

Functional Organic Click-Materials: Application in Phosphorescent Organic Light Emitting Diodes

Paul Kautny,^{*a} Chenyang Zhao,^b Thomas Kader,^a Berthold Stöger,^c Ernst Horkel,^a
Jiangshan Chen,^{*b} Dongge Ma,^b Johannes Fröhlich^a and Daniel Lumpi^a

Supporting Information

^a Institute of Applied Synthetic Chemistry, TU Wien, Getreidemarkt 9/163, A-1060 Vienna, Austria; E-mail: paul.kautny@tuwien.ac.at

^b State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, China; E-mail: jschen@ciac.ac.cn

^c Institute of Chemical Technologies and Analytics, TU Wien, Getreidemarkt 9/164, A-1060 Vienna, Austria

NMR spectra

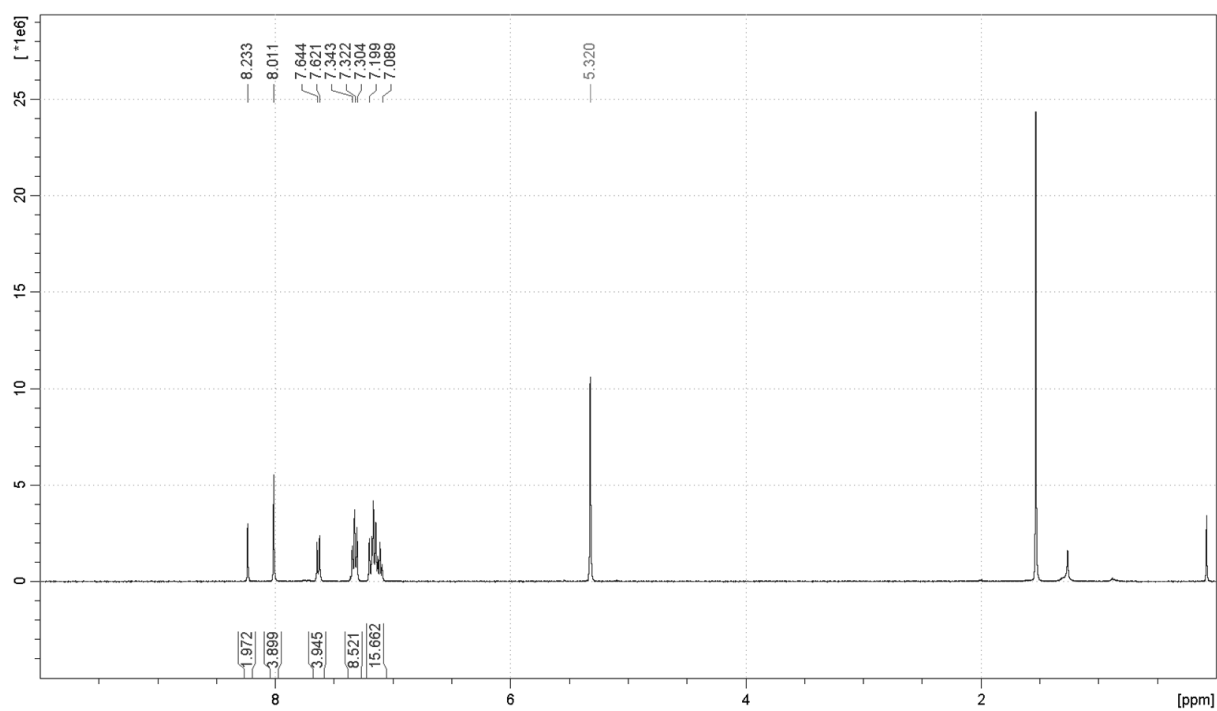


Figure S 1. Proton NMR spectrum of compound 3a.

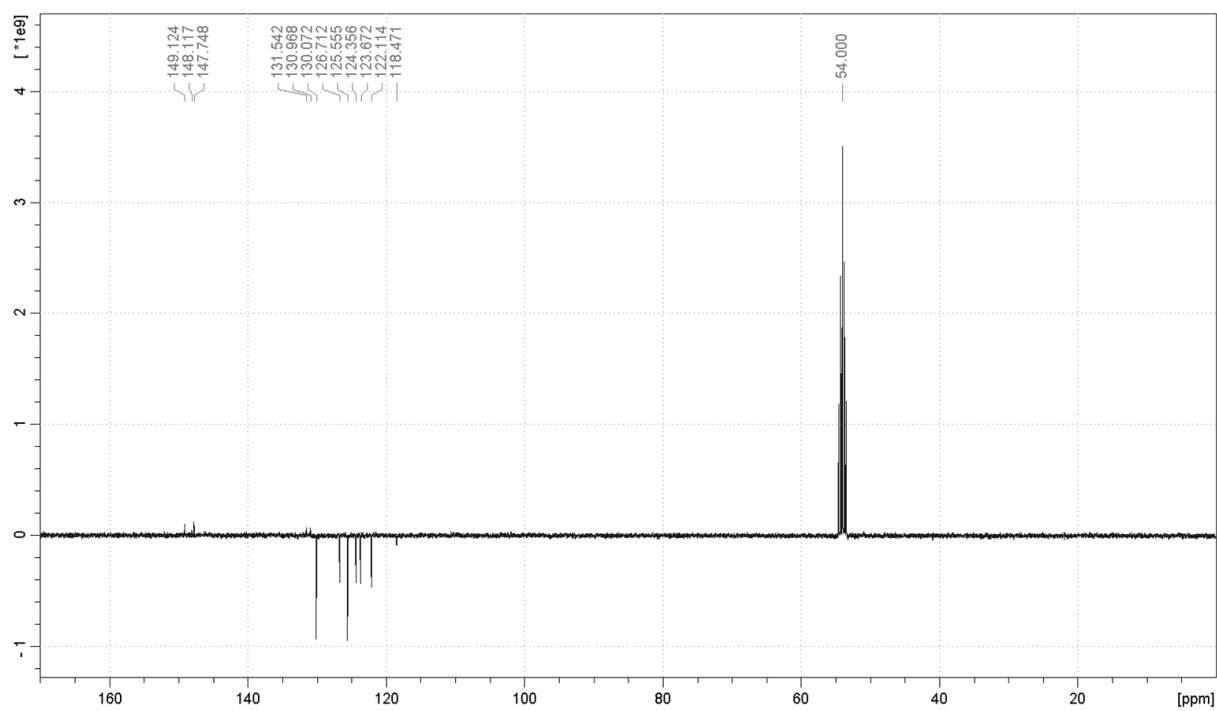


Figure S 2. Carbon NMR spectrum of compound 3a.

