Electronic Supplementary Information (ESI) to:

Oxazolochlorins 13. PEGylated *meso*-arylporpholactone metal complexes as optical cyanide sensors in water

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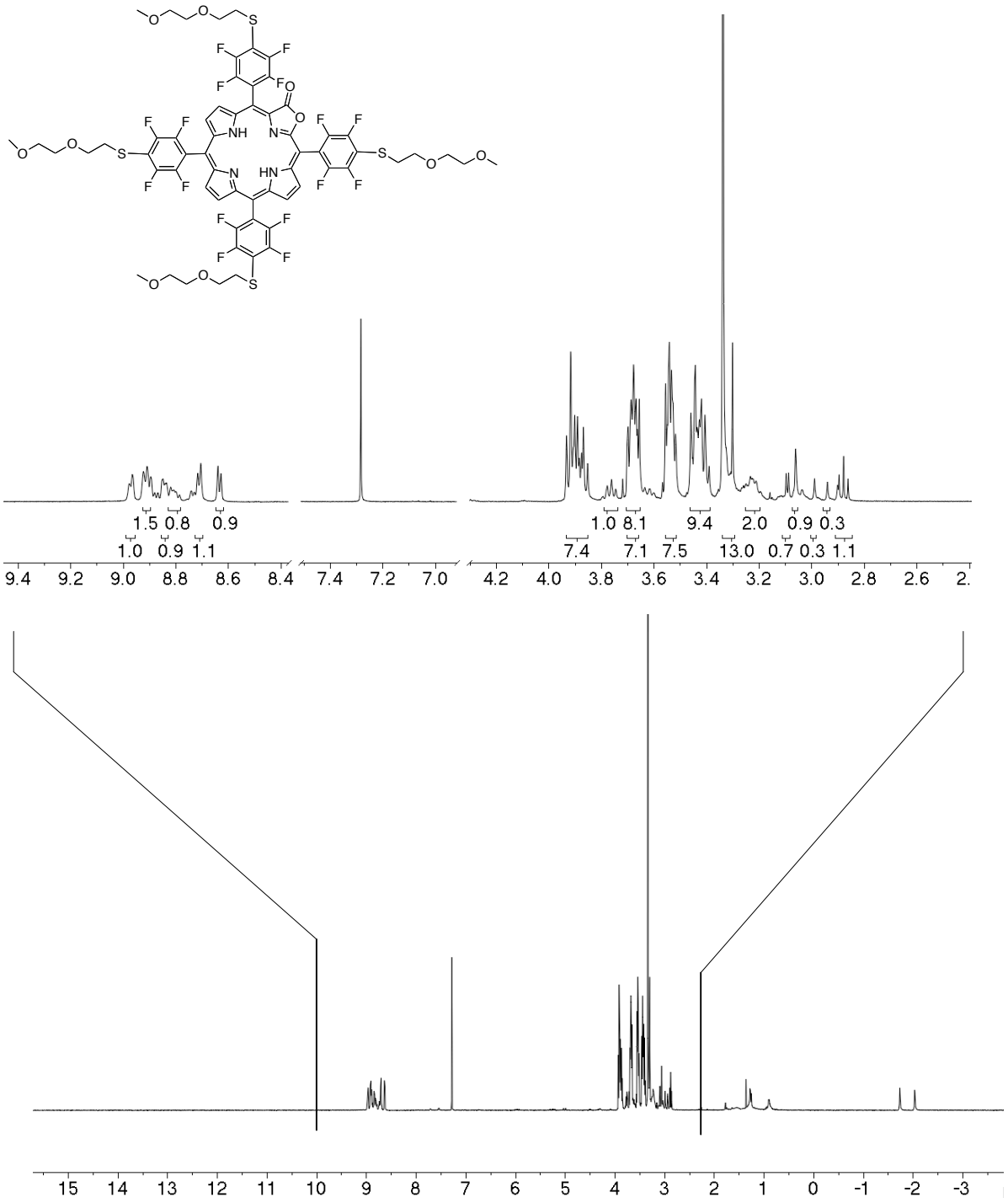

Figure 1. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6-MET**.

