

Supporting information for

Synthesis, photophysical properties, and toxicity of o-xylene-bridged porphyrin dimers

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^1H NMR-, ^{13}C NMR and mass-spectra of synthesized compounds **6-10** are illustrated below.

1. Compound **4**.

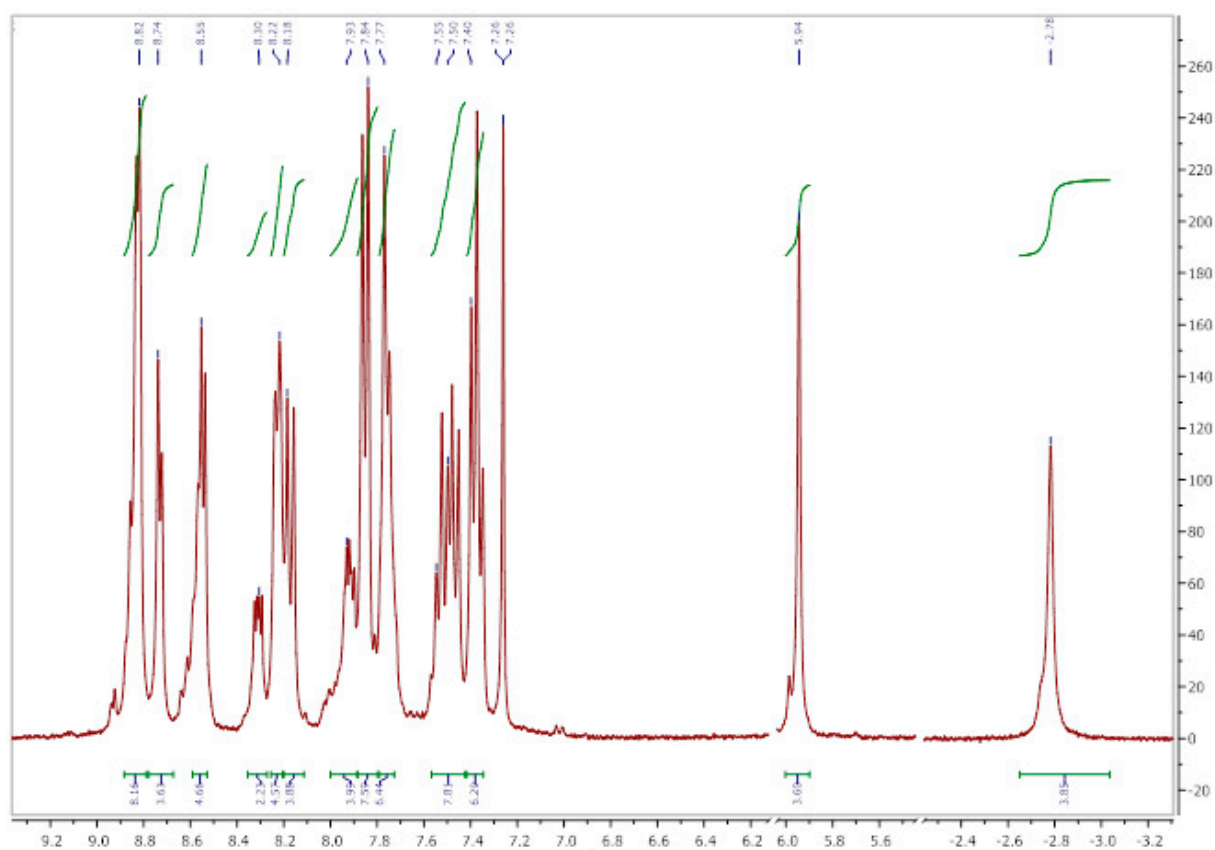
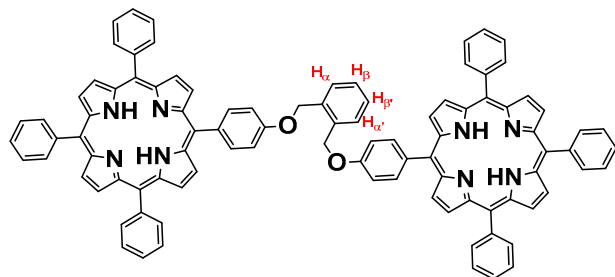


Figure S1. ^1H NMR of compound **4** in CDCl_3 at 298 K.

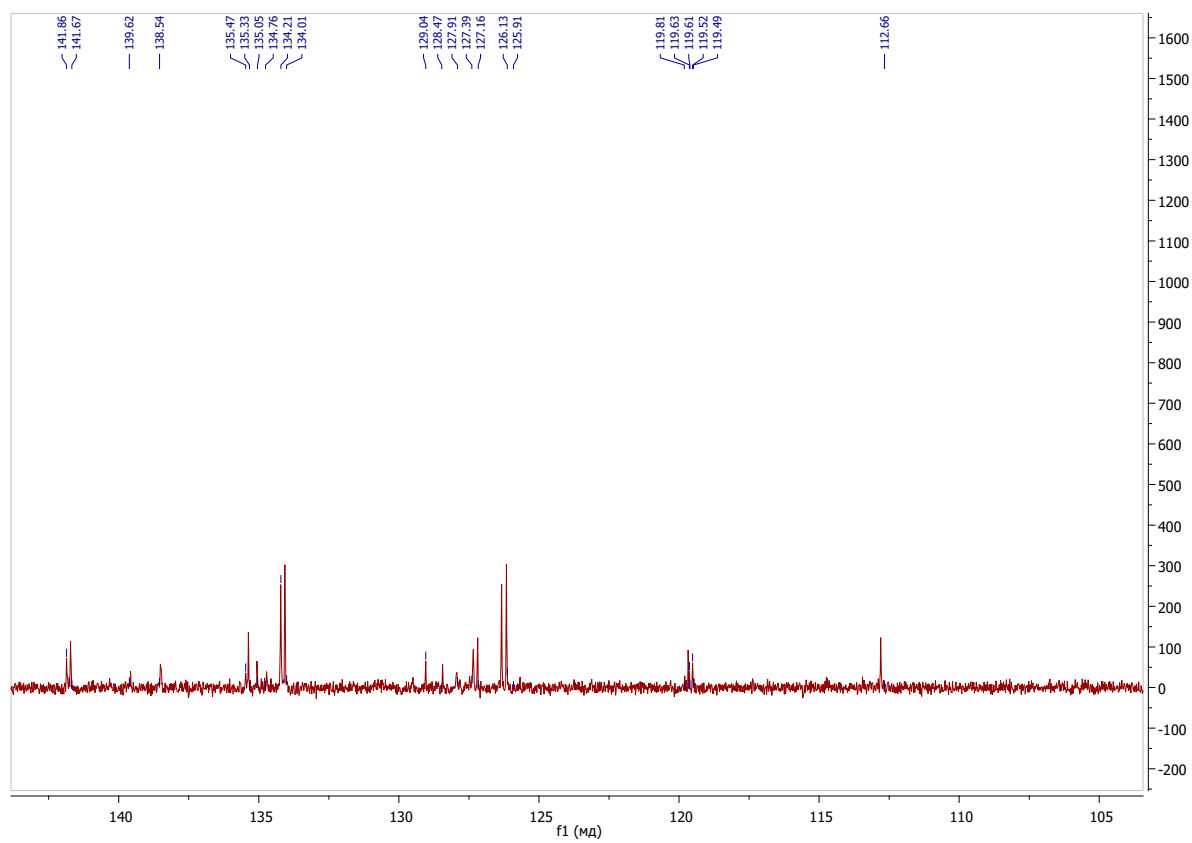


Figure S2. ¹³C NMR of compound **4** in CDCl₃.