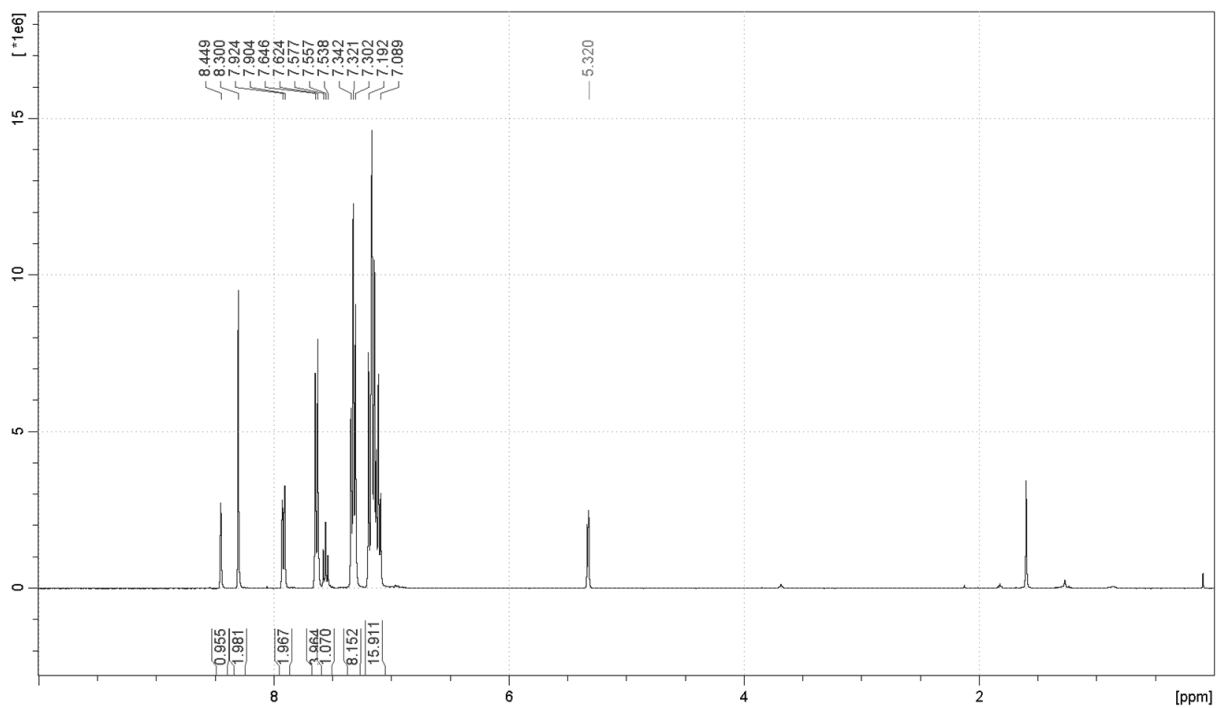


Figure S 3. Proton NMR spectrum of compound 3b.

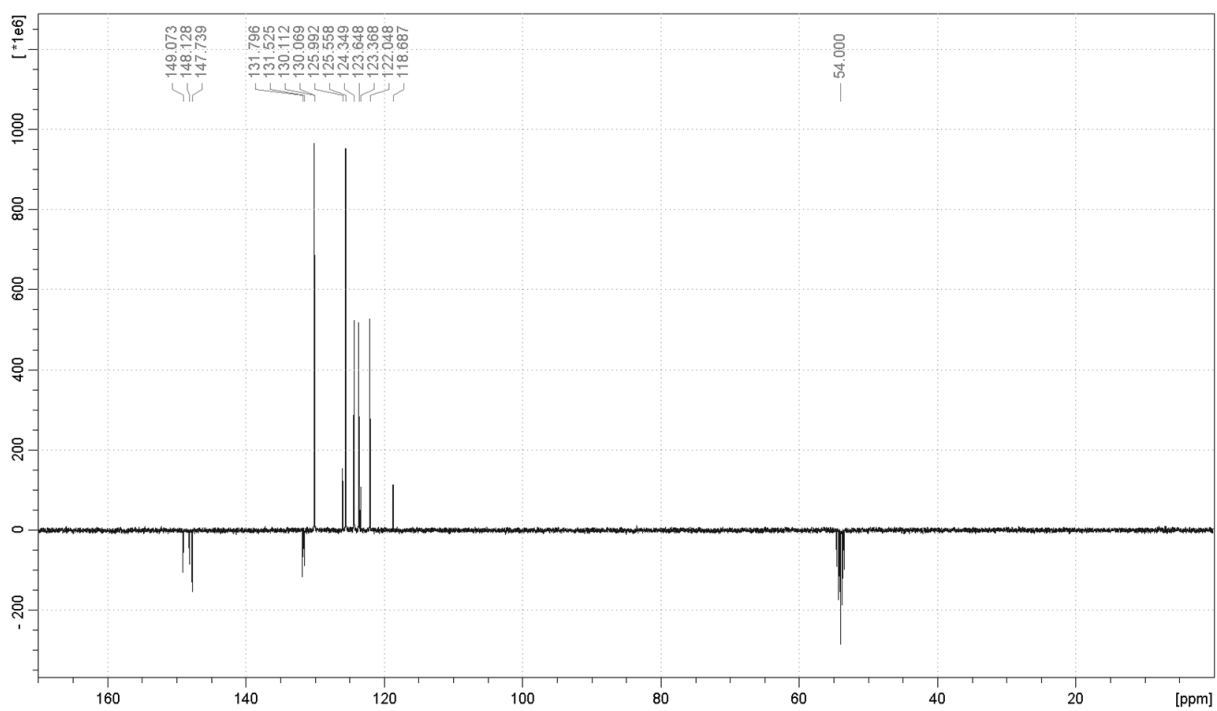


Figure S 4. Carbon NMR spectrum of compound 3b.