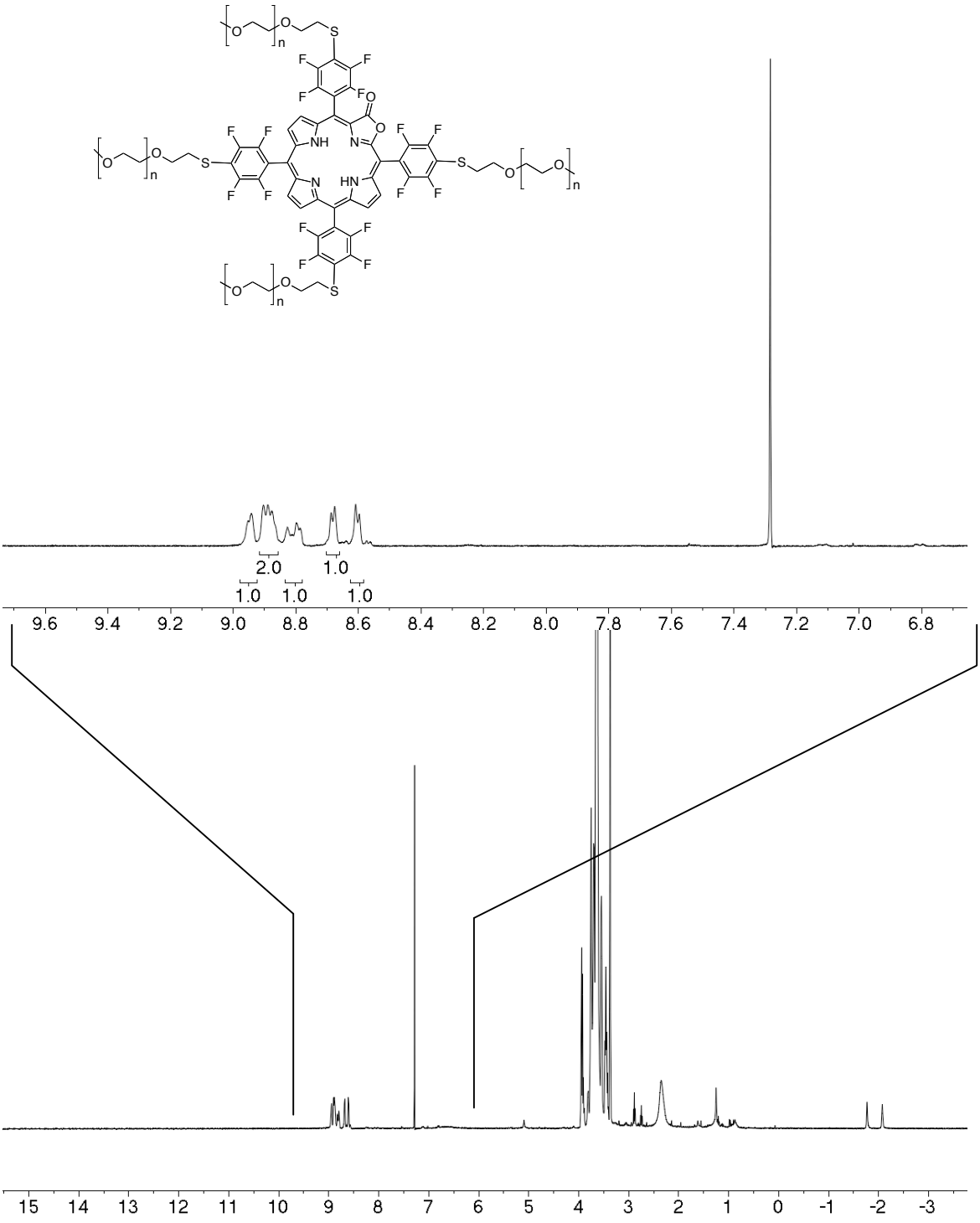

Figure 2. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6-PEG$_{1000}$** (n ~ 20).

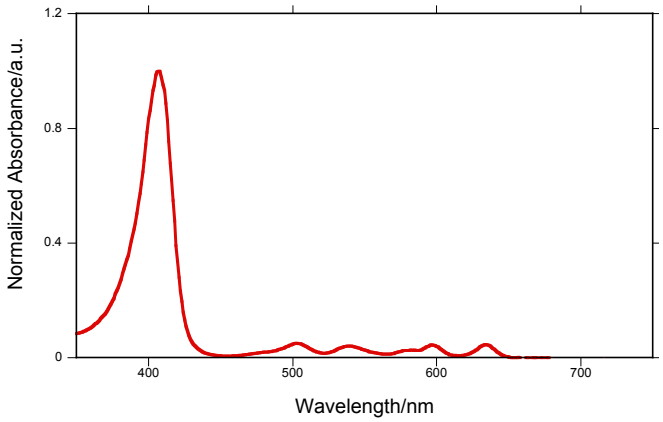

Figure 3. UV-vis spectrum (CH_2Cl_2) of **6-MET**.

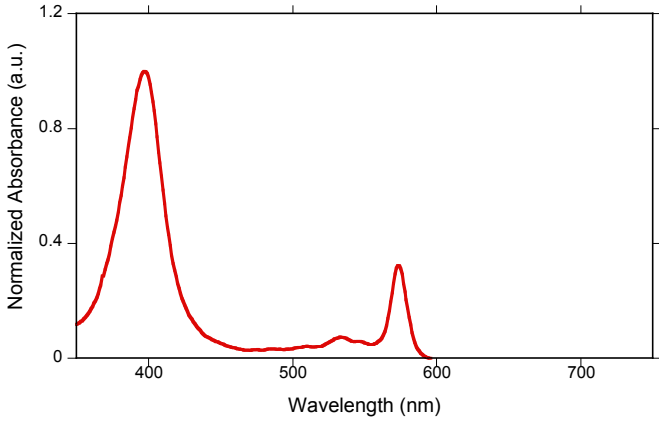

Figure 4. UV-vis spectrum (CH_2Cl_2) of **6Pt-PEG$_{1000}$**.

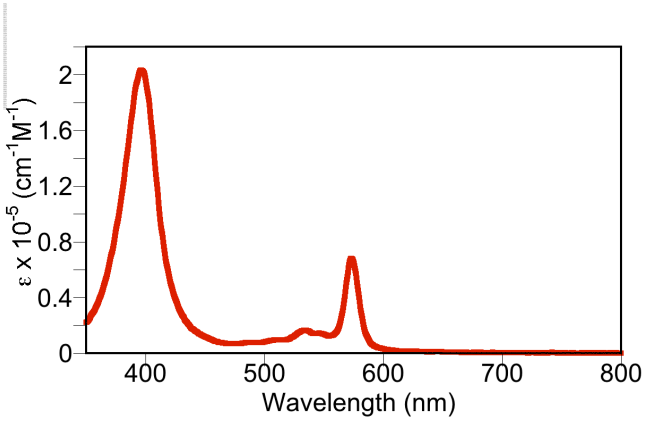

Figure 5. UV-vis spectrum (pH 7 phosphate buffer) of **6Pt-PEG$_{1000}$**.

