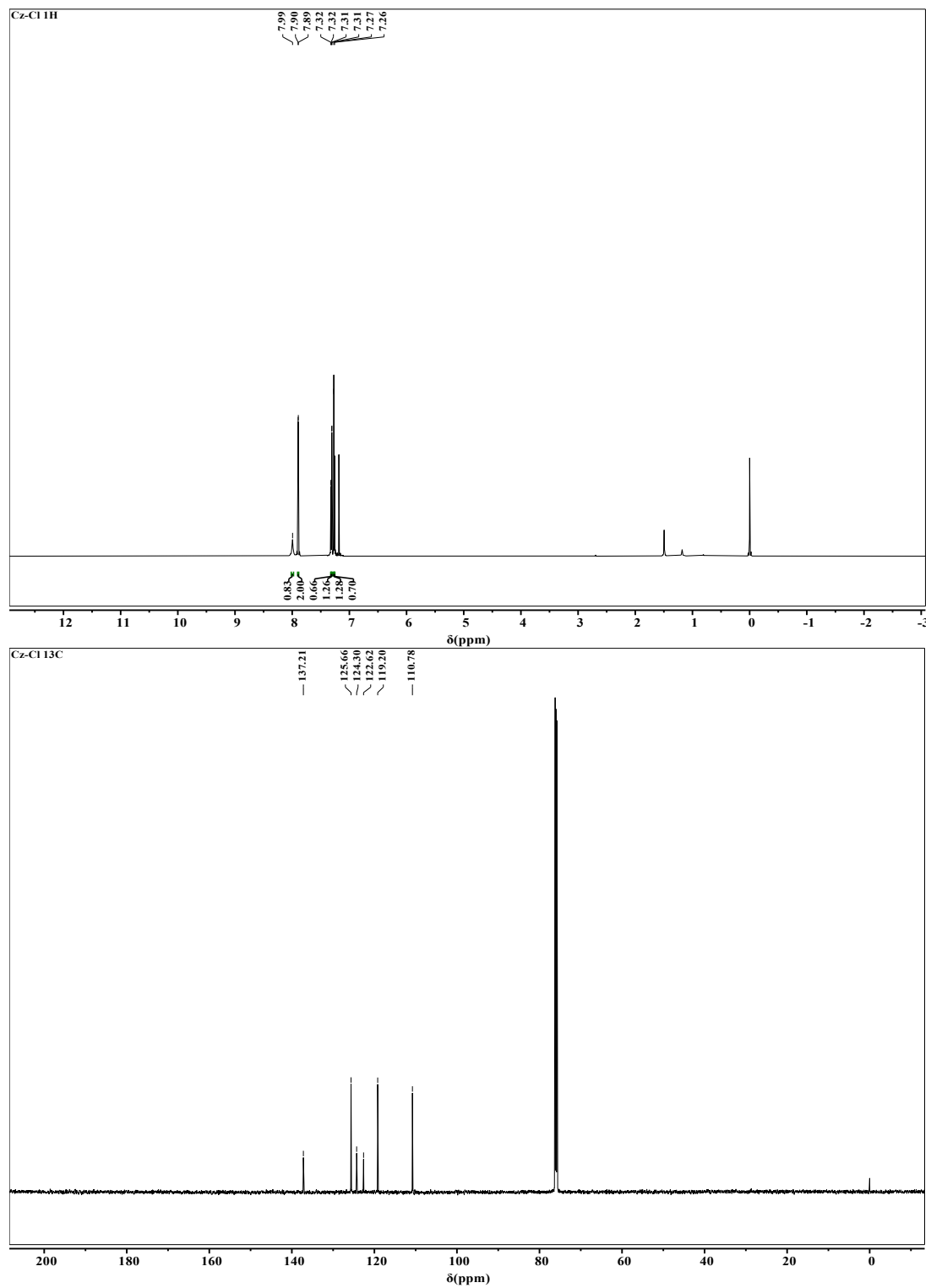


### Electronic Supplementary Information (ESI)

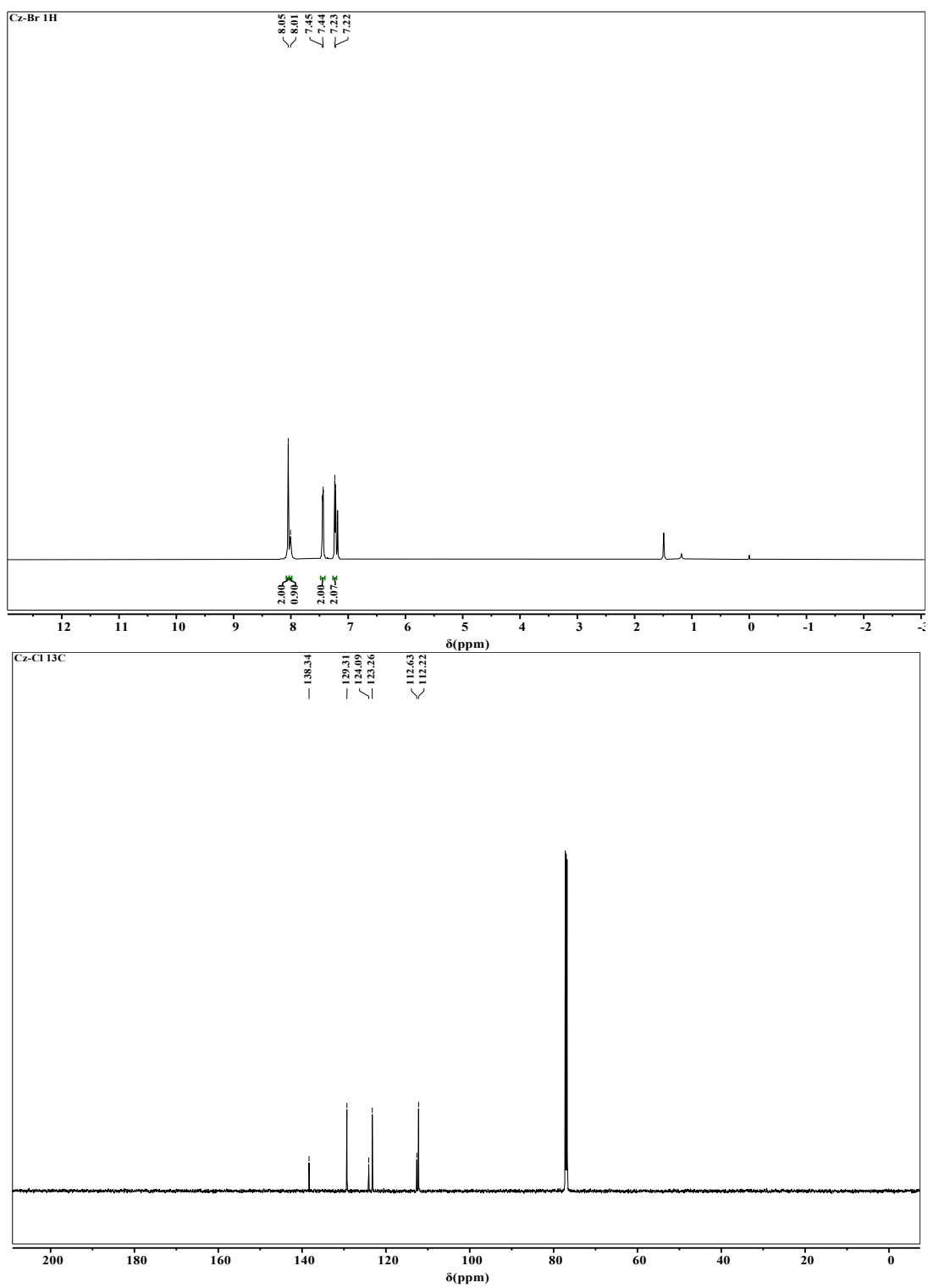
#### Halogen atom substitution effect on the carbazole fluorescence properties and supramolecular interactions in the solid-state



