

Supporting Information: Effect of the Number of Anchoring and Electron Donating Groups on the efficiency of Free-Base- and Zn-Porphyrin-Sensitized Solar Cells

Raheleh Nasrollahi ^{1,2}, Luis Martín-Gomis ¹, Fernando Fernández-Lázaro ¹, Saeed Zakavi ² and Ángela Sastre-Santos ^{1,*}

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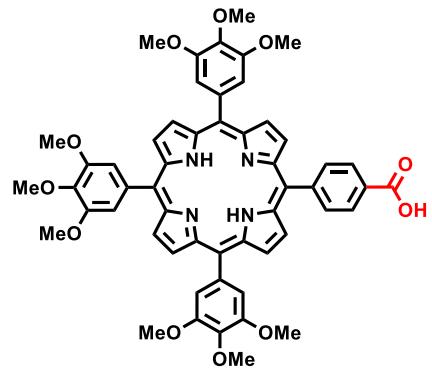


Figure S1. Molecular structure of H₂P-CO₂H 1.

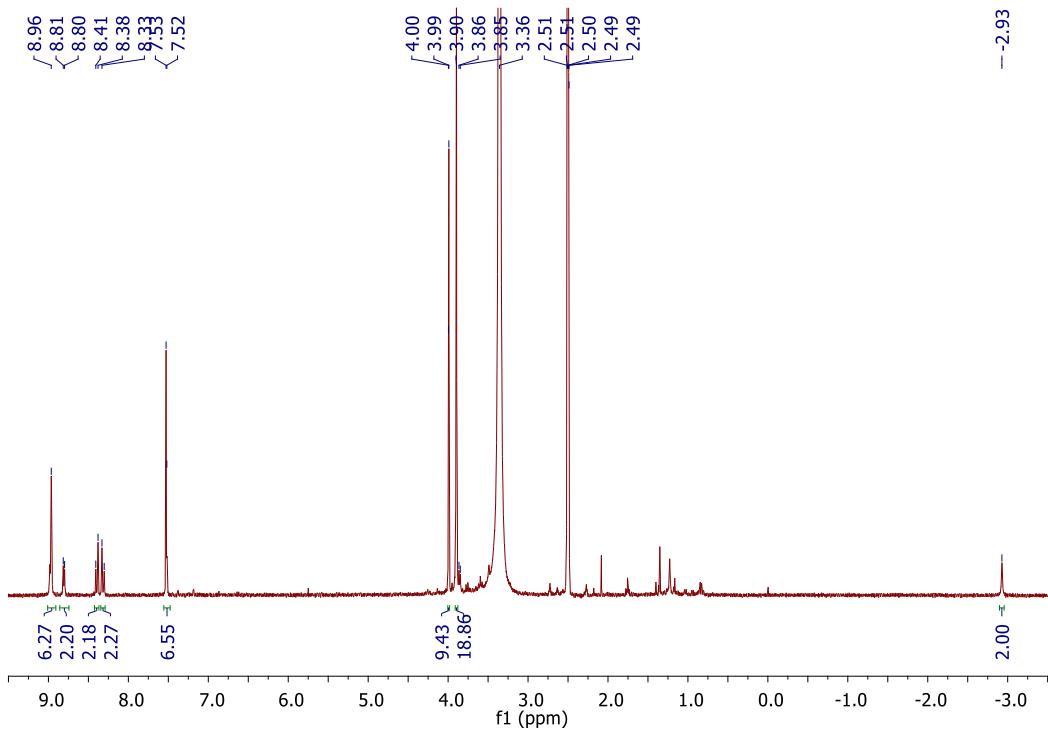


Figure S2. ¹H-NMR (CDCl₃) H₂P-CO₂H 1.

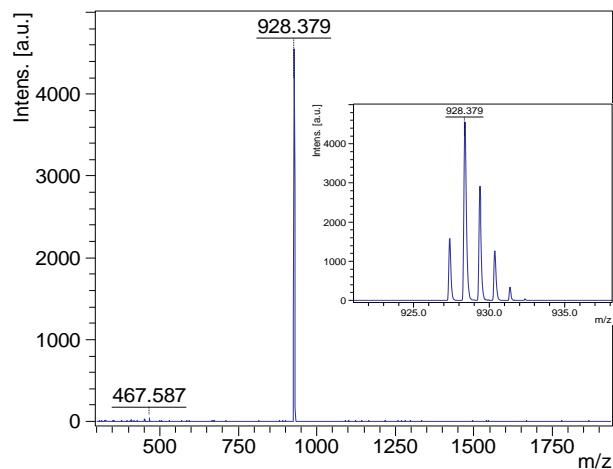


Figure S3. HR-MS (MALDI-TOF) spectrum of H₂P-CO₂H 1.

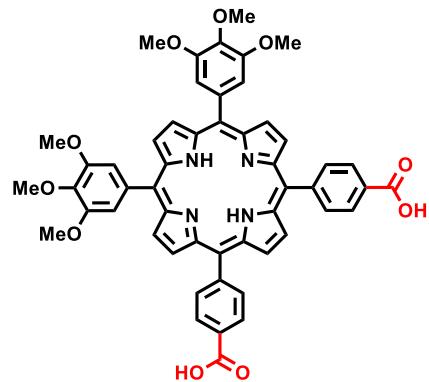


Figure S4. Molecular structure of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 cis.

