

Supporting Information Appendix:

Synthesis and Photophysical Studies of Self-Assembled Multicomponent Supramolecular Coordination Prisms Bearing Porphyrin Faces

Yanhui Shi,^{*,†,‡} Irene Sánchez-Molina,[‡] Changsheng Cao,[†] Timothy R. Cook,[‡] and Peter J. Stang^{*,‡}

[†]*School of Chemistry and Chemical Engineering and Jiangsu Key Laboratory of Green Synthetic Chemistry for Functional Materials, Jiangsu Normal University, Xuzhou, Jiangsu 221116, PR China*

[‡]*Department of Chemistry, University of Utah, 315 South 1400 East, RM 2020, Salt Lake City, Utah 84112, United States*

Corresponding Author Info: Peter J. Stang, Department of Chemistry, University of Utah, 315 South 1400 East, RM 2020, Salt Lake City, Utah 84112; stang@chem.utah.edu; Yanhui Shi, School of Chemistry and Chemical Engineering, Jiangsu Normal University, Xuzhou, Jiangsu 221116, PR China; yhshi@jsnu.edu.cn

Table of Contents

Pages S2-S6: ¹H NMR spectra of **4a-e** and **5a-e**.

Pages S7-S10: ³¹P NMR spectra of **4a-e** and **5a-e**.

Pages S11-S15: ESI-MS spectra of **4a-e** and **5a-e**.

Page S16: Absorption and emission spectra of **4a**, **4b**, **4c**, **4d** and **4e** in acetone

Page S17: Absorption and emission spectra of **5a**, **5b**, **5c**, **5d** and **5e** in acetone

