Supplementary Materials: Synthesis of 5,10-bis(Trifluoromethyl) Substituted β-Octamethylporphyrins and Central-Metal-Dependent Solvolysis of their *meso*-trifluoromethyl Groups

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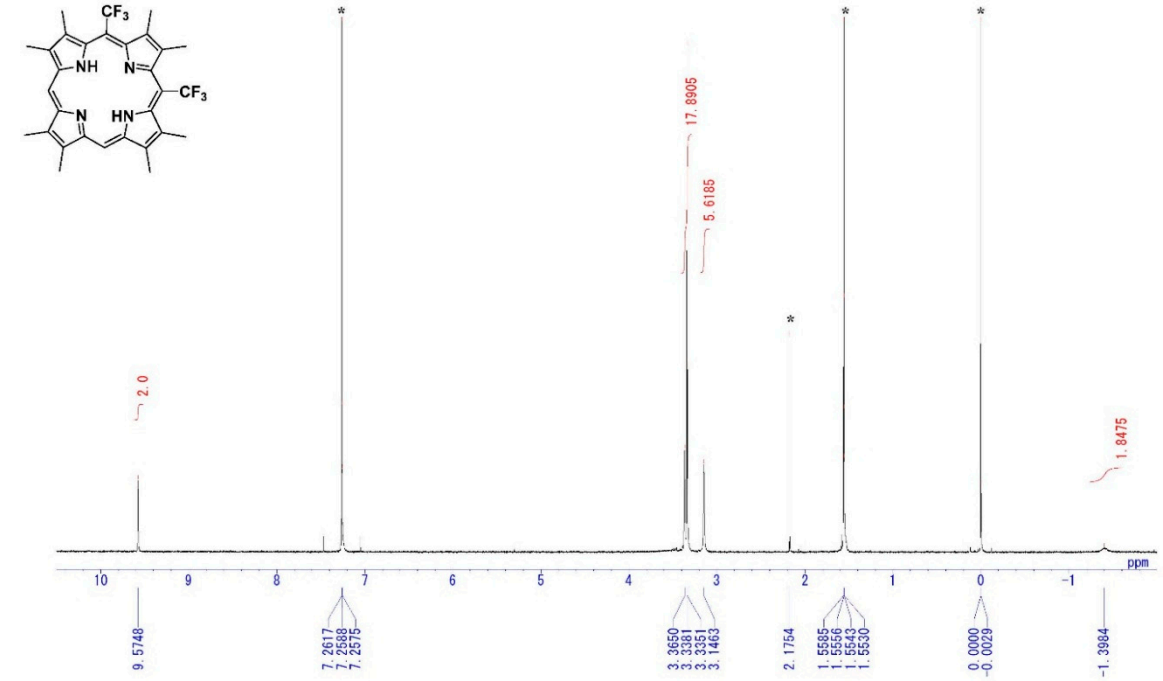


Figure S1. ^{1}H NMR spectrum of **9** in$CDCl_3$. *: solvent and impurity.