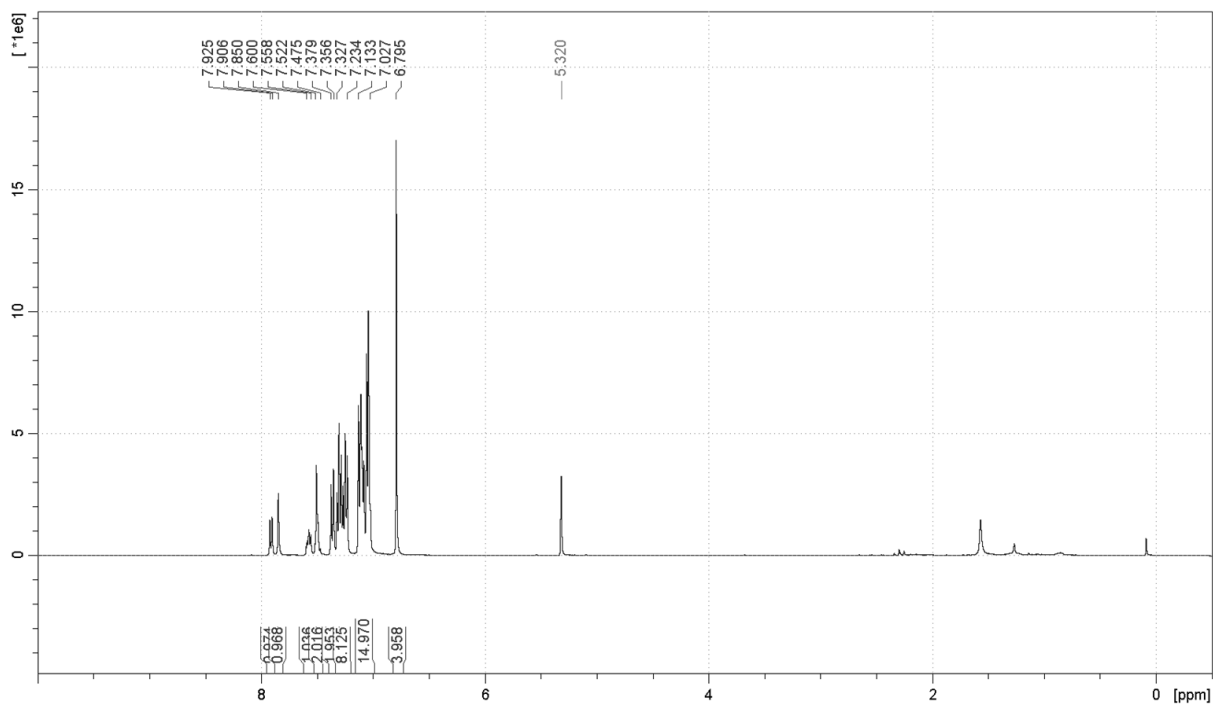


Figure S 5. Proton NMR spectrum of compound 3c.

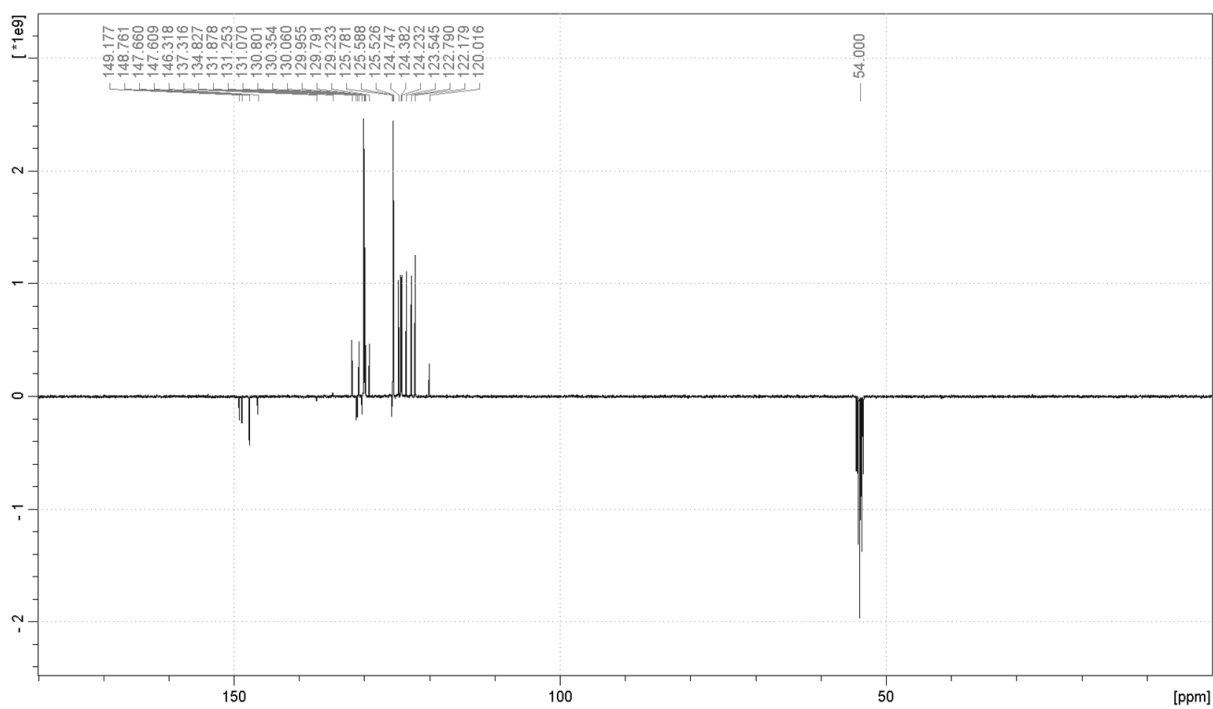


Figure S 6. Carbon NMR spectrum of compound 3c.

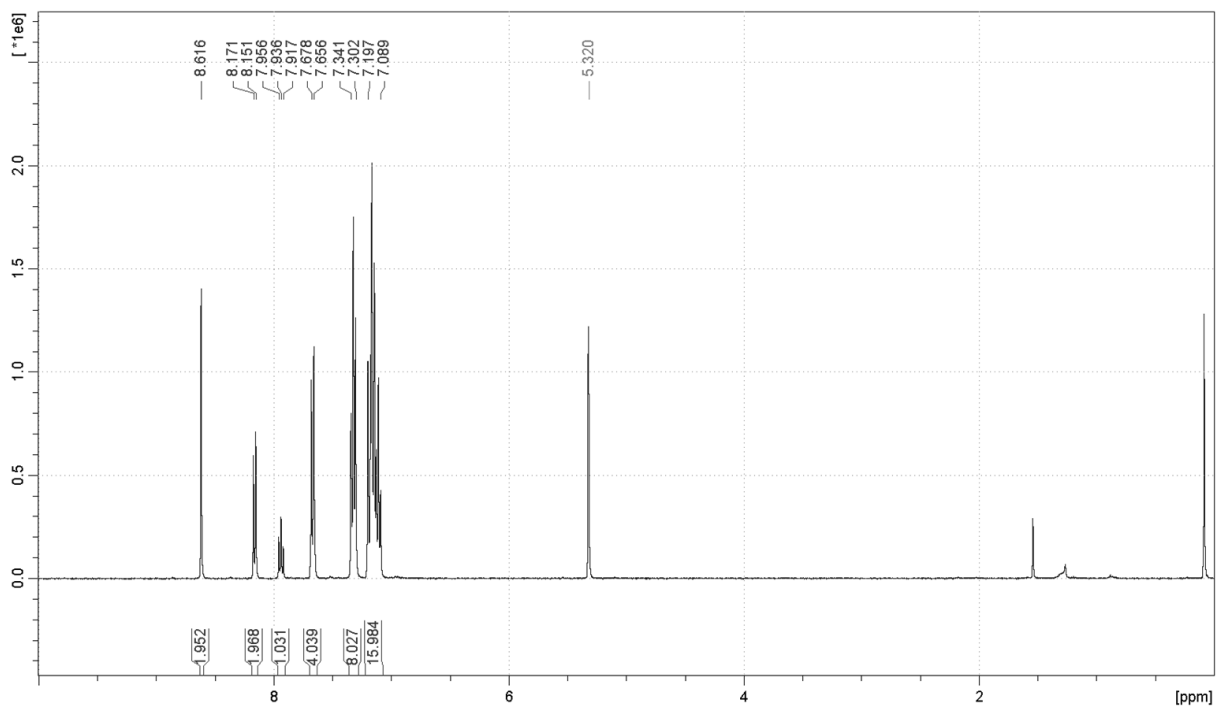


Figure S 7. Proton NMR spectrum of compound 3d.