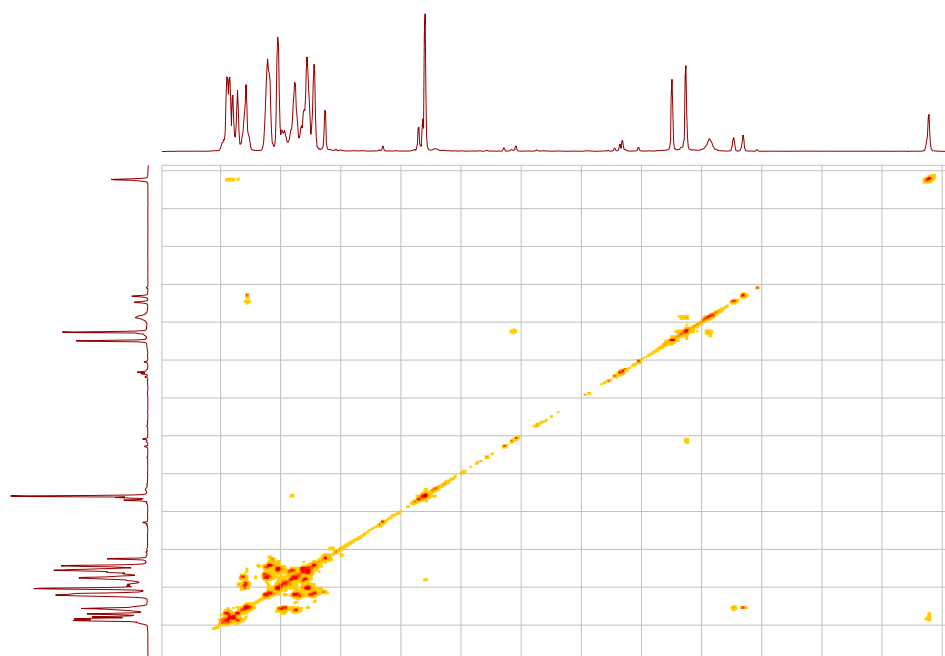


Figure S3. ^1H - ^1H COSY NMR of compound **4** in CDCl_3 .

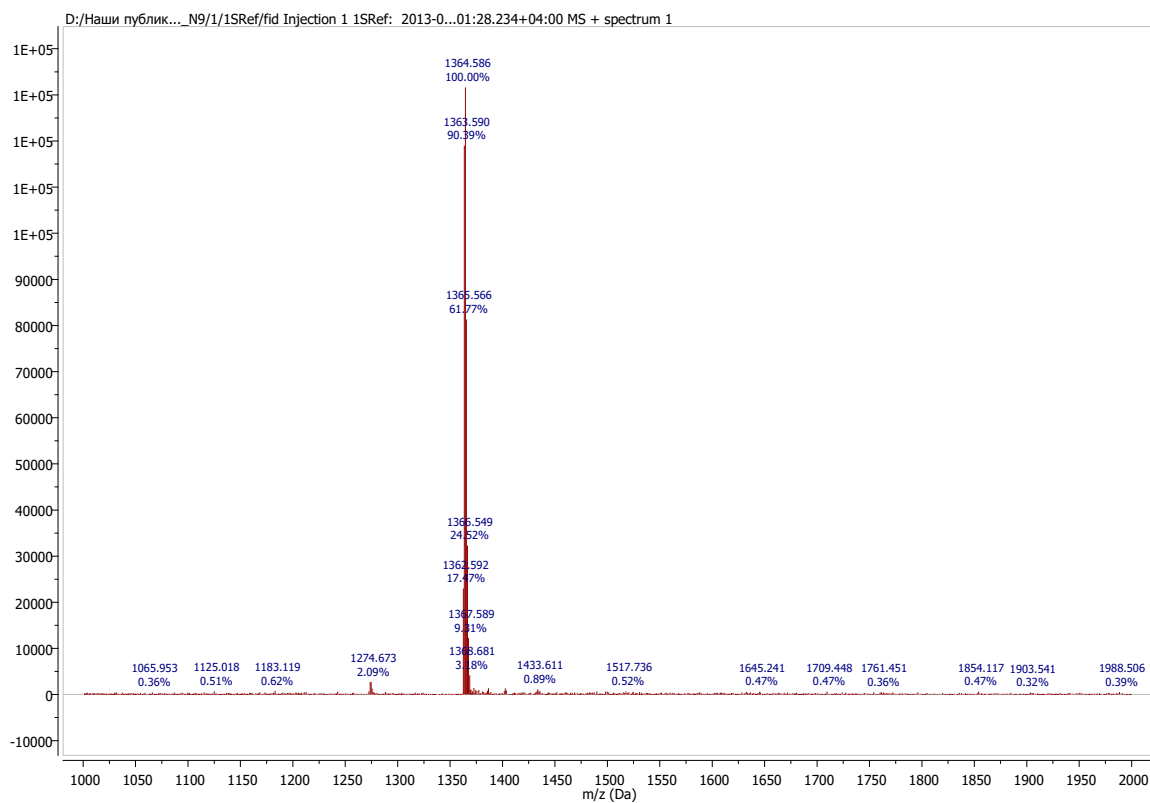
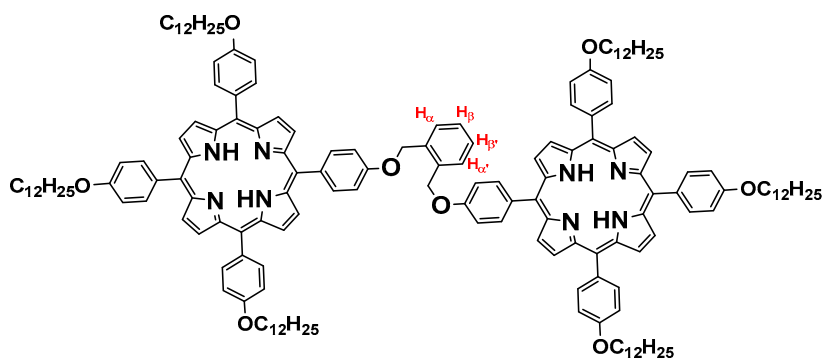


Figure S4. MALDI-TOF mass-spectrum of compound **4**.

2. Compound **5**.



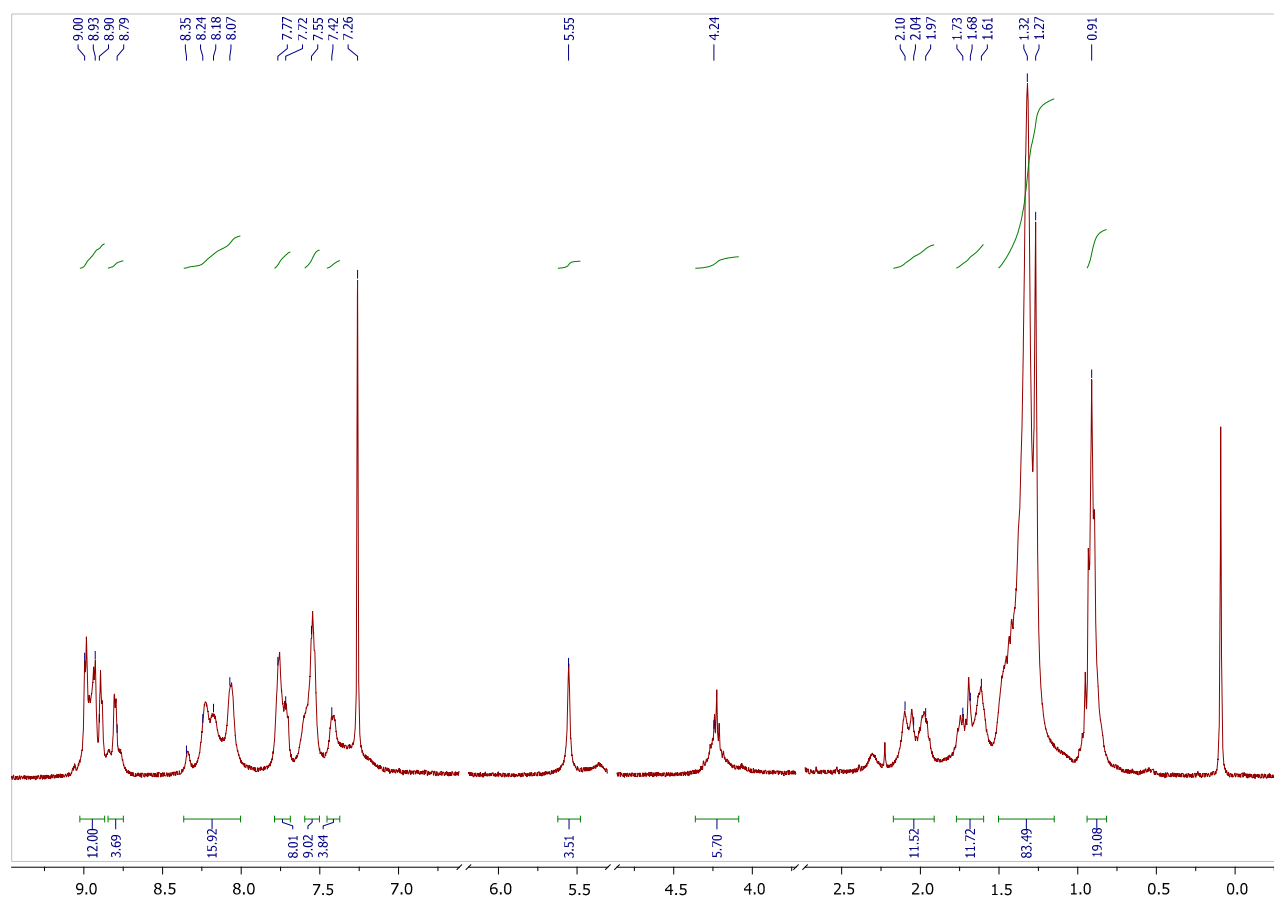


Figure S5. ¹H NMR of compound **5** in CDCl₃.

