Supporting Information for

A dendritic oligoarylamine-substituted benzimidazole derivative as a useful n-type dopant

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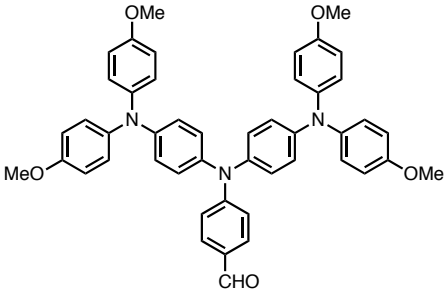
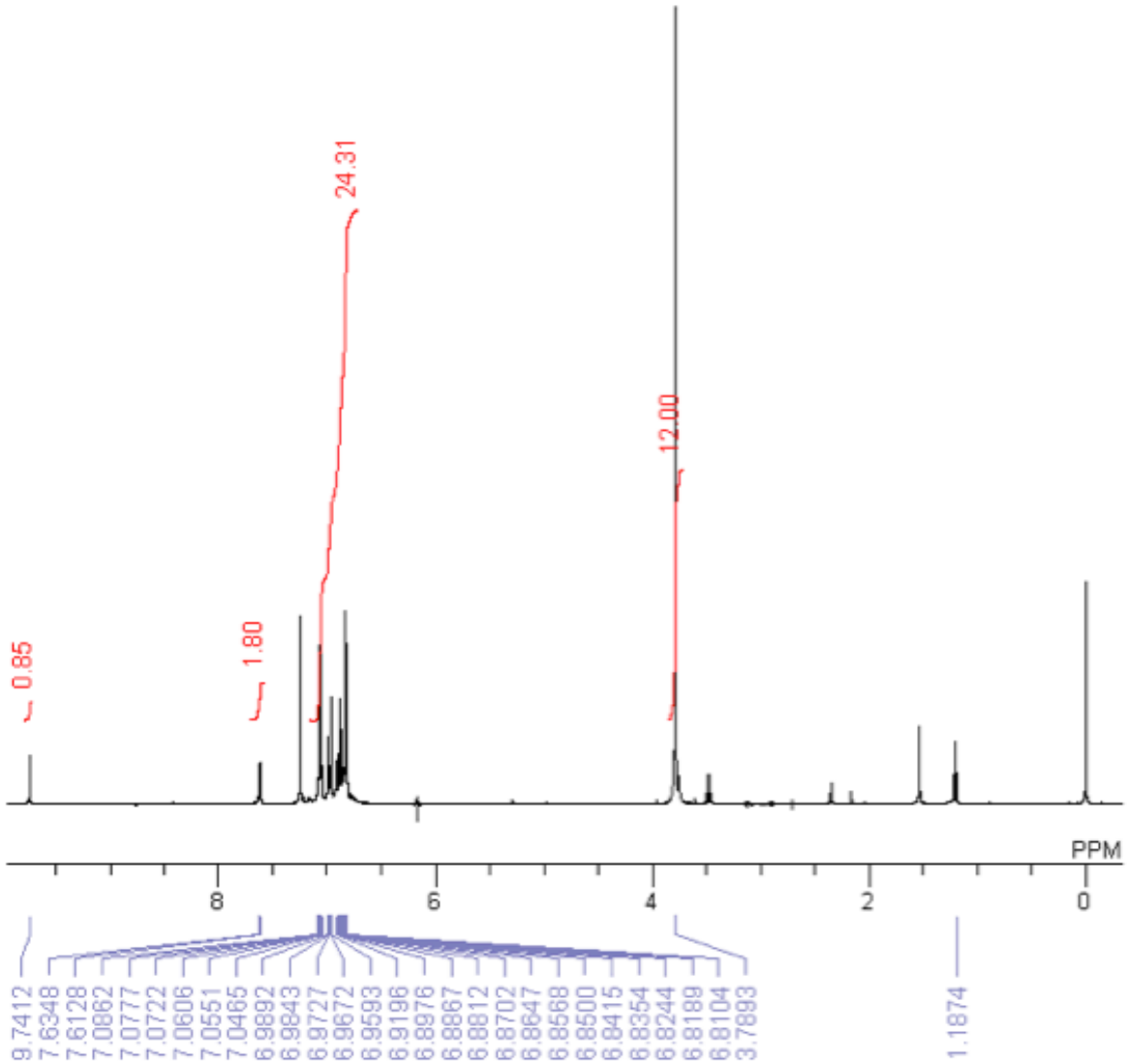
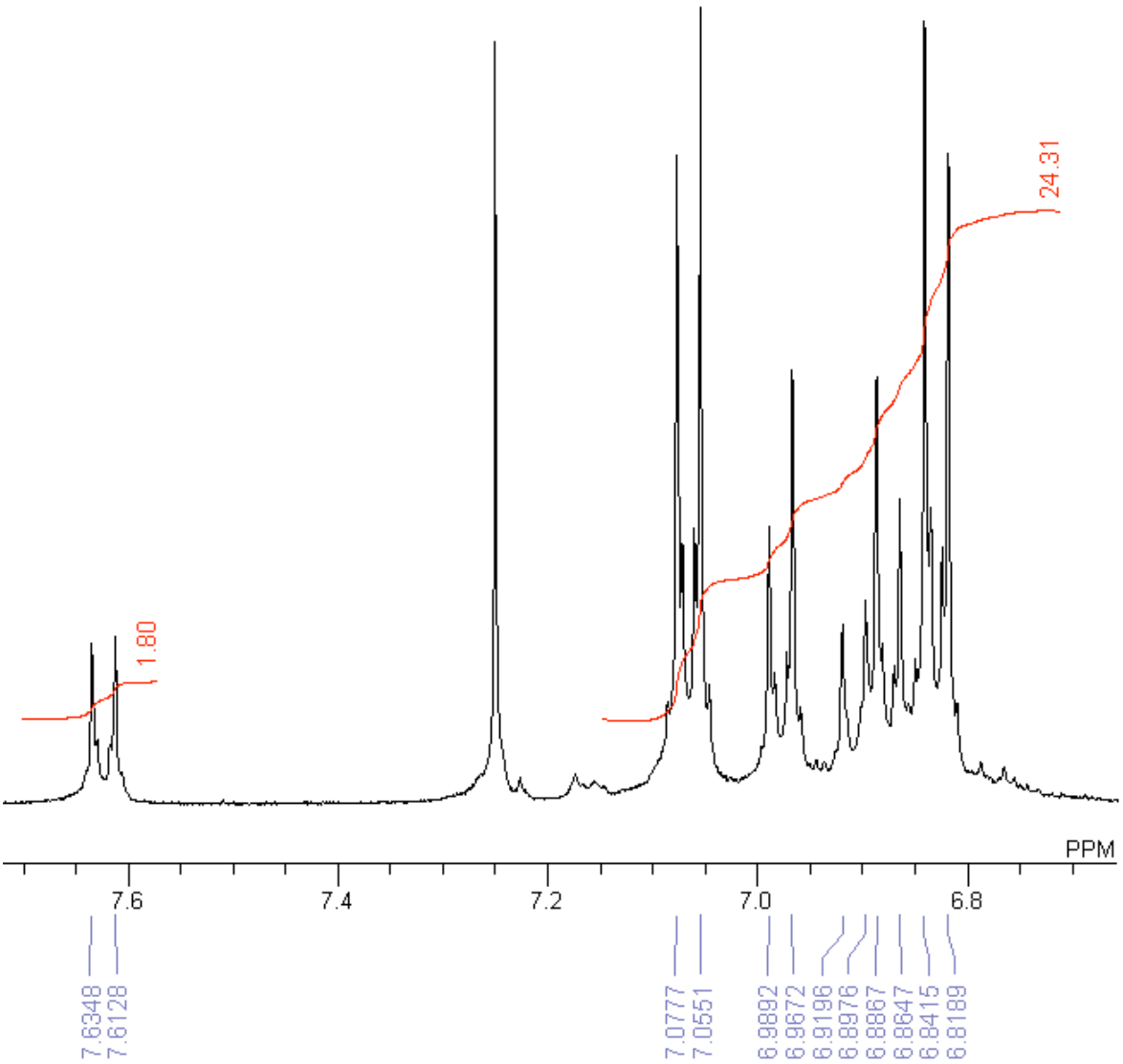
^{1}H- and ^{13}C-NMR Spectra of 2 and N3-DMBI-H.