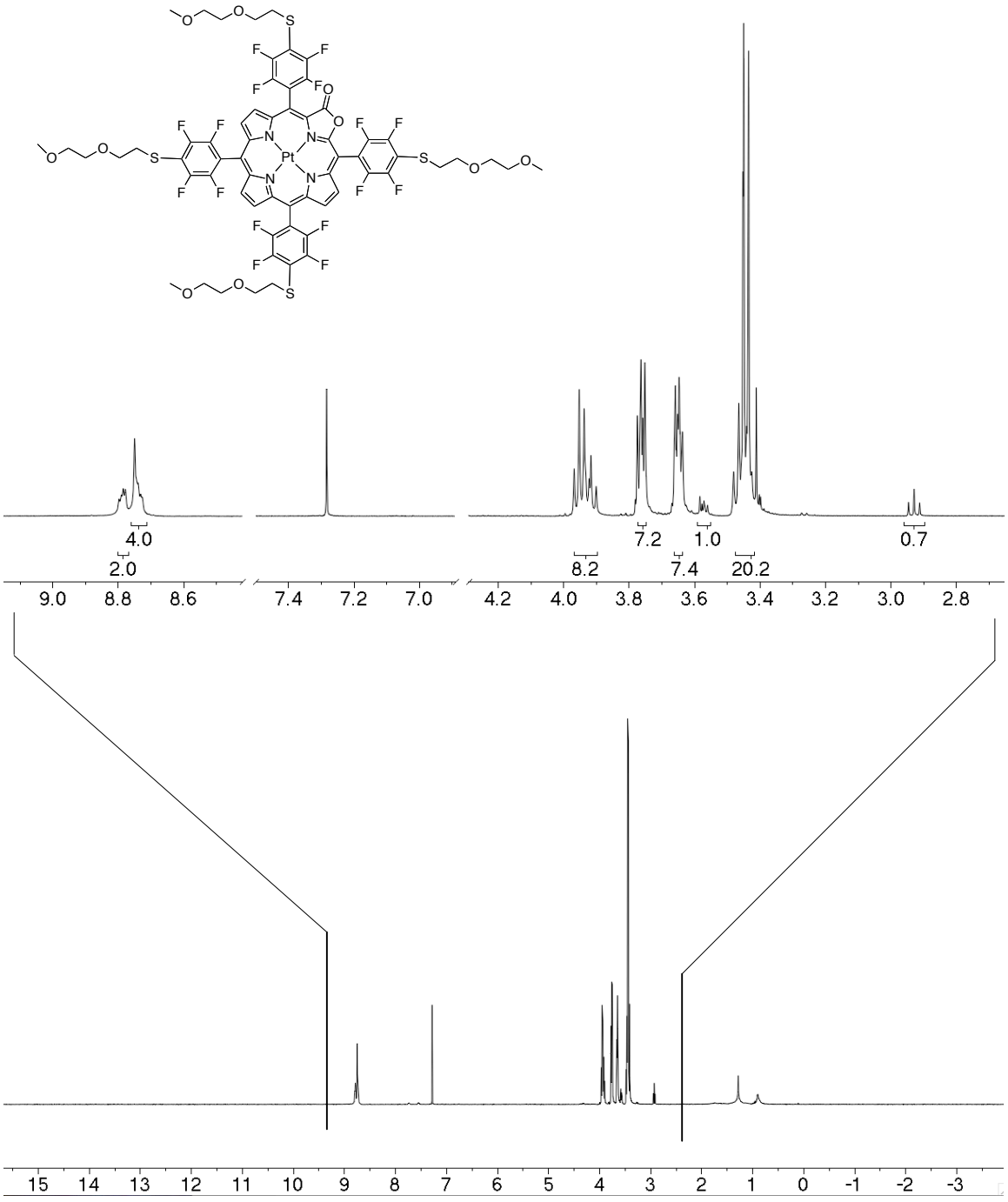

Figure 6. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Pt-MET**.

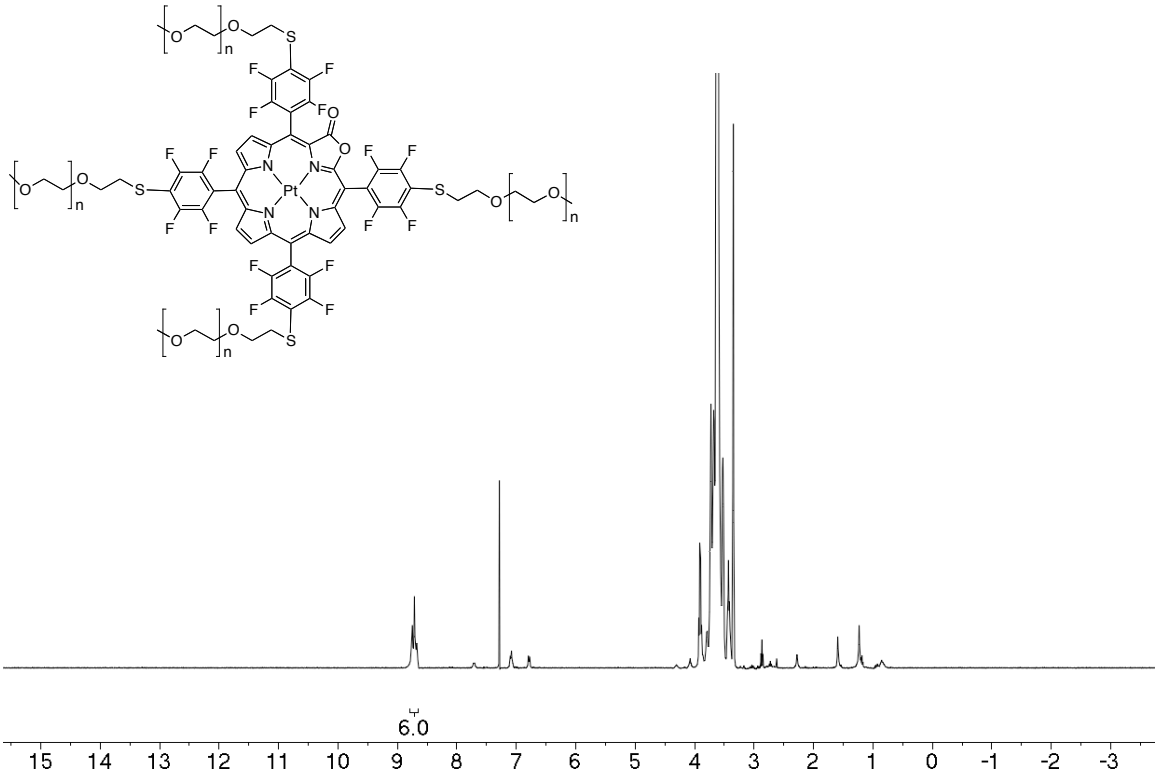

Figure 7. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Pt-PEG$_{1000}$** (M_n ~ 1000).

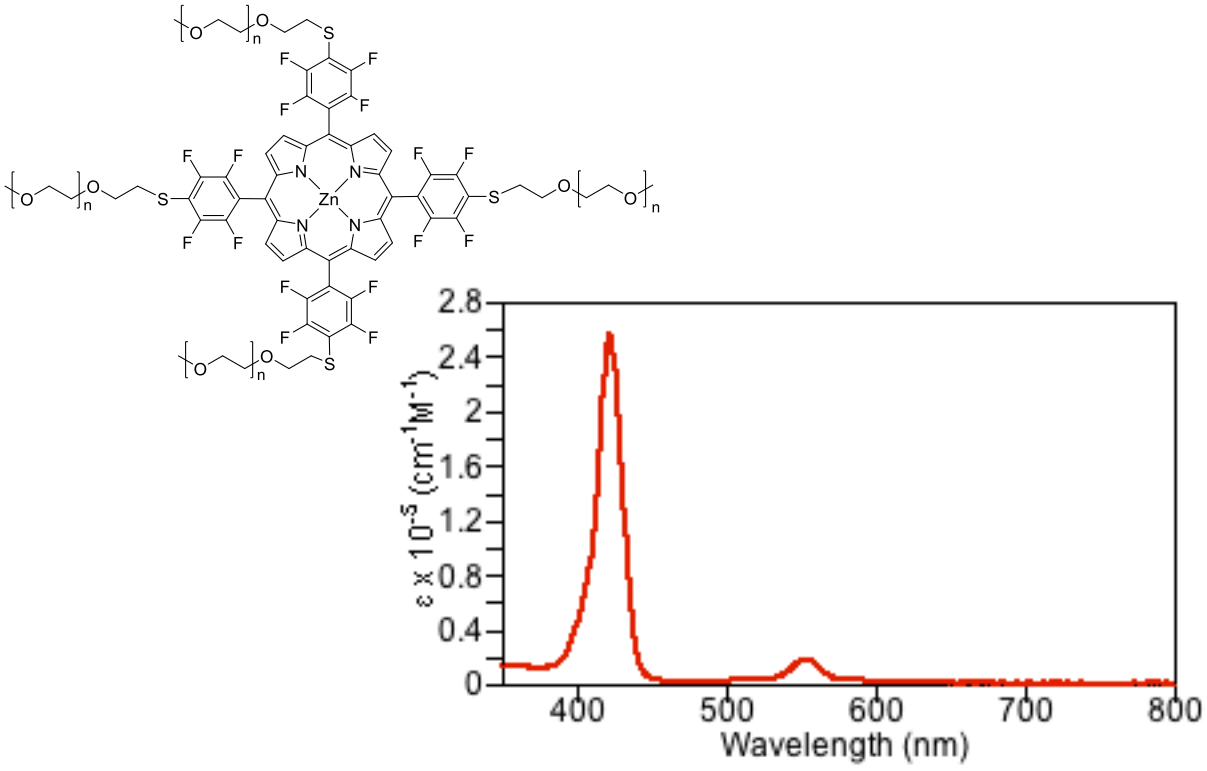

Figure 8. UV-vis spectrum (pH 7 phosphate buffer) of **1Zn-PEG$_{1000}$**.