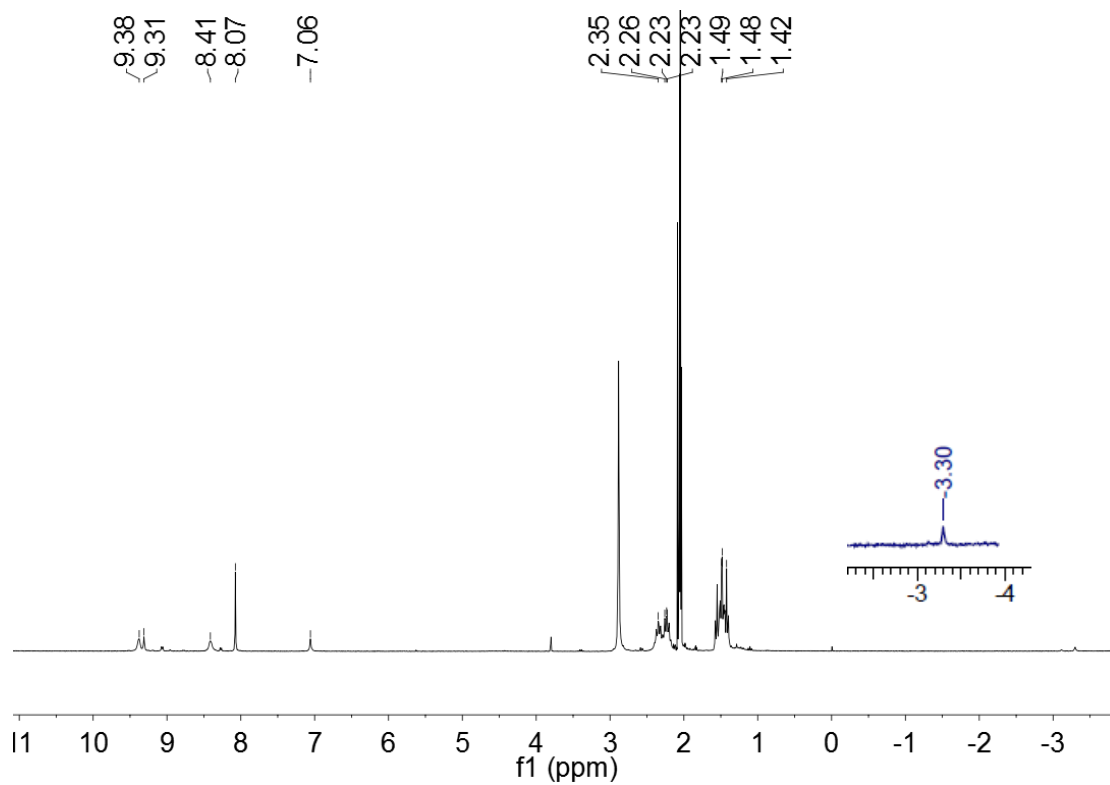


Figure S1. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **4a**

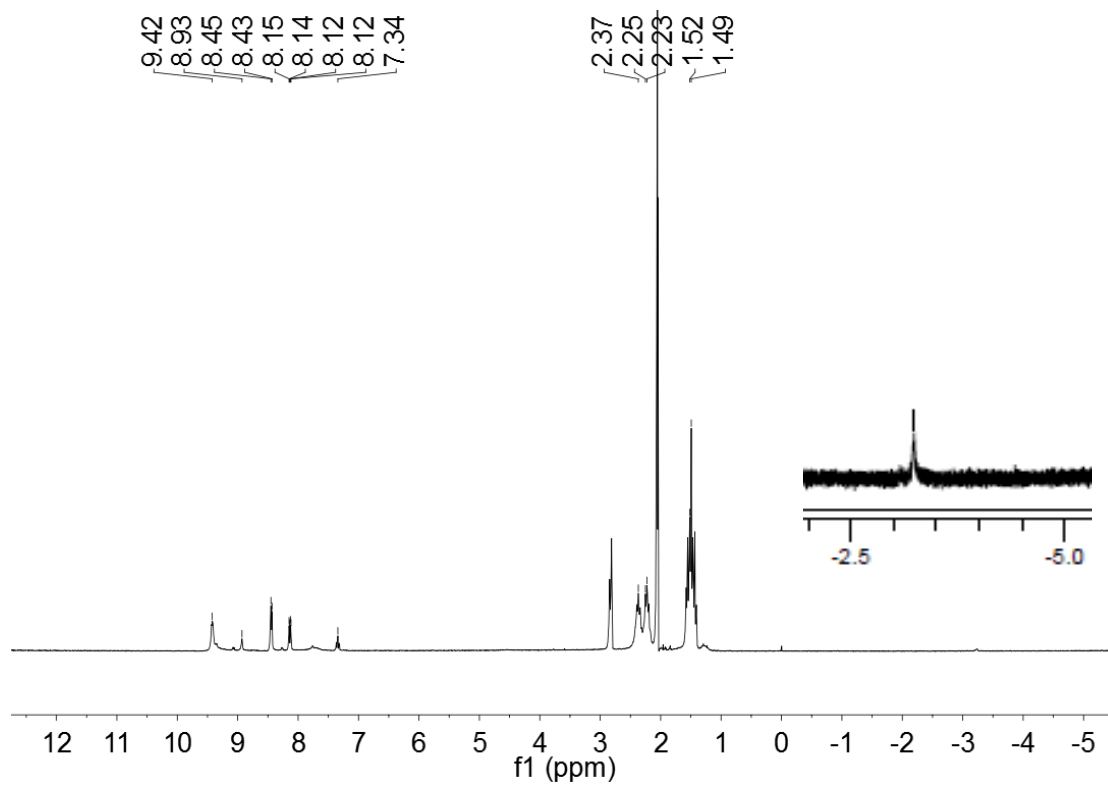


Figure S2. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **4b**

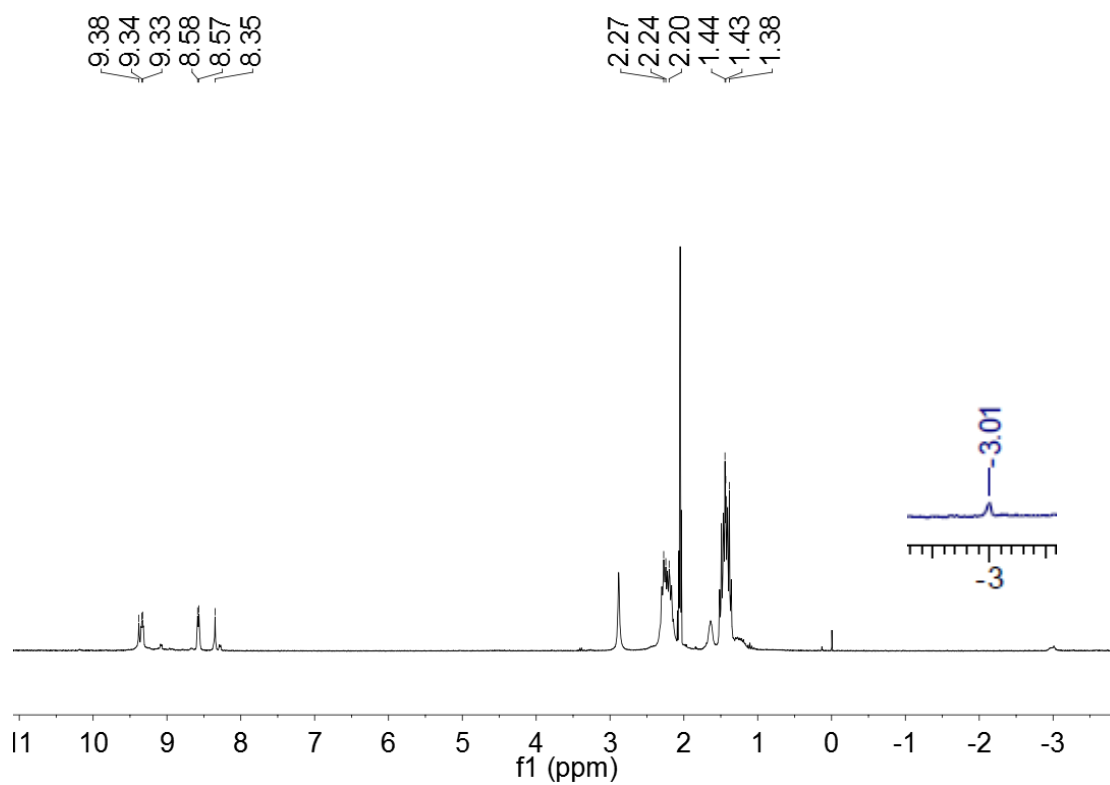


Figure S3. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **4c**

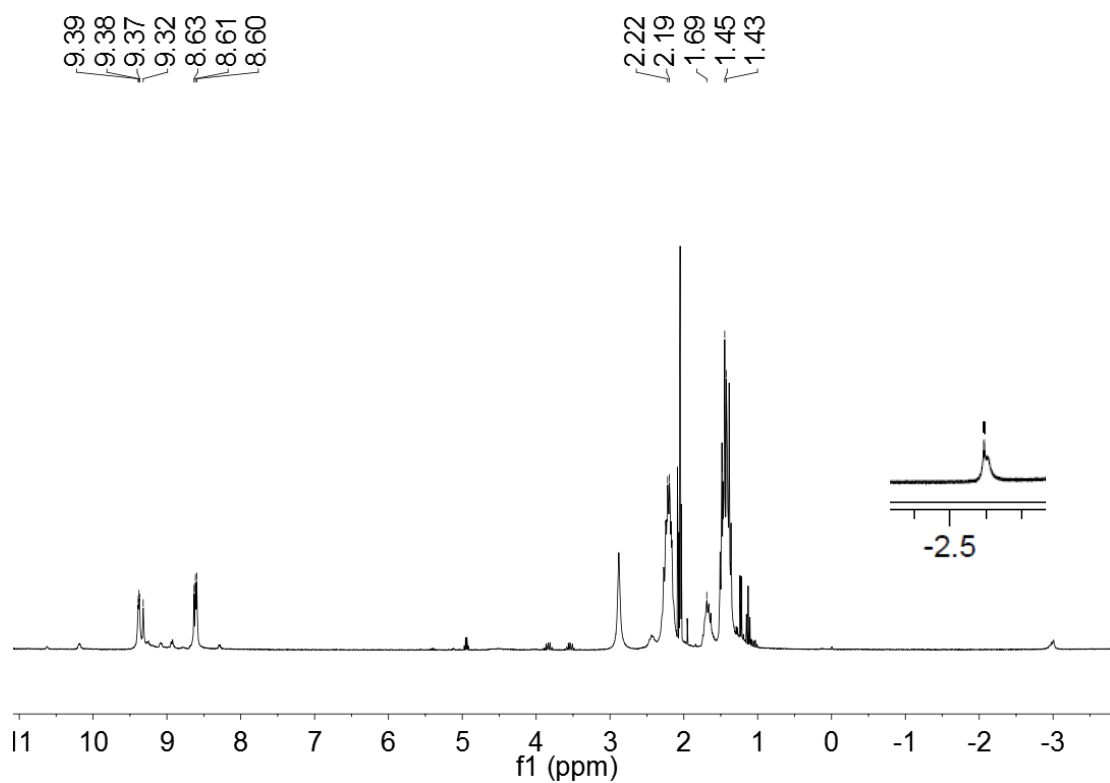


Figure S4. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **4d**

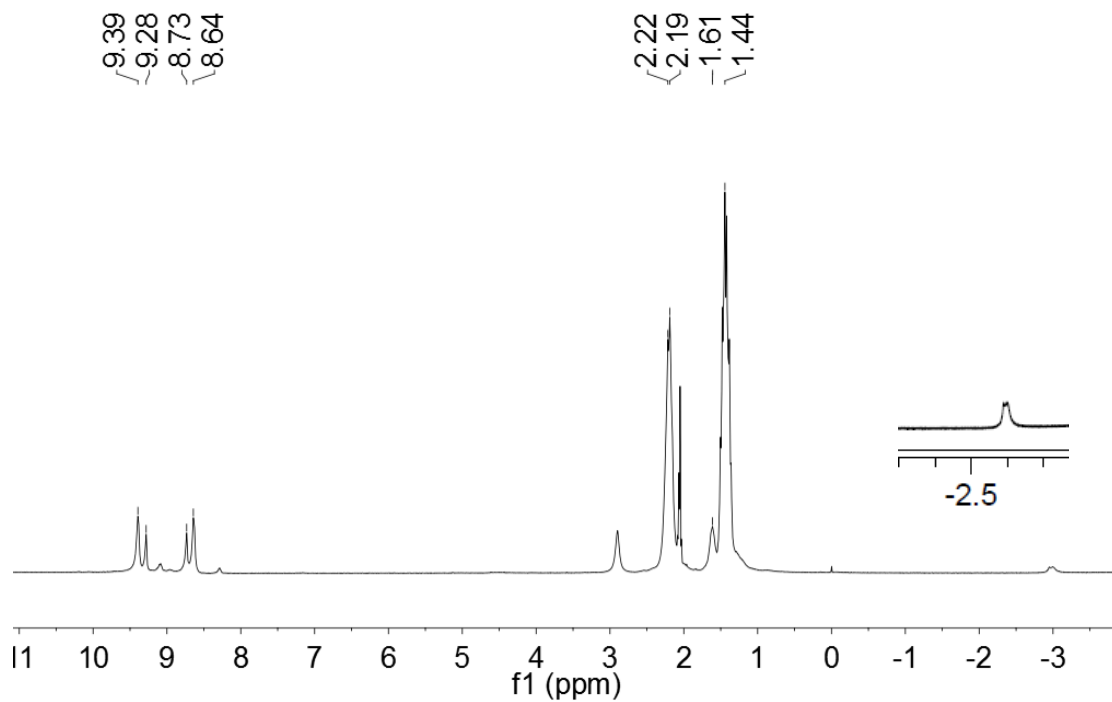


Figure S5. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **4e**