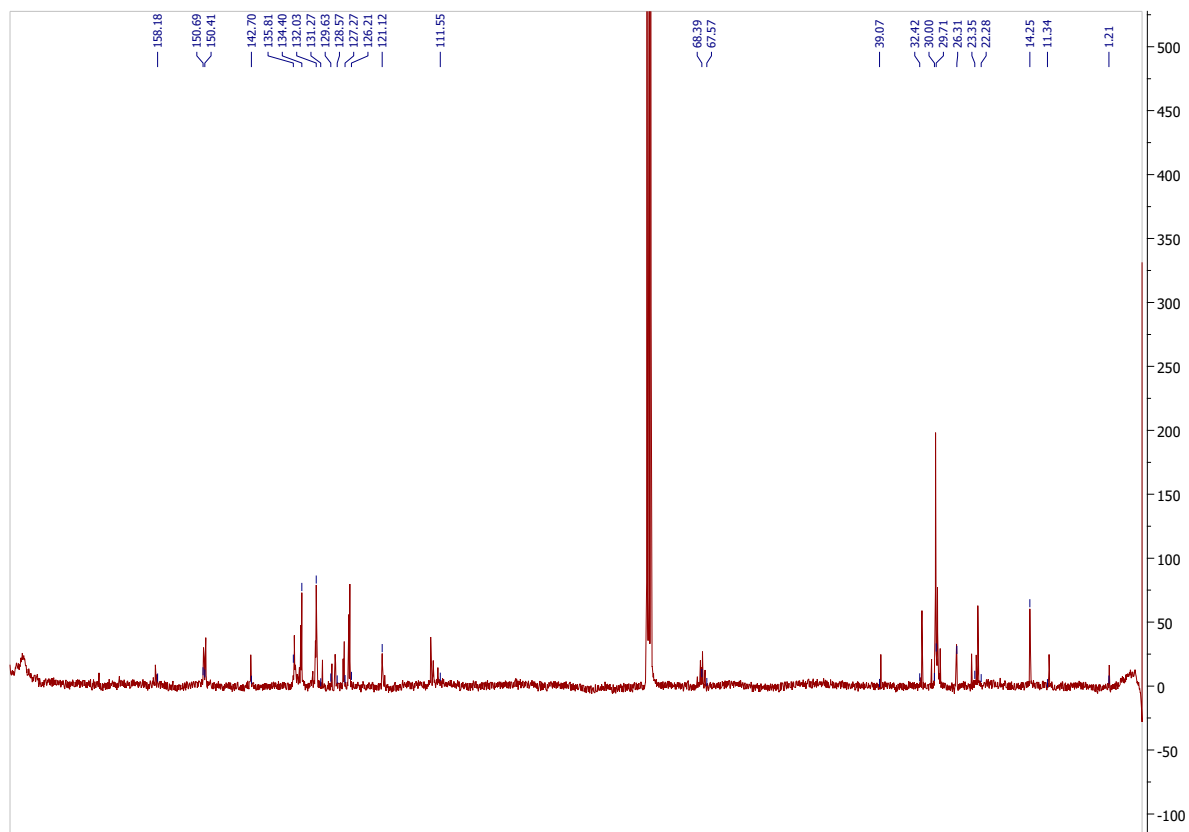


Figure S6. ¹³C NMR of compound **5** in CDCl₃.

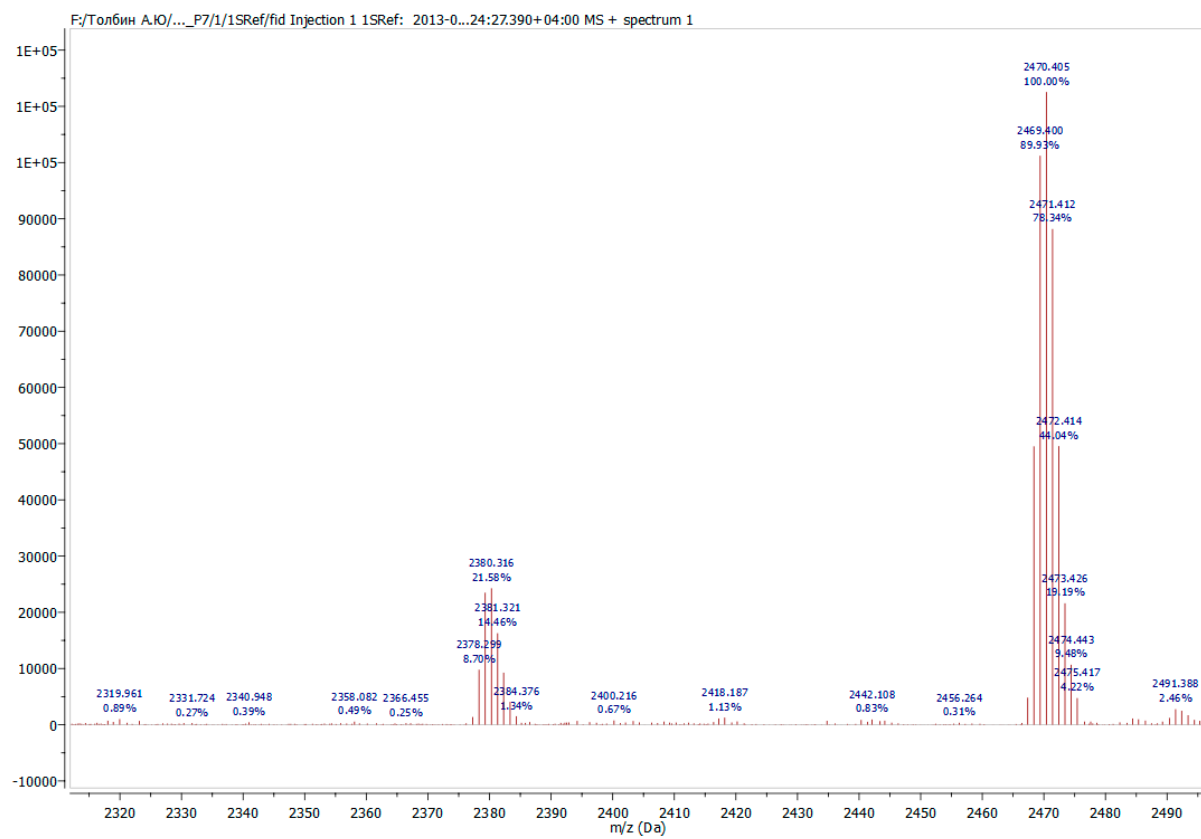
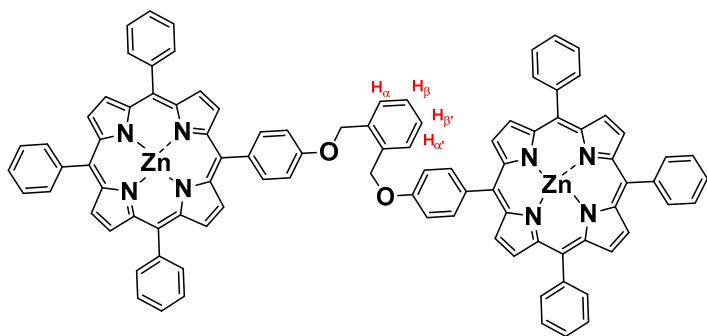


Figure S7. MALDI-TOF mass-spectrum of compound **5**.

