

Supporting Information

15*H*-diindolo[2,3-*b*:1',2',3'-*lm*]carbazole: A Novel Rigid Donor for Highly Efficient Thermally Activated Delayed Fluorescence Emitters

Rajendra Kumar Konidena^a, Kyung Hyung Lee^a and Jun Yeob Lee^{a*}, Wan Pyo Hong^{b*},

^aSchool of Chemical Engineering, Sungkyunkwan University, 2066 Seobu-ro, Jangan-gu, Suwon, Gyeonggi 440-746, Korea

^bLG Chem, Ltd, LG Science Park, 30, Magokjungang 10-ro, Gangseo-gu, Seoul, 07796, Republic of Korea

Email: leej17@skku.edu, whongw@lgchem.com

Fig. S1	Emission spectra of the compounds a) DICzCNTrz and b) CzCNTrz recorded in different solvents.	S2
Fig. S2	Transient PL fluorescence decay (prompt) of the doped films	S2
Fig. S3	TGA traces observed for the compounds	S3
Fig. S4	Electrochemical properties of a) DICzCNTrz and b) CzCNTrz .	S3
Fig. S5	Cyclicvoltammogram of DICz	S4
Fig. S6	a) absorption and b) emission and phosphorescence spectra of DICz donor in THF solution	S4
Fig. S7	¹ H NMR spectra of 2 recorded in CDCl ₃	S5
Fig. S8	¹ H NMR spectra of 3 recorded in CDCl ₃	S5
Fig. S9	¹ H NMR spectra of DICz recorded in CDCl ₃	S6
Fig. S10	¹ H NMR spectra of DICzCNTrz recorded in CDCl ₃	S6
Fig. S11	¹³ C NMR spectra of DICzCNTrz recorded in CDCl ₃	S7
Fig. S12	¹ H NMR spectra of CzCNTrz recorded in CDCl ₃	S7
Fig. S13	¹³ C NMR spectra of CzCNTrz recorded in CDCl ₃	S8

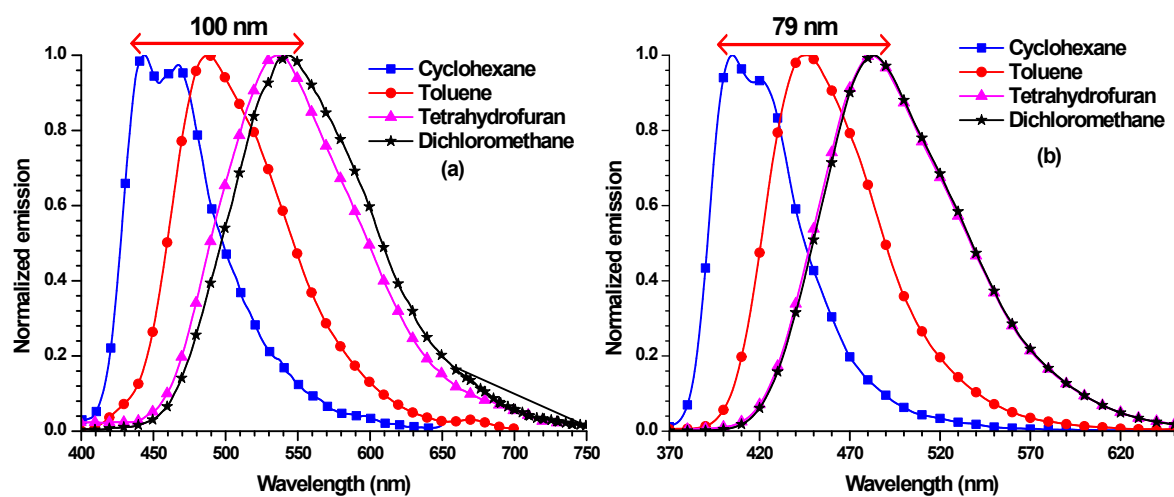


Fig. S1 Emission spectra of the compounds a) **DICzCNTrz** and b) **CzCNTrz** recorded in different solvents.