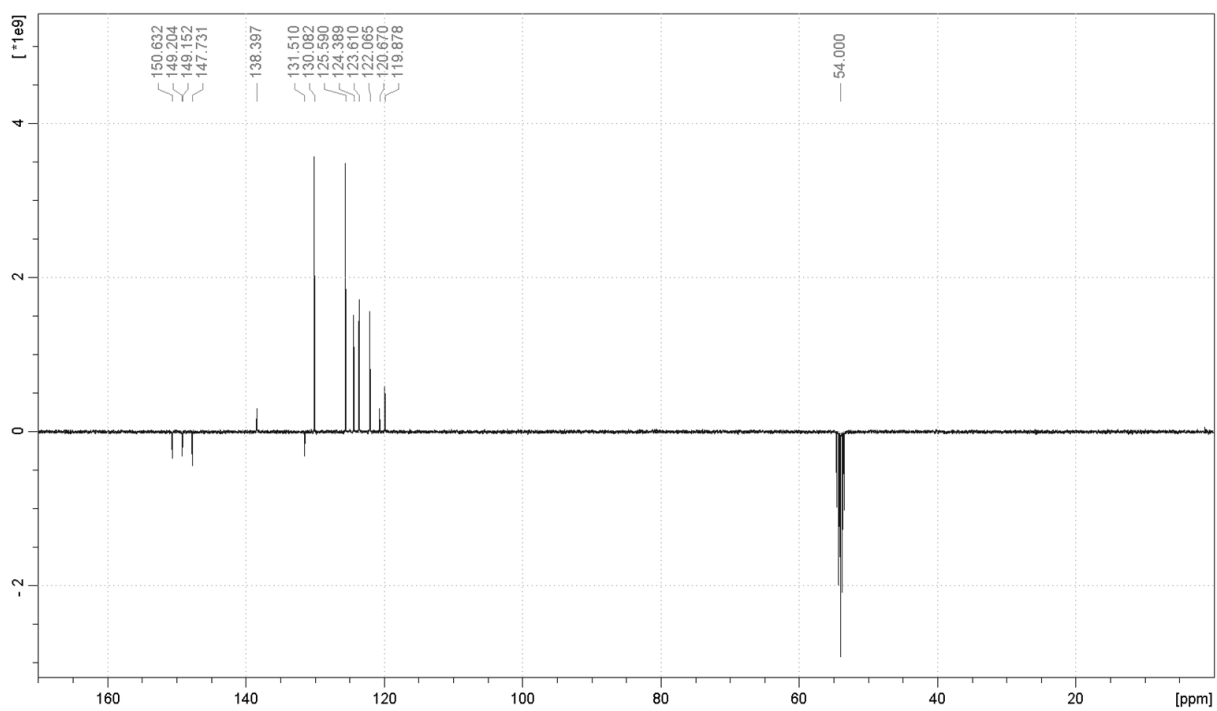


Figure S 8. Carbon NMR spectrum of compound 3d.

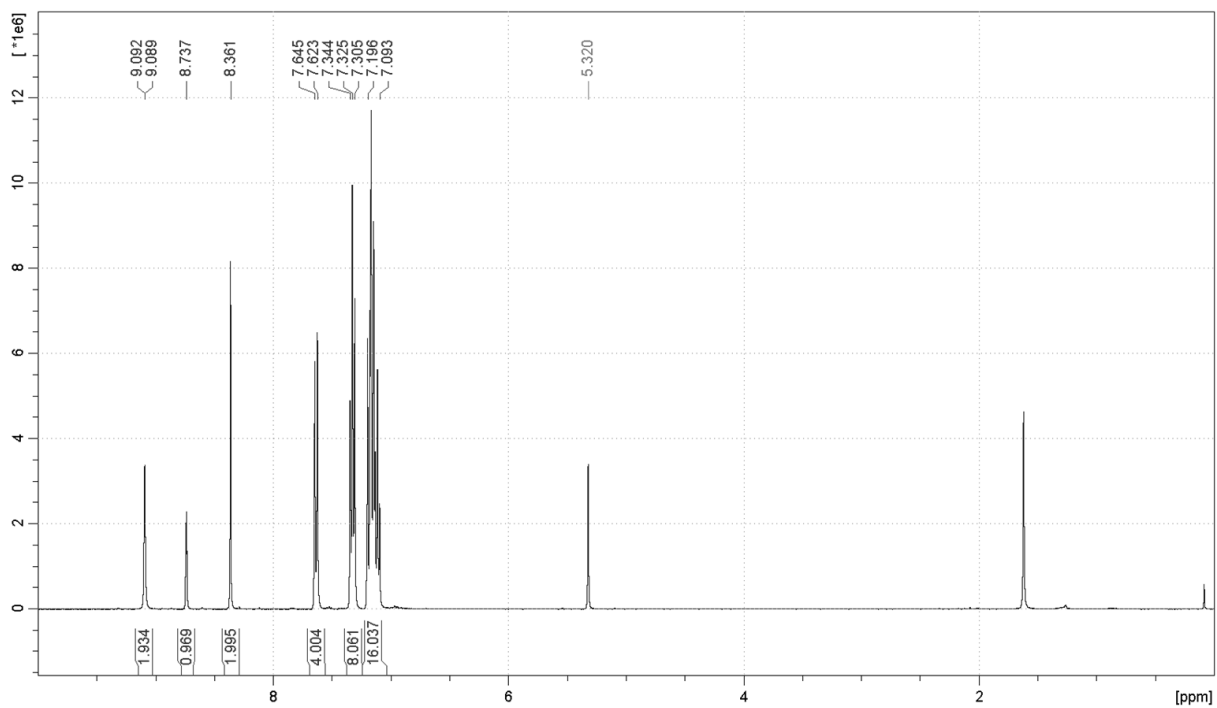


Figure S 9. Proton NMR spectrum of compound 3e.