3. Compound **4-Zn**.



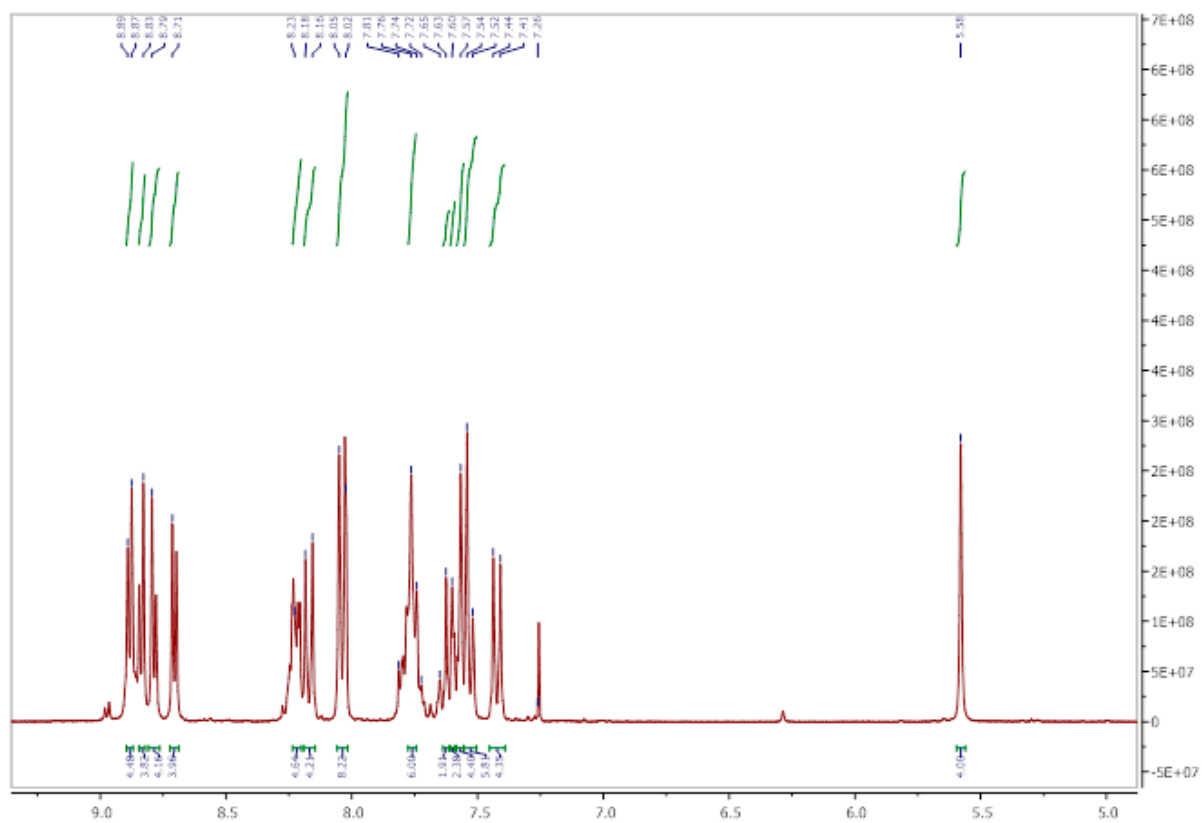


Figure S8. ^1H NMR of compound 4-Zn in CDCl_3 .

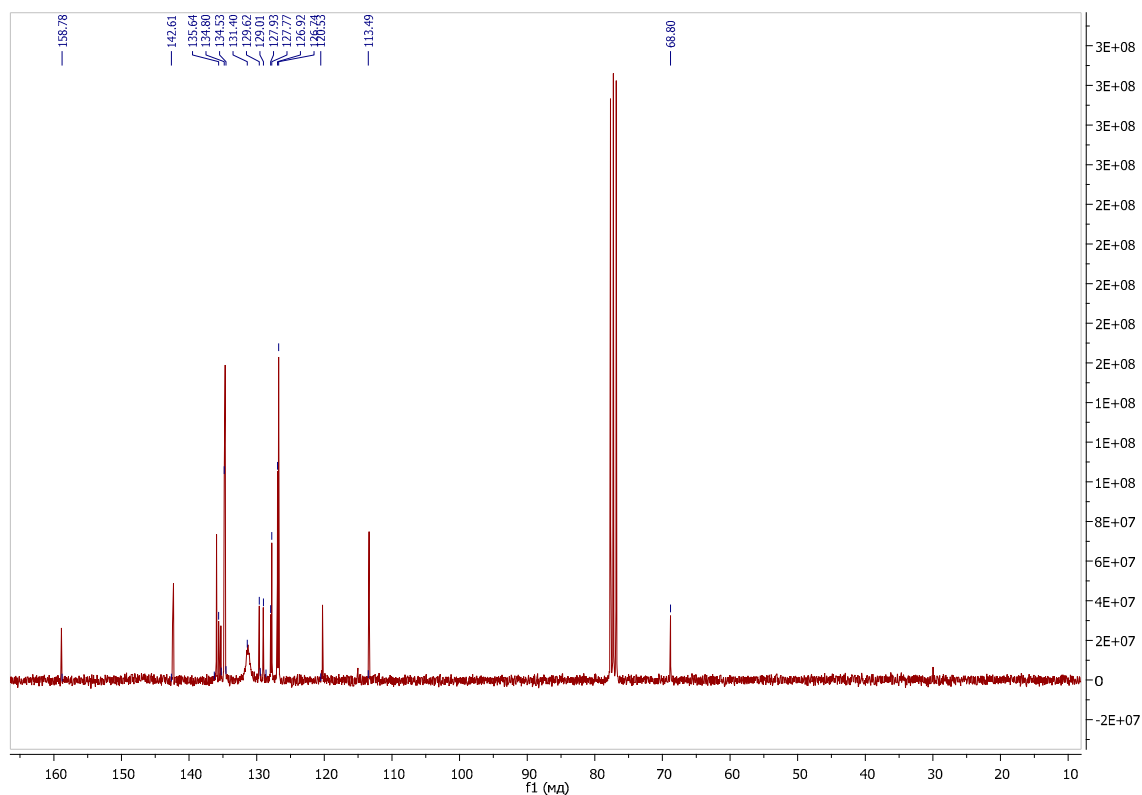


Figure S9. ^{13}C NMR of compound **4-Zn** in CDCl_3 .

Comment 1
Comment 2

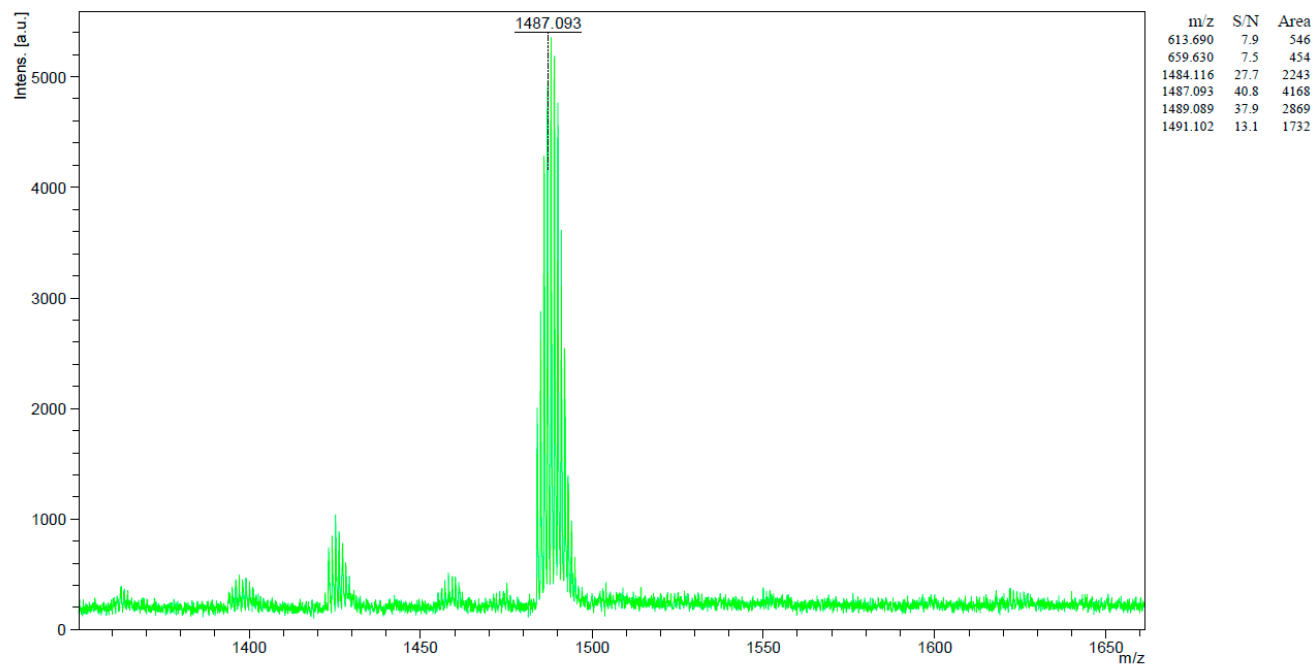


Figure S10. MALDI-TOF mass-spectrum of compound **4-Zn**.