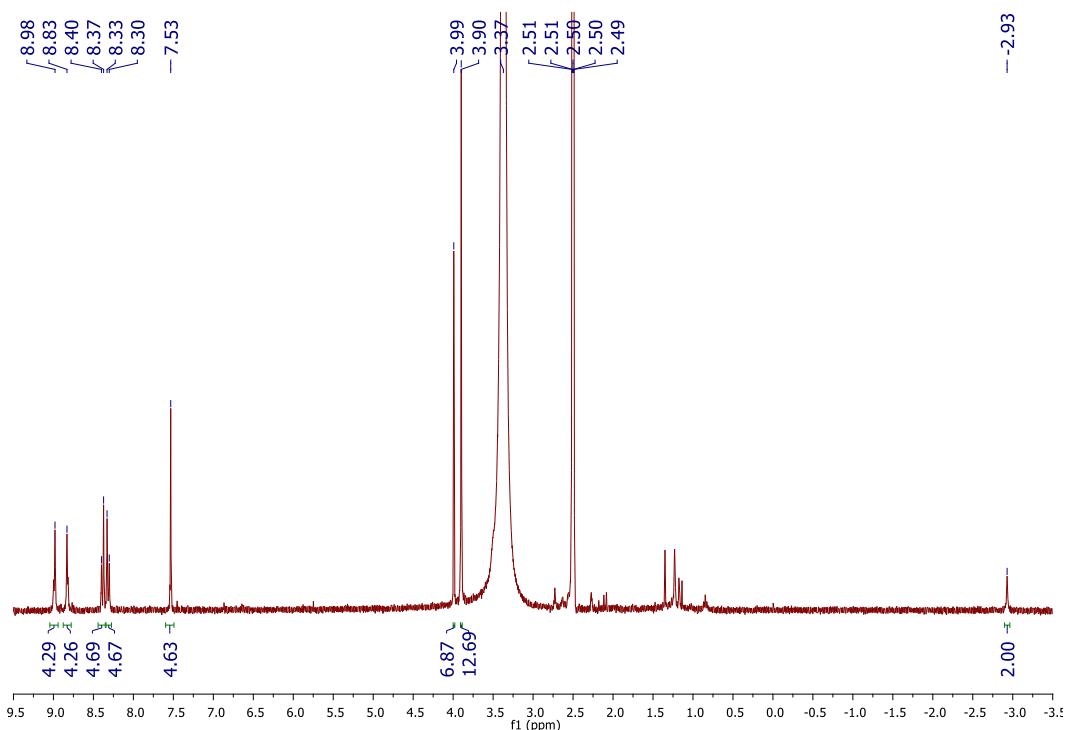


Figure S5. ^1H -NMR (CDCl_3) of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 cis.

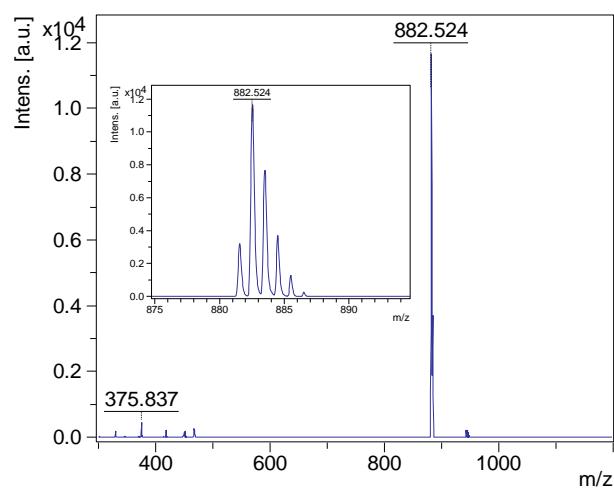


Figure S6. HR-MS (MALDI-TOF) spectrum of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 cis.

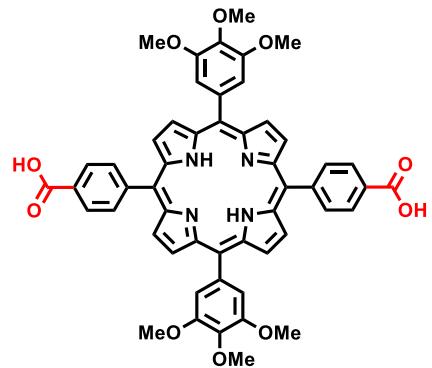


Figure S7. Molecular structure of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 trans.

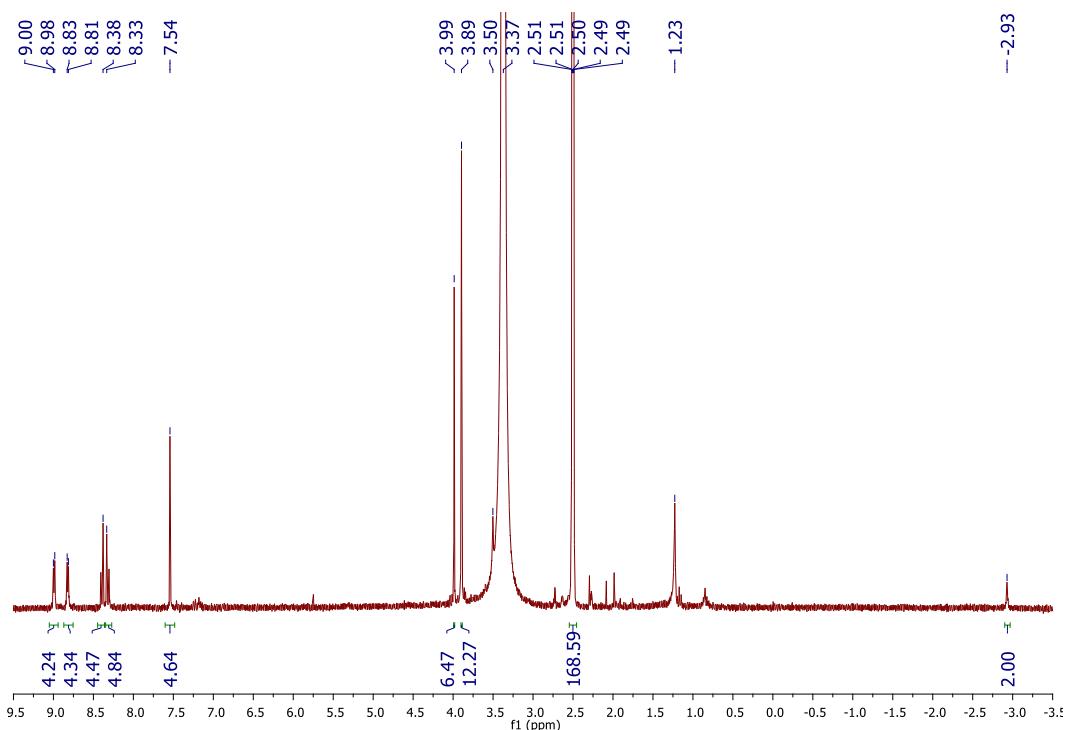


Figure S8. ^1H -NMR (CDCl_3) of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 trans.