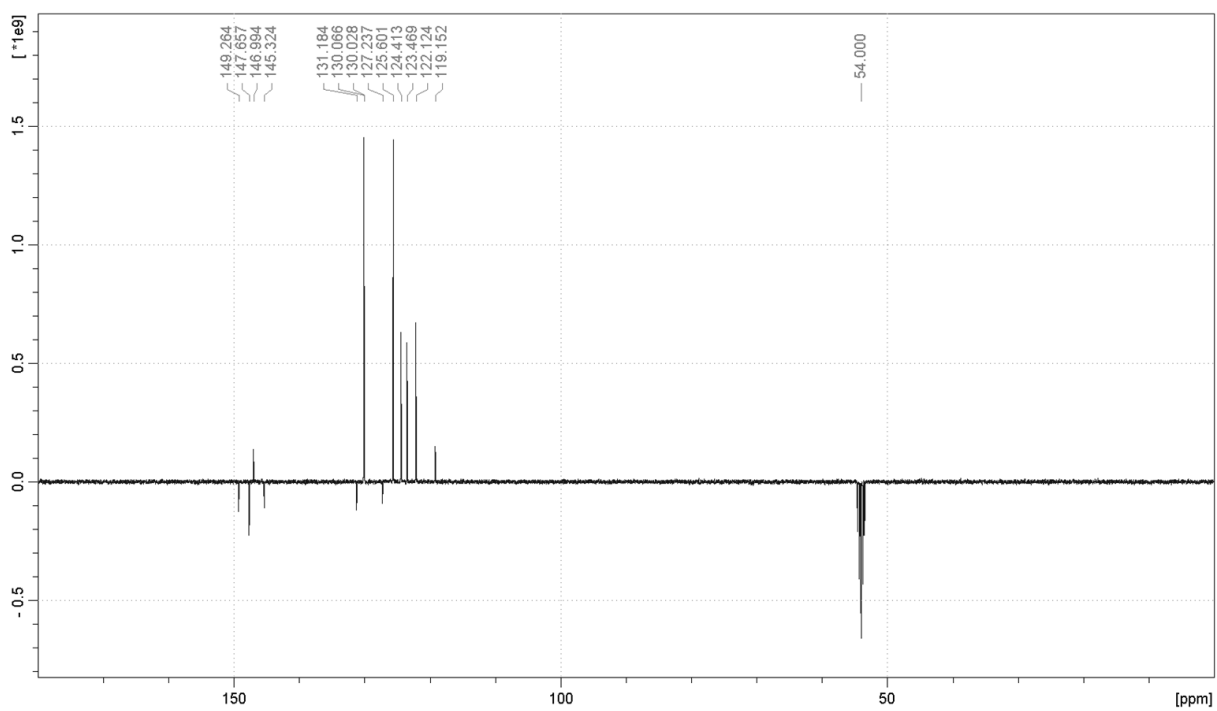


Figure S 10. Carbon NMR spectrum of compound 3e.

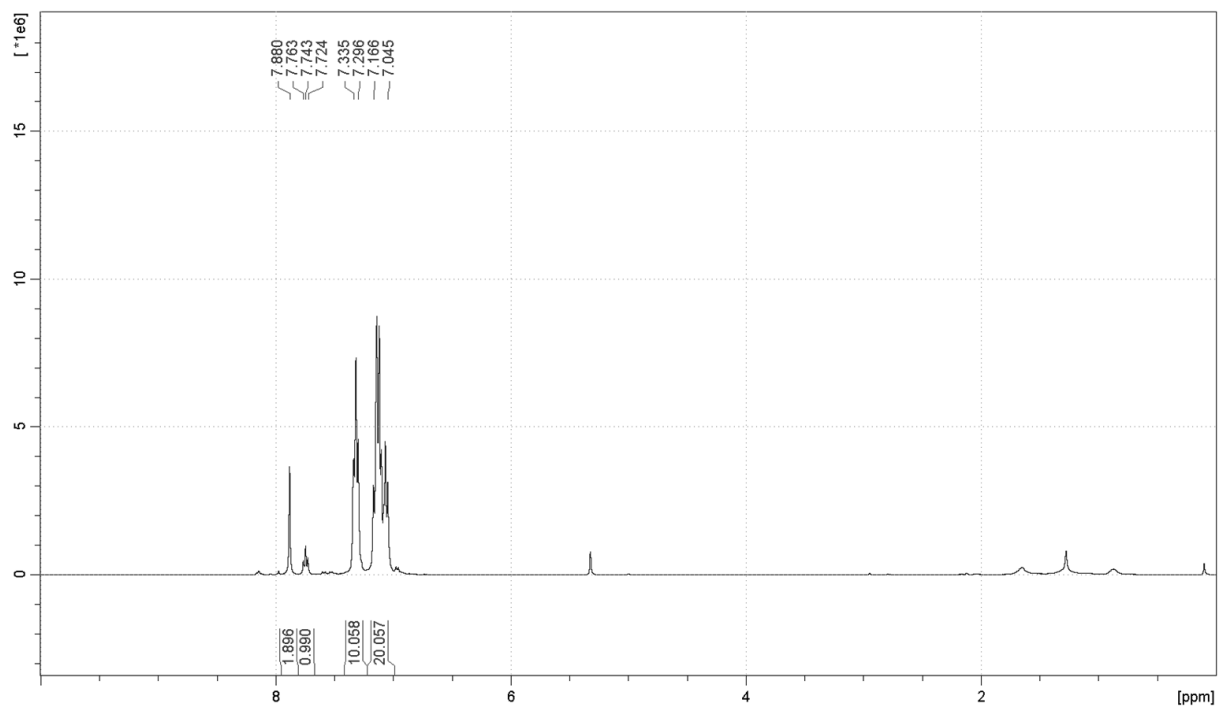


Figure S 11. Proton NMR spectrum of compound 4d.