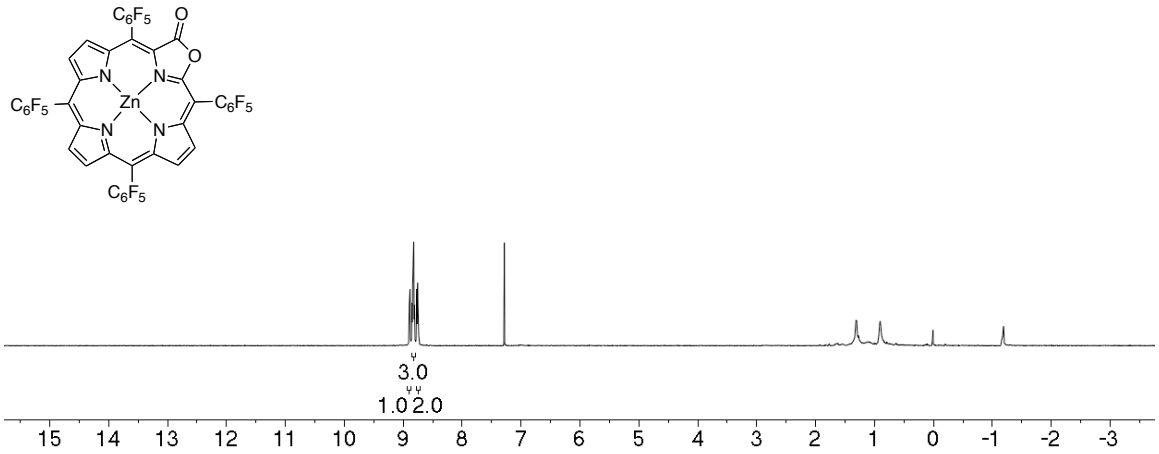

Figure 9. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Zn**.

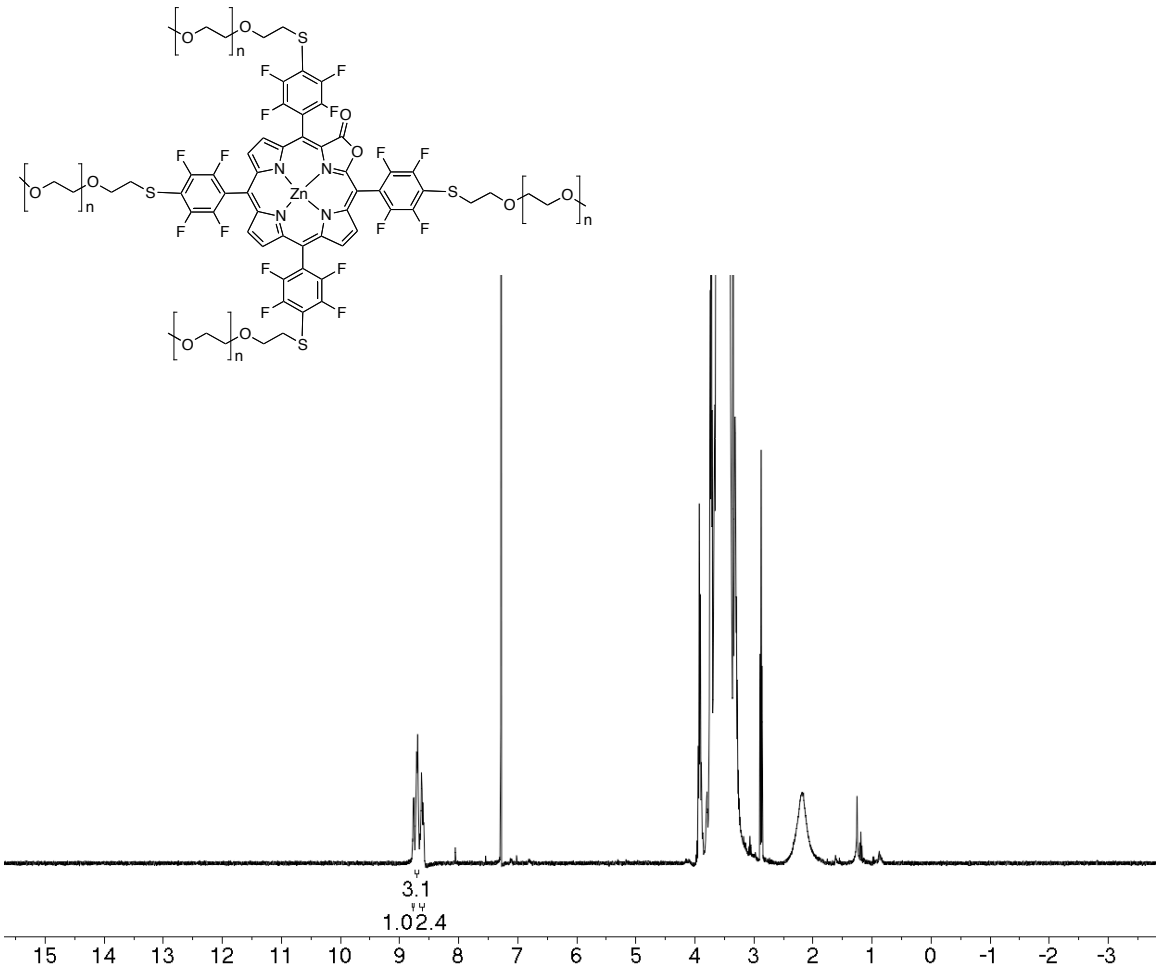

Figure 10. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Zn-PEG$_{1000}$**.