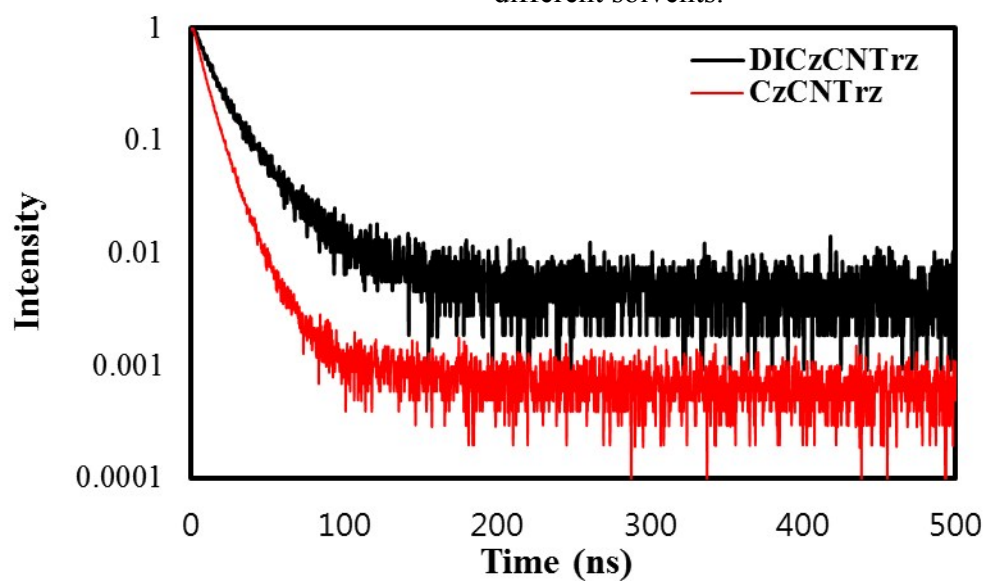


Fig. S2 Transient PL fluorescence decay (prompt) of the doped films in DPEPO.