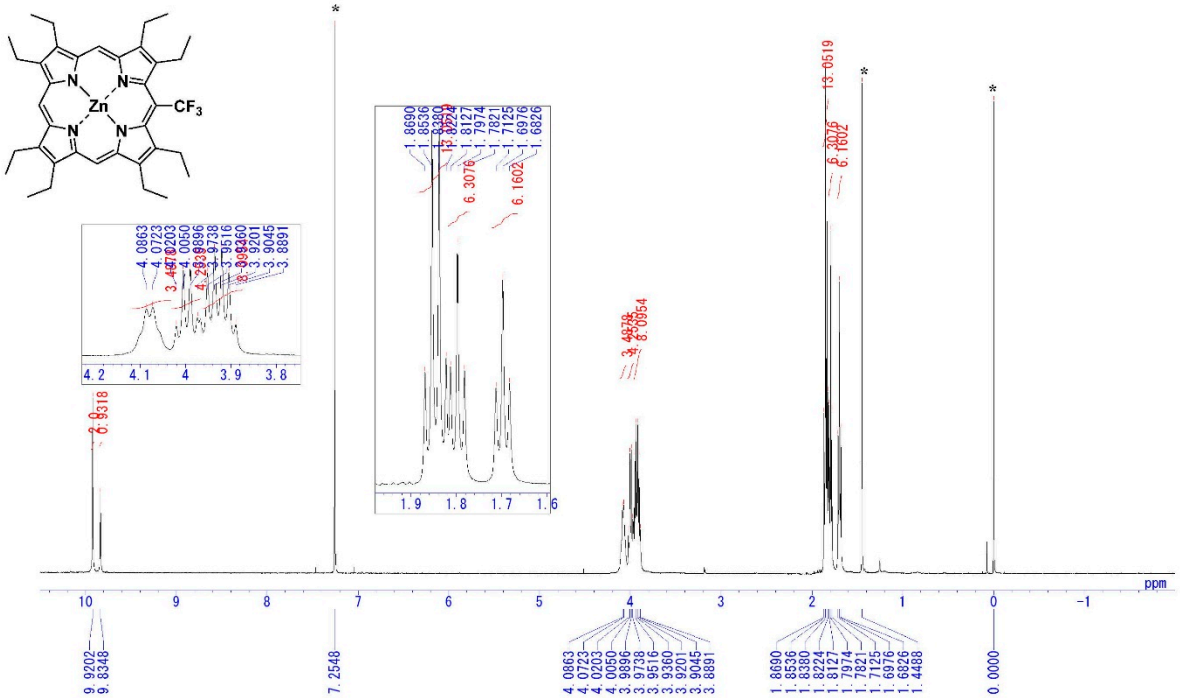


Figure S2. ^{1}H NMR spectrum of **7Zn** in$CDCl_3$. *: solvent and impurity.

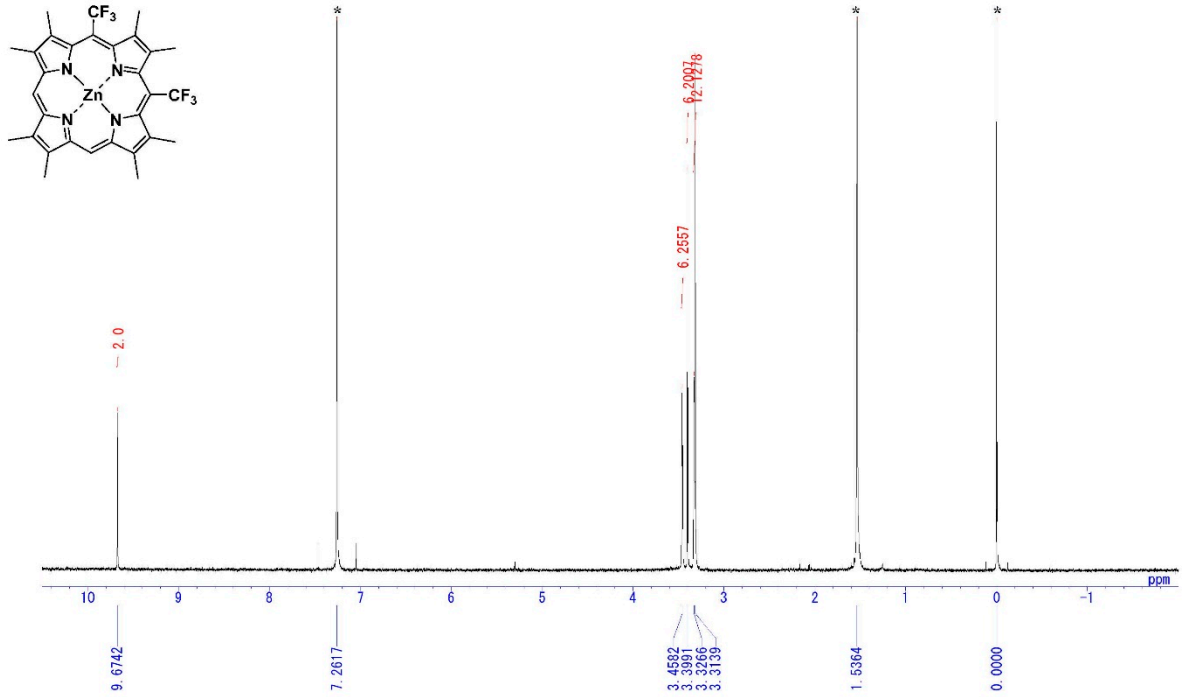


Figure S3. ^{1}H NMR spectrum of **9Zn** in$CDCl_3$. *: solvent and impurity.