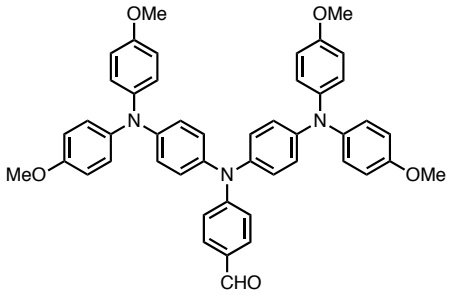
^{1}H-NMR spectrum of **2** ($CDCl_3$).

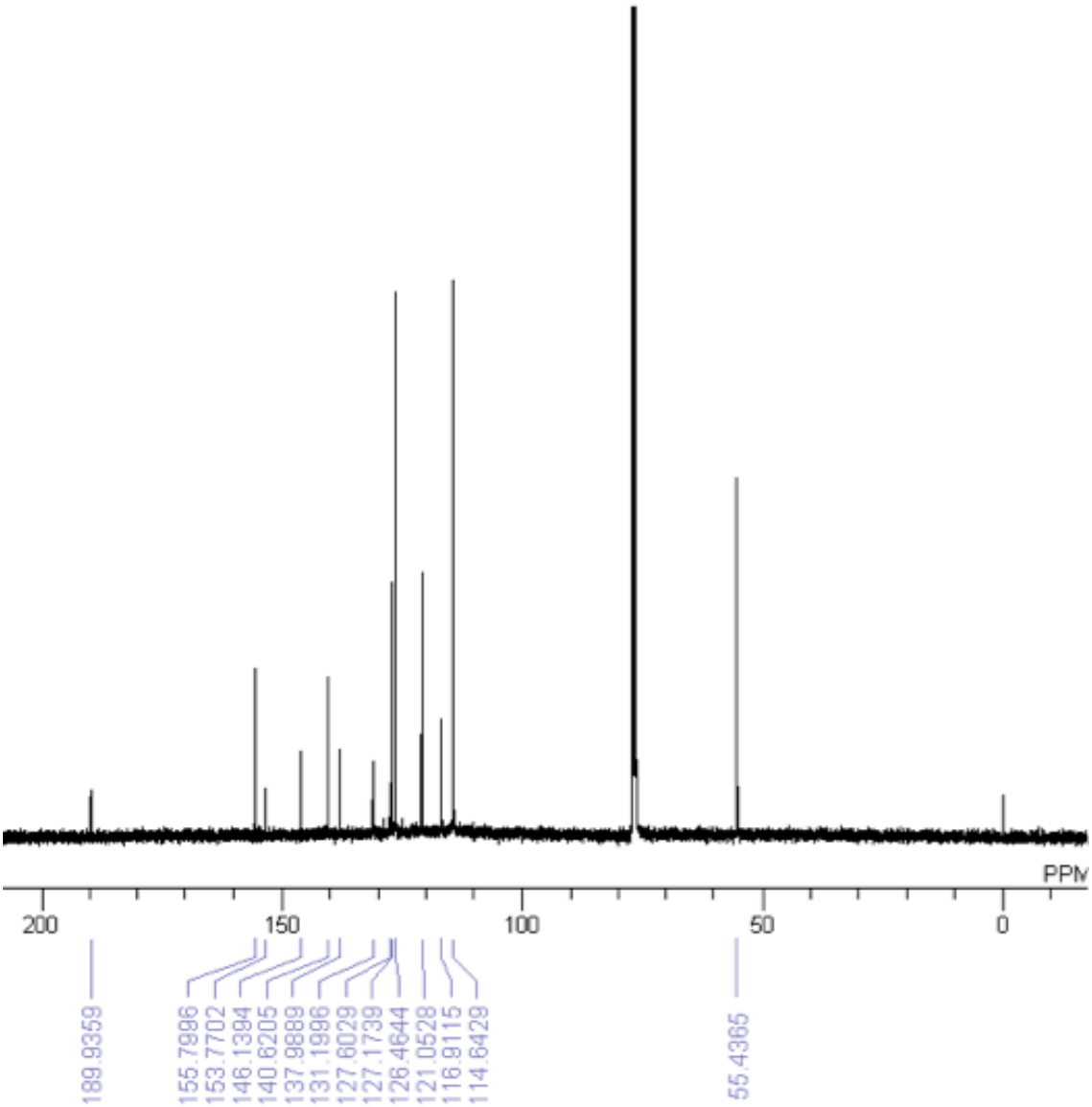




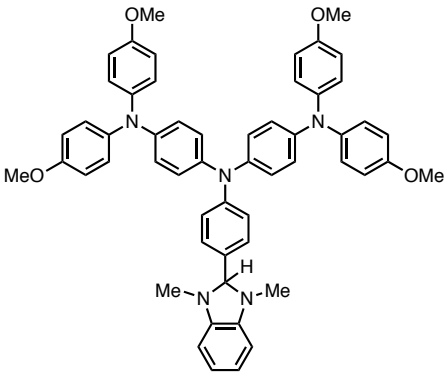

24.31
1.80
PPM