4. Compound **5-Zn**.

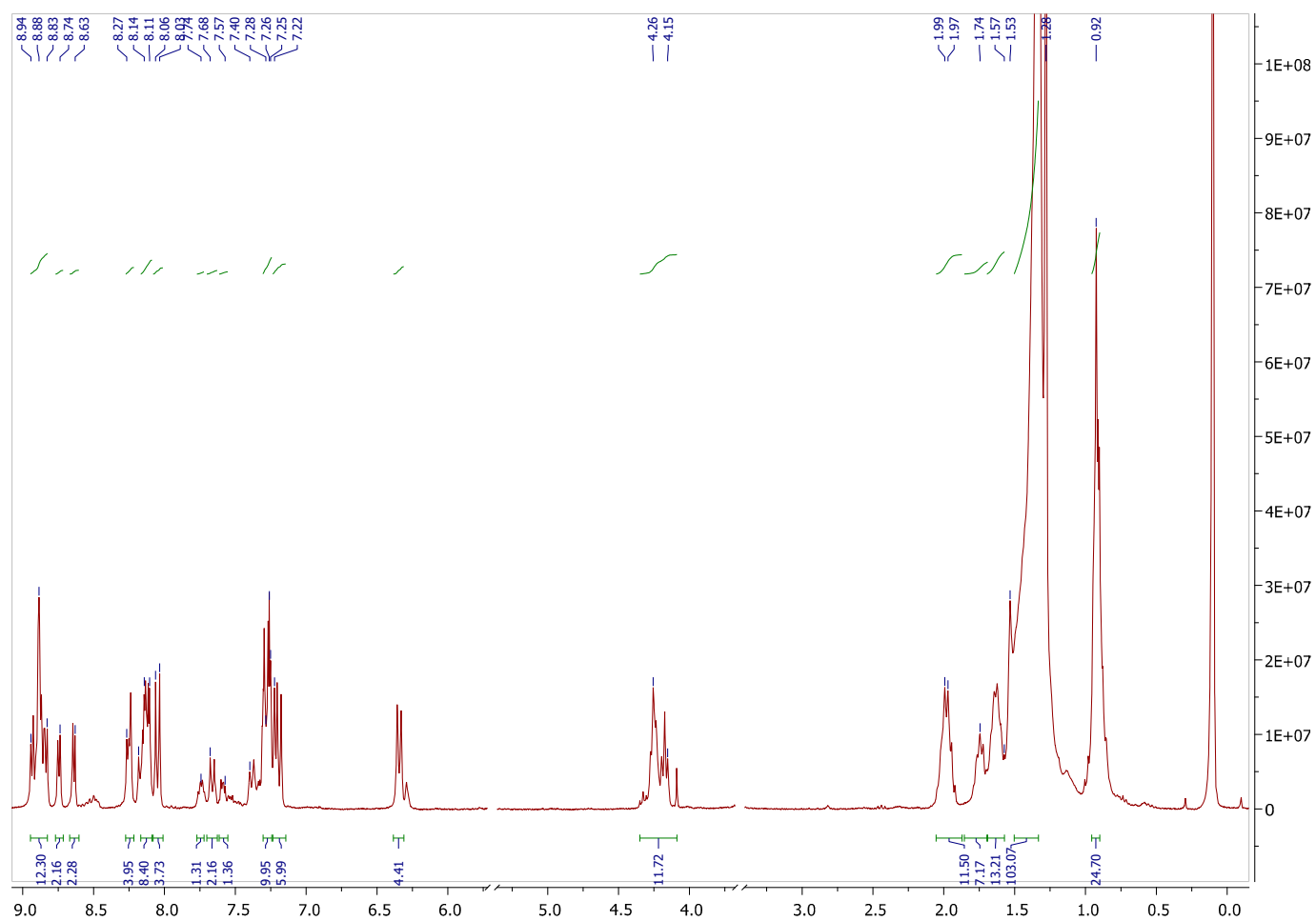
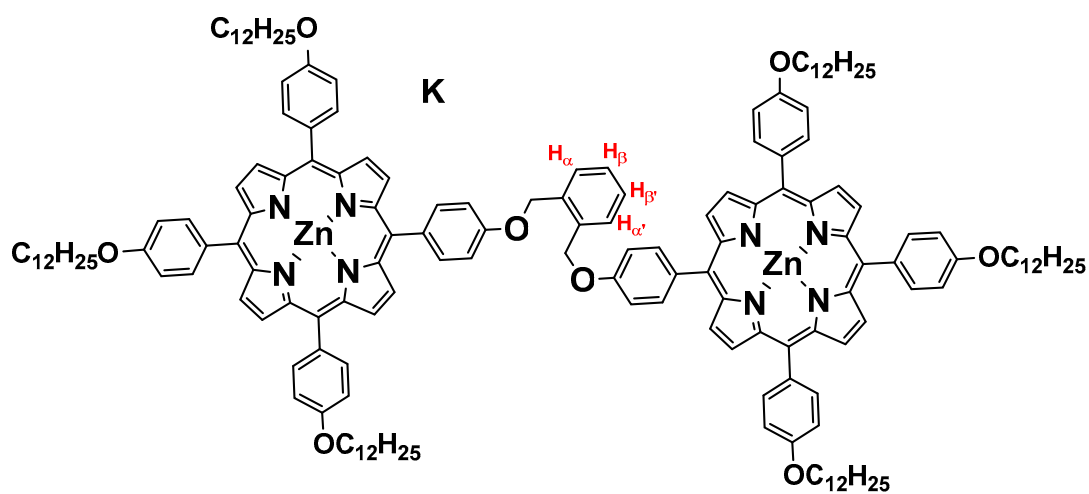


Figure S11. ^1H NMR of compound **5-Zn** in CDCl_3 .