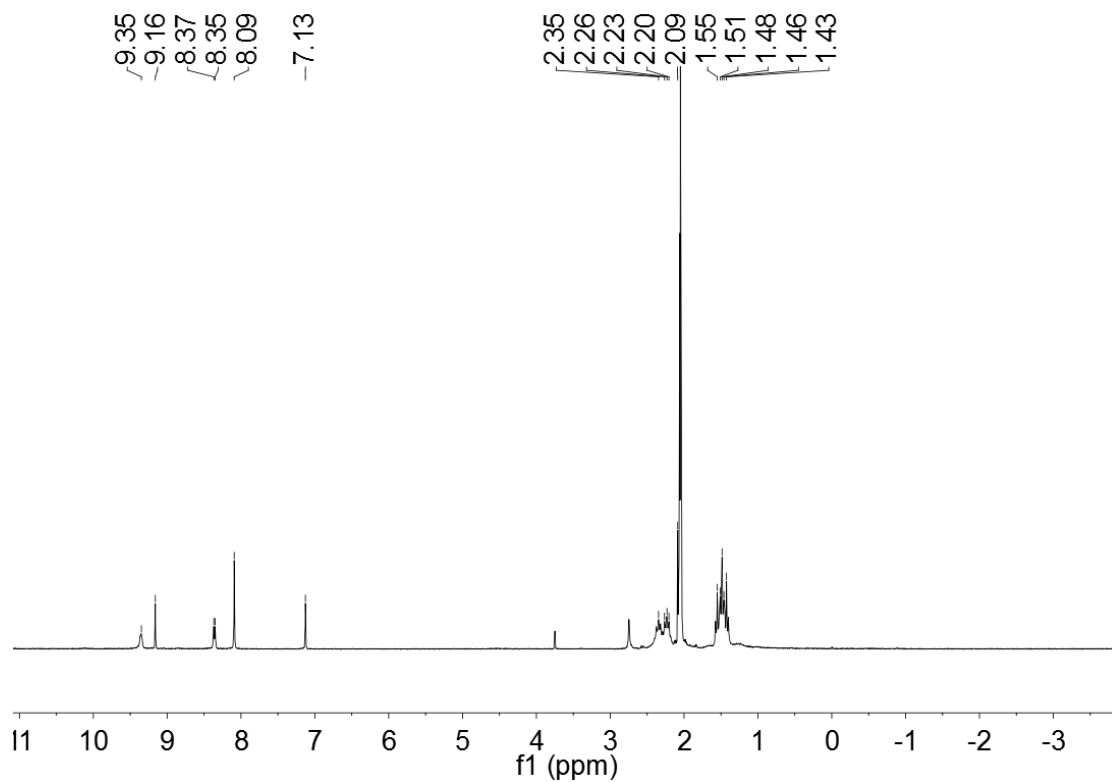


Figure S6. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **5a**

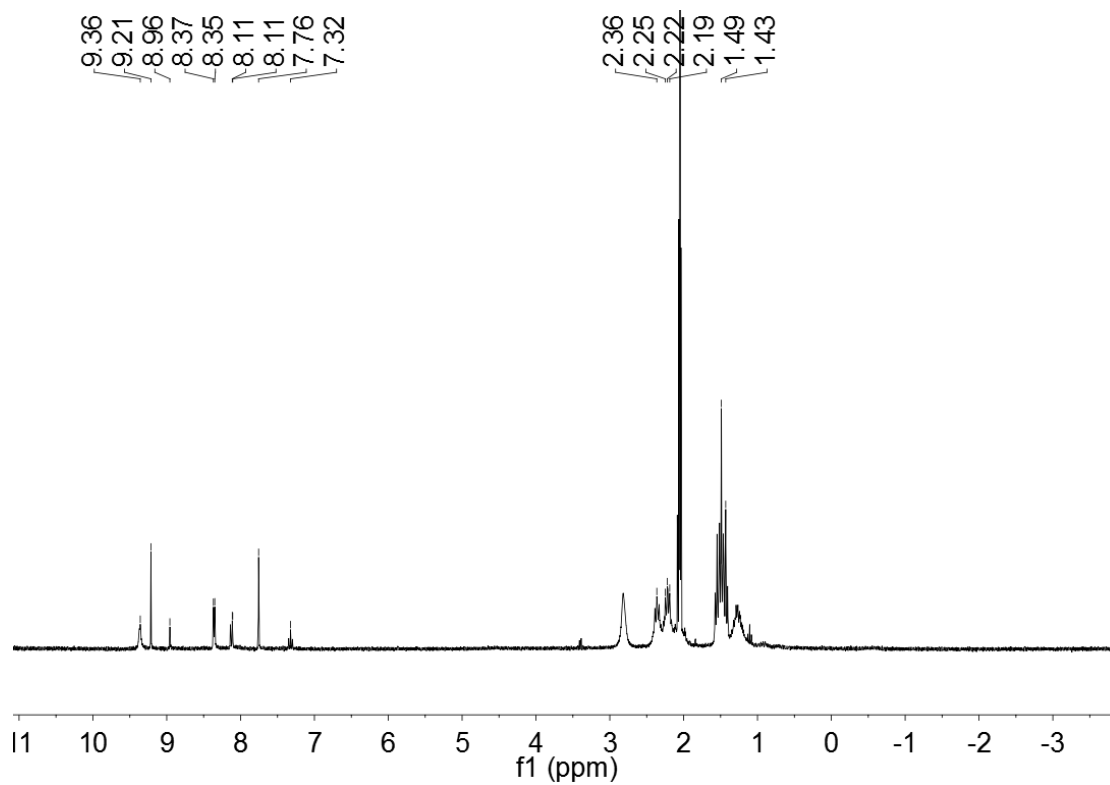


Figure S7. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **5b**

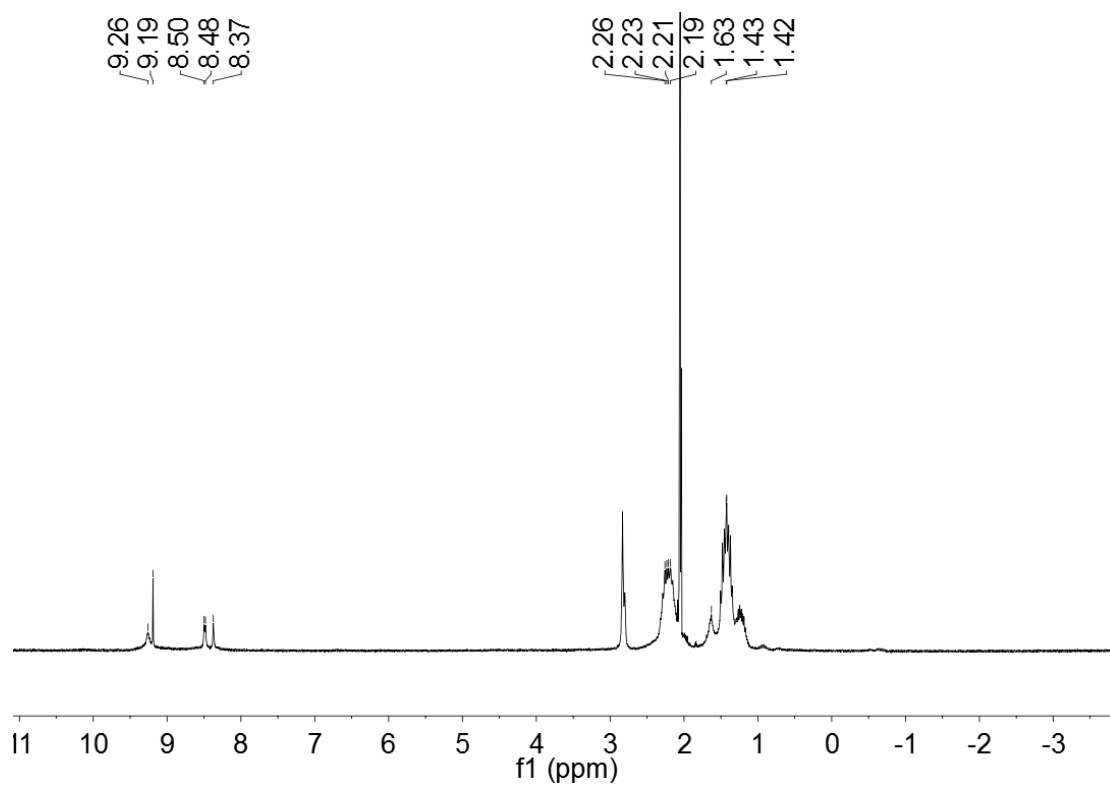


Figure S8. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **5c**

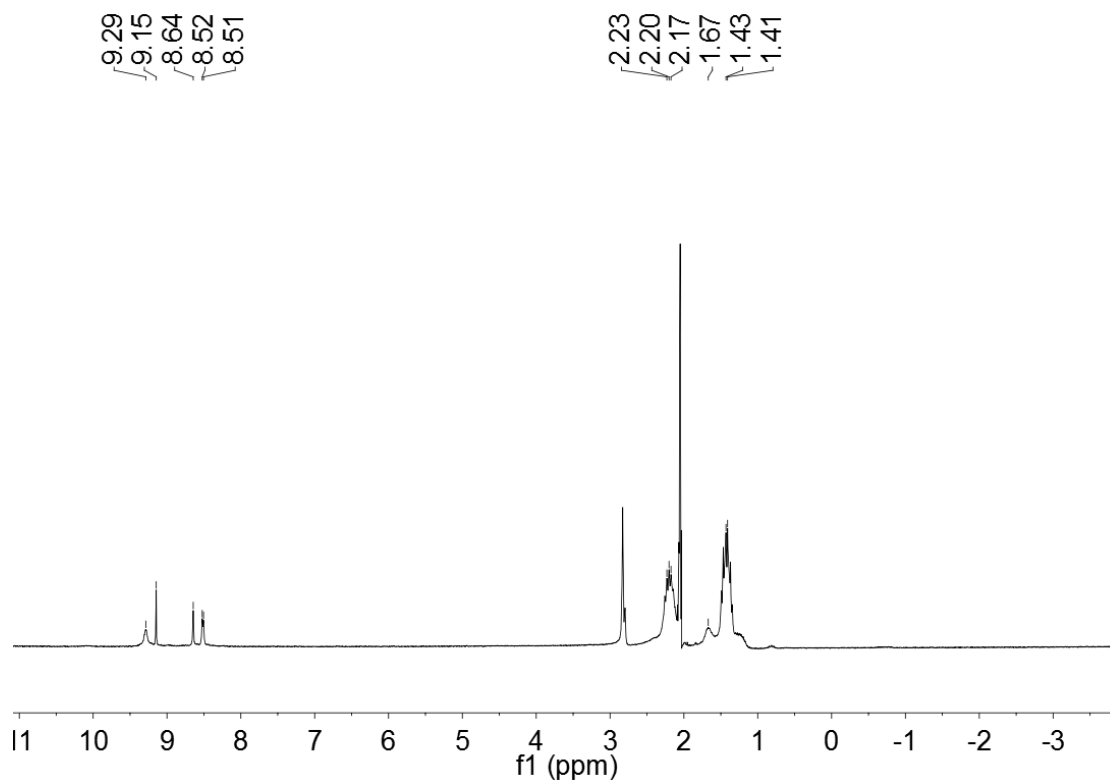


Figure S9. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **5d**

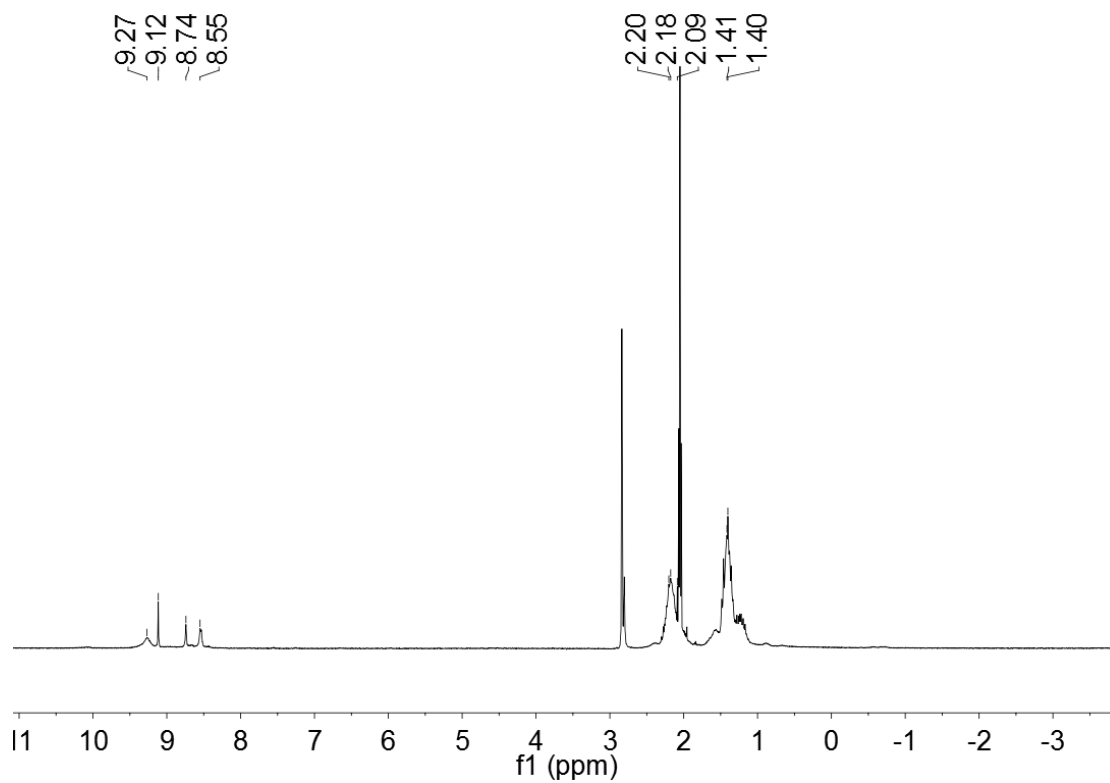


Figure S10. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of **5e**