7.6
7.4
7.2
7.0
6.8
7.6348
7.6128
7.0777
7.0551
6.9892
6.9672
6.9196
6.8976
6.8867
6.8647
6.8415
6.8189

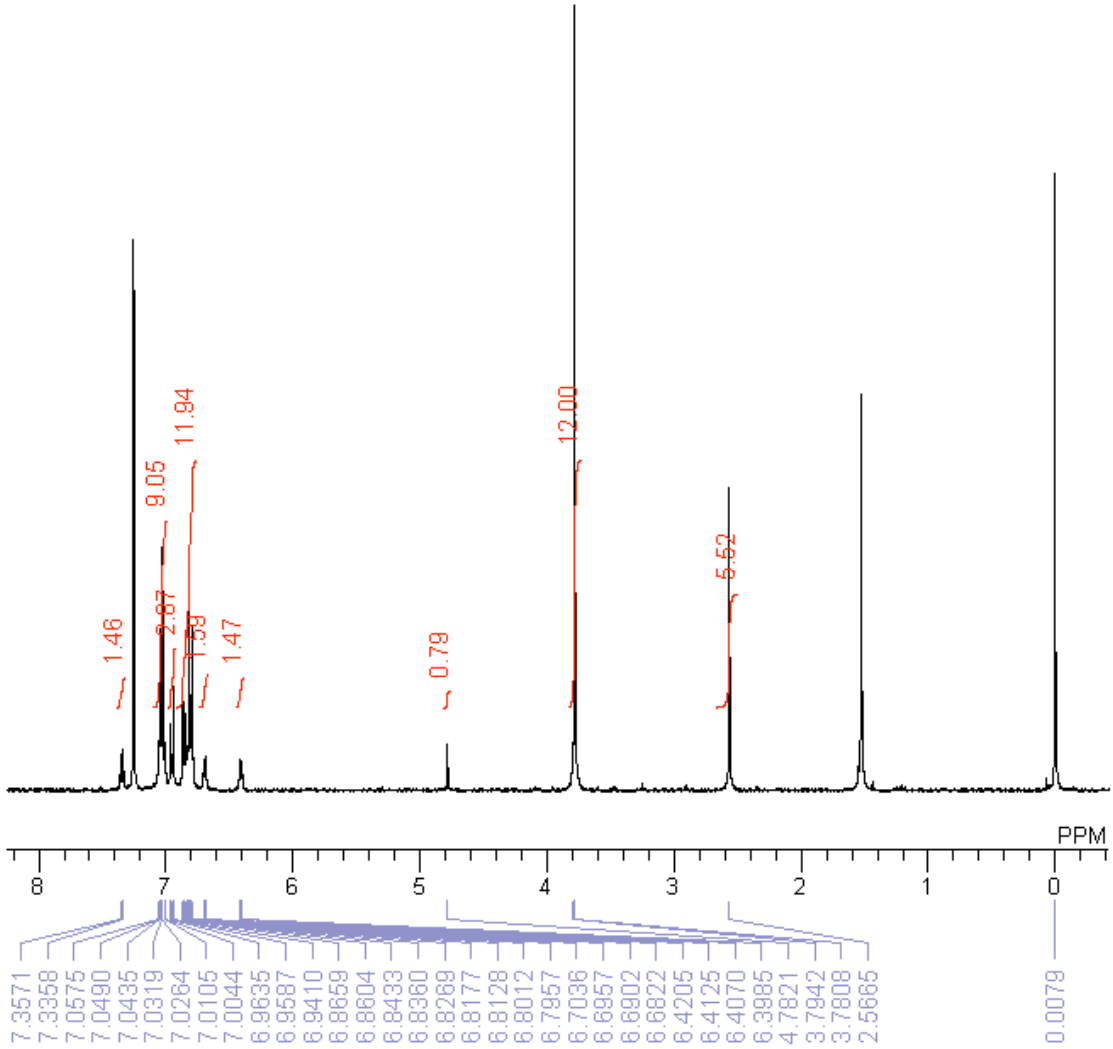
^{13}C-NMR spectrum of **2** ($CDCl_3$).