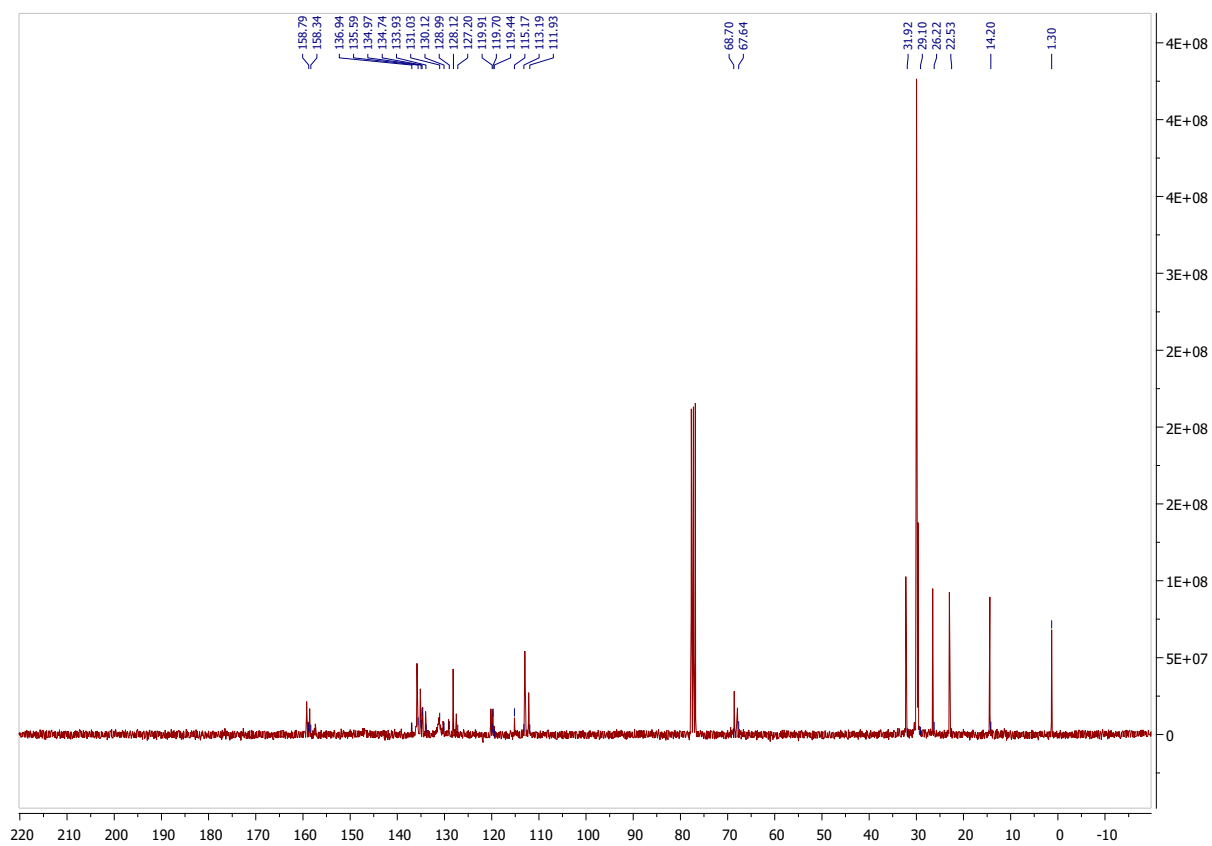


Figure S12. ^{13}C NMR of compound **5-Zn** in CDCl_3 .

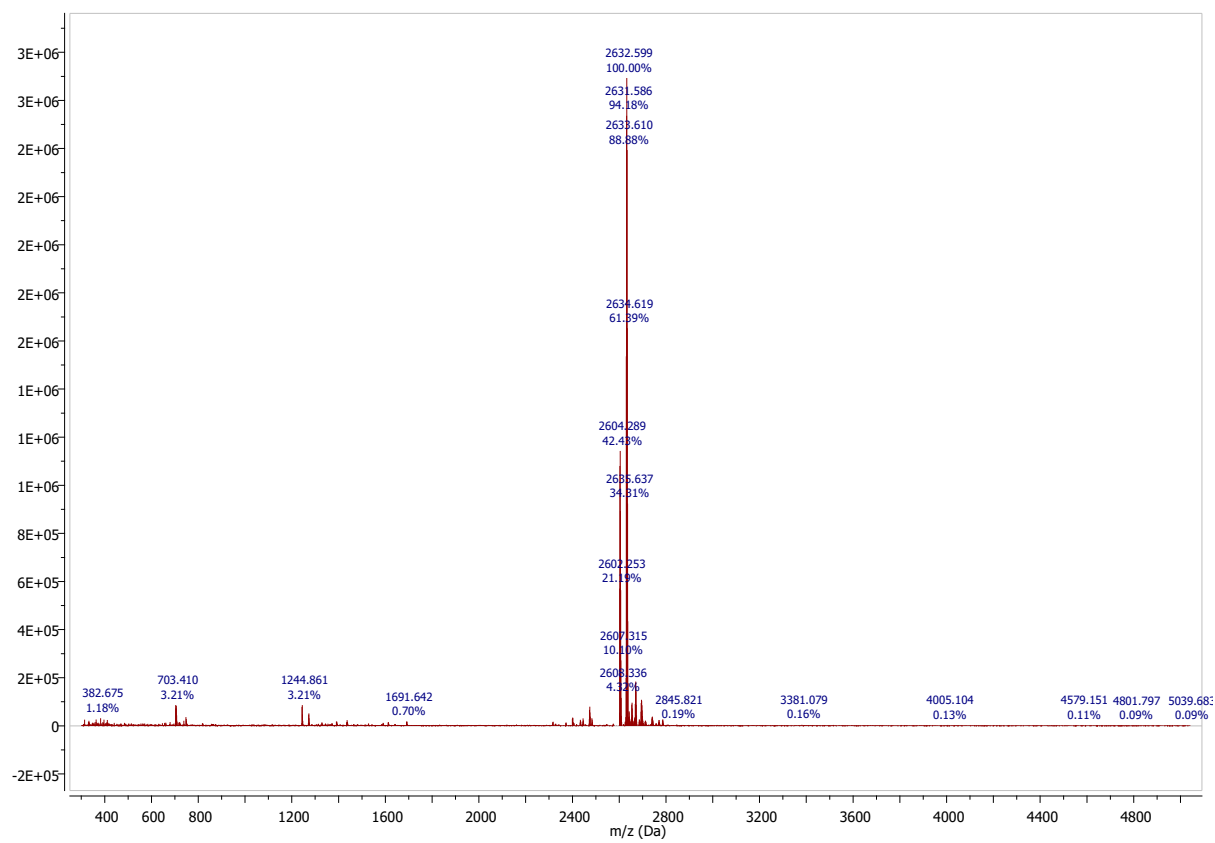
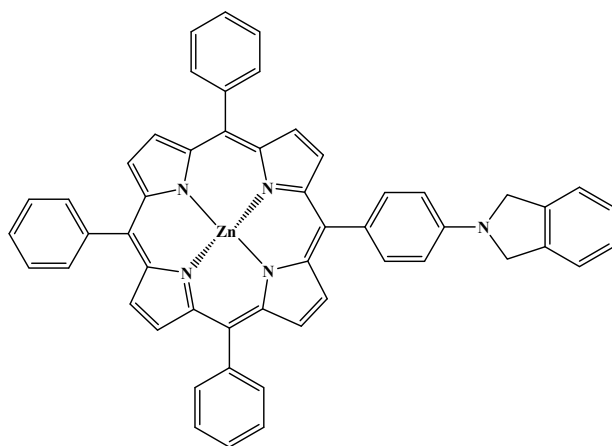


Figure S13. MALDI-TOF mass-spectrum of compound **5-Zn**.

Compound **6**.