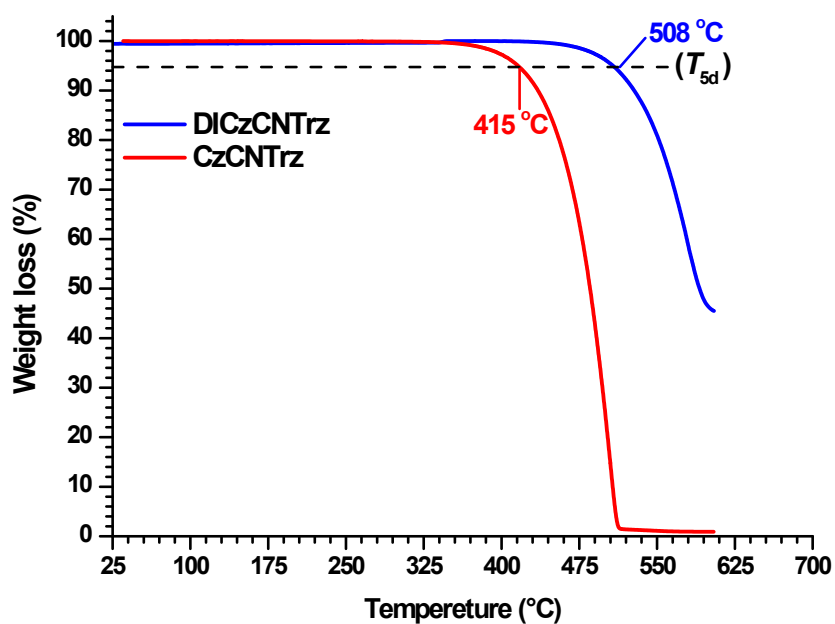


Fig. S3 TGA traces observed for the compounds

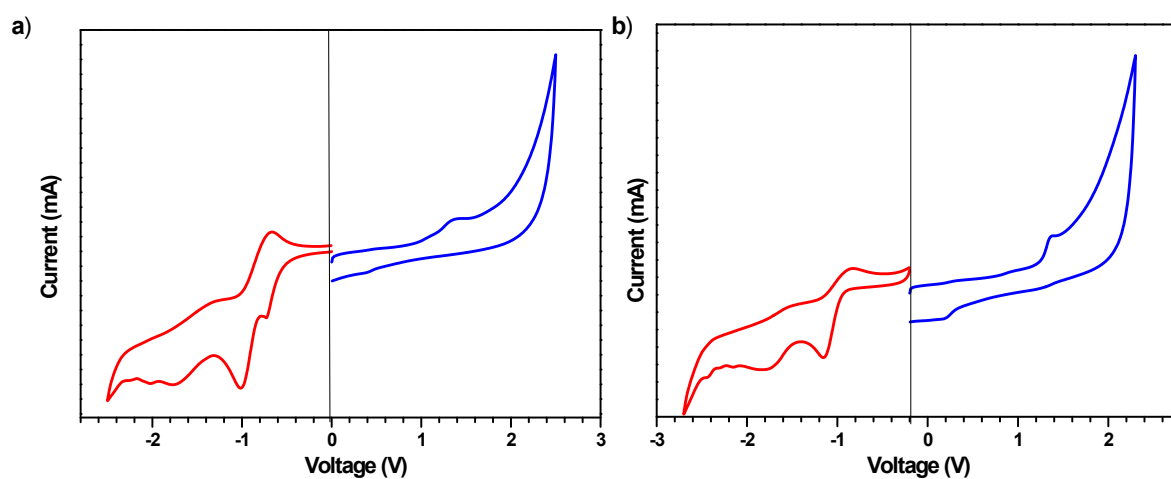


Fig. S4 Electrochemical properties of a) DICzCNTrz and b) CzCNTrz.

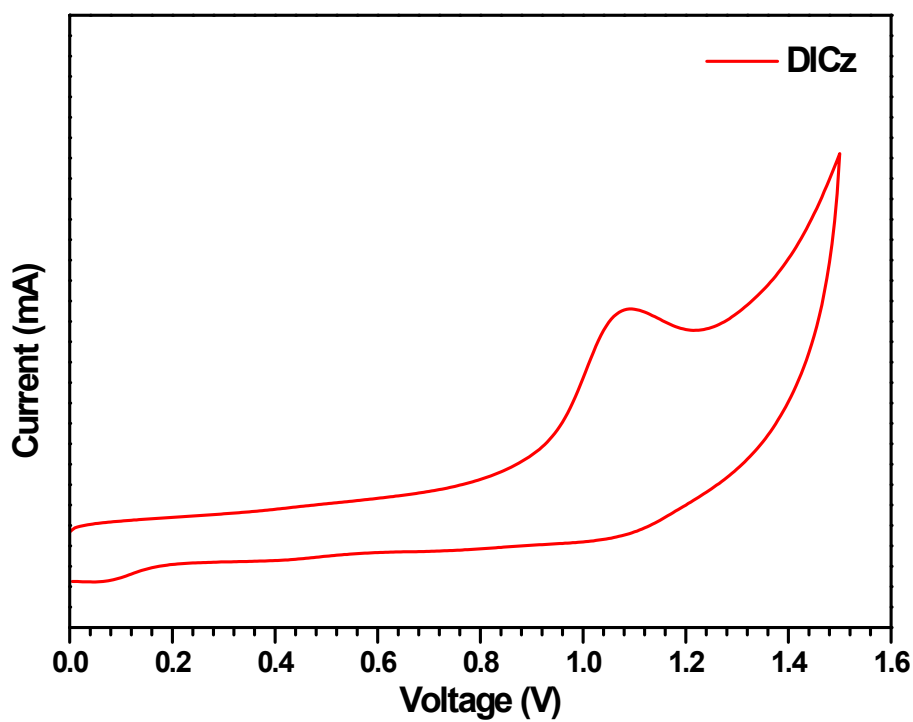


Fig. S5 Cyclicvoltammogram of DICz

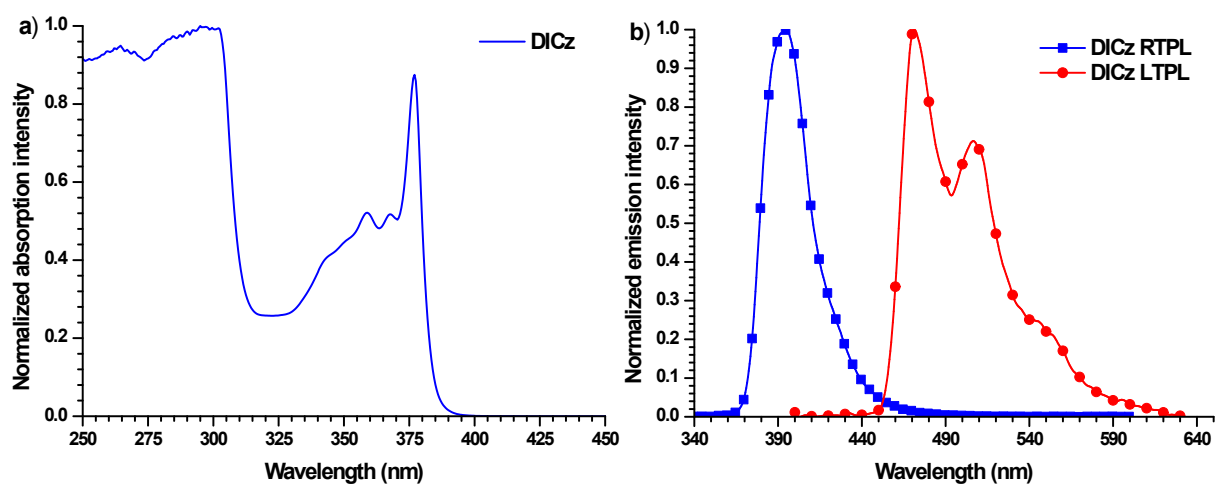


Fig. S6 a) absorption and b) emission and phosphorescence spectra of DICz donor in THF solution.