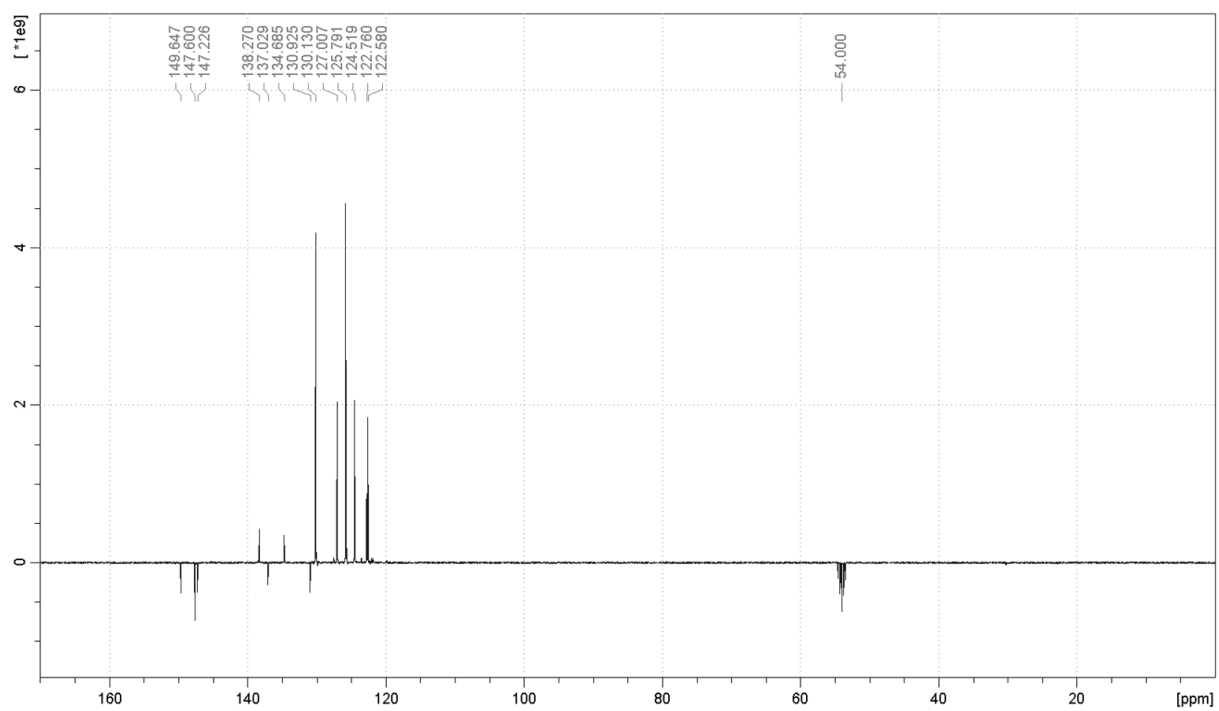


Figure S 12. Carbon NMR spectrum of compound 4d.

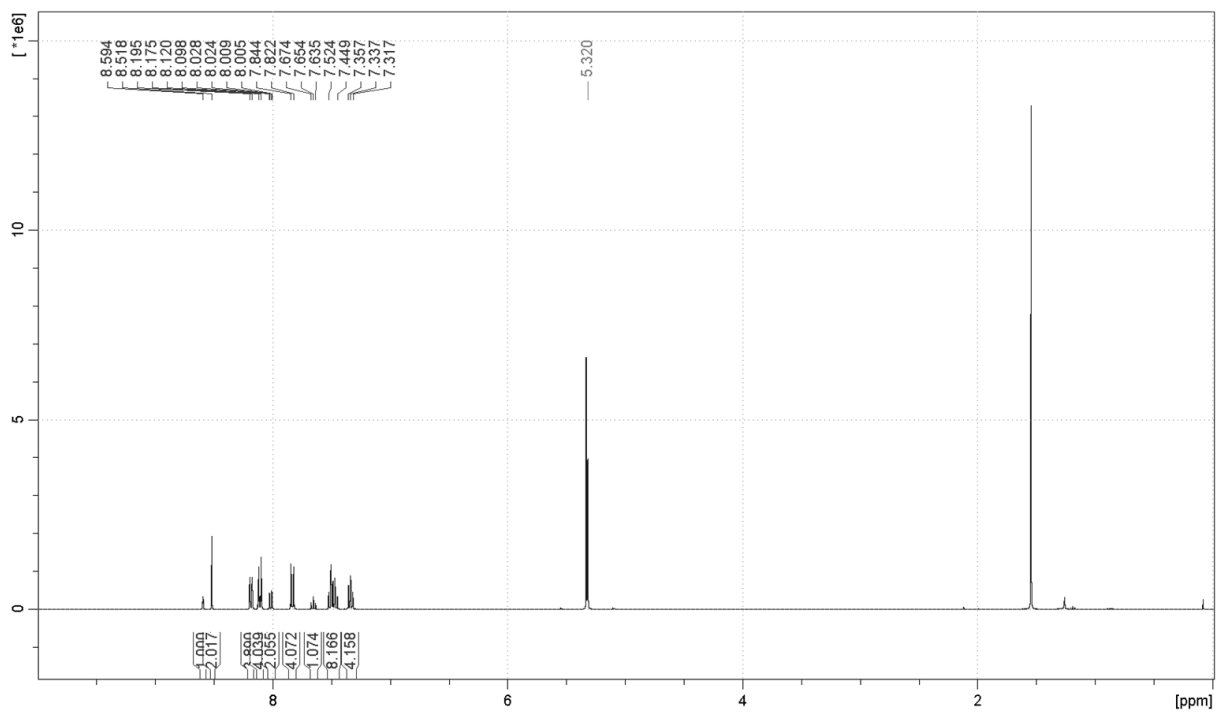


Figure S 13. Proton NMR spectrum of compound 5b.

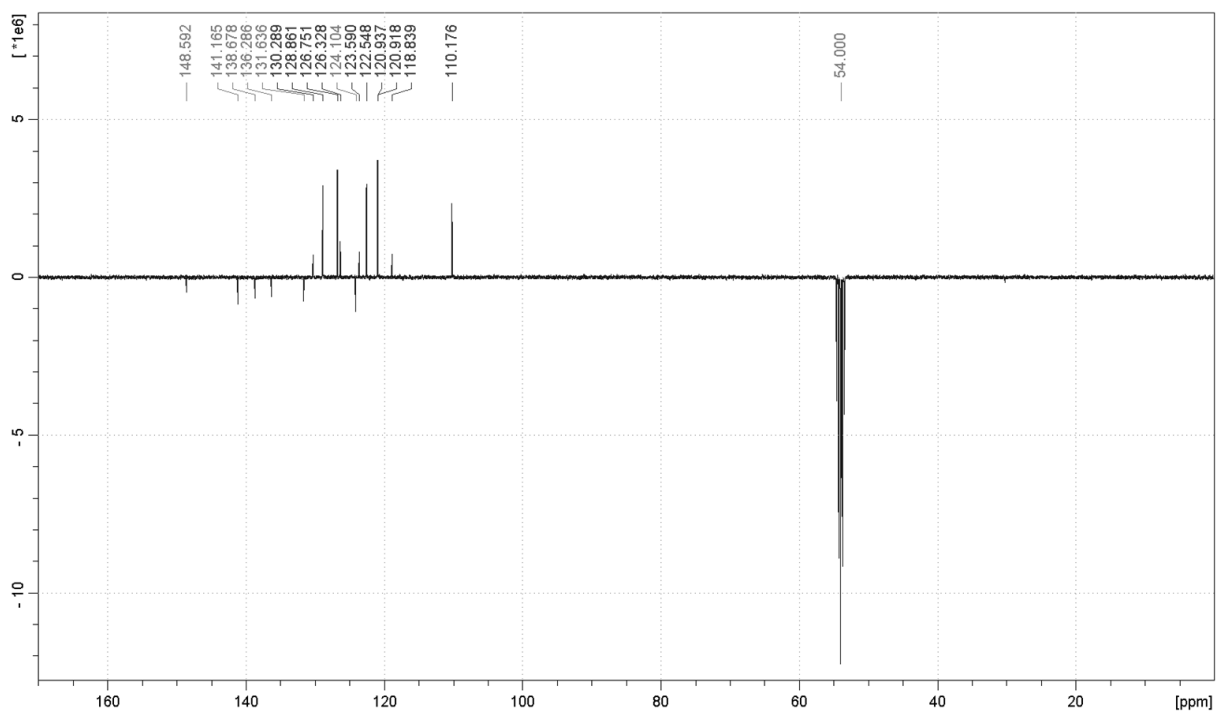


Figure S 14. Carbon NMR spectrum of compound 5b.