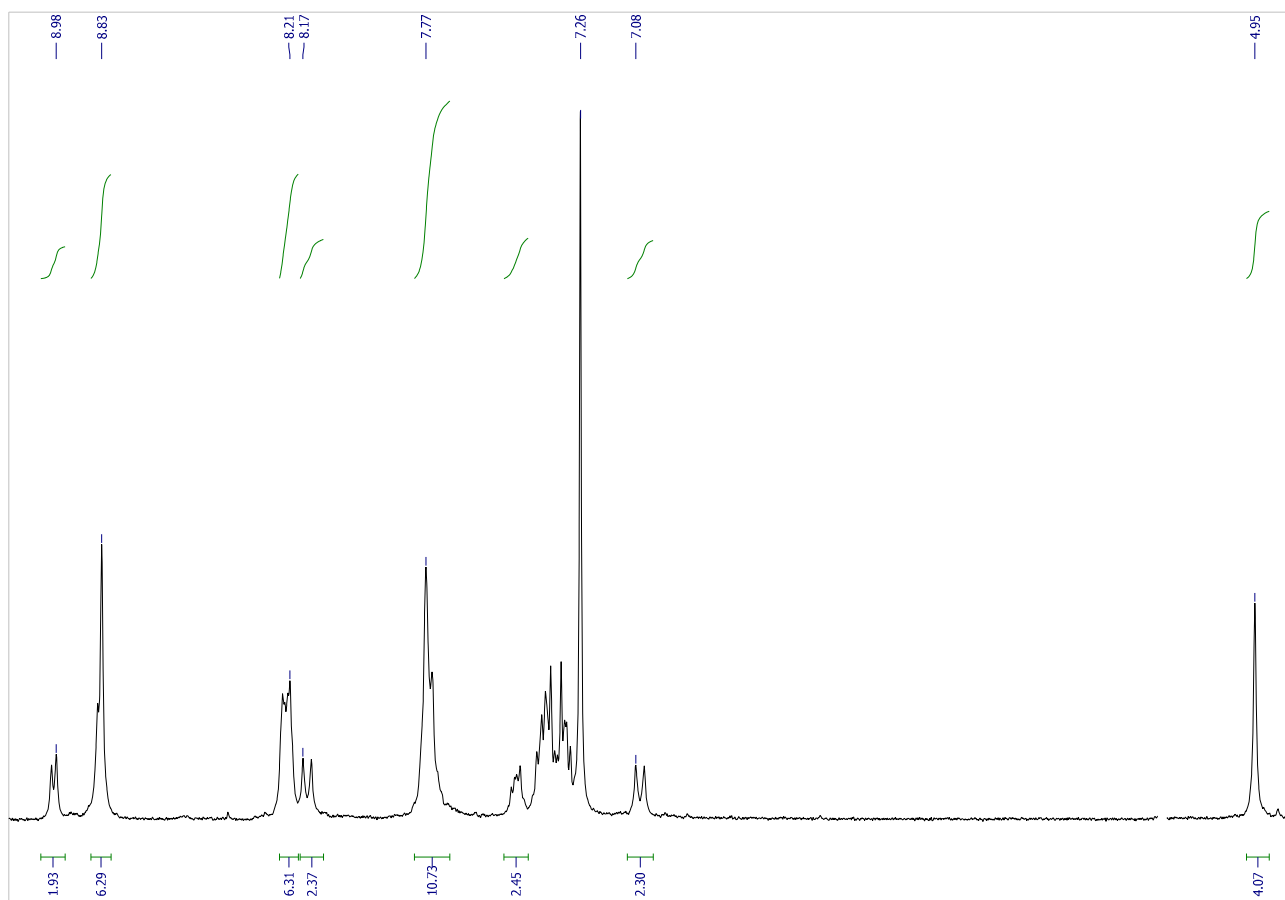


Figure S14. ^1H NMR of compound **6** in CDCl_3 .

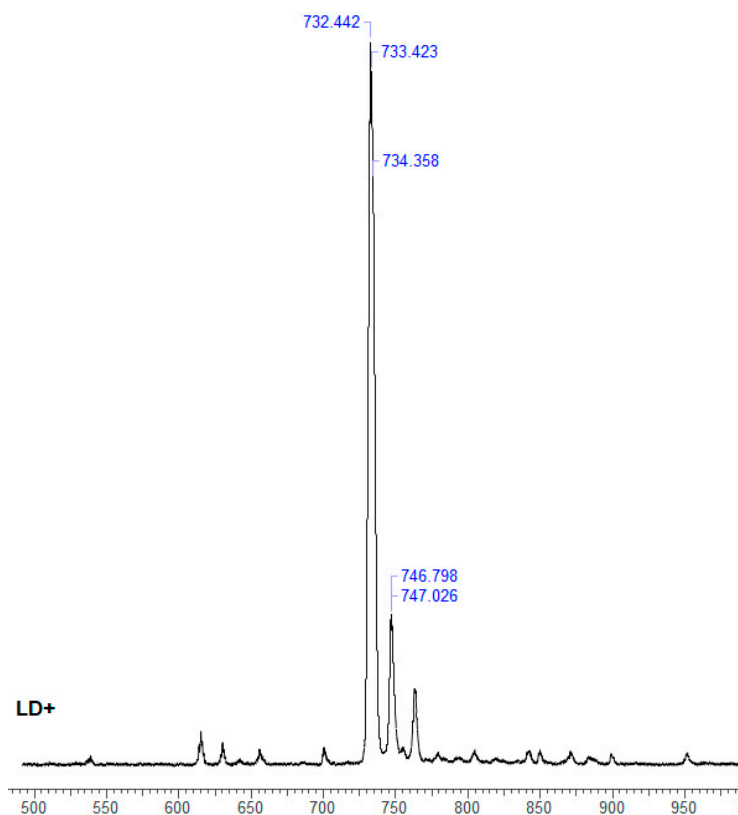


Figure S15. MALDI-TOF mass-spectrum of compound **6**.

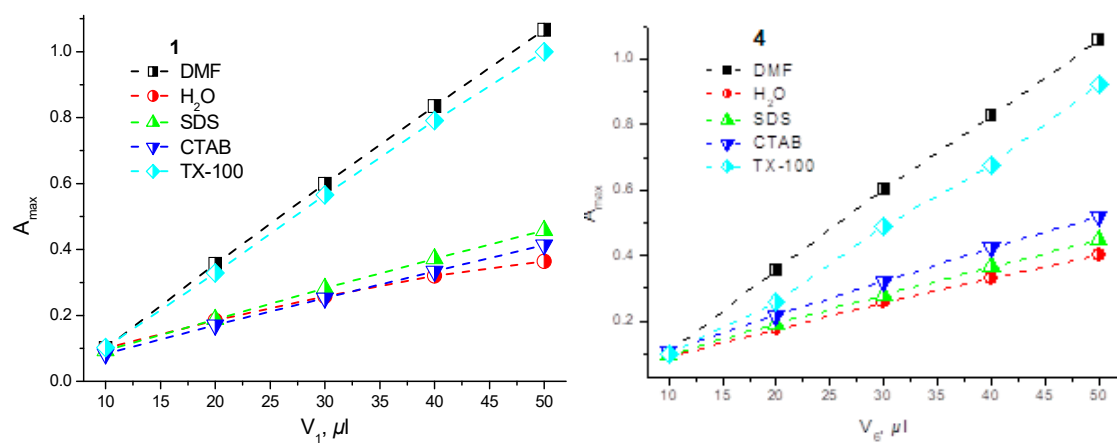


Figure S16. Concentration dependences of optical density for porphyrin **1** and dimer **4** in different media.

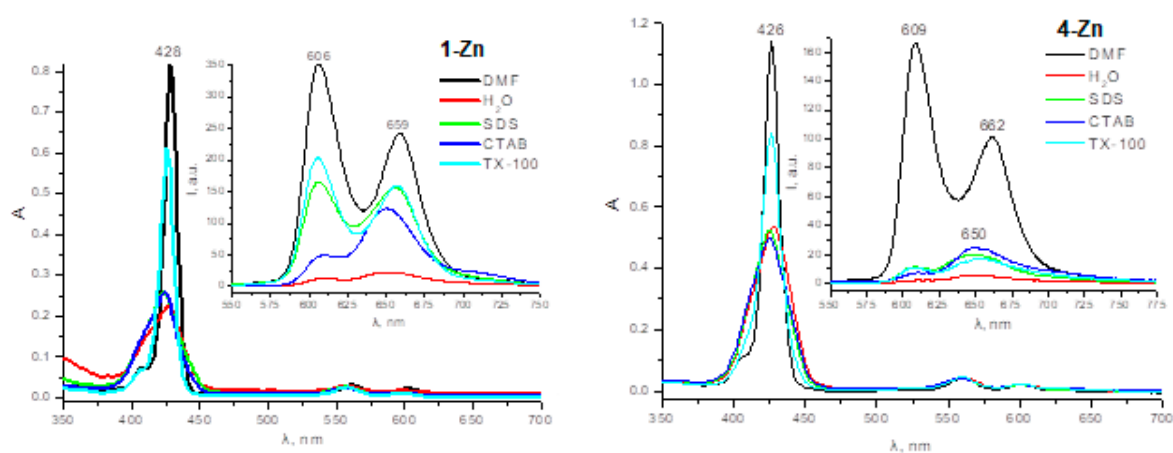


Figure S17. UV-Vis spectra of porphyrin **1-Zn** and dimer **4-Zn** in different media and their corresponding fluorescence spectra (insert).

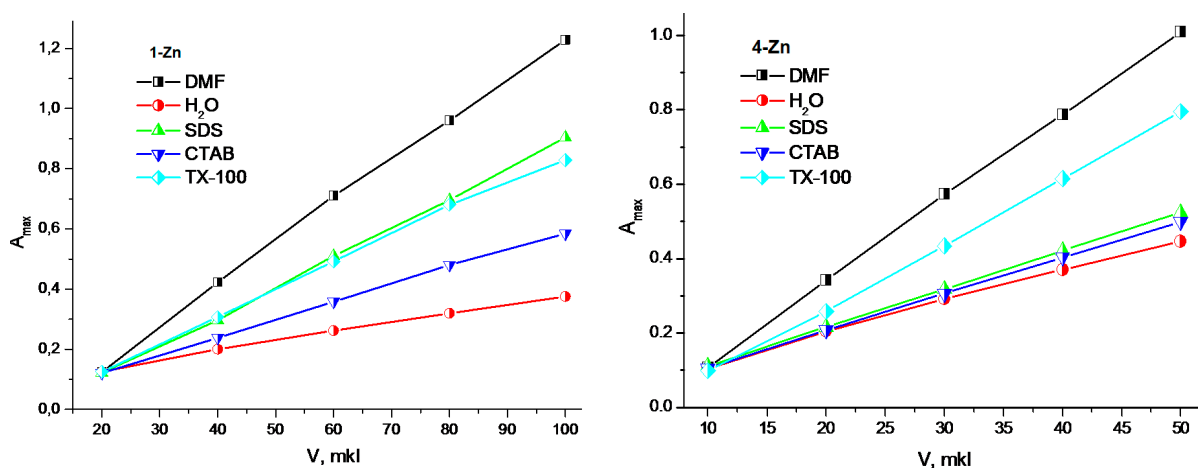


Figure S18. Concentration dependences of optical density for porphyrin **1-Zn** and dimer **4-Zn** in different media.