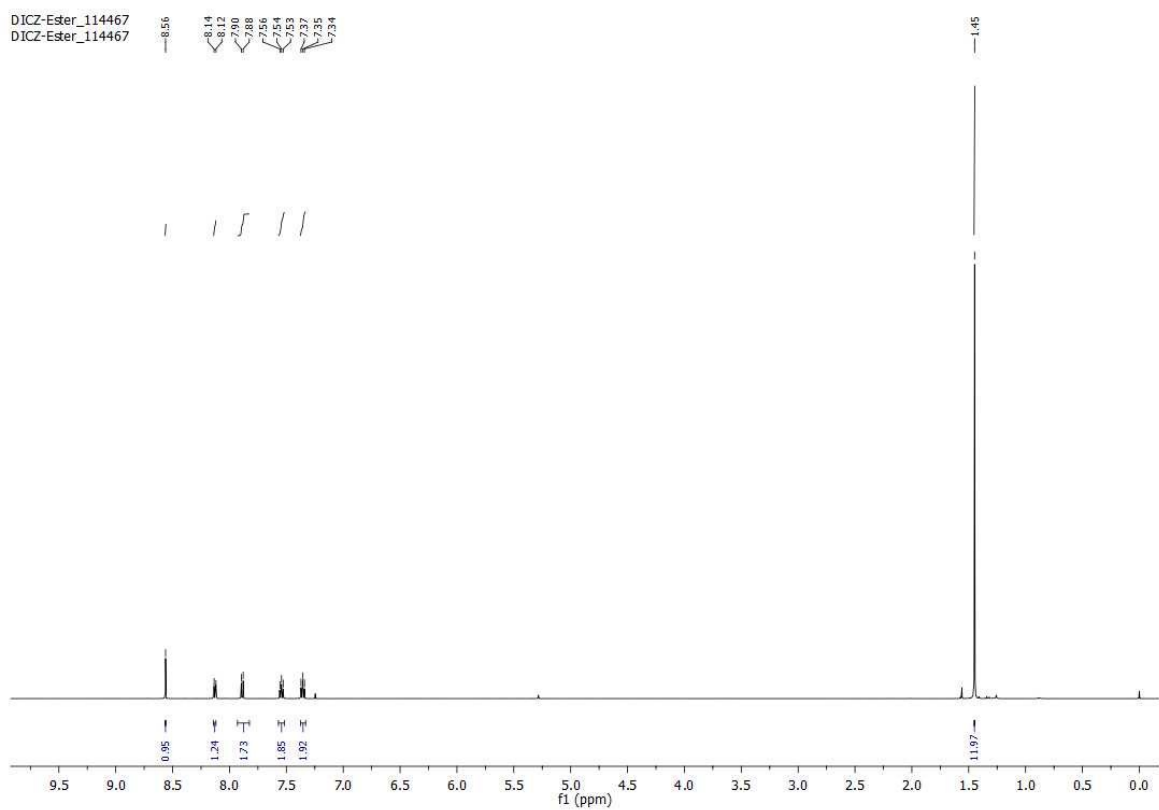


Fig. S7 ^1H NMR spectra of **2** recorded in CDCl_3

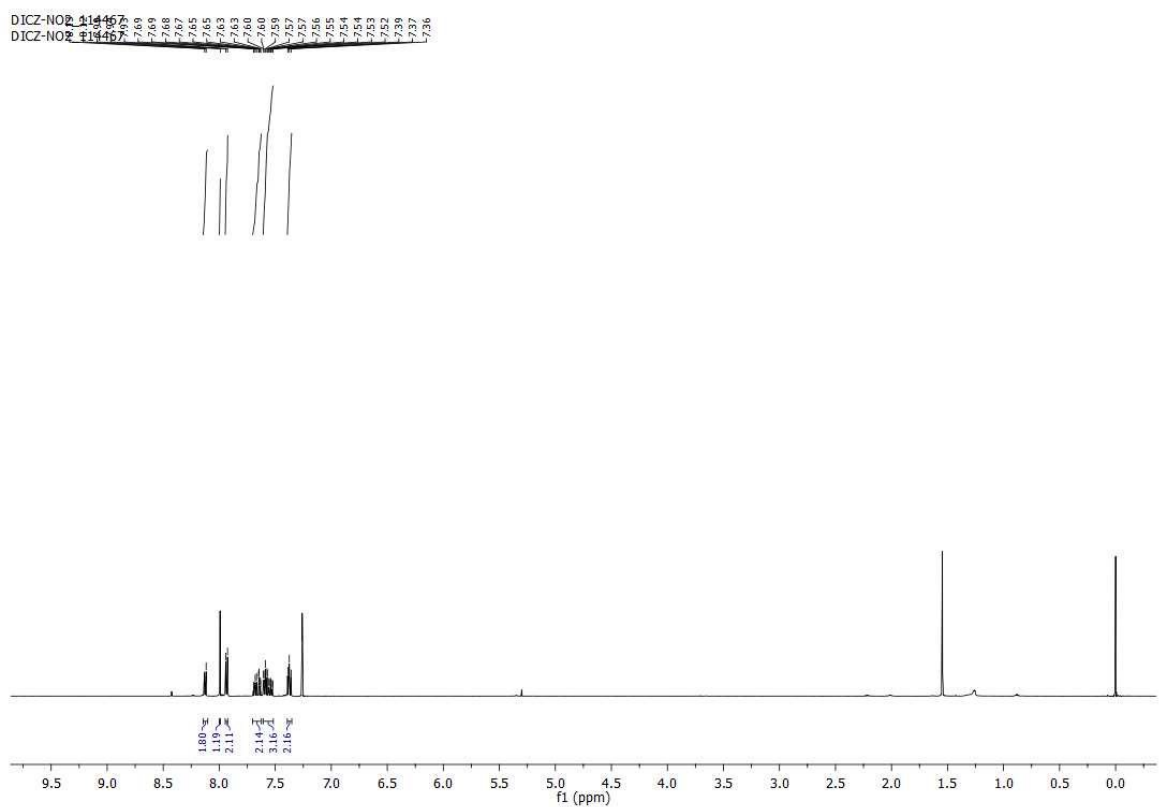