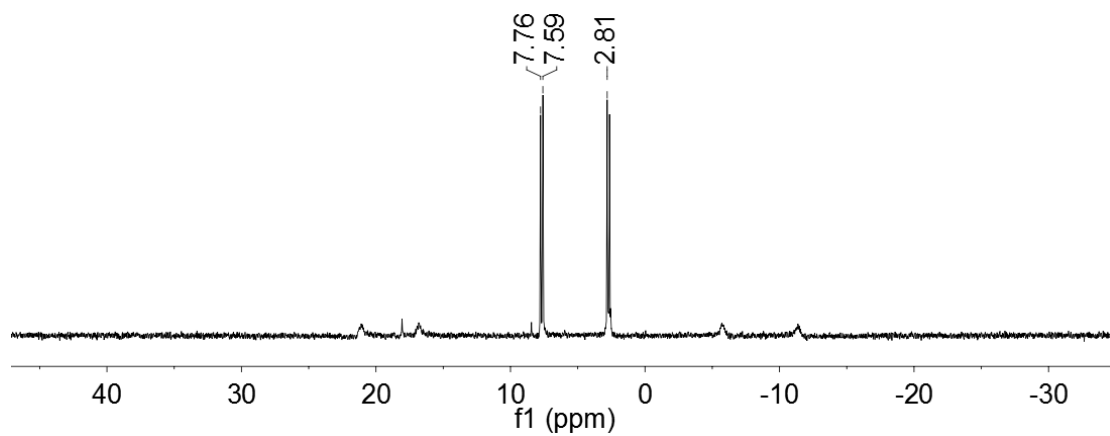


Figure S11. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **4a**

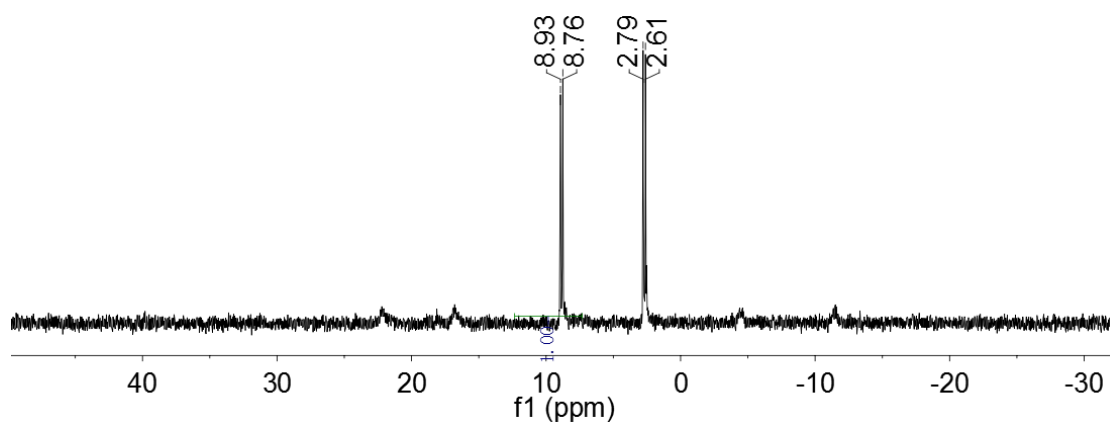


Figure S12. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **4b**

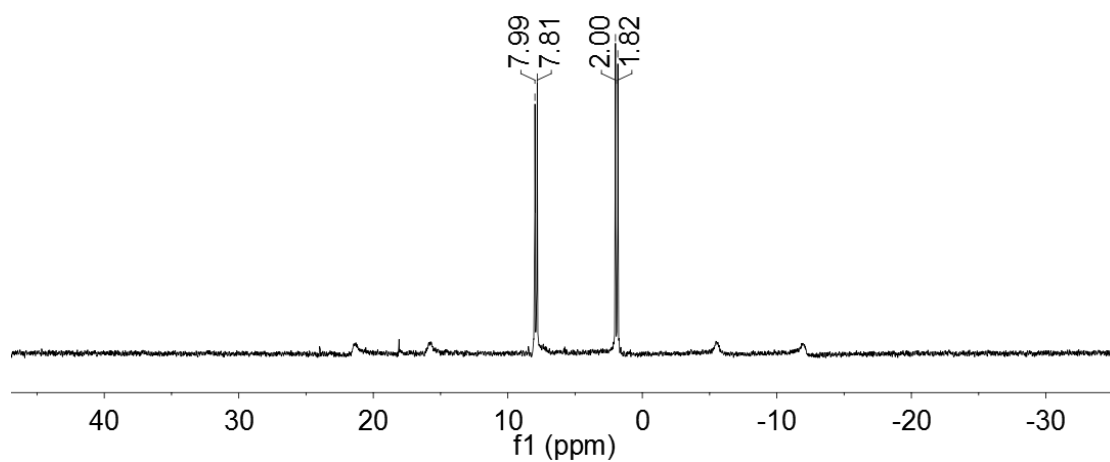


Figure S13. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **4c**

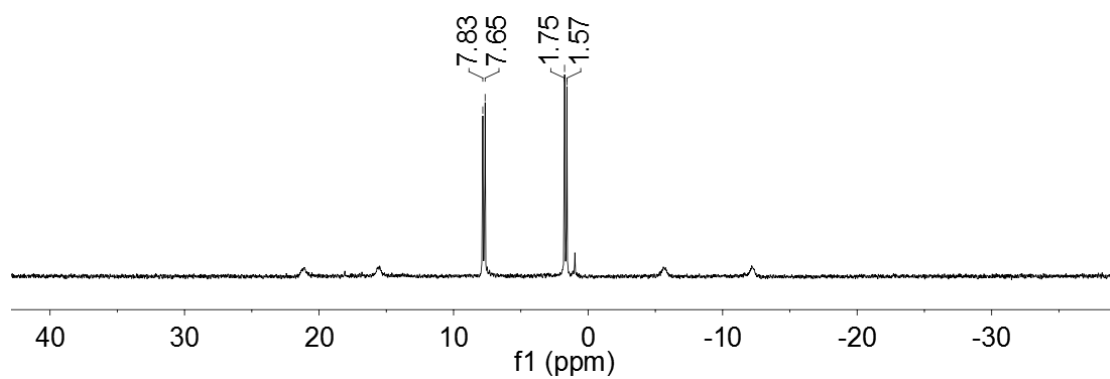


Figure S14. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **4d**

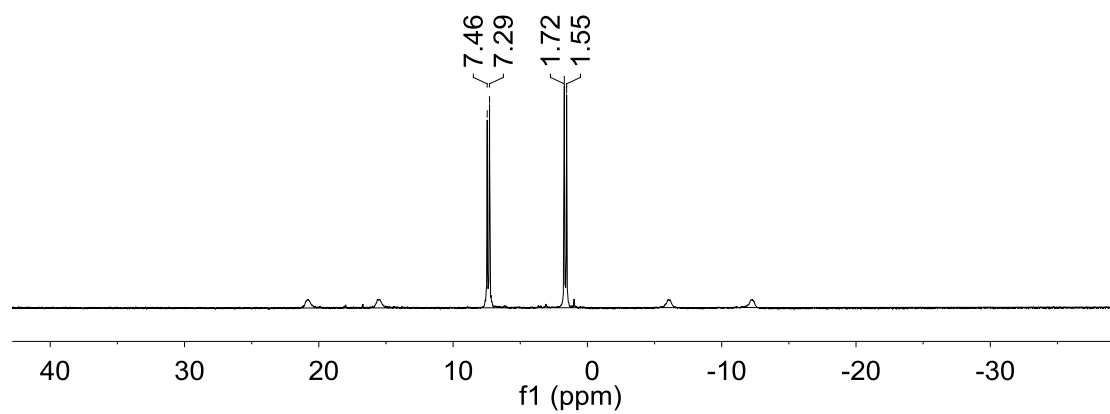


Figure S15. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **4e**