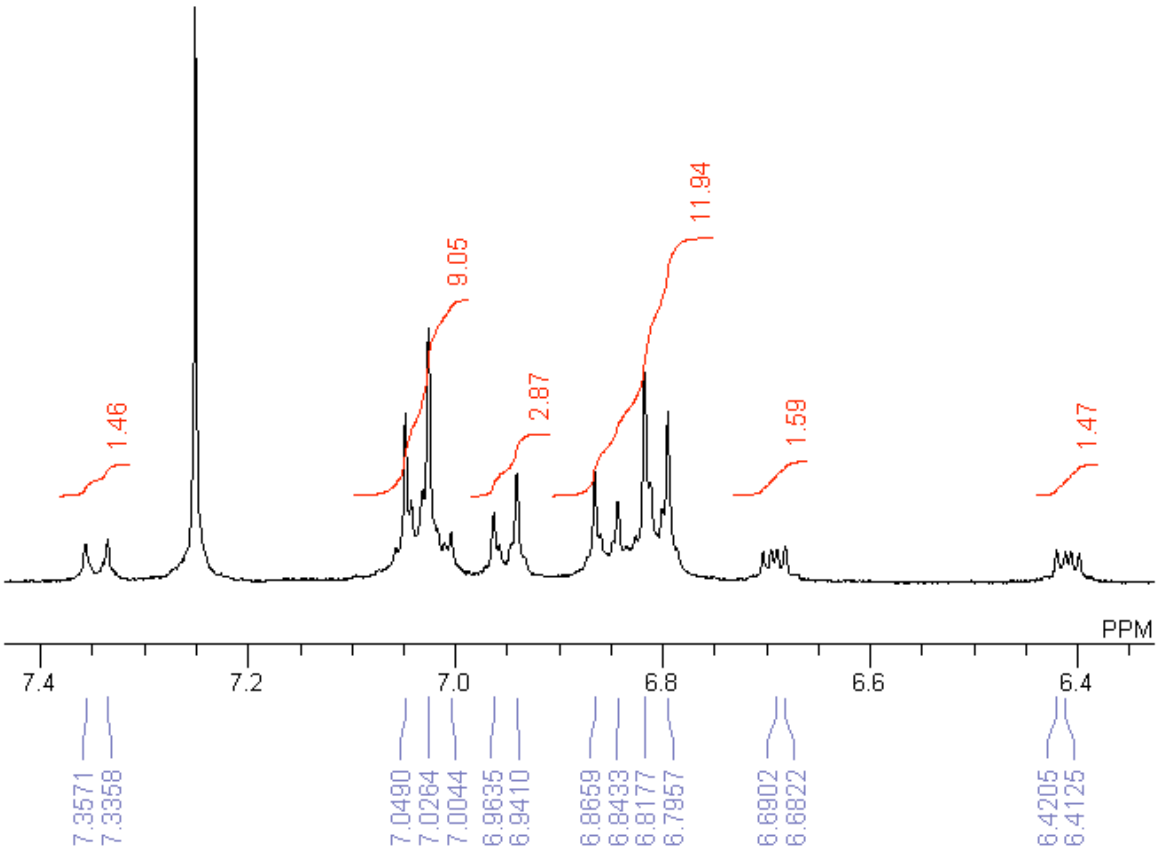




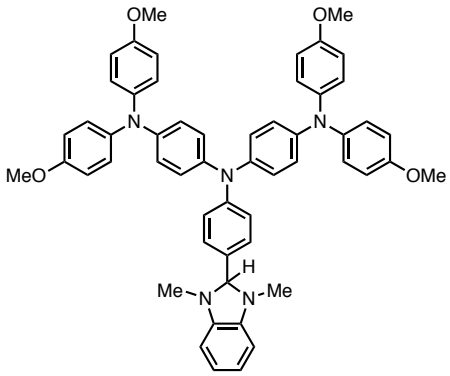
^{1}H-NMR spectrum of **N3-DMBI** ($CDCl_3$).