Fig. S8 ^1H NMR spectra of **3** recorded in CDCl_3

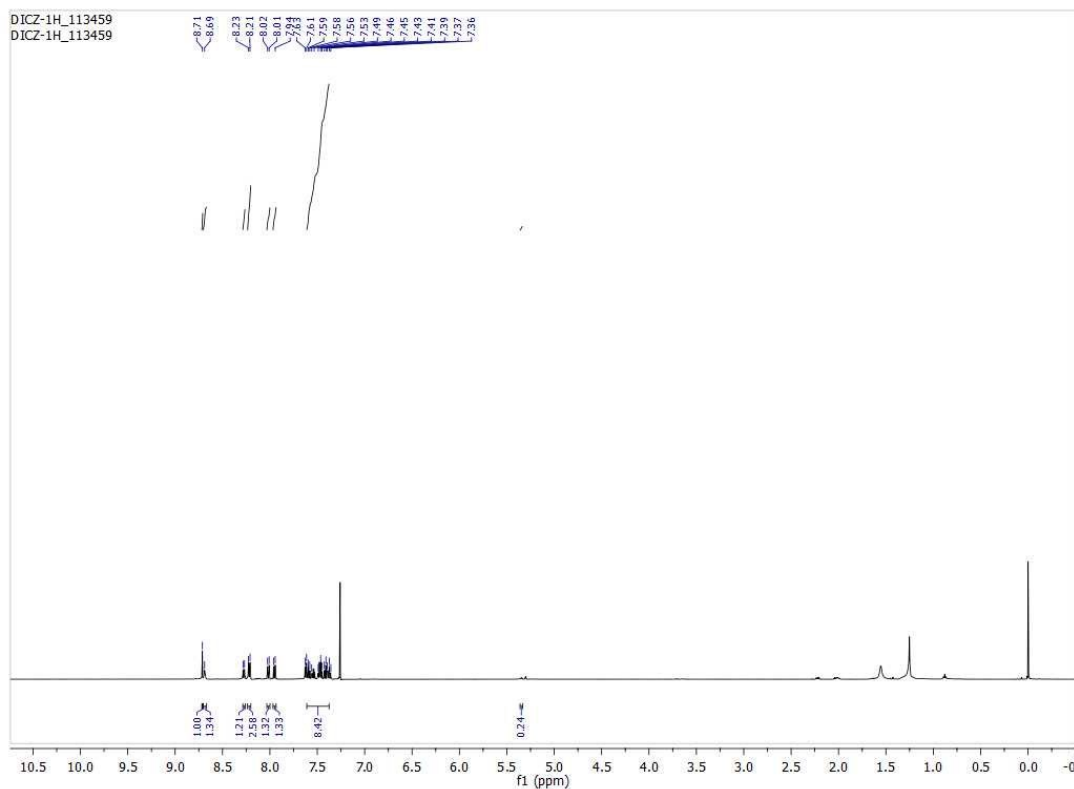


Fig. S9 ^1H NMR spectra of **DICz** recorded in CDCl_3