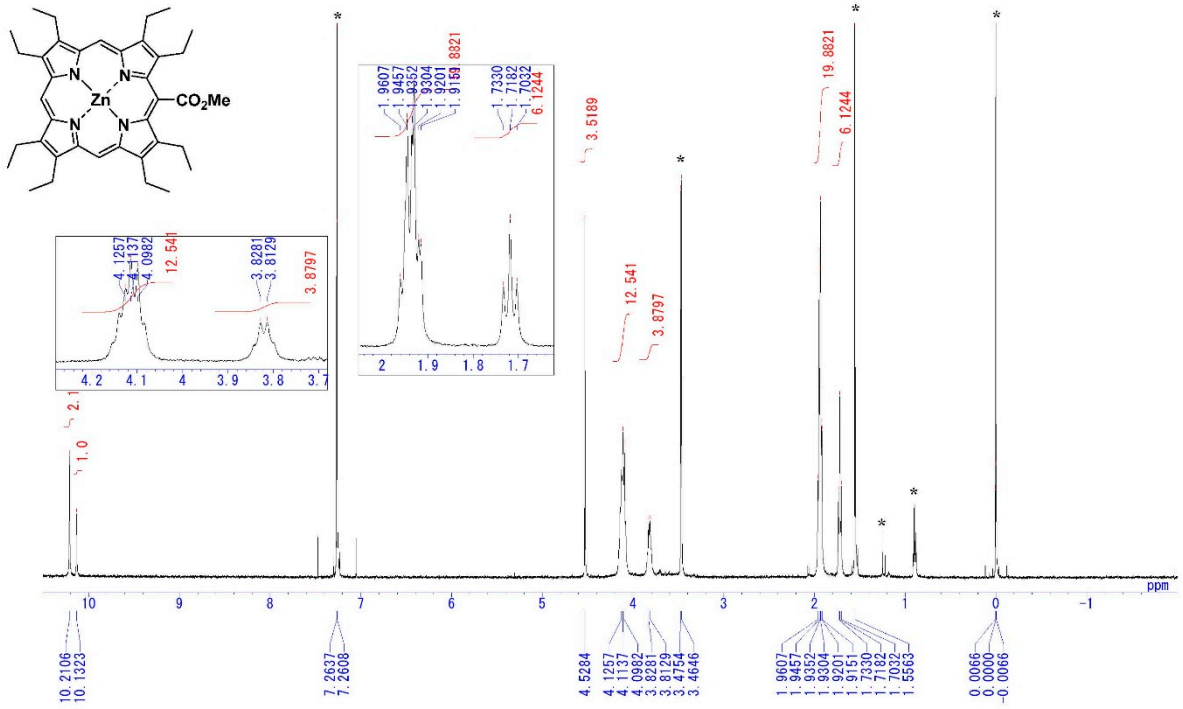


Figure S4. ^{1}H NMR spectrum of **11Zn** in$CDCl_3$. *: solvent and impurity.

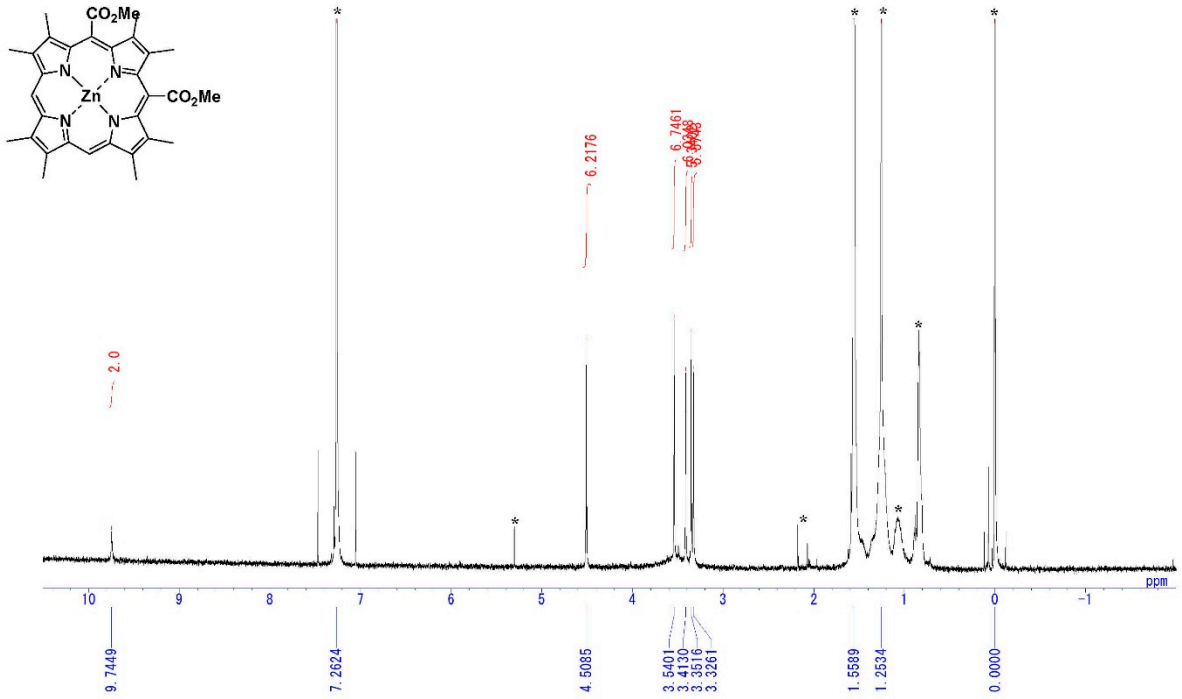


Figure S5. ^{1}H NMR spectrum of **12Zn** in$CDCl_3$. *: solvent and impurity.