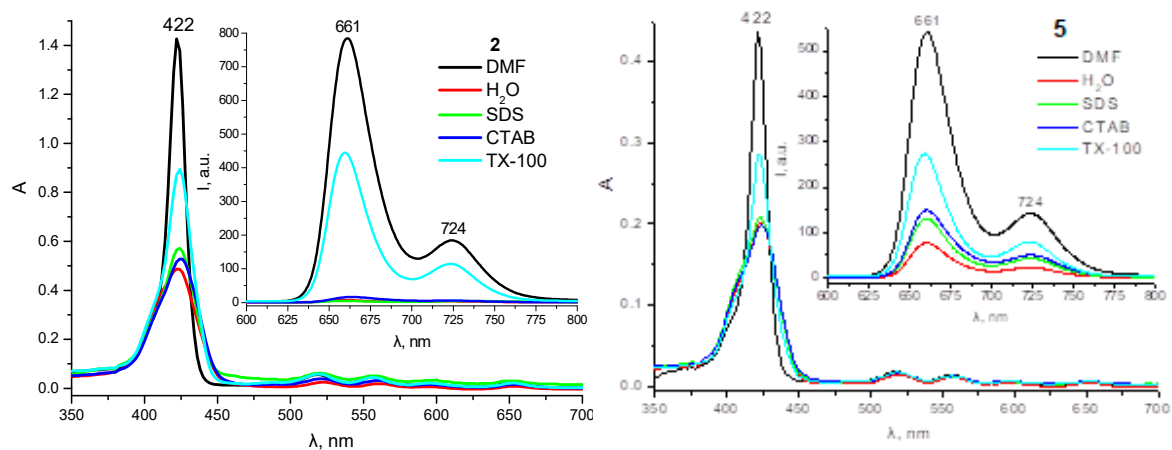


Figure S19. UV-Vis spectra of porphyrin **2** and dimer **5** in different media and their corresponding fluorescence spectra (insert)

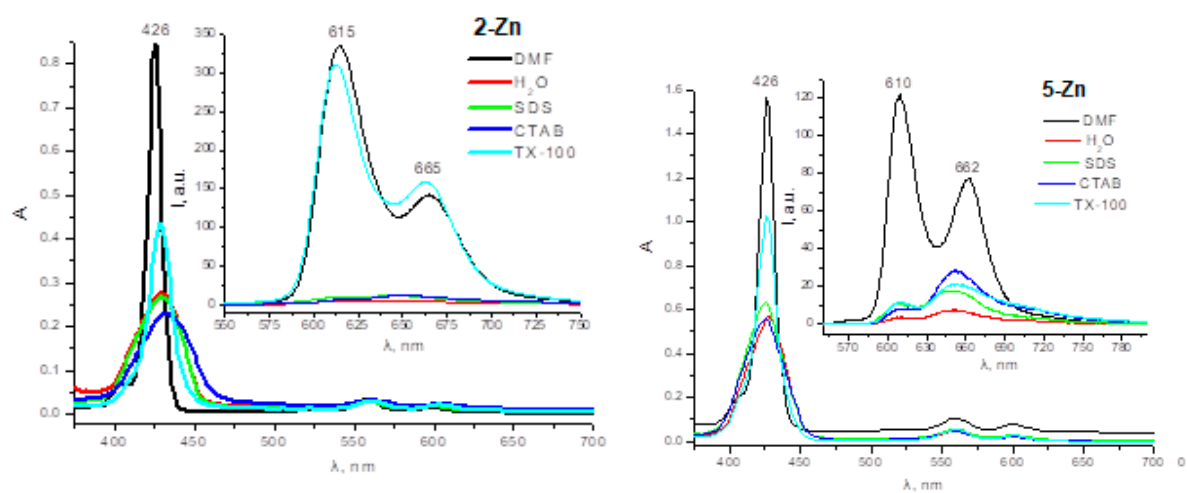
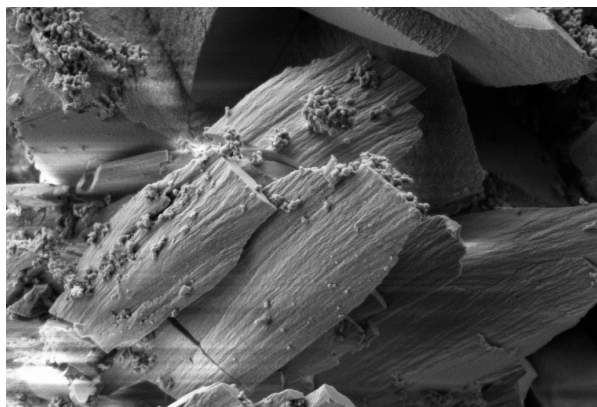
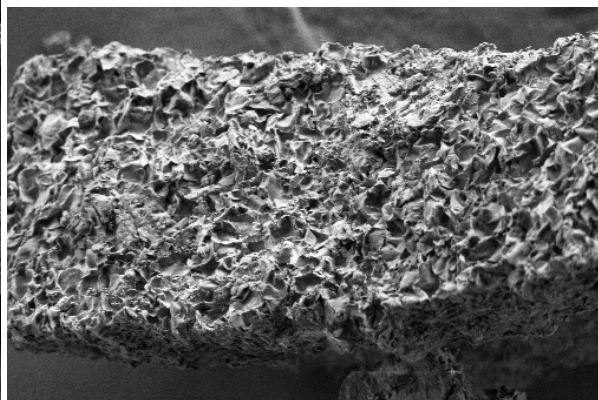


Figure S20. UV-Vis spectra for porphyrin **2-Zn** and dimer **5-Zn** in different media and their corresponding fluorescence spectra (insert).



A)



B)

Figure S21. SEM images A) porphyrin 4; B) porphyrin 5.

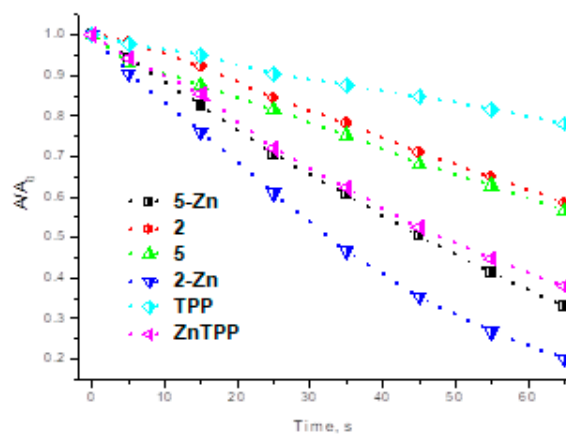
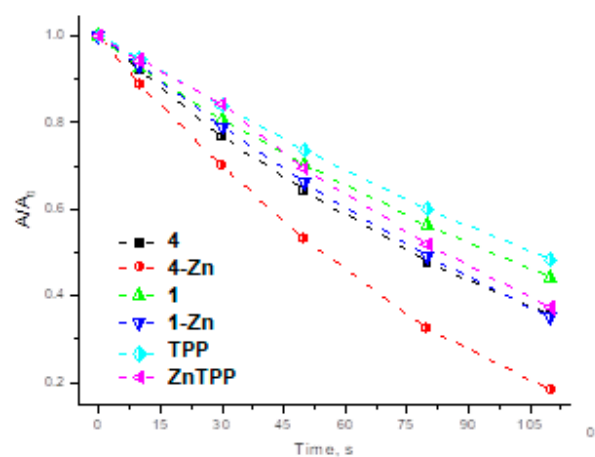


Figure S22. Kinetic curves of photosensitized oxidation of DPBF in DMF by singlet oxygen in the presence of compounds **1-(5-Zn)** ($\lambda_{irr} > 500$ nm).