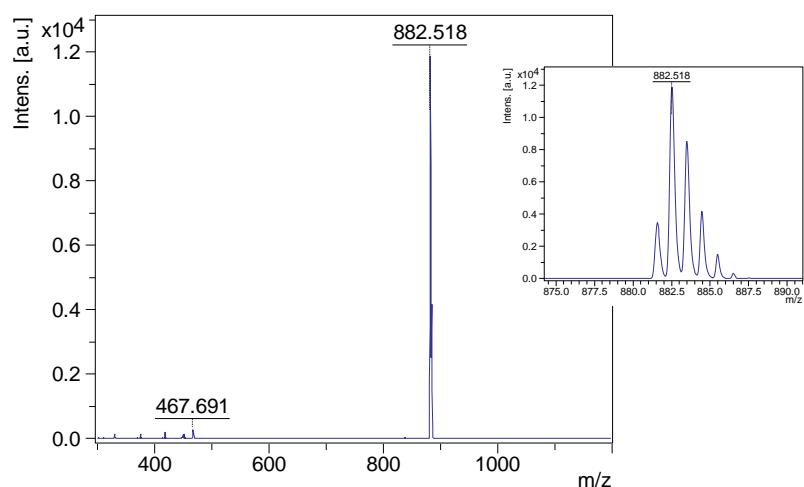


Figure S9. HR-MS (MALDI-TOF) spectrum of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_2$ 2 trans.

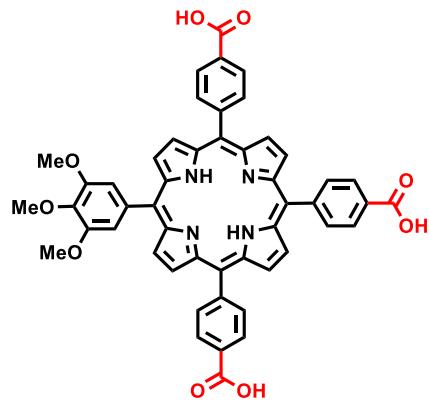


Figure S10. Molecular structure of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_3$ 3.

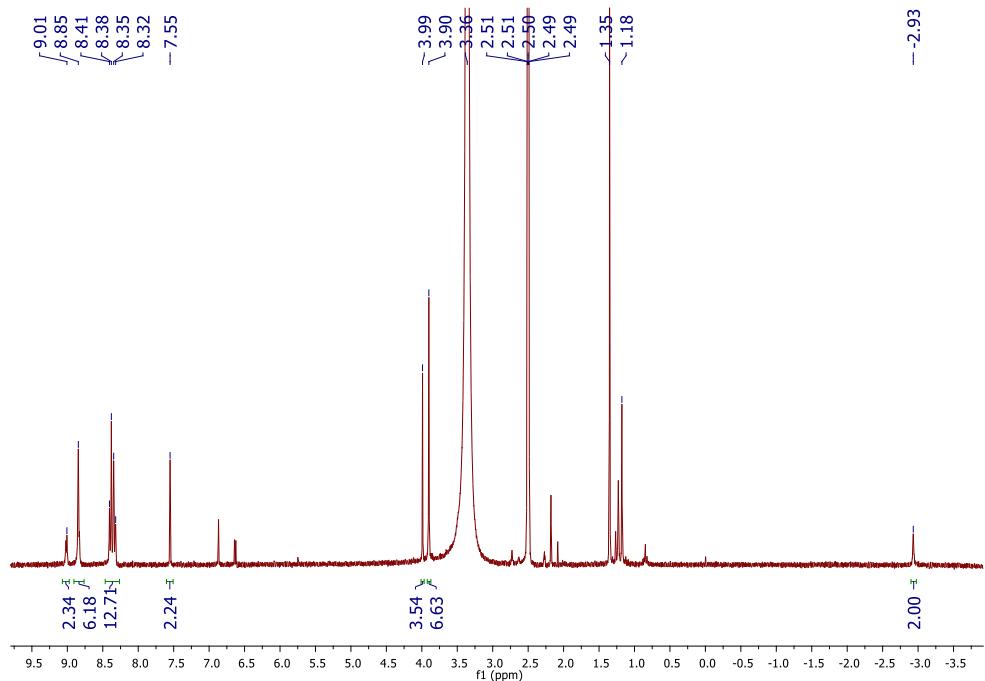


Figure S11. ^1H -NMR (CDCl_3) of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_3$ 3.

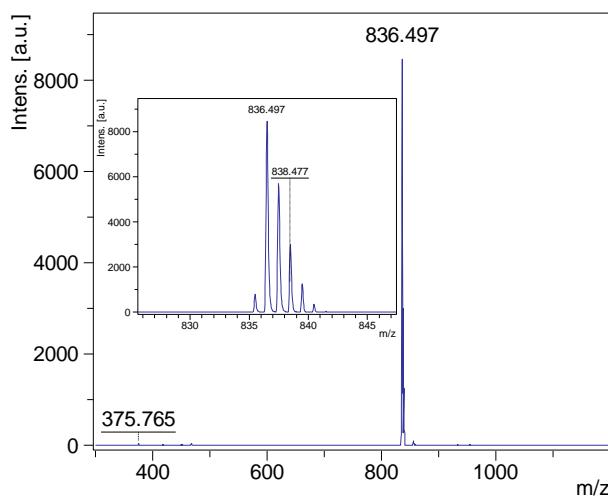


Figure S12. HR-MS (MALDI-TOF) spectrum of $\text{H}_2\text{P}-(\text{CO}_2\text{H})_3$ 3.

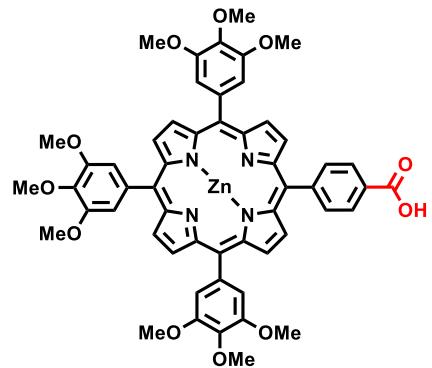


Figure S13. Molecular structure of ZnP-CO₂H 4.