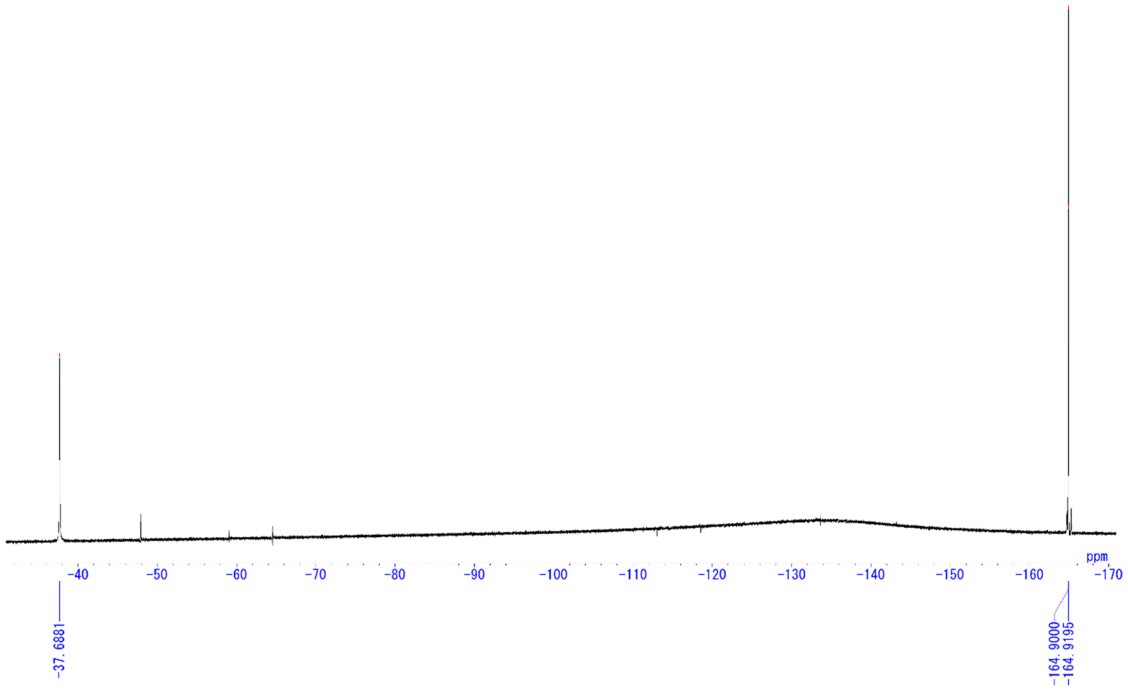


Figure S6. ^{19}F NMR spectrum of **9** in$CDCl_3$.