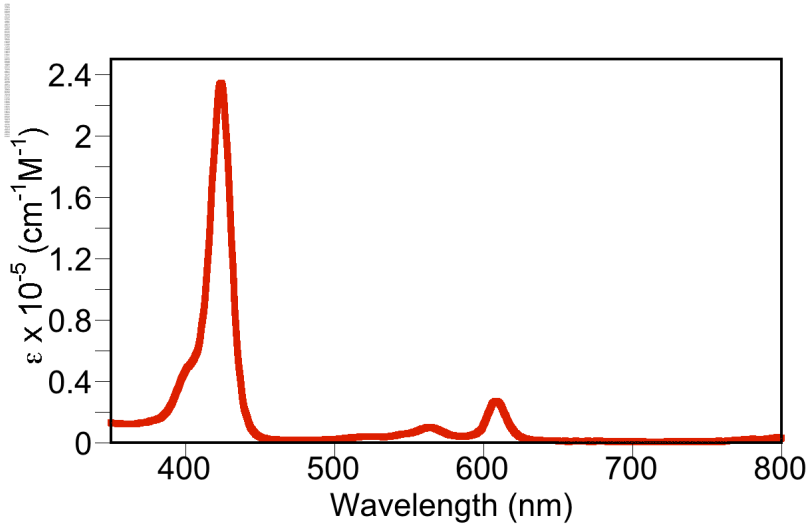

Figure 11. UV-vis spectrum (pH 7 phosphate buffer) of **6Zn-PEG$_{1000}$**.

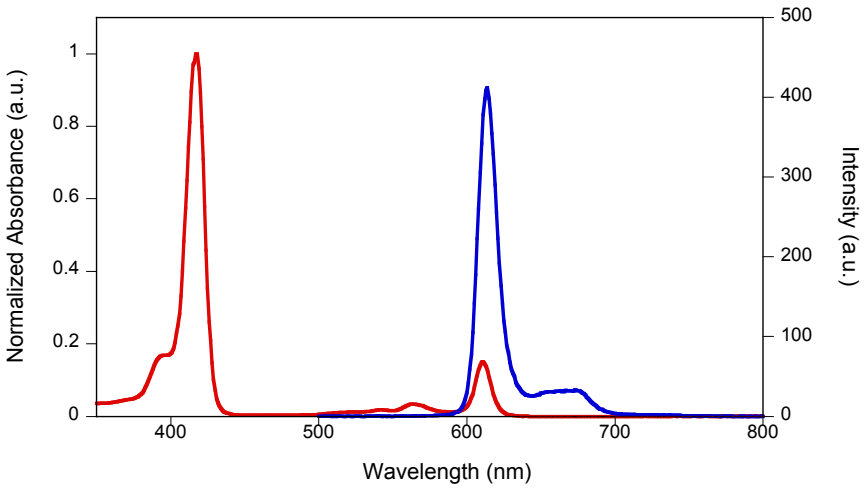

Figure 12. UV-vis and fluorescence spectrum (CH_2Cl_2) of **6Ga**.

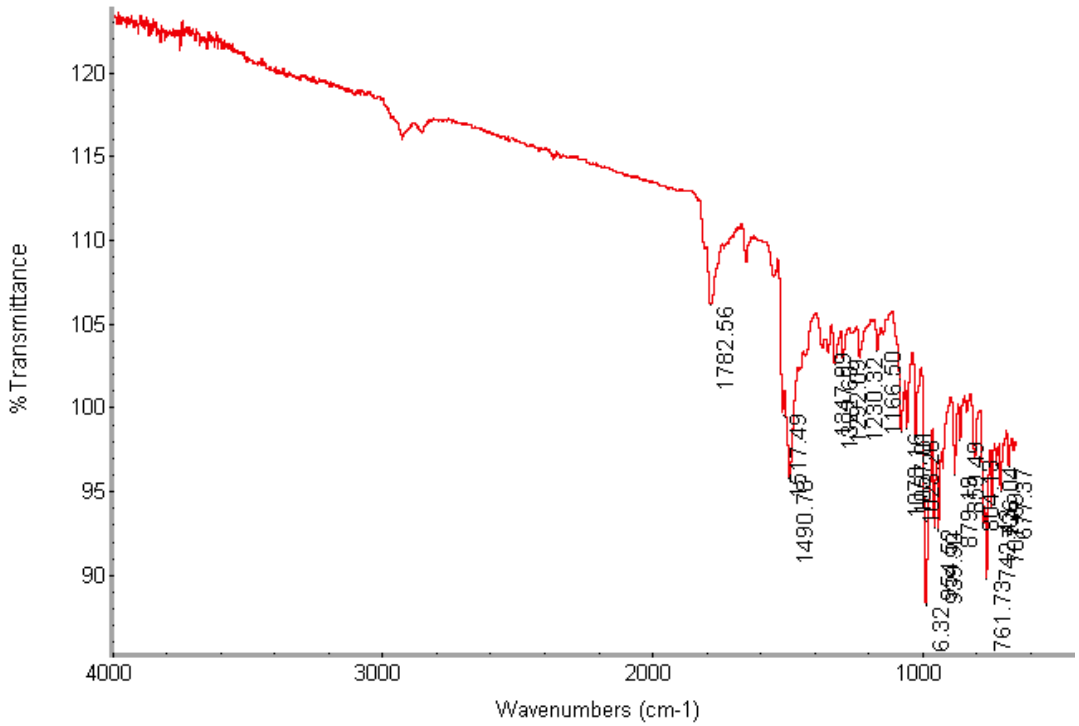

Figure 13. FT-IR spectrum (neat, diffuse reflectance) of **6Ga**.

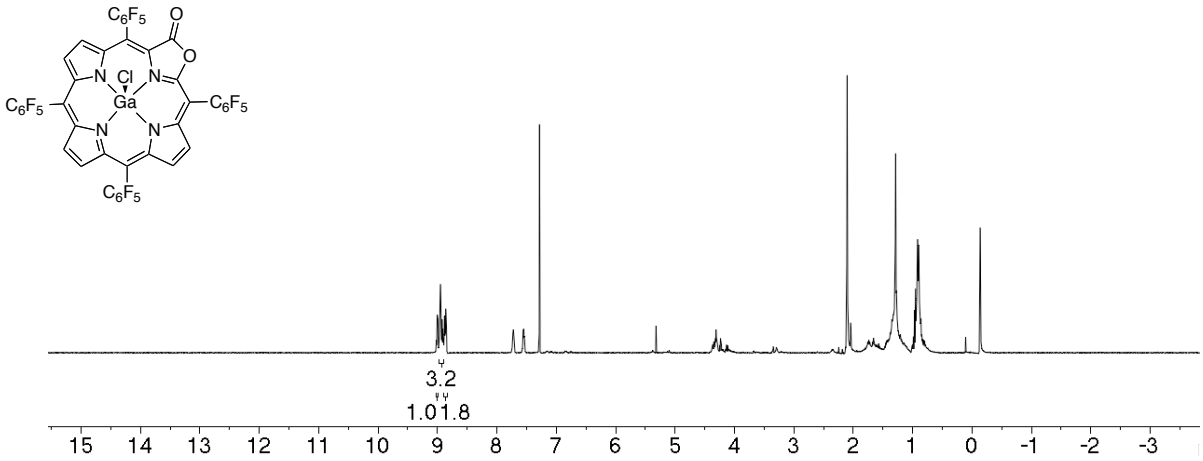

Figure 14. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Ga**.