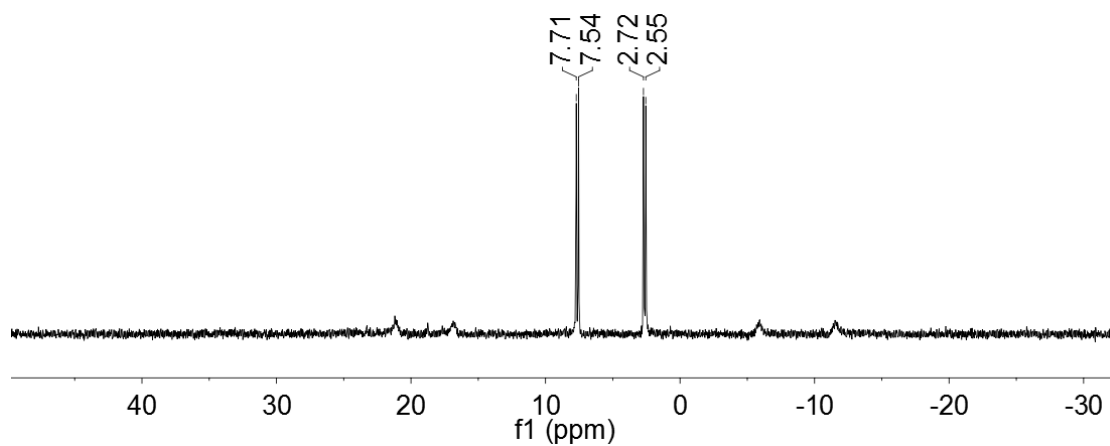


Figure S16. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **5a**

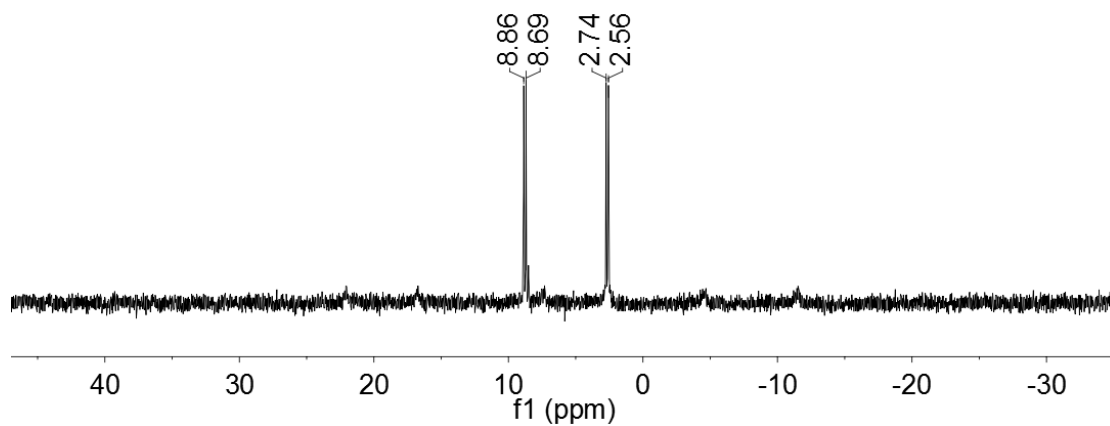


Figure S17. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **5b**

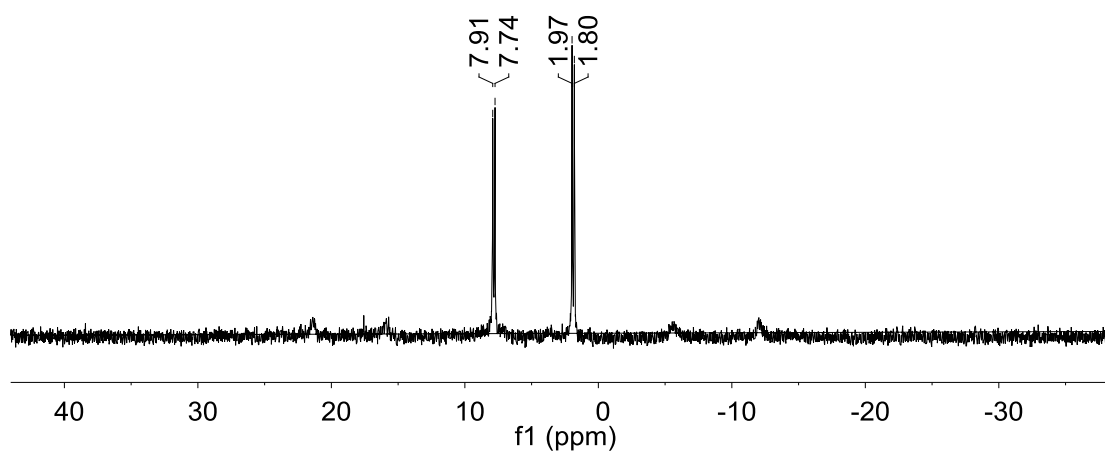


Figure S18. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **5c**

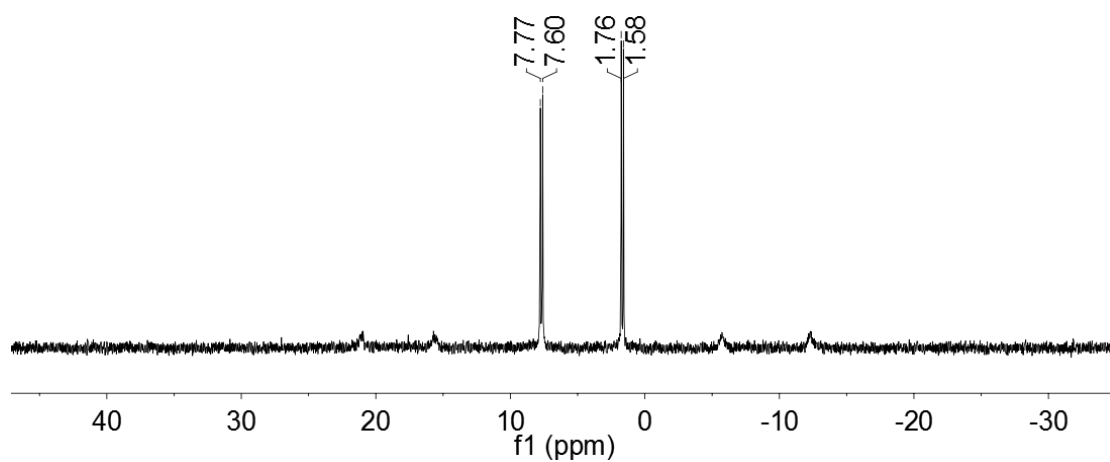


Figure S19. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **5d**

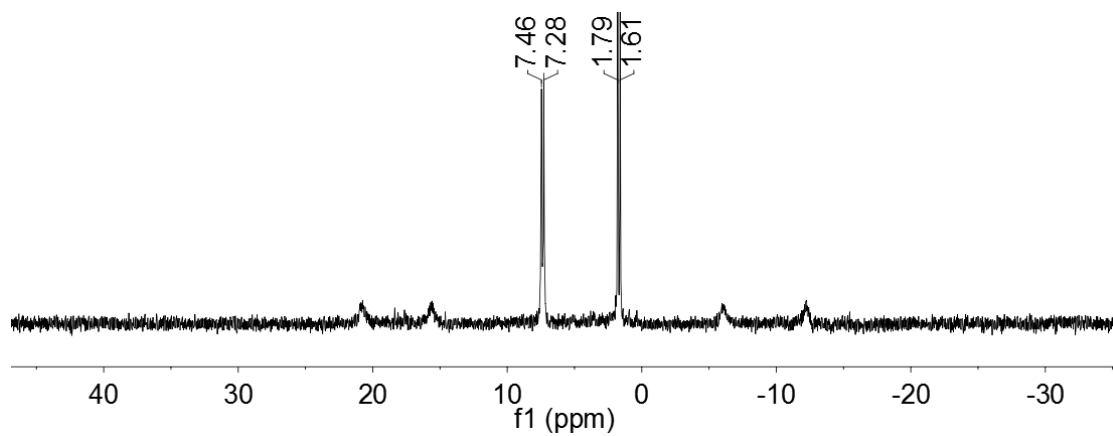


Figure S20. $^{31}\text{P}\{^1\text{H}\}$ spectrum of **5e**