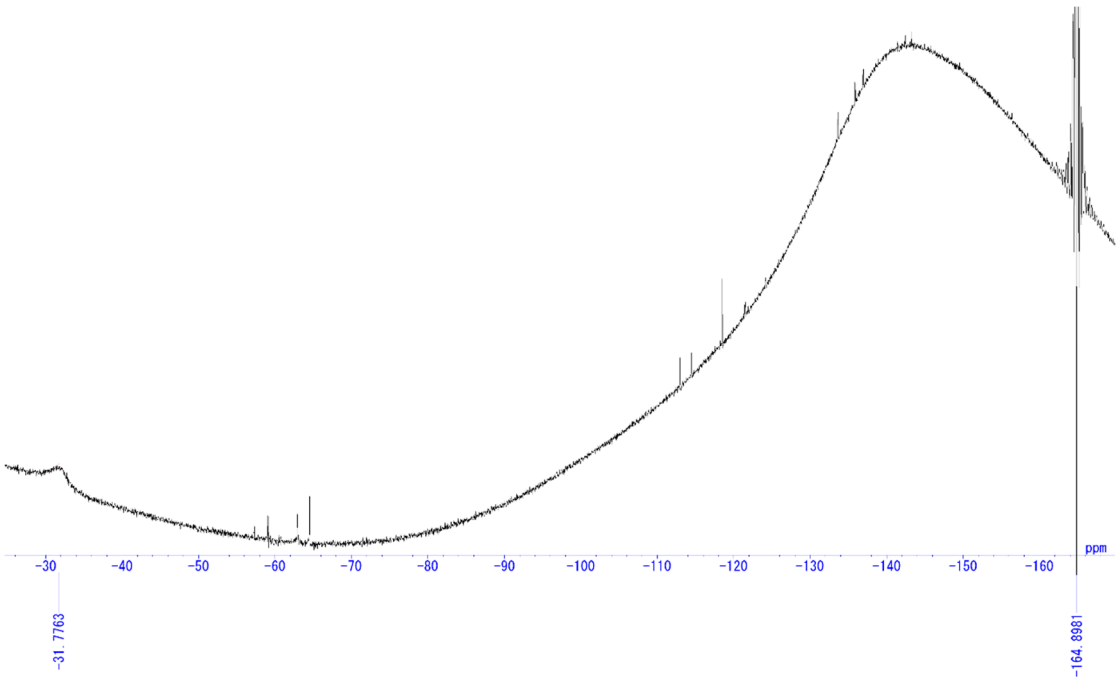


Figure S7. ^{19}F NMR spectrum of **7Zn** in$CDCl_3$.

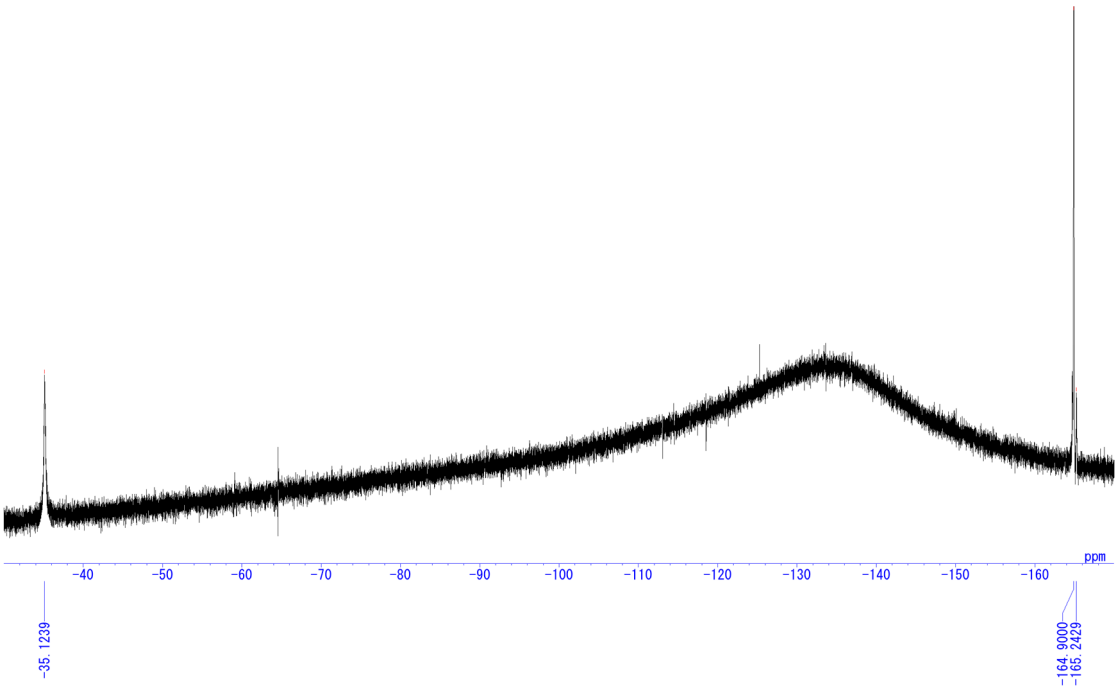


Figure S8. ^{19}F NMR spectrum of **9Zn** in$CDCl_3$.