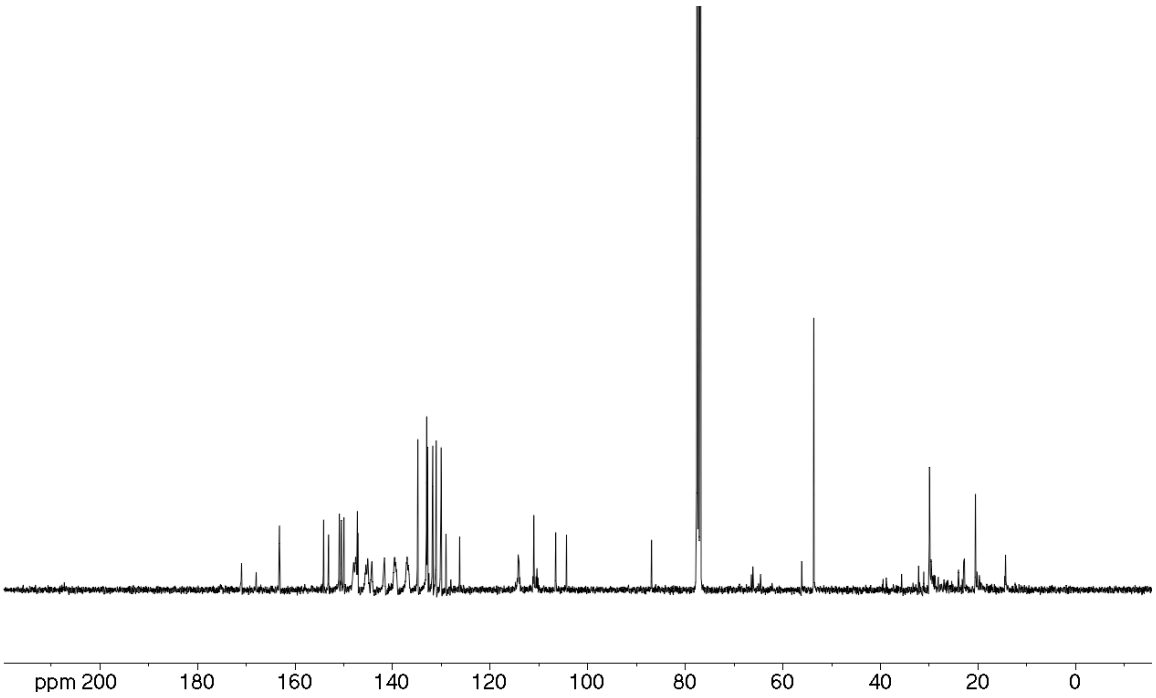

Figure 15. ^{13}C NMR spectrum (100 MHz, $CDCl_3$) of **6Ga**.