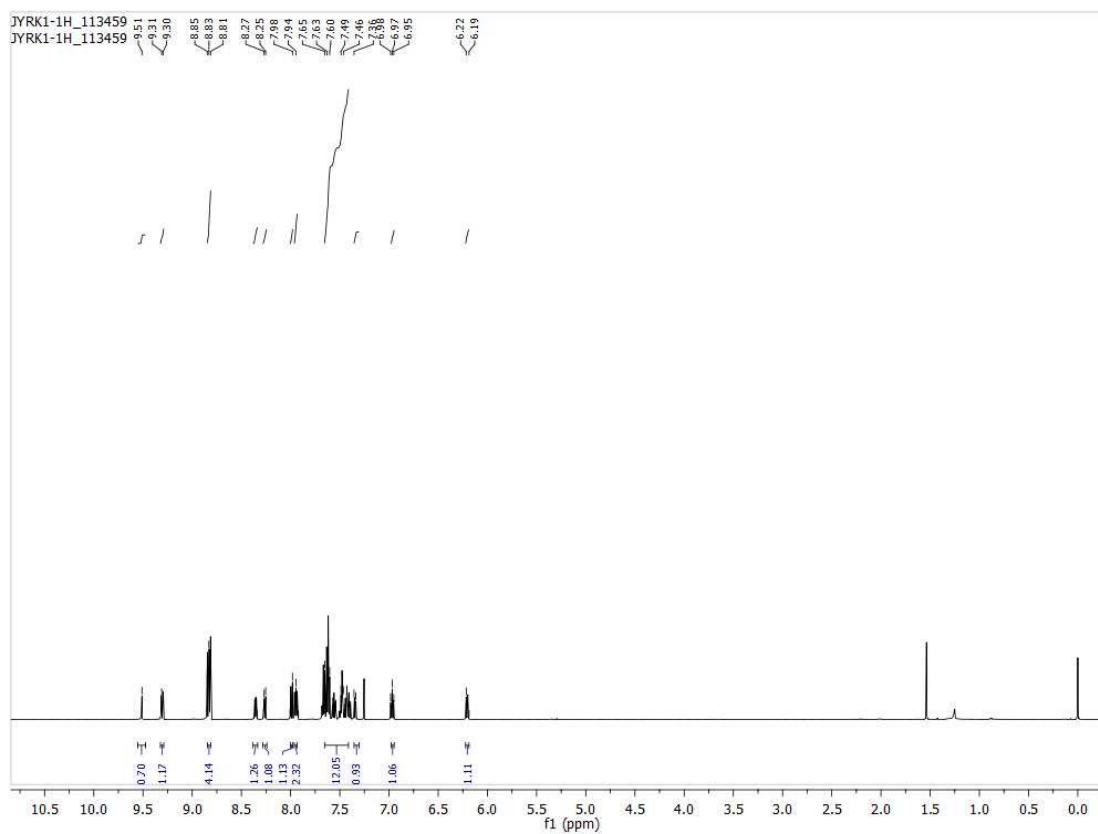


Fig. S10 ^1H NMR spectra of **DICzCNTrz** recorded in CDCl_3

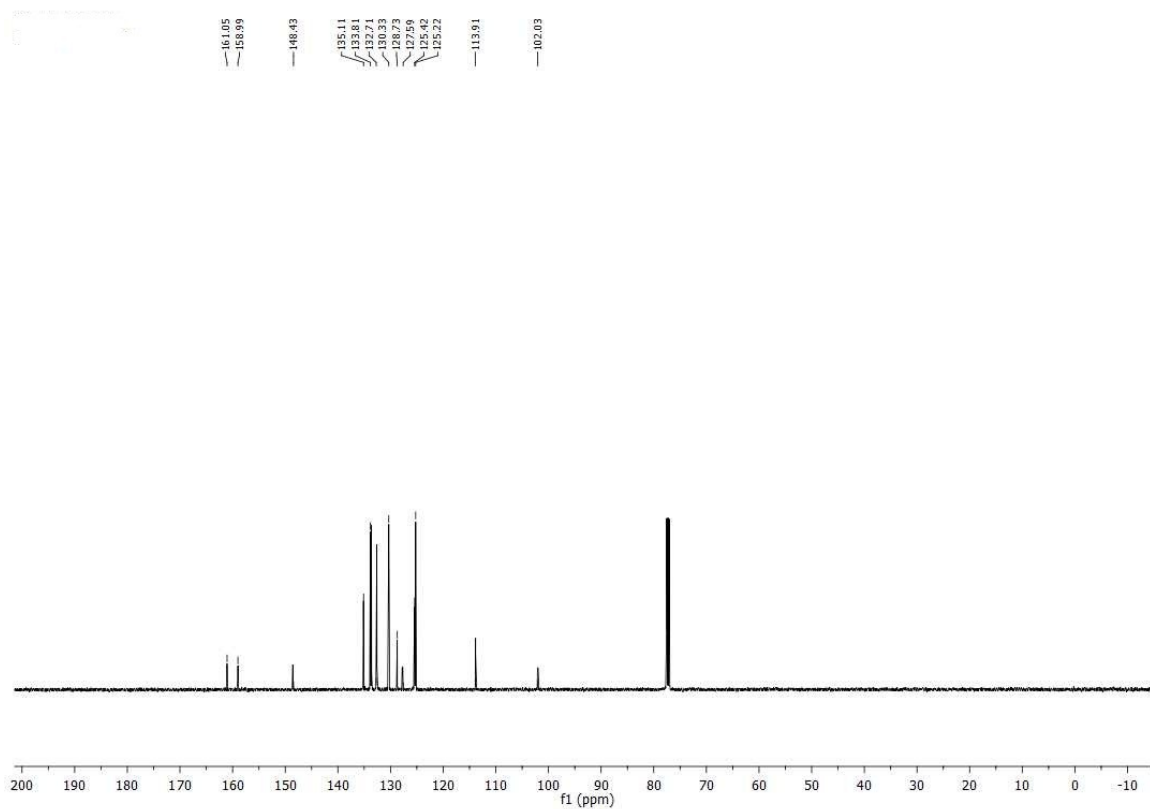