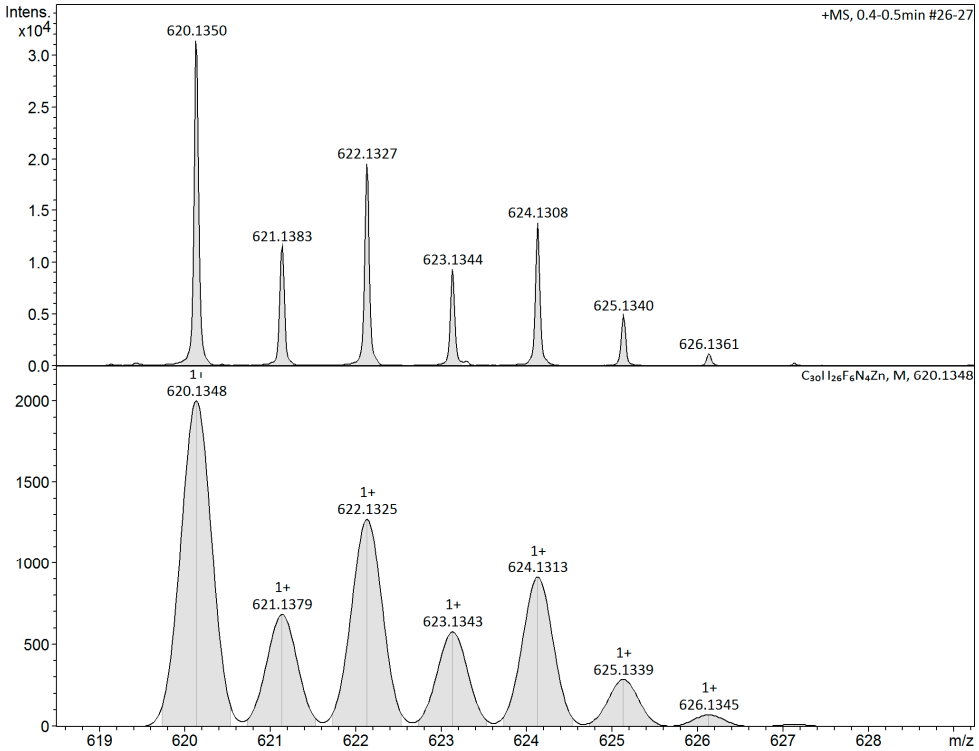


Figure S9. HR-ESI mass spectrum of **9**. Upper: found, lower: calcd.

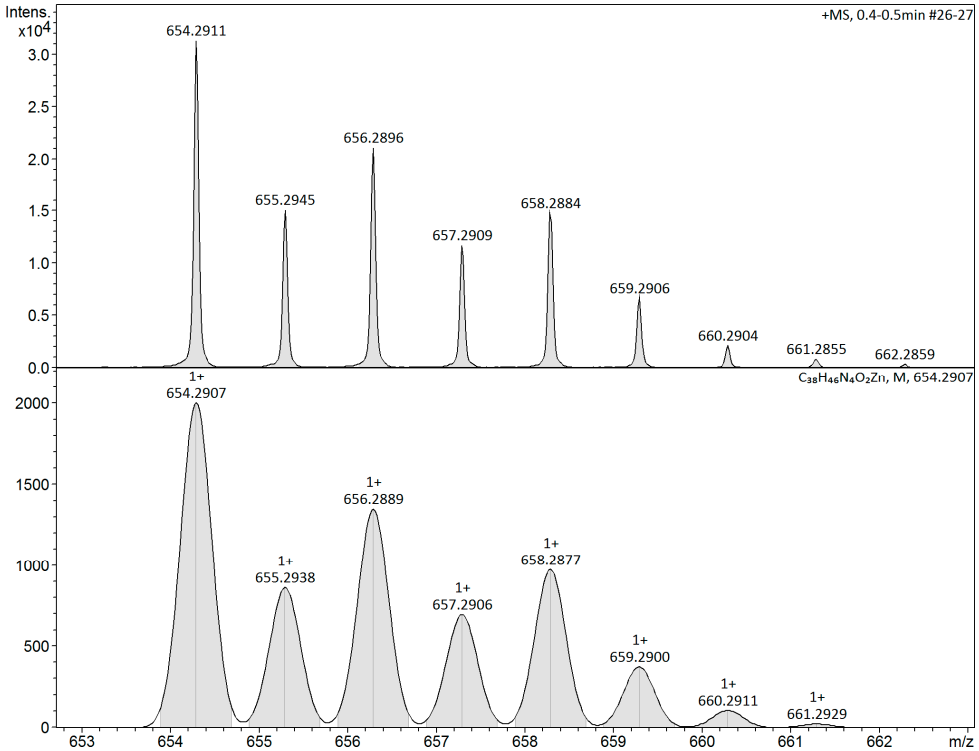


Figure S10. HR-ESI mass spectrum of **7Zn**. Upper: found, lower: calcd.