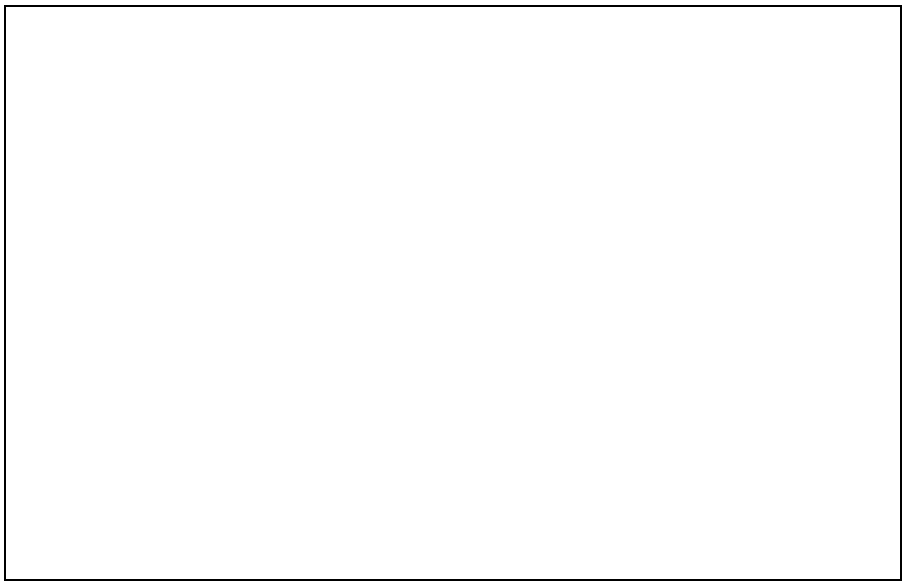

Figure 16. UV-vis spectrum (CH_2Cl_2) of **6Ga-MET.**

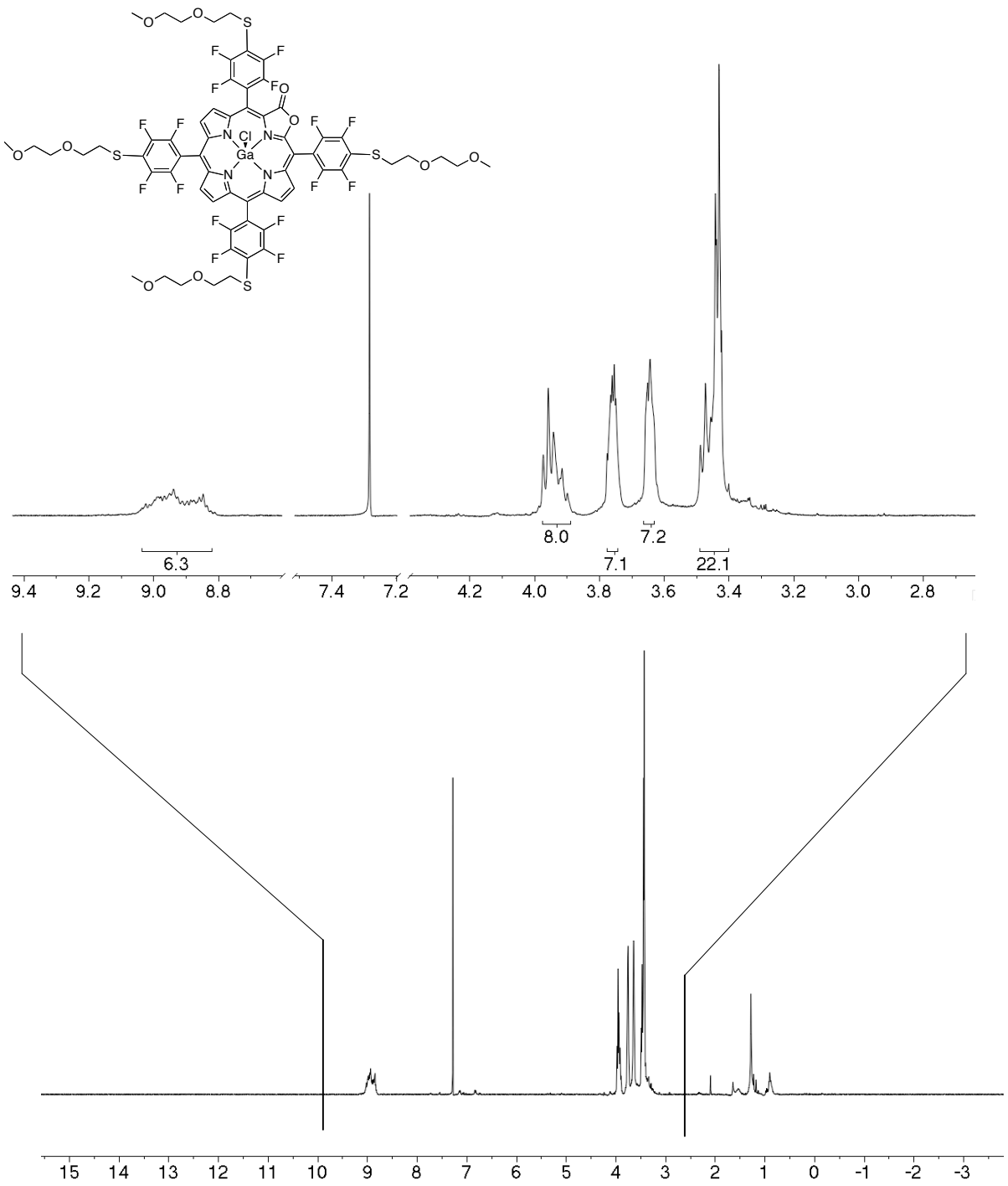

Figure 17. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Ga-MET**.

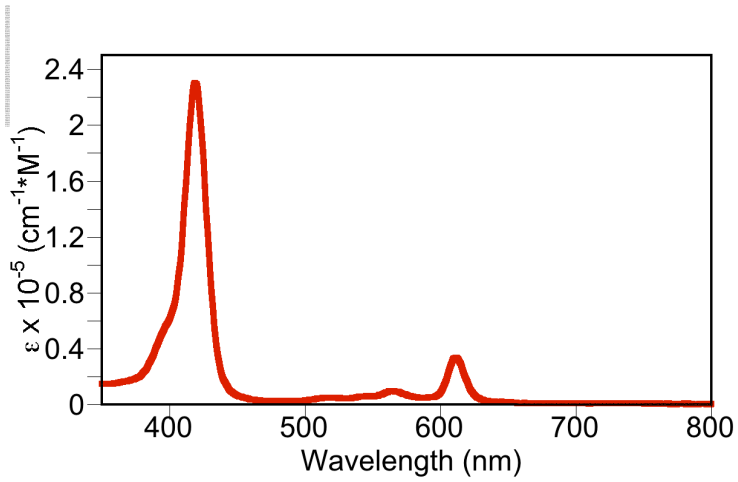

Figure 18. UV-vis spectrum (pH 7 phosphate buffer) of **6Ga-PEG$_{1000}$**.

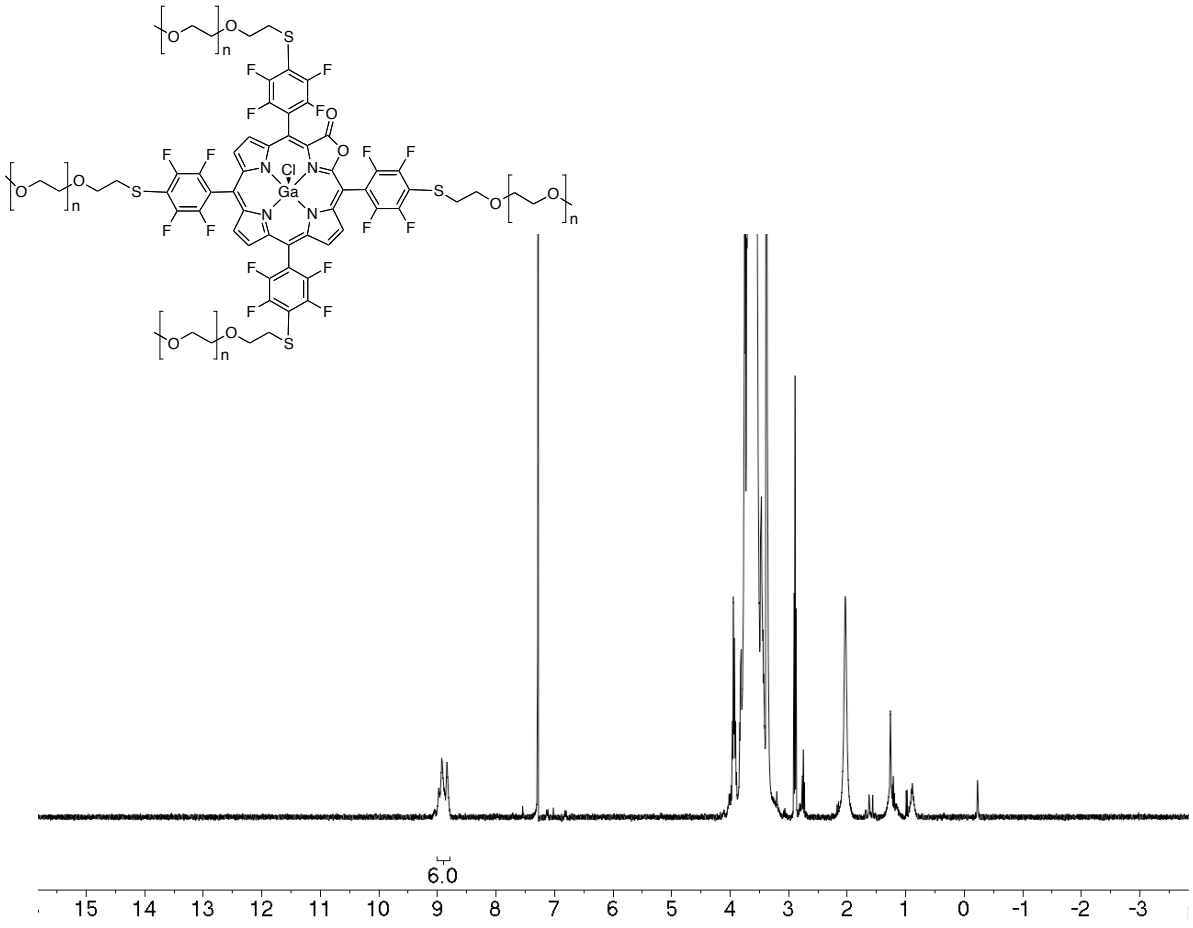

Figure 19. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of **6Ga-PEG$_{1000}$**.