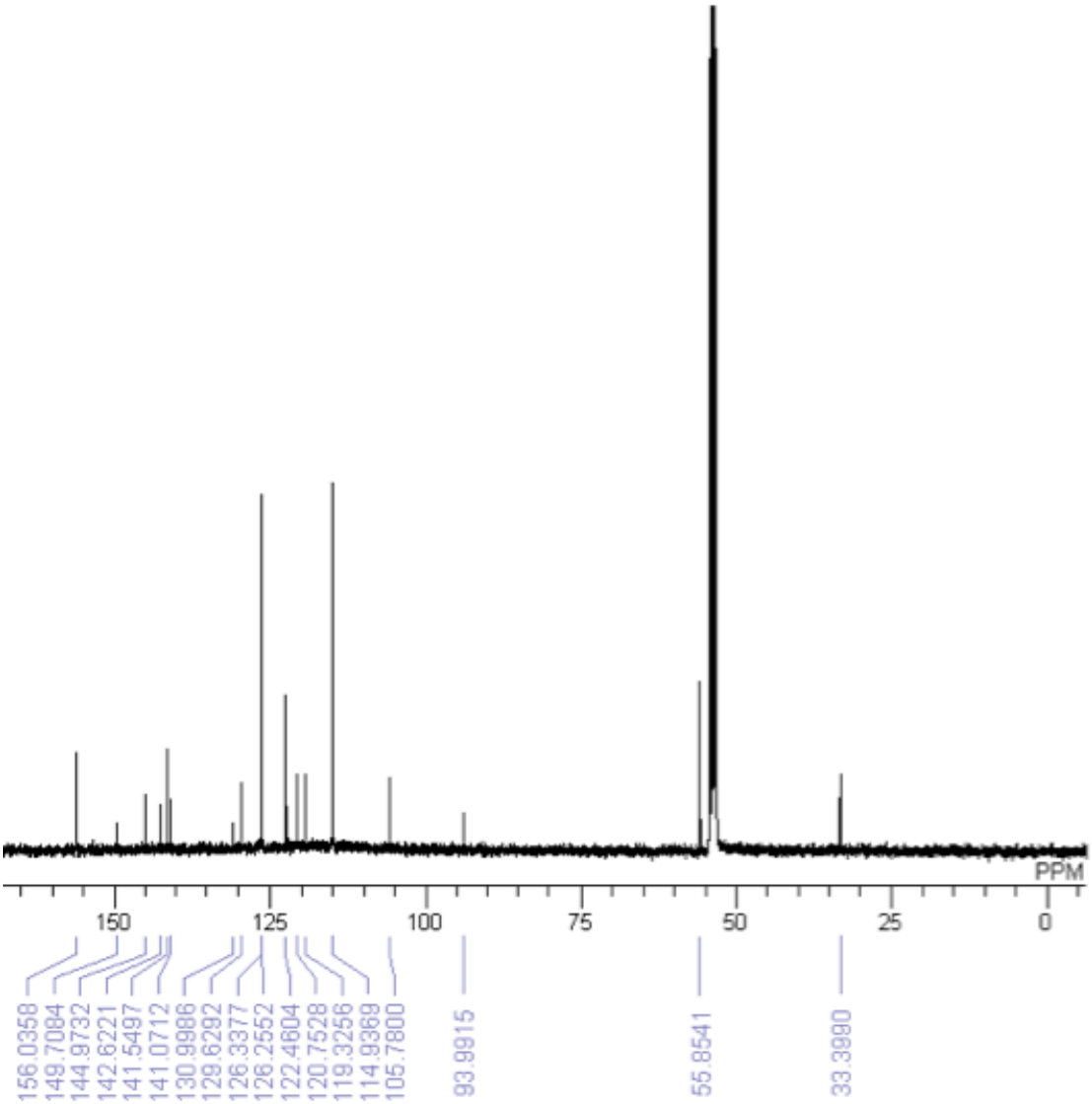





1.46
9.05
2.87
11.94
1.59
1.47
PPM
7.4
7.2
7.0
6.8
6.6
6.4
7.3571
7.3358
7.0490
7.0264
7.0044
6.9635
6.9410
6.8659
6.8433
6.8177
6.7957
6.6902
6.6822
6.4205
6.4125

^{13}C-NMR spectrum of **N3-DMBI** (CD_2Cl_2).