Fig. S11 ^{13}C NMR spectra of **DICzCNTrz** recorded in CDCl_3

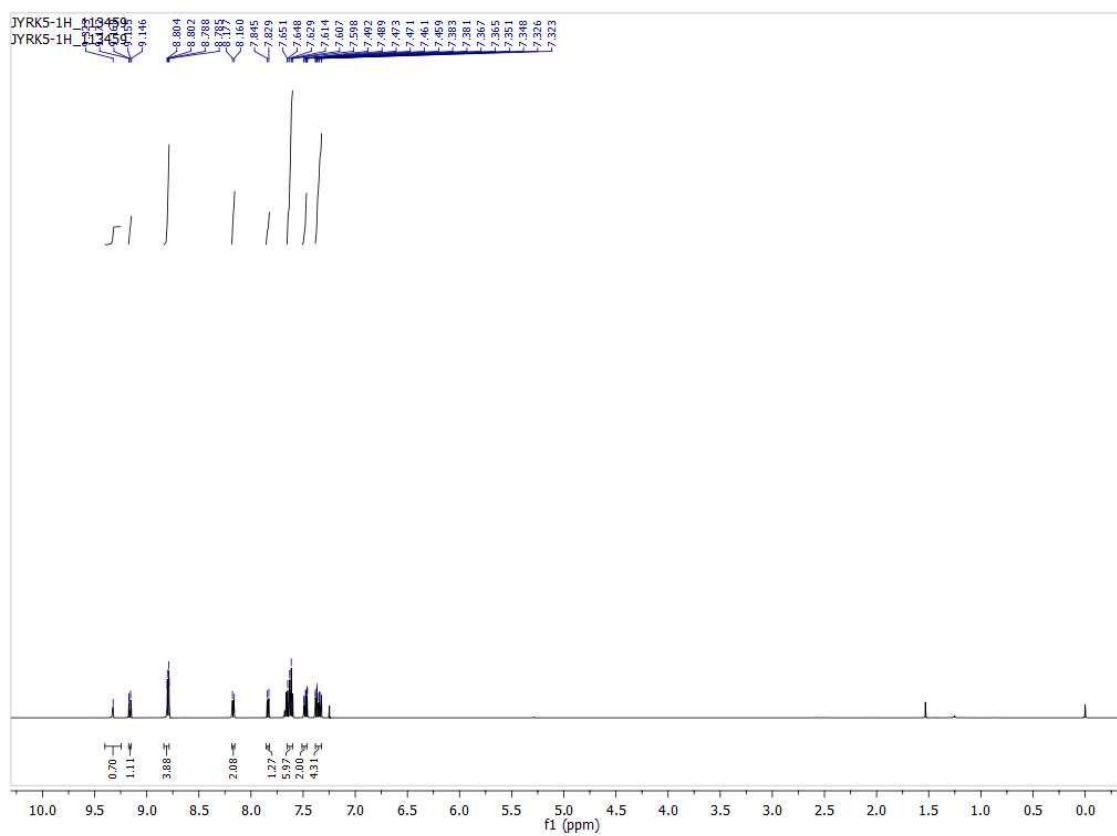


Fig. S12 ^1H NMR spectra