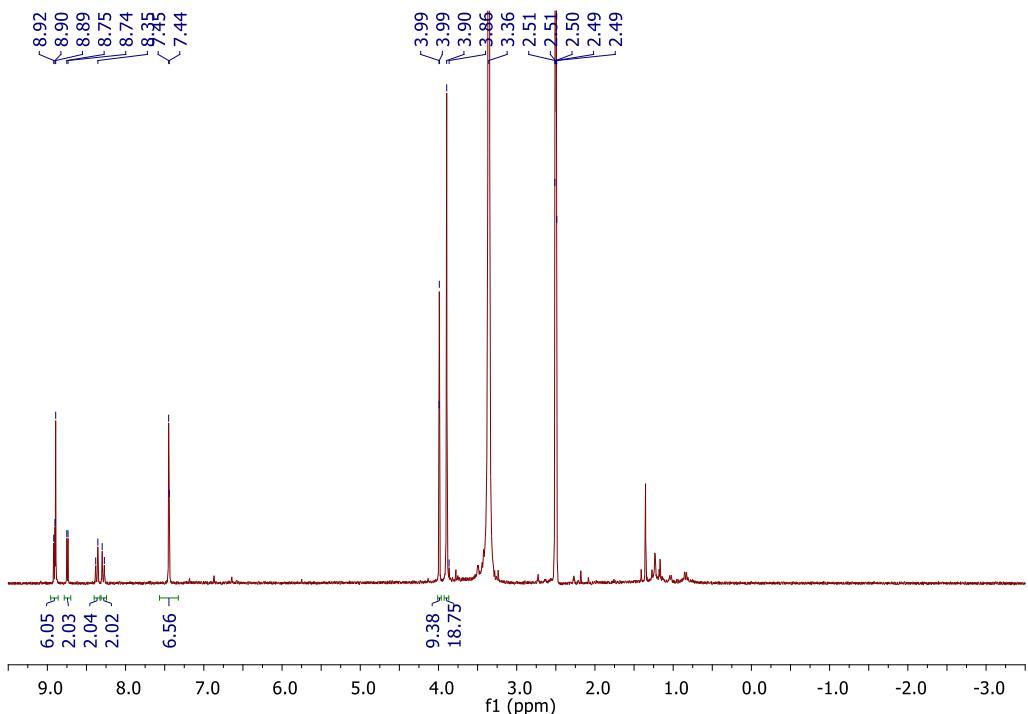


Figure S14. ¹H-NMR (CDCl₃) of ZnP-CO₂H 4.

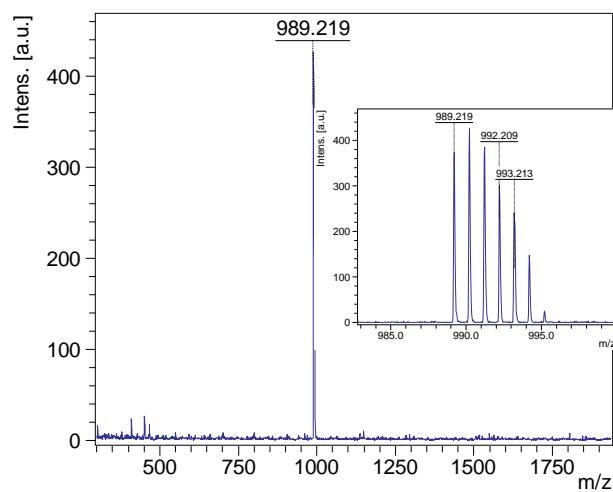


Figure S15. HR-MS (MALDI-TOF) spectrum of ZnP-CO₂H 4.

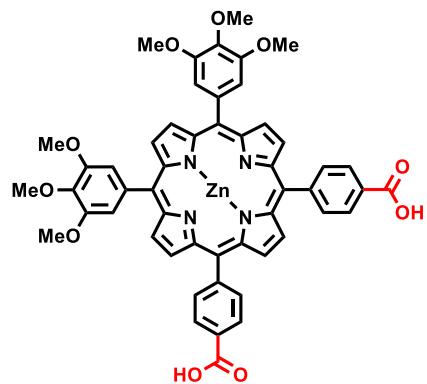


Figure S16. Molecular structure of ZnP-(CO₂H)₂ 5 cis.