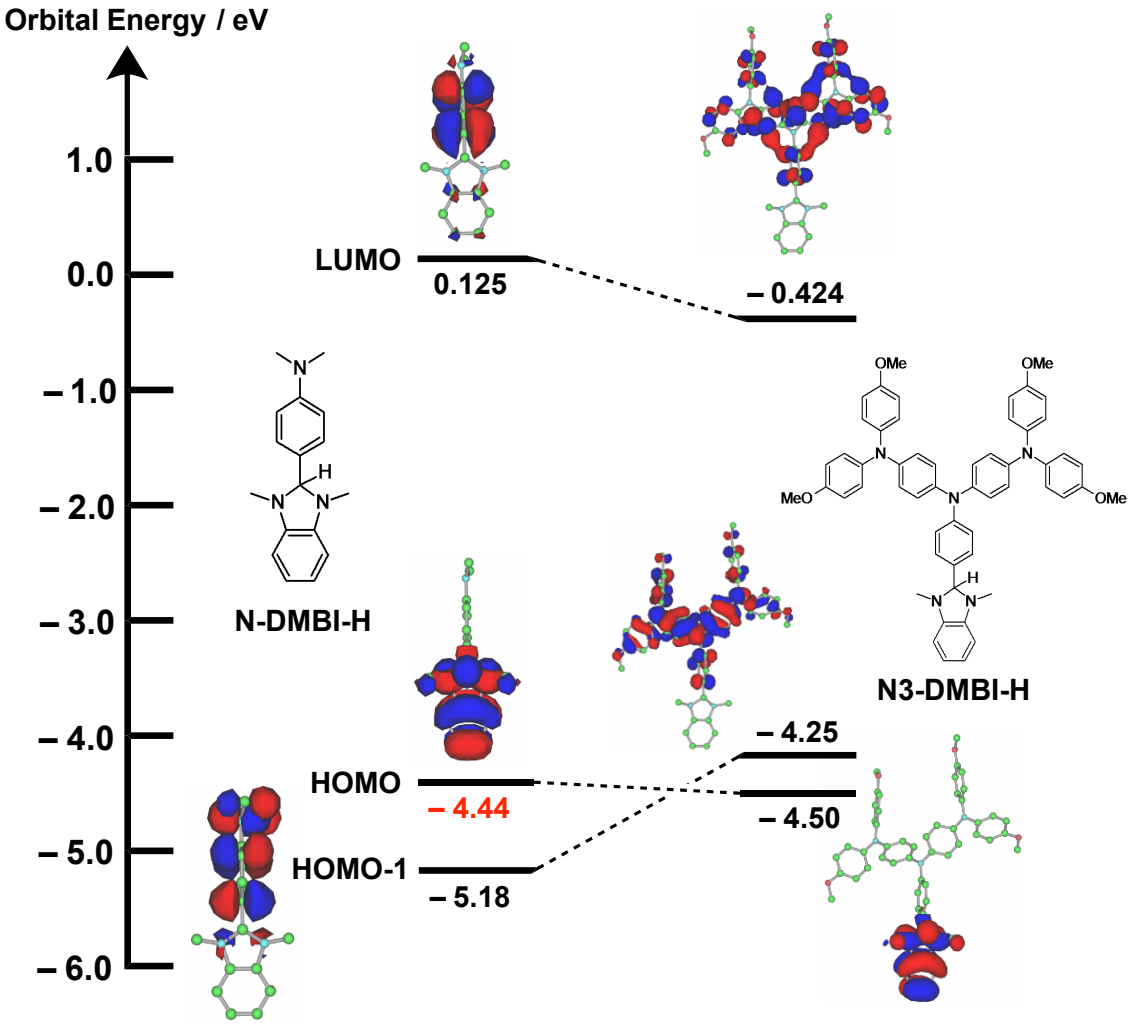


Fig. S1. Frontier Kohn-Sham orbital energy levels for N-DMBI-H and N3-DMBI-H at the B3LYP/6-31G* level of theory. Note that the raising of the HOMO-1 level occurs owing to the introduction of dendritic triamino groups, and the energy levels of the benzimidazole-localized HOMO and the amino-localized HOMO-1 for N-DMBI-H are inverted for N3-DMBI-H.