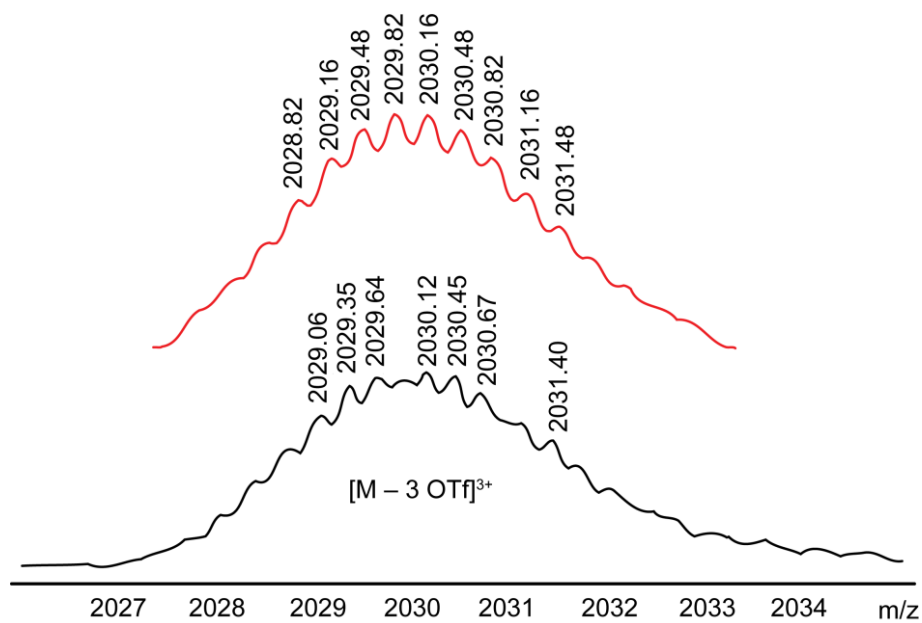


Figure S21. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[4a-3OTf]^{3+}$

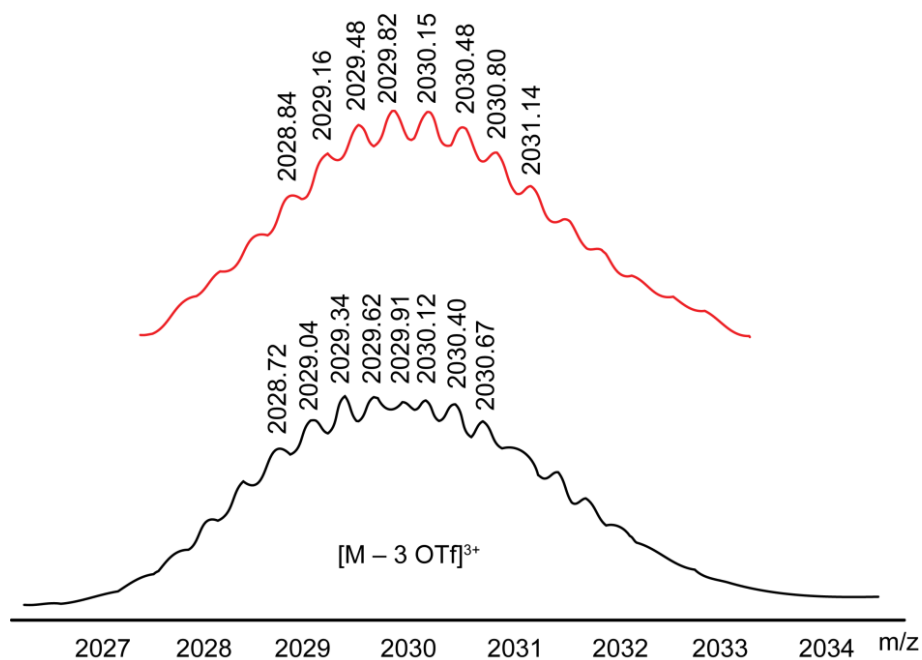


Figure S22. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[4b-3OTf]^{3+}$

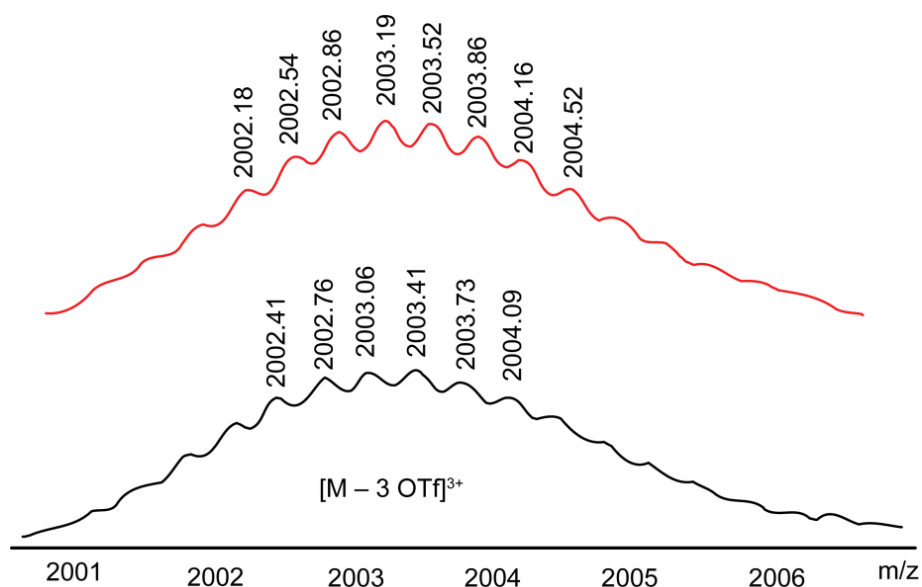


Figure S23. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[4c-3OTf]^{3+}$

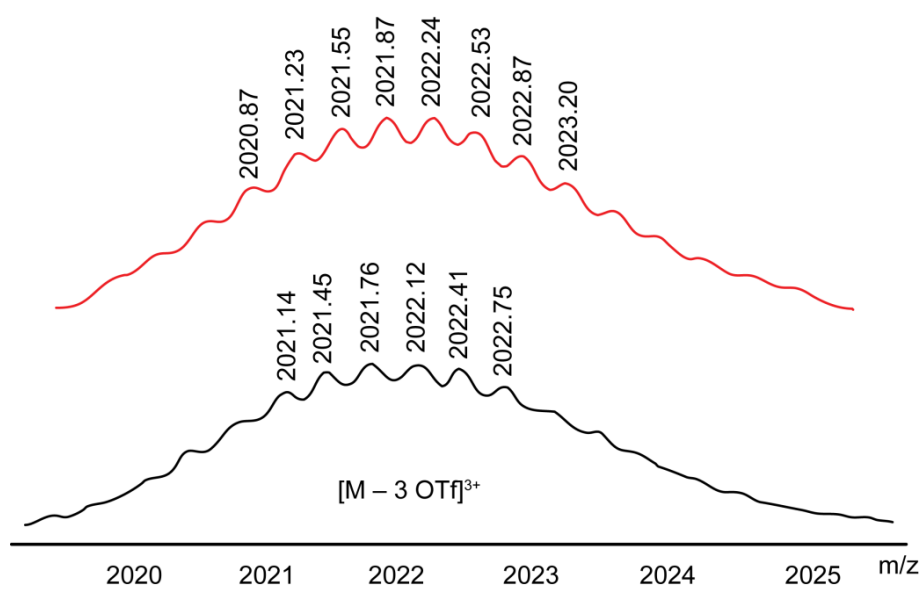


Figure S24. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[4d-3OTf]^{3+}$

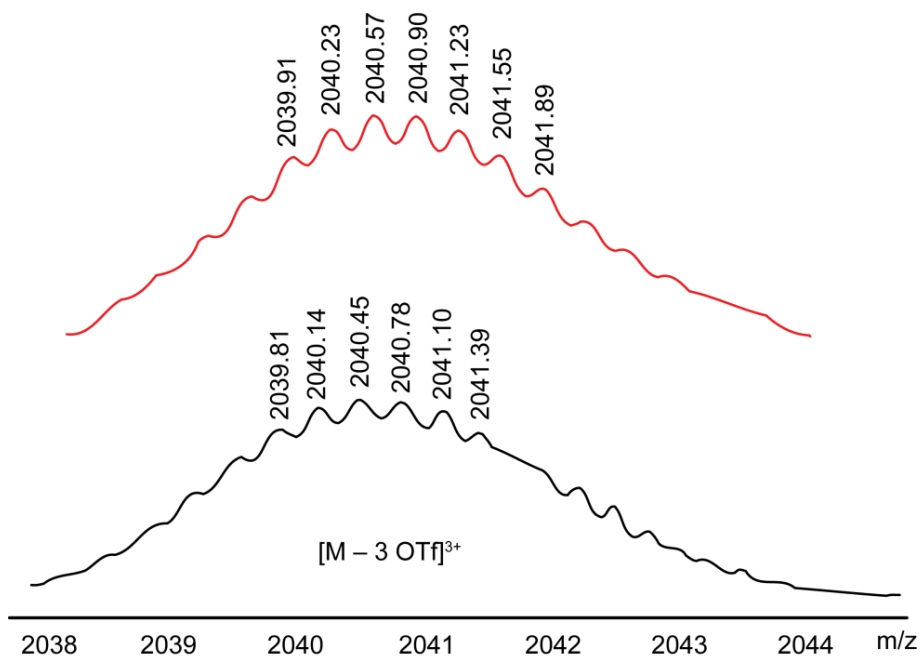