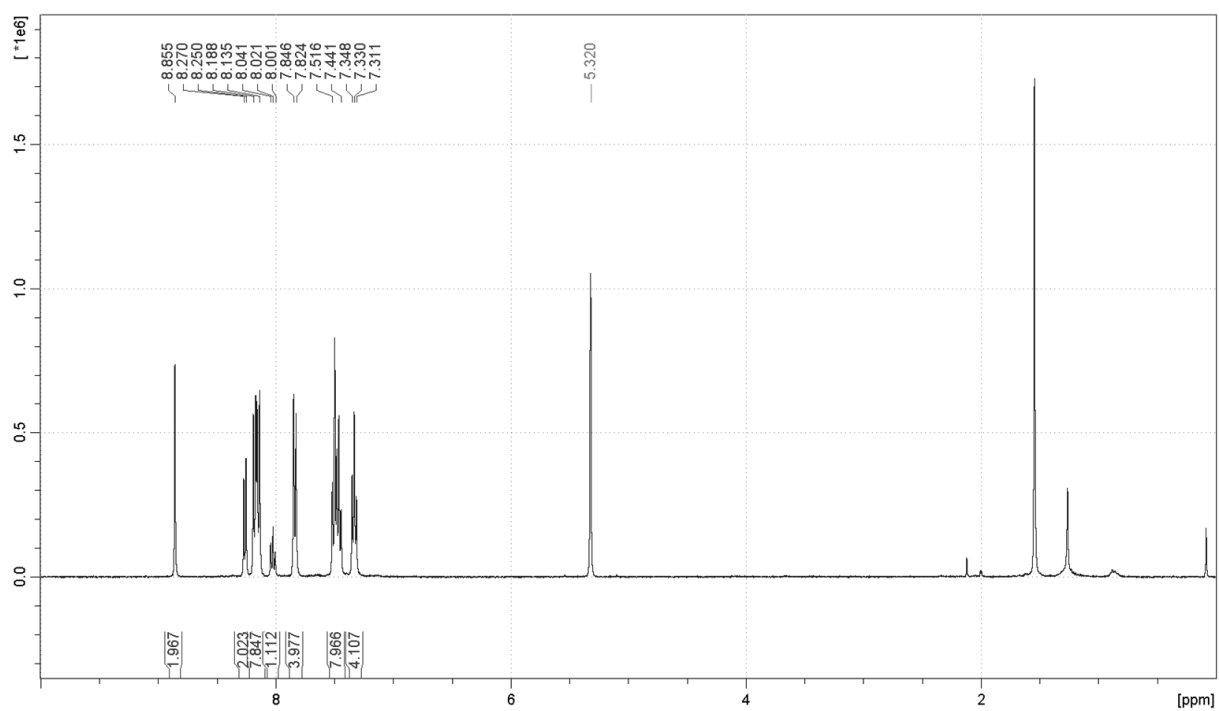


Figure S 15. Proton NMR spectrum of compound 5d.

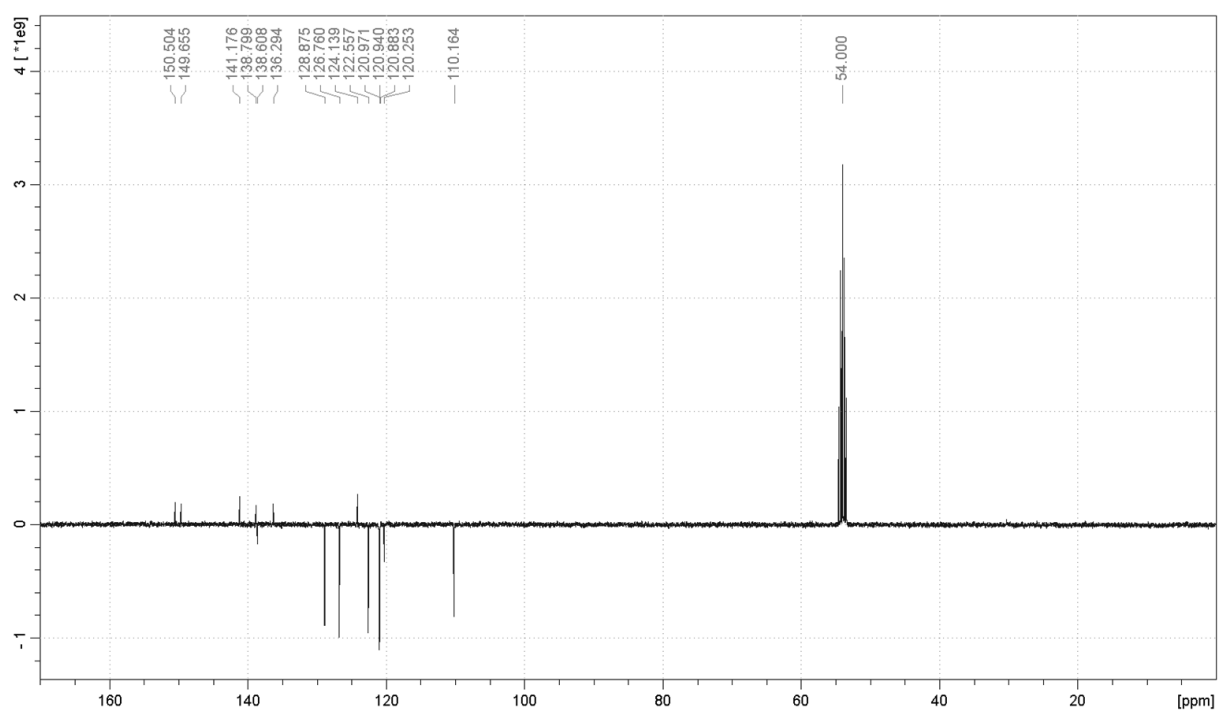


Figure S 16. Carbon NMR spectrum of compound 5d.