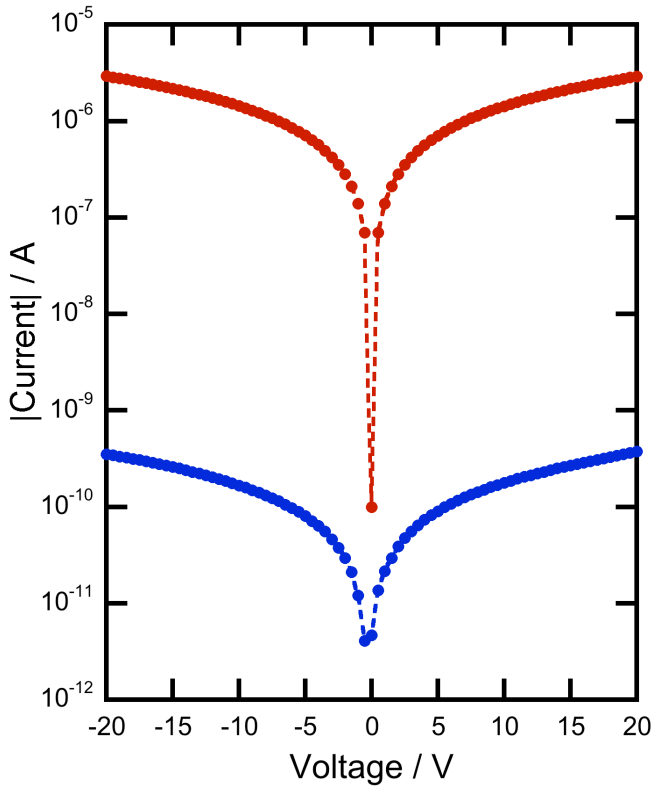


Fig. S2. Two-terminal *I-V* characteristics of undoped (blue) and 10 wt% N-DMBI-H-doped (red) PCBM thin films (channel length: 50 nm).

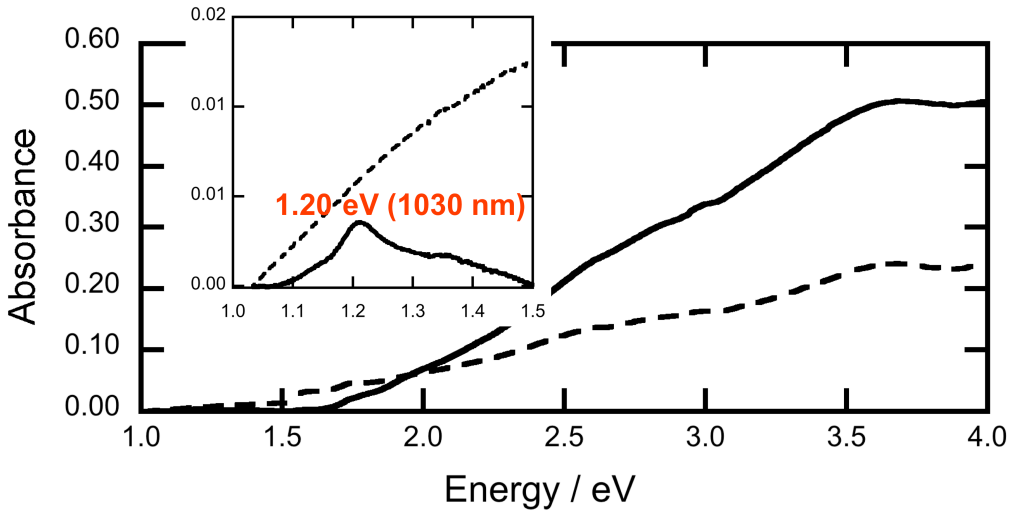


Fig. S3. UV/Vis-NIR spectra for undoped (broken line) and 5 wt% N3-DMBI-H-doped (solid line) PCBM thin films; the inset shows the partial enlargement of the spectra in the lower energy region.