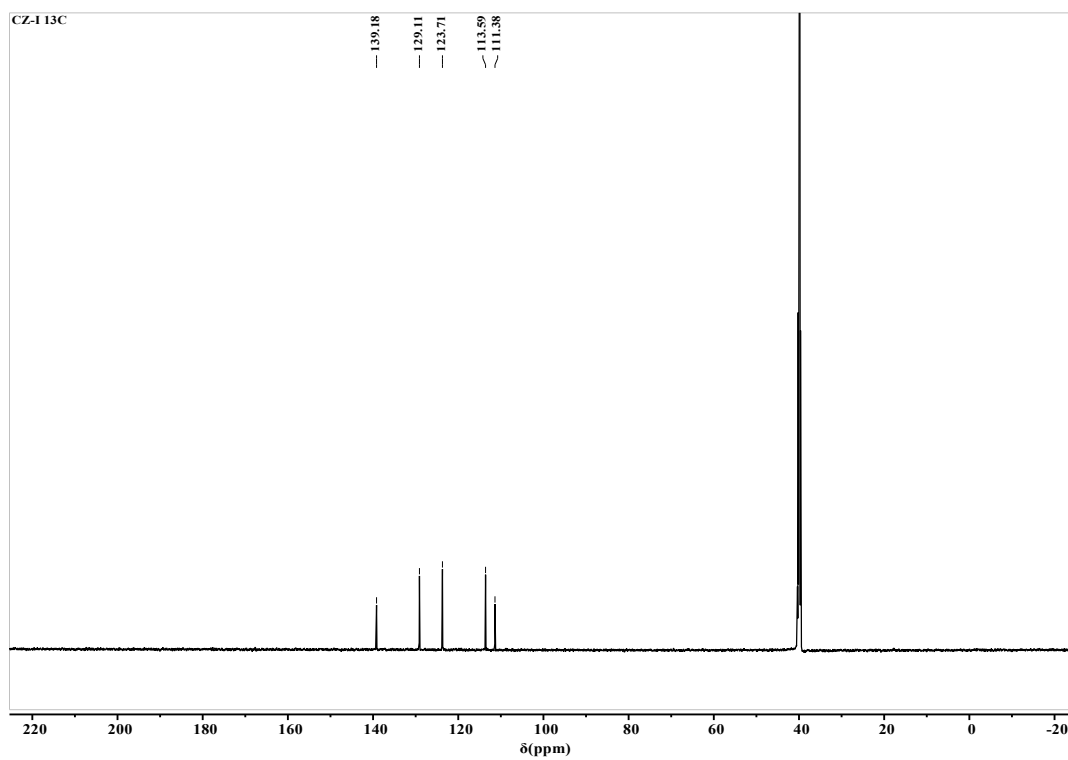
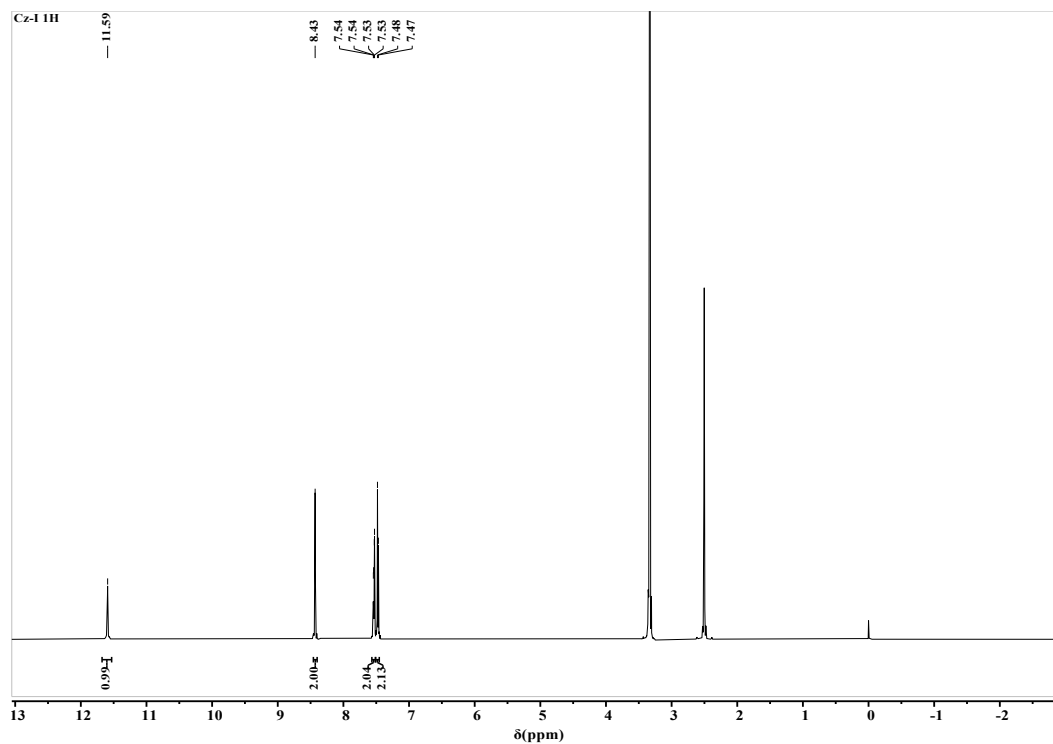
Scheme S1. Synthesis of **Cz-Cl**, **Cz-Br** and **Cz-I**.



<sup>1</sup>H and <sup>13</sup>C NMR of Cz-Cl in CDCl<sub>3</sub>.



$^1\text{H}$  and  $^{13}\text{C}$  NMR of **Cz-Br** in  $\text{CDCl}_3$ .