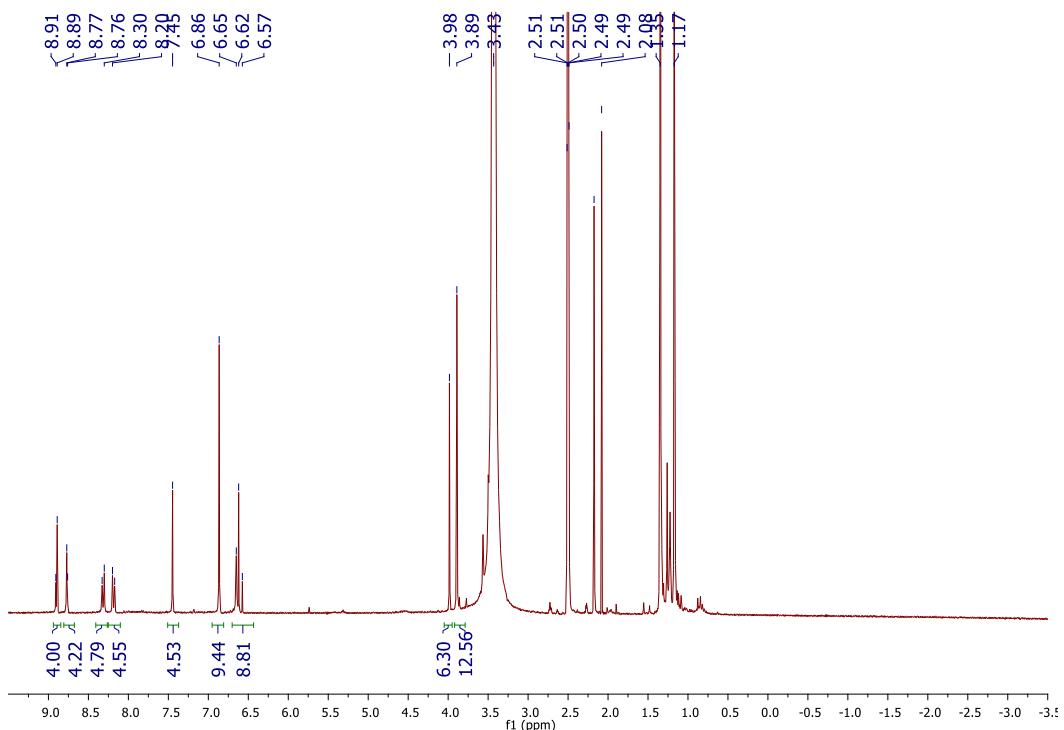


Figure S17. ^1H -NMR (CDCl_3) of $\text{ZnP-(CO}_2\text{H)}_2$ 5 cis.

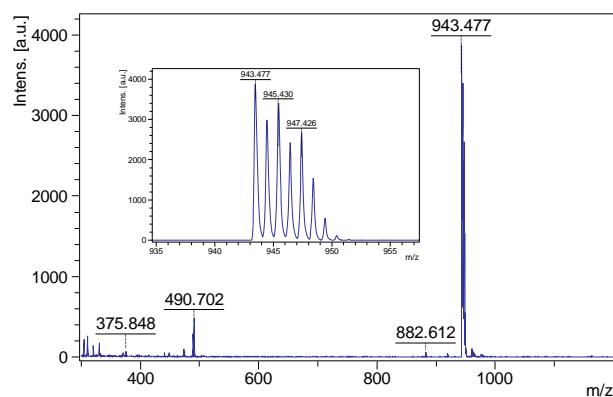


Figure S18. HR-MS (MALDI-TOF) spectrum of ZnP-(CO₂H)₂ 5 cis.

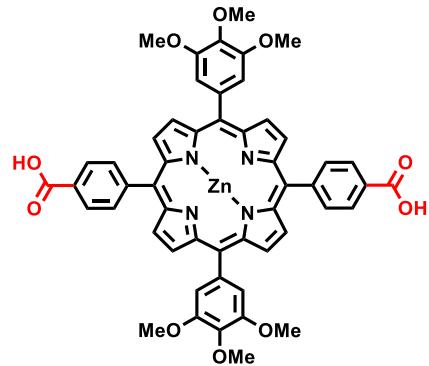


Figure S19. Molecular structure of $\text{ZnP}-(\text{CO}_2\text{H})_2$ 5 trans.

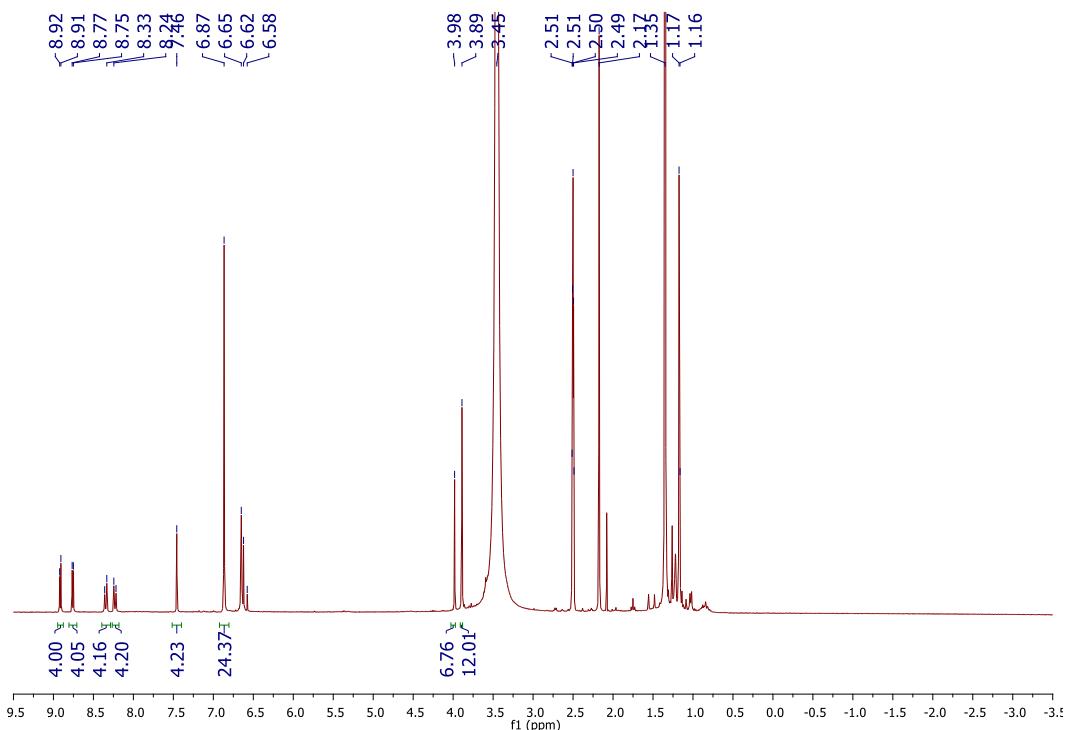


Figure S20. ^1H -NMR (CDCl_3) of $\text{ZnP}-(\text{CO}_2\text{H})_2$ 5 trans.

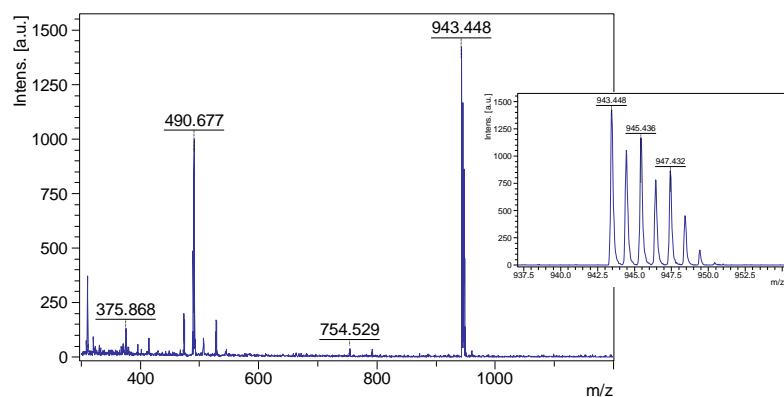


Figure S21. HR-MS (MALDI-TOF) spectrum of $\text{ZnP}-(\text{CO}_2\text{H})_2$ 5 trans.