TGA/DSC

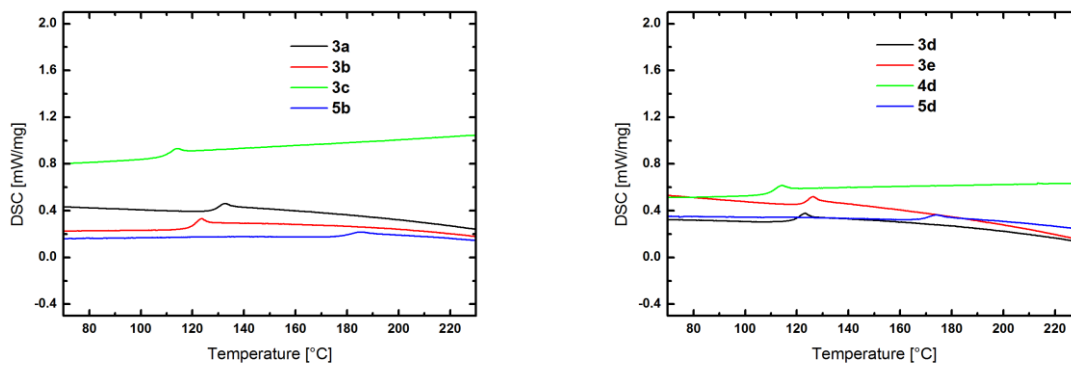


Figure S 17. DSC trace of the second heating cycle of **3a**, **3b**, **3c** and **5b** (left) and **3d**, **3e**, **4d** and **5d** (right) recorded at a heating rate of 10 °C min^{-1} .

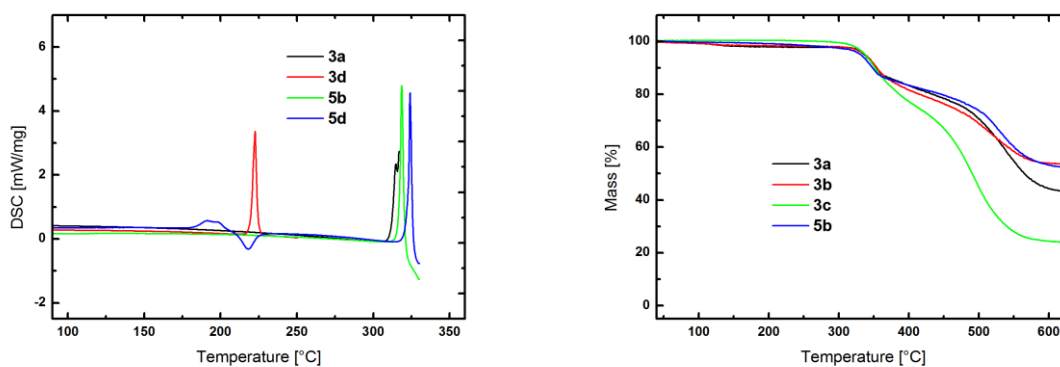


Figure S 18. DSC trace of the first heating cycle of **3a**, **3d**, **5b** and **5d** (left) and TGA trace of **3a**, **3b**, **3c** and **5b** (right) recorded at a heating rate of 10 °C min^{-1} .

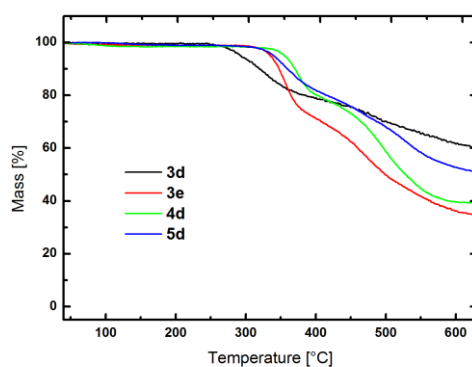


Figure S 19. TGA trace of **3d**, **3e**, **4d** and **5d** (right) recorded at a heating rate of 10 °C min^{-1} .

Cyclic voltammetry

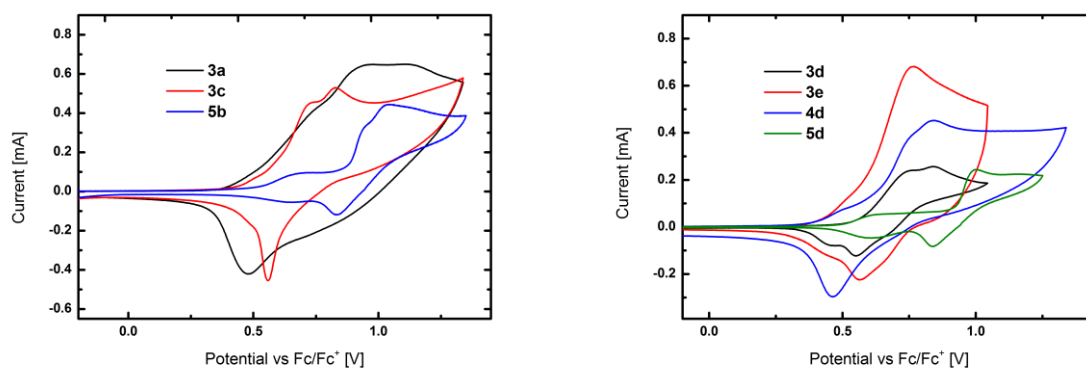


Figure S 20. CV curves of **3a**, **3c** and **5b** (left) and **3d**, **3e**, **4d** and **5d** (right).

Theoretical calculations



Figure S 21. Spatial distribution of the HOMO (left) and LUMO (right) of **3a**.



Figure S 22. Spatial distribution of the HOMO (left) and LUMO (right) of **3c**.

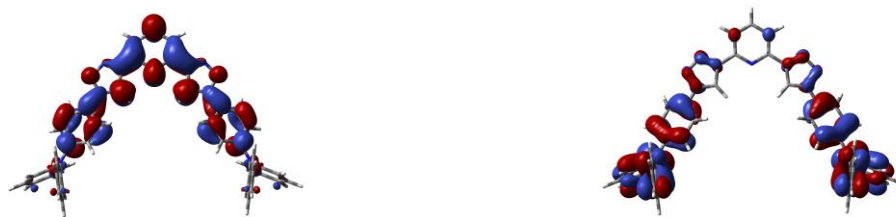


Figure S 23. Spatial distribution of the HOMO (left) and LUMO (right) of **3d**.



Figure S 24. Spatial distribution of the HOMO (left) and LUMO (right) of **3e**.



Figure S 25. Spatial distribution of the HOMO (left) and LUMO (right) of **4d**.

EL spectra

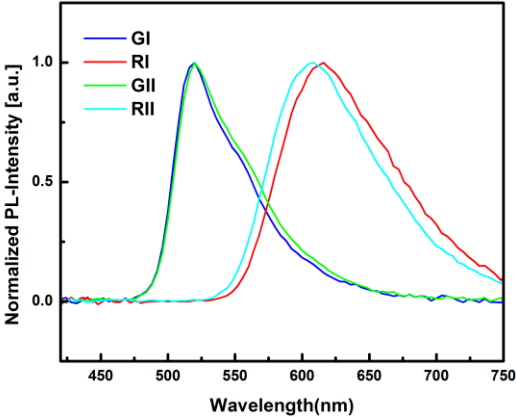


Figure S 26. EL spectra of devices RI, RII, GI and GII.