$^1\text{H}$  and  $^{13}\text{C}$  NMR of **Cz-I** in  $\text{DMSO } d_6$ .

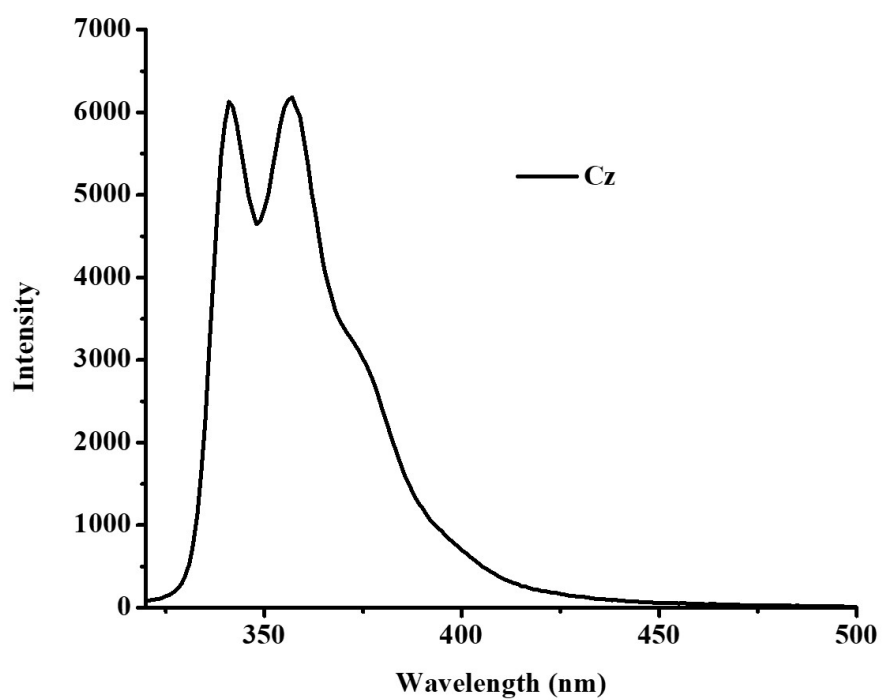


Fig. S1. Fluorescence spectra of Cz in ethyl acetate (as a representative case).

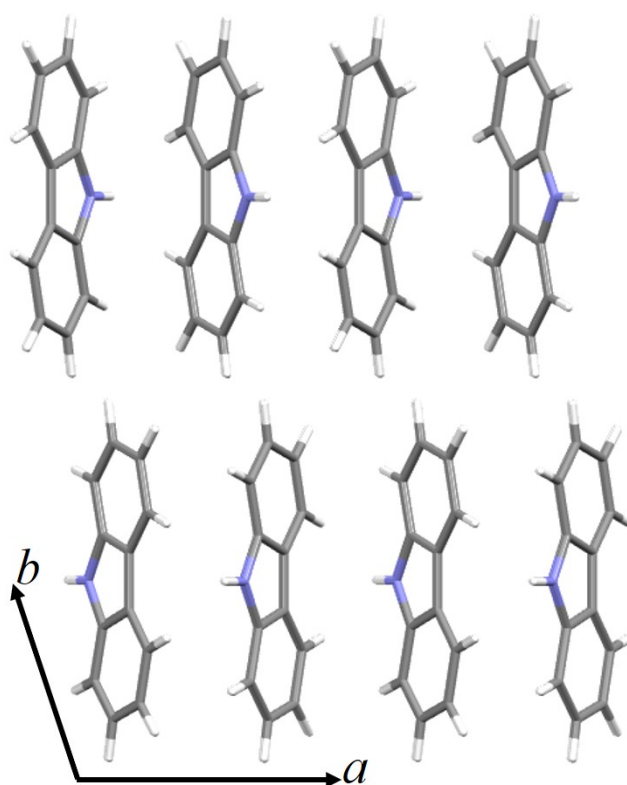


Fig. S2. Molecular packing of Cz.

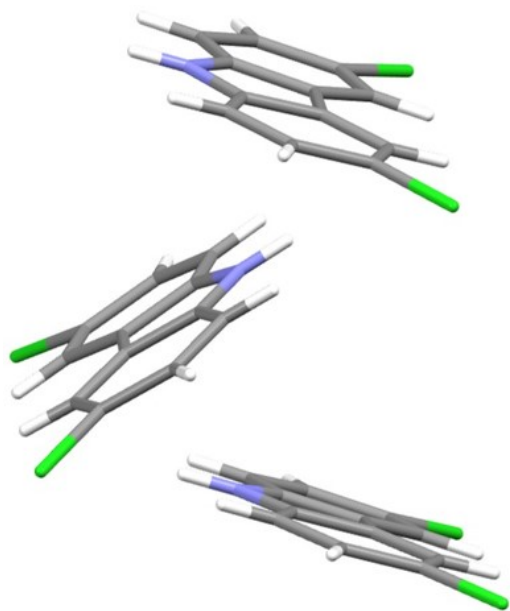


Fig. S3. Asymmetric unit of **Cz-Cl**.