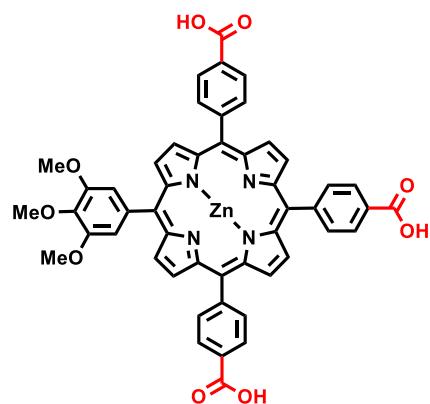


Figure S22. Molecular structure of $\text{ZnP}-(\text{CO}_2\text{H})_3$ 6.

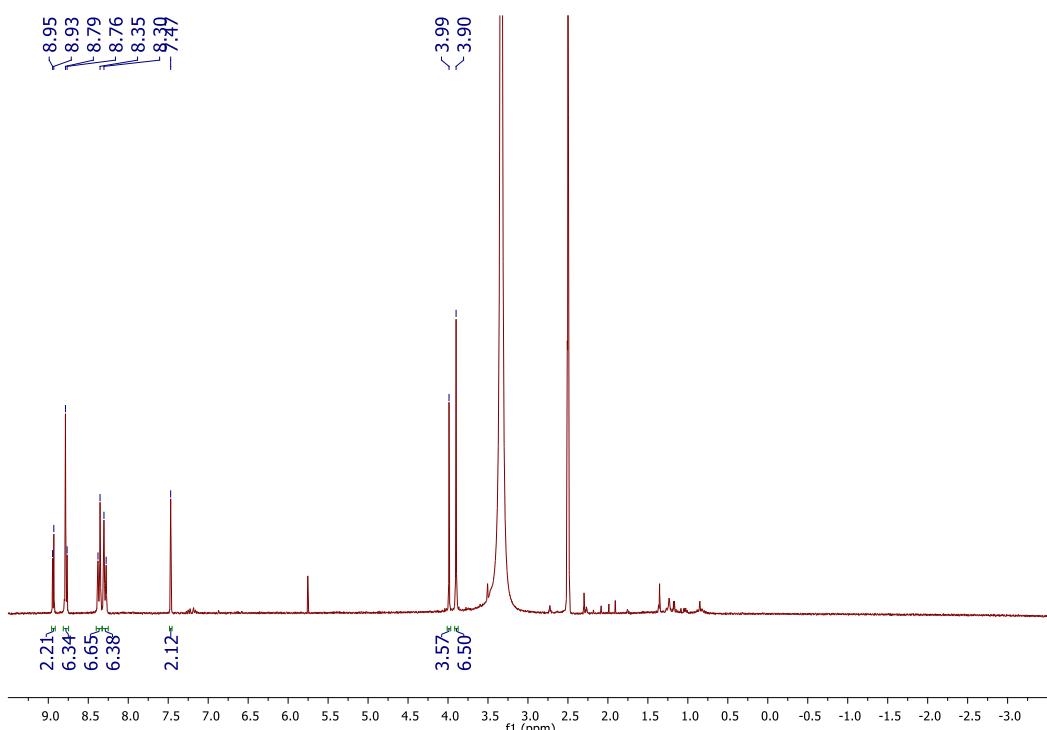


Figure S23. ^1H -NMR (CDCl_3) of $\text{ZnP}-(\text{CO}_2\text{H})_3$ 6.

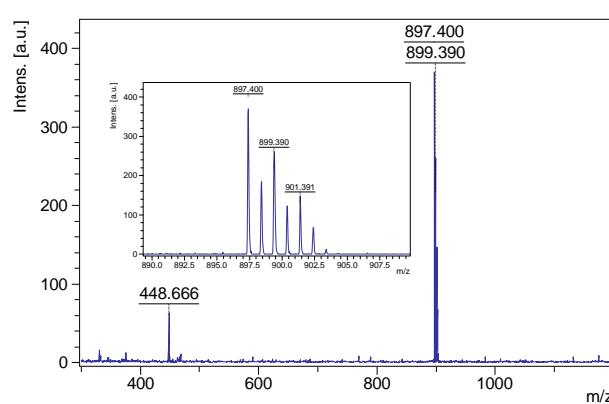


Figure S24. HR-MS (MALDI-TOF) spectrum of $\text{ZnP}-(\text{CO}_2\text{H})_3$ 6.

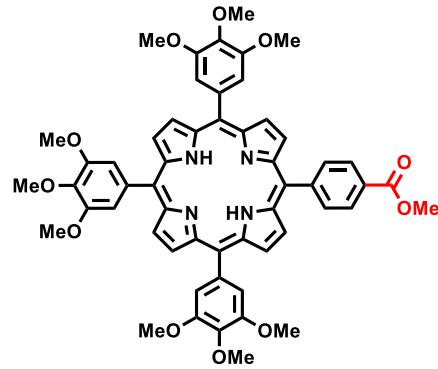


Figure S25. Molecular structure of H₂P-CO₂Me 7.