of **CzCNTrz** recorded in CDCl_3

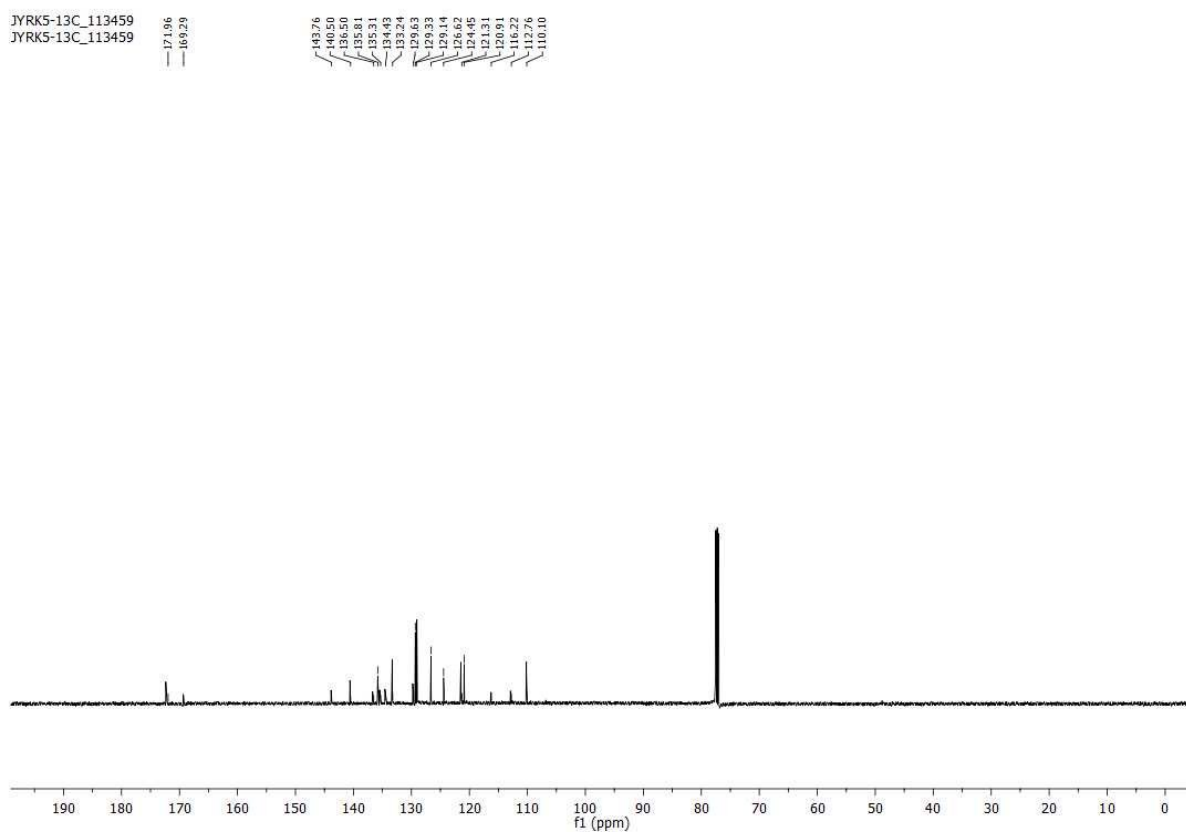


Fig. S13 ^{13}C NMR spectra of **CzCNTrz** recorded in CDCl_3