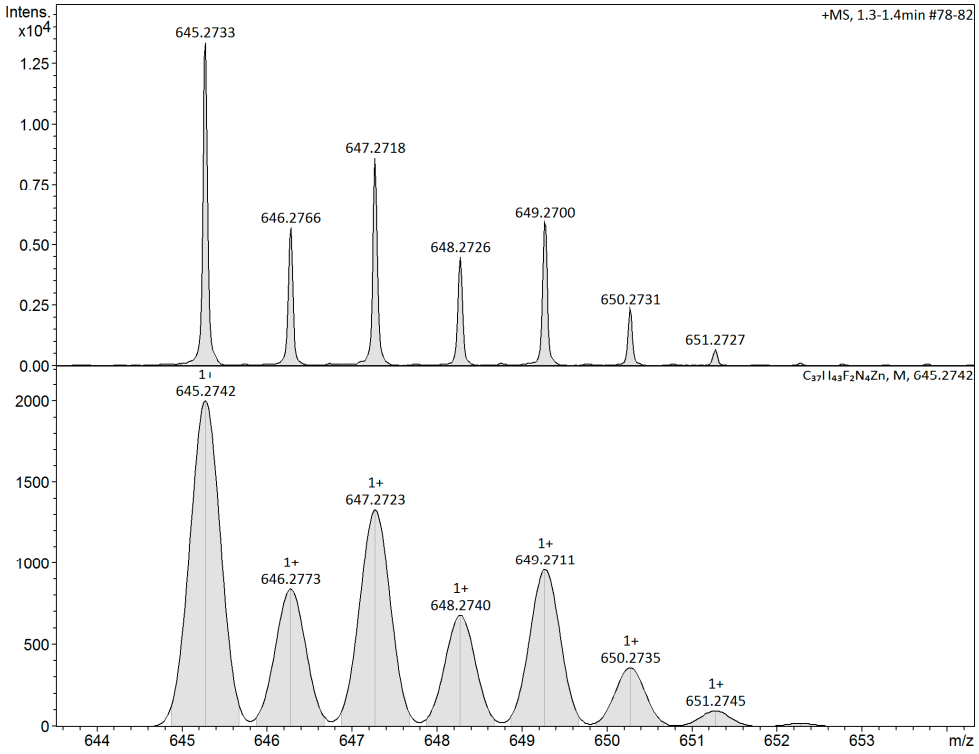


Figure S11. HR-ESI mass spectrum of **9Zn**. Upper: found, lower: calcd.

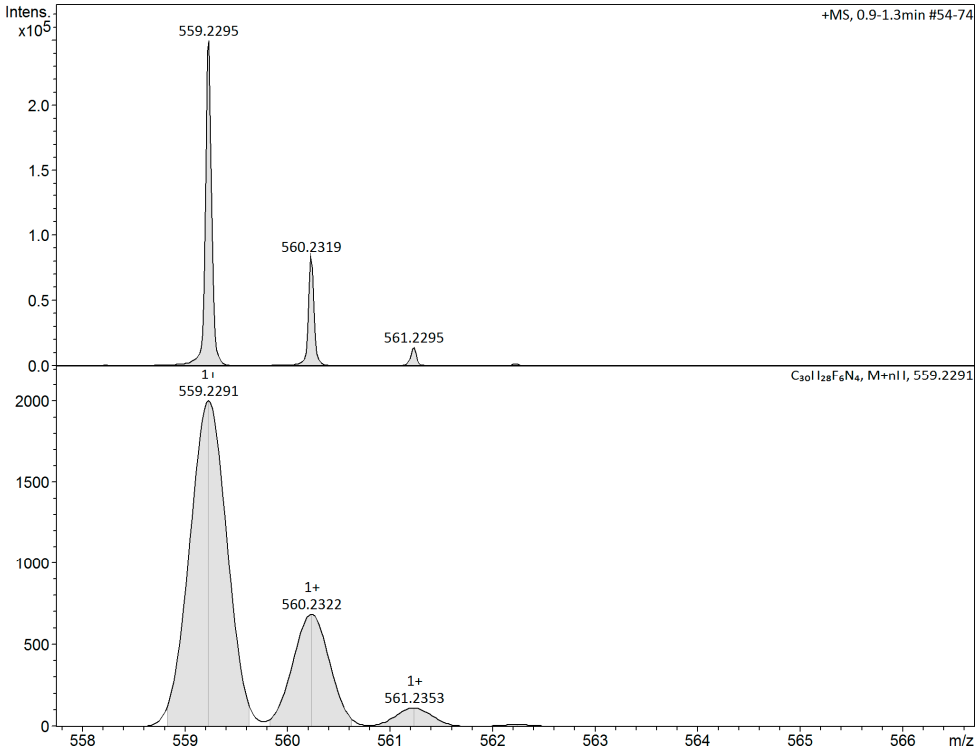


Figure S12. HR-ESI mass spectrum of **11Zn**. Upper: found, lower: calcd.