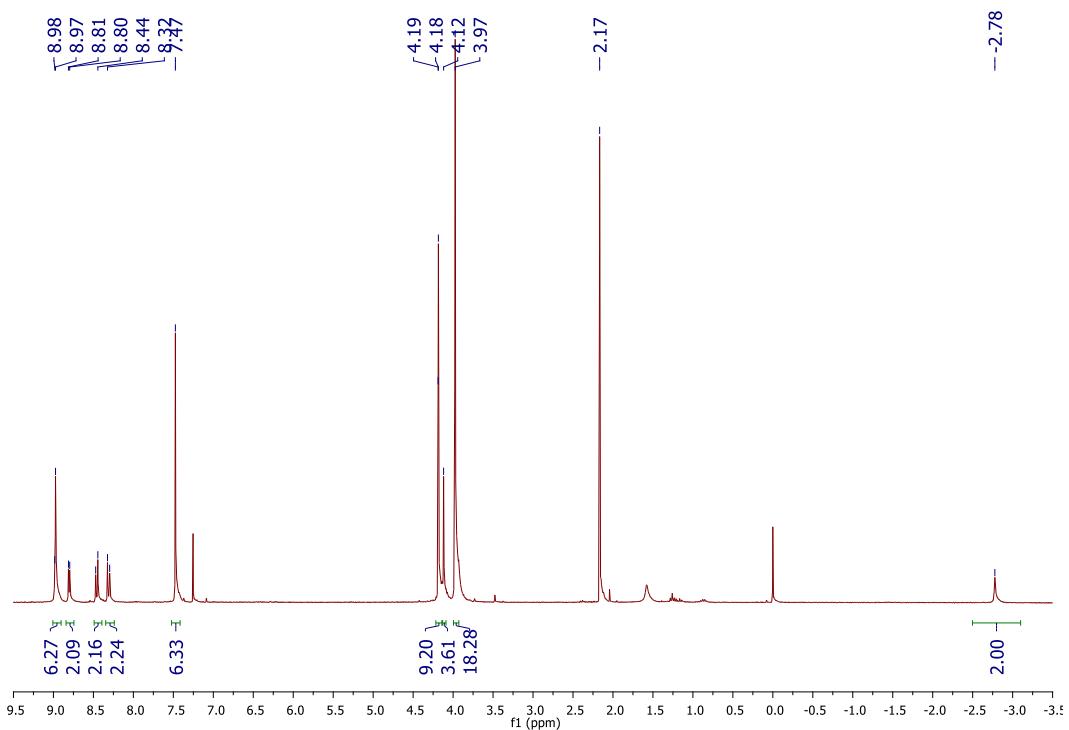


Figure S26. ¹H-NMR (CDCl₃) of H₂P-CO₂Me 7.

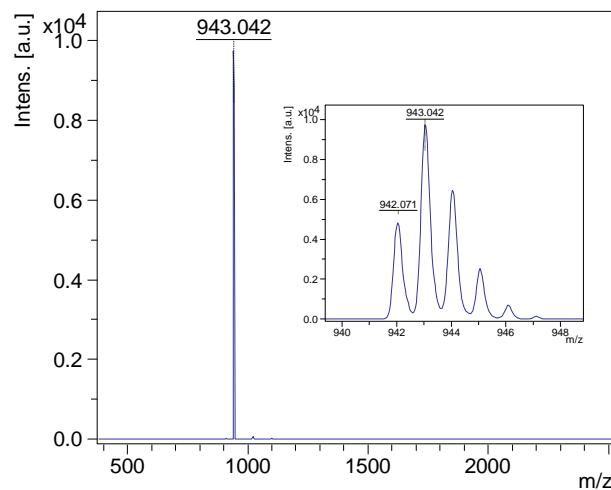


Figure S27. HR-MS (MALDI-TOF) spectrum of H₂P-CO₂Me 7.

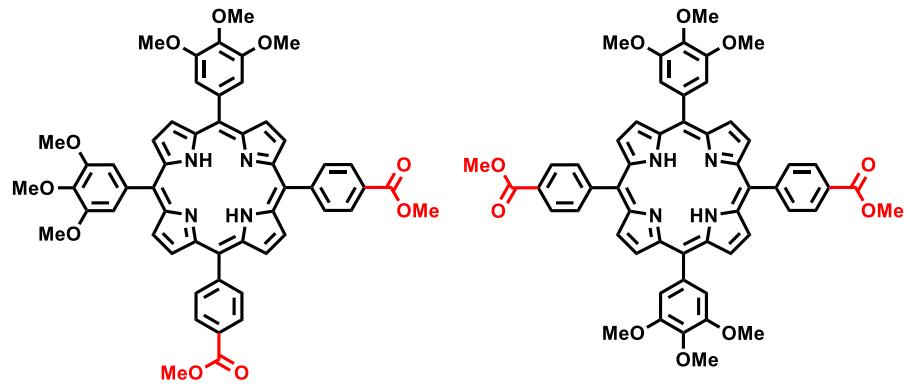


Figure S28. Molecular structure of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_2$ 8, mixture of isomers.

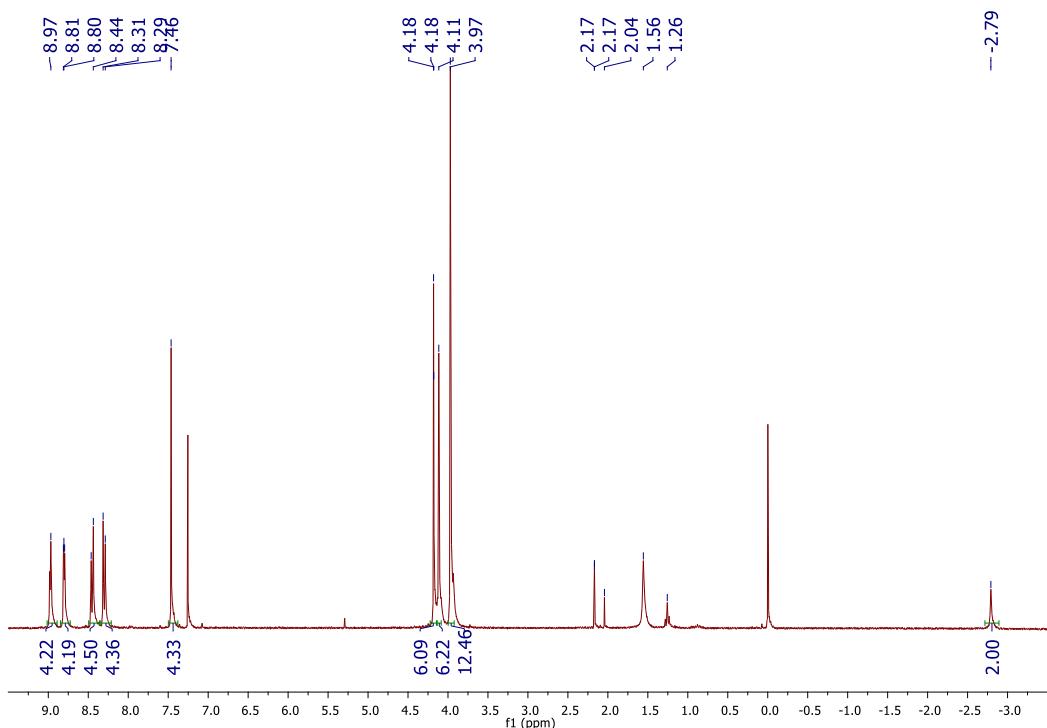


Figure S29. ^1H -NMR (CDCl_3) of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_2$ 8, mixture of isomers.