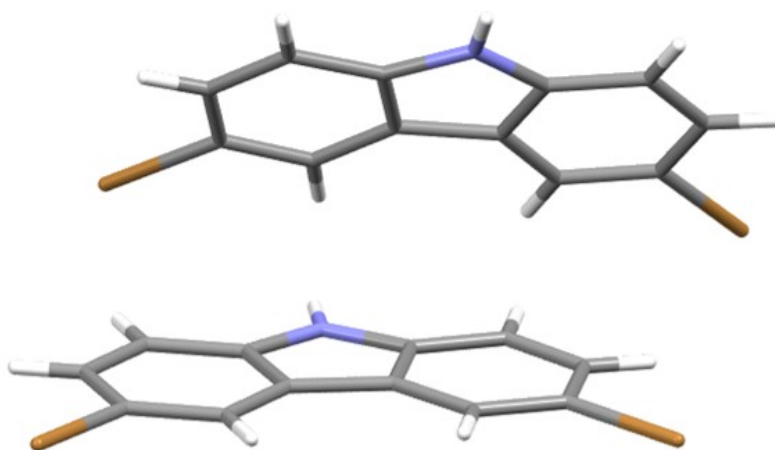


Fig. S4. Asymmetric unit of **Cz-Br**.

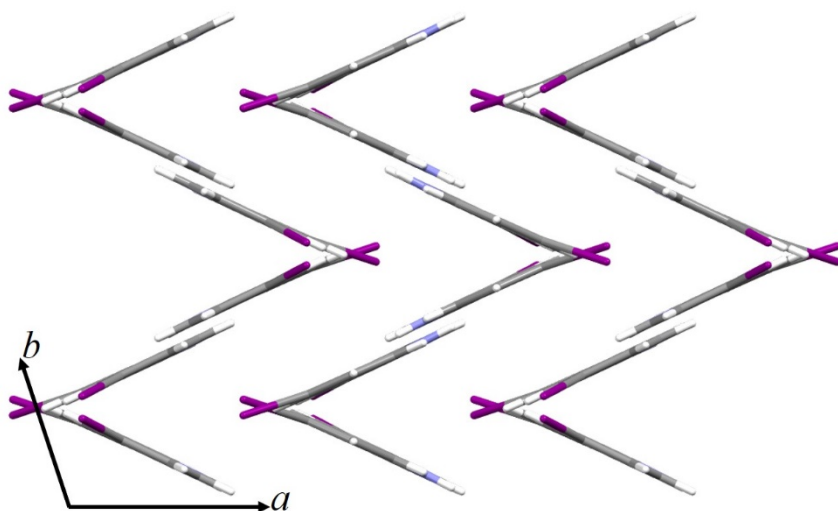


Fig. S5. Molecular packing in the crystal lattice of **Cz-I-1**.

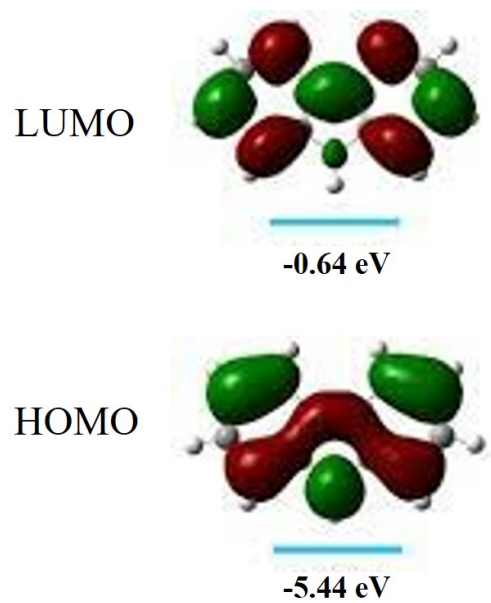


Fig. S6. HOMO-LUMO of **Cz** (N. Agarwal, P. K. Nayak, F. Ali, M. P. Patankar, K. L. Narasimhan and N. Periasamy, *Synthetic Metals*, 2011, **161**, 466-473).