Figure S25. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[4e-3OTf]^{3+}$

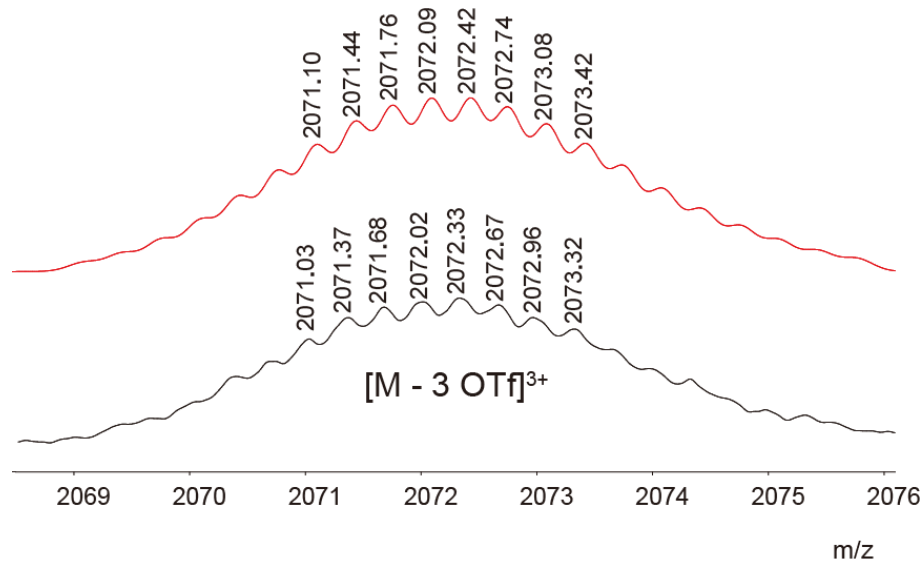


Figure S26. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[5a-3OTf]^{3+}$

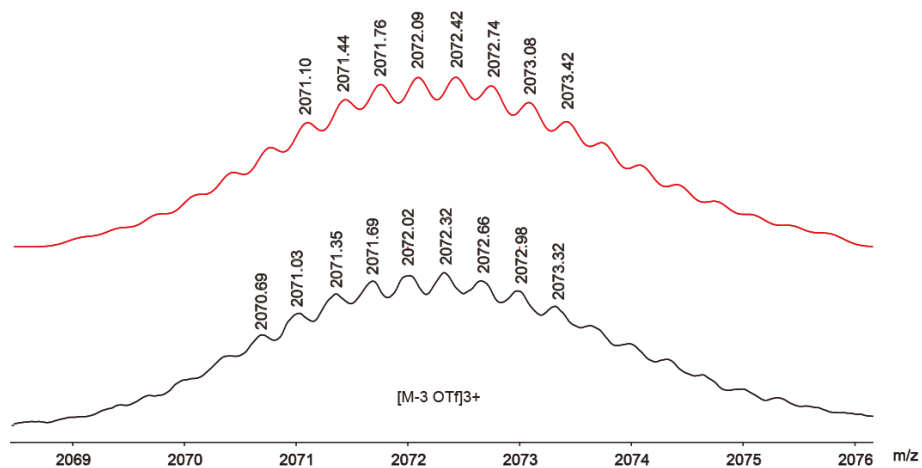


Figure S27. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[5b-3OTf]^{3+}$

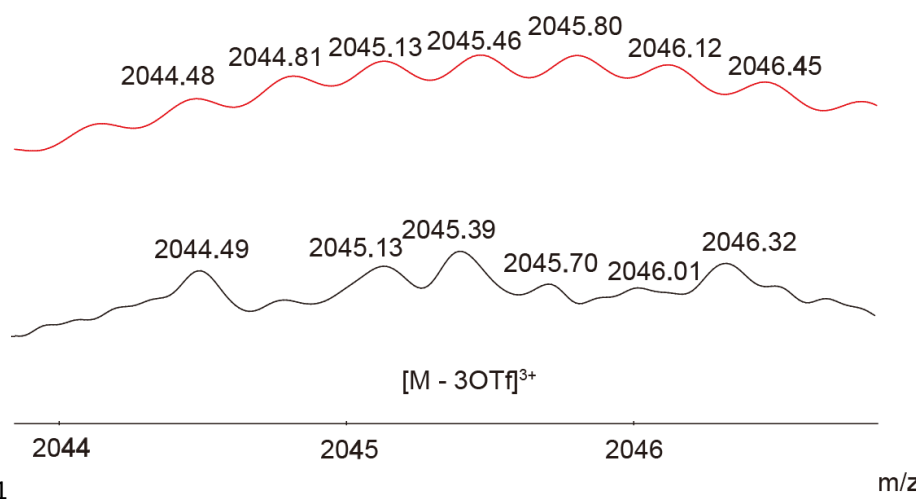


Figure S28. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[5c-3OTf]^{3+}$

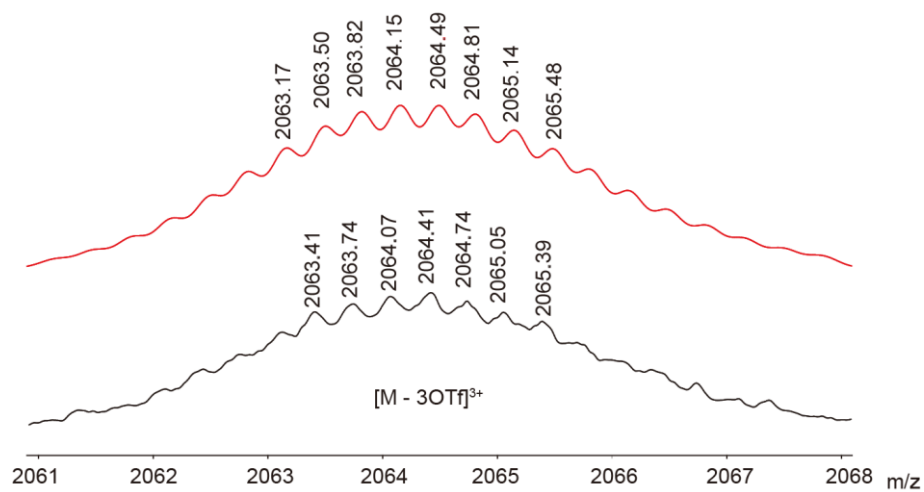


Figure S29. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[5d-3OTf]^{3+}$