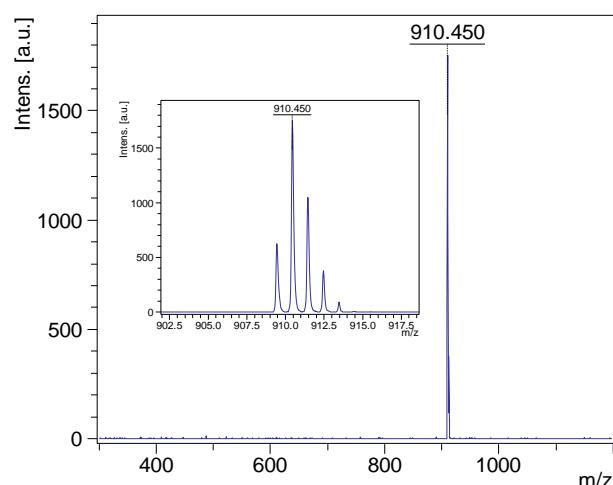


Figure S30. HR-MS (MALDI-TOF) spectrum of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_2$ 8, mixture of isomers.

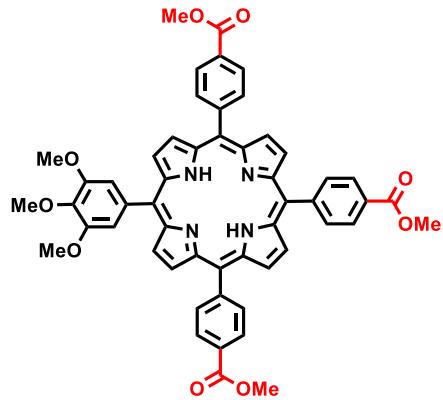


Figure S31. Molecular structure of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_3$ 9.

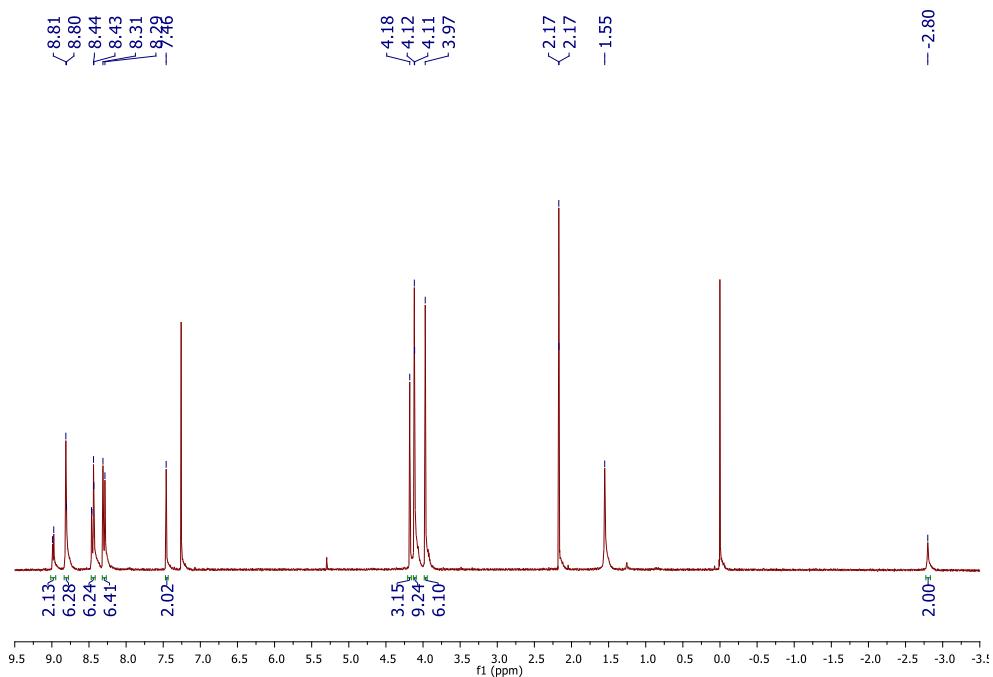


Figure S32. ^1H -NMR (CDCl_3) of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_3$ 9.

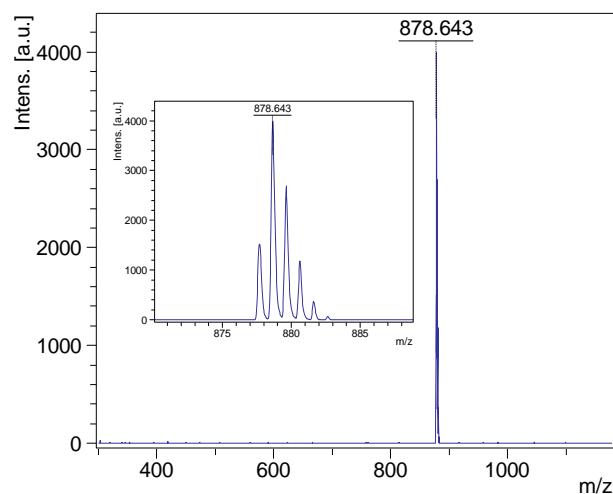


Figure S33. HR-MS (MALDI-TOF) spectrum of $\text{H}_2\text{P}-(\text{CO}_2\text{Me})_3$ 9.



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