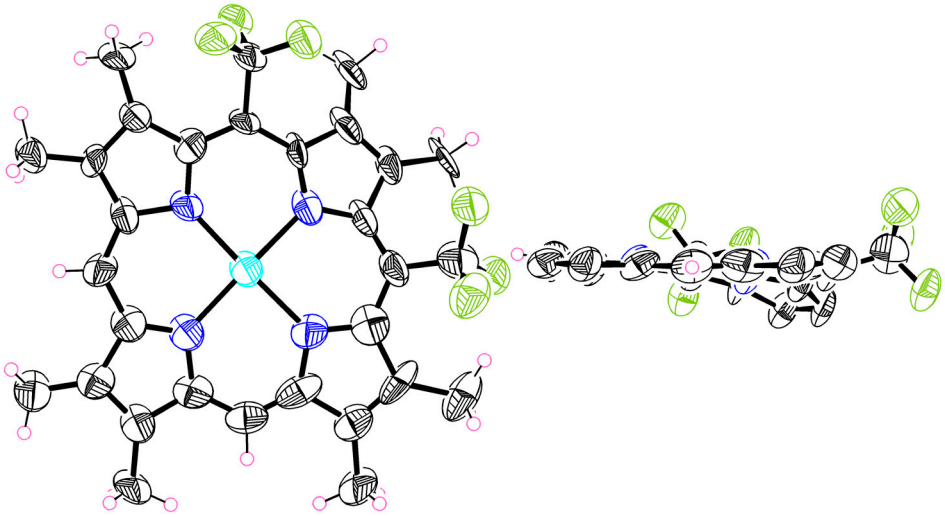


Figure S13. Preliminary crystal structure of **9Zn**. Left: top view; right: side view. The *β*–methyl substituents are omitted for clarity in the side view. Thermal ellipsoids are set at the 50% probability level.

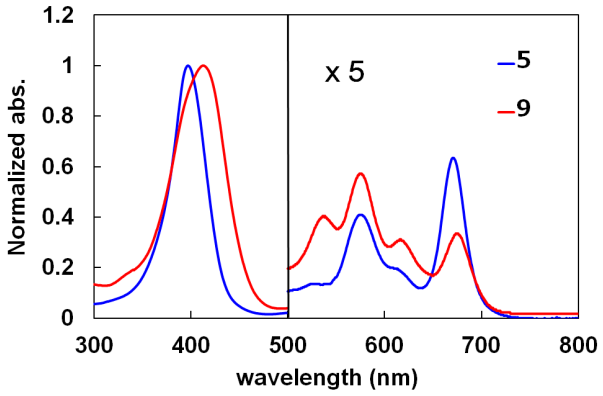
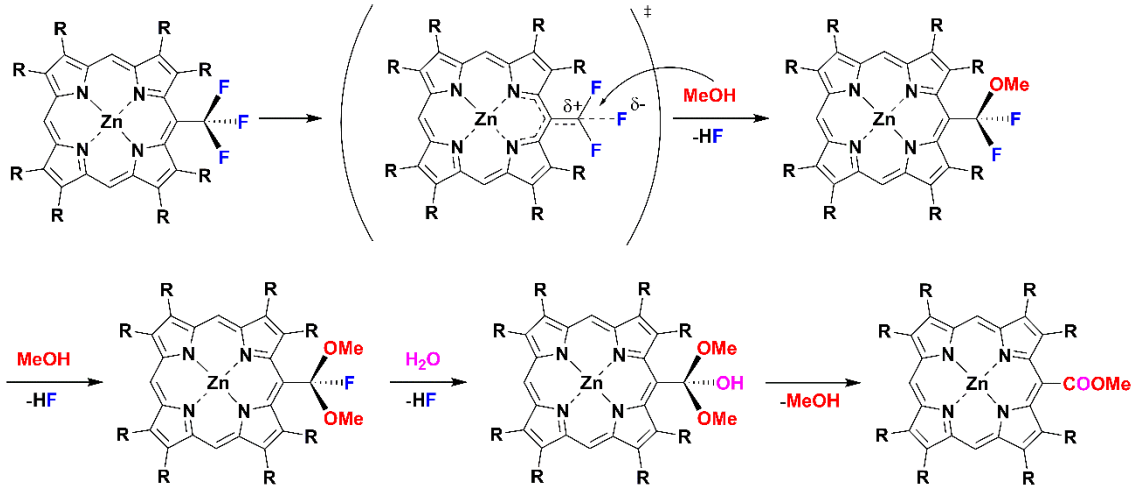


Figure S14. Comparison between UV-vis spectrum of **5** and that of **9** in CH_2Cl_2.



Scheme S1. A proposed mechanism of solvolysis.