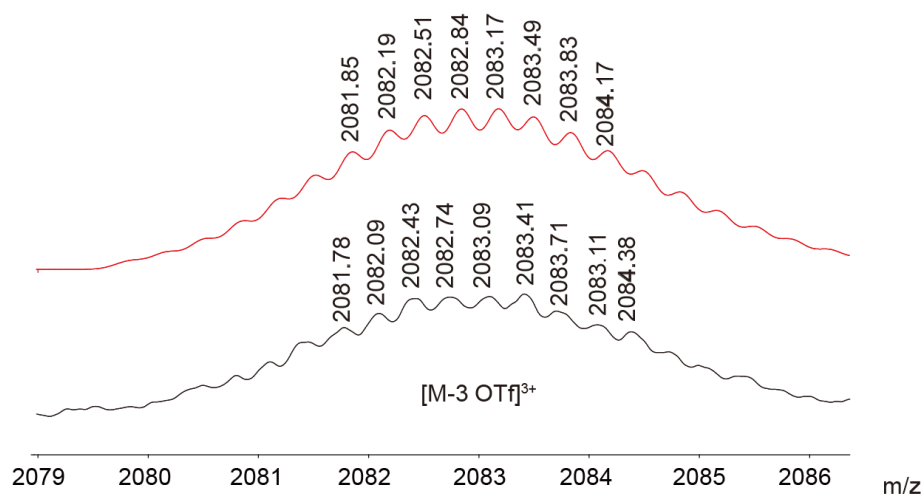


Figure S30. Calculated (red, top) and experimental (black, bottom) ESI-MS spectrum of $[5e-3OTf]^{3+}$

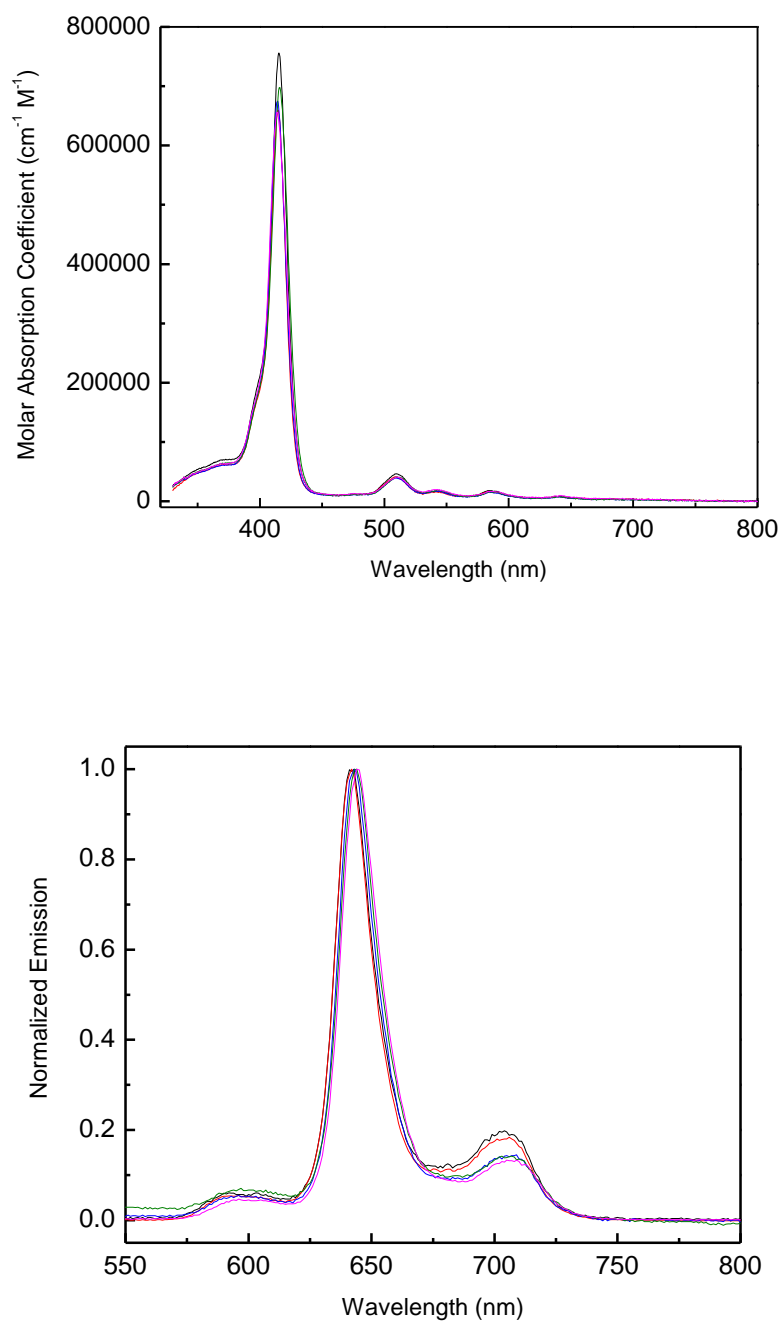


Figure S31. Absorption (top) and emission (bottom) profiles for **4a** (black), **4b** (red), **4c** (blue), **4d** (green) and **4e** (pink) in acetone

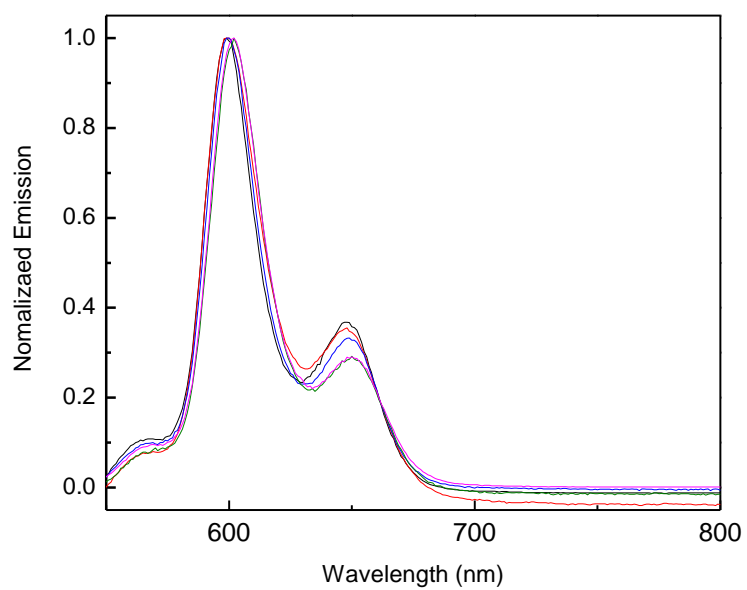
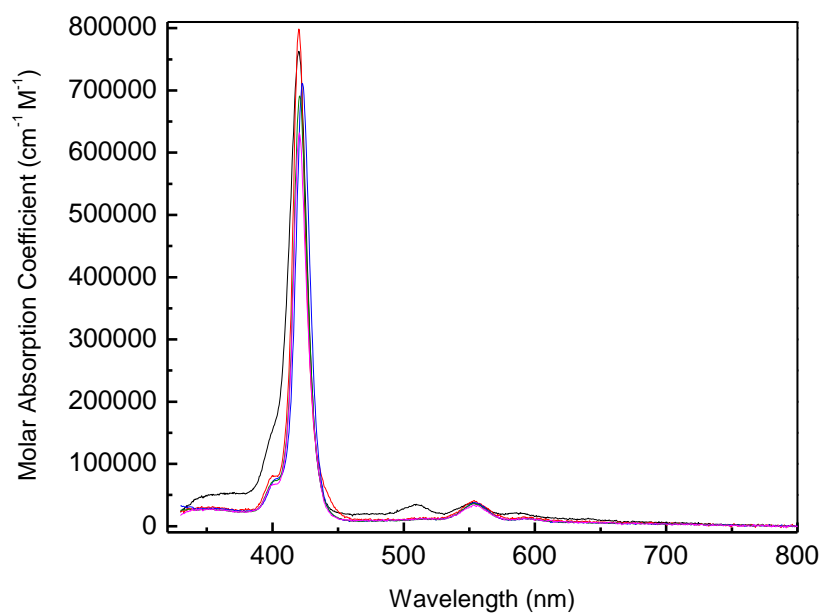


Figure S32. Absorption (top) and emission (bottom) profiles for **5a** (black), **5b** (red), **5c** (blue), **5d** (green) and **5e** (pink) in acetone