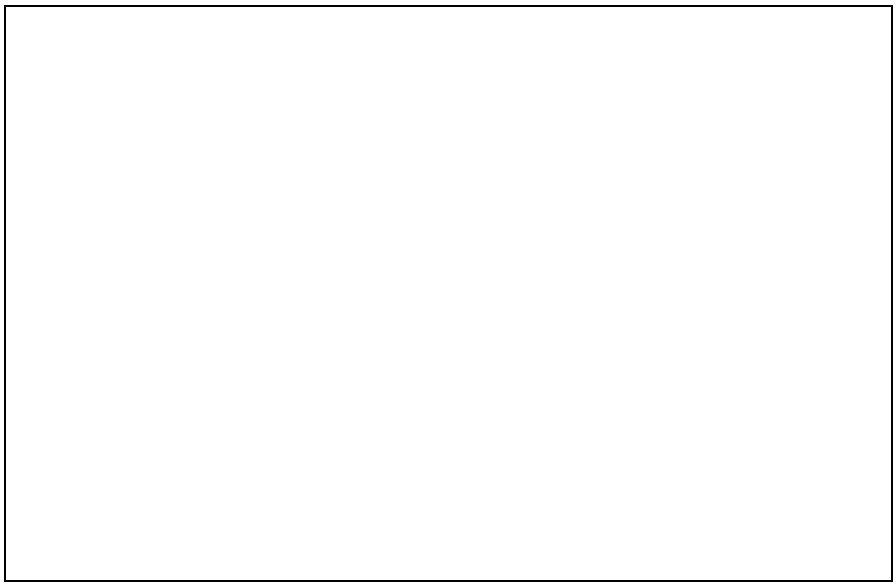

Figure 20. Spectrophotometric CN^- titration of **6Zn-PEG$_{1000}$** (H_2O) and CN^- in the form of NaCN.

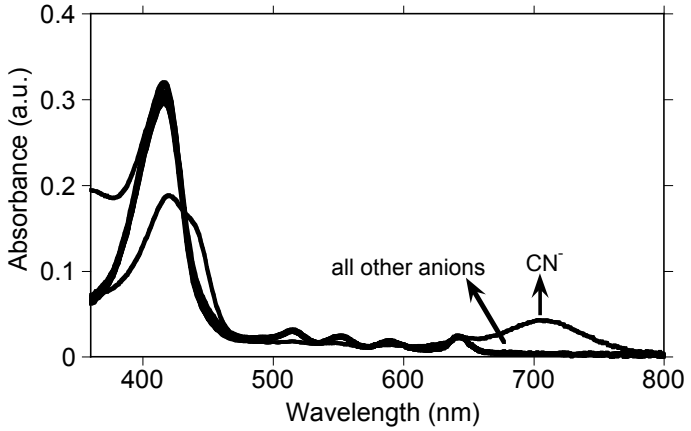

Figure 21. UV-vis spectrum of **6-PEG$_{1000}$** upon the addition of various anions (50 equiv) in water: CN^-, F^-, Cl^-, Br^-, I^-, AcO^-, ClO_4^-, NO_3^-, NO_2^-, $H_2PO_4^-$, N_3^-.

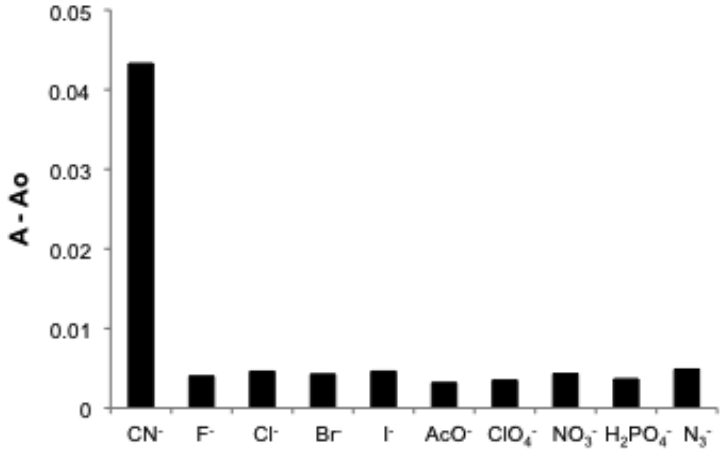

Figure 22. Absorbance intensity ($A-A_o$) response of a solution of 6-PEG$_{1000}$ upon the addition of various anions (50 equiv) in water: CN^-, F^-, Cl^-, Br^-, I^-, AcO^-, ClO_4^-, NO_3^-, NO_2^-, $H_2PO_4^-$, N_3^-.

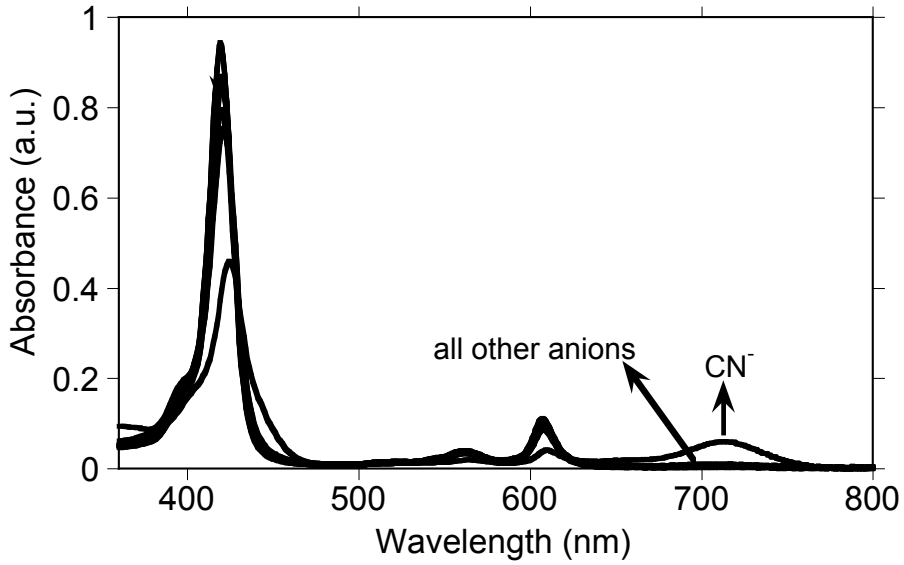

Figure 23. UV-vis spectrum of **6Ga-PEG$_{1000}$** upon the addition of various anions (50 equiv) in water: CN^-, F^-, Cl^-, Br^-, I^-, AcO^-, ClO_4^-, NO_3^-, NO_2^-, $H_2PO_4^-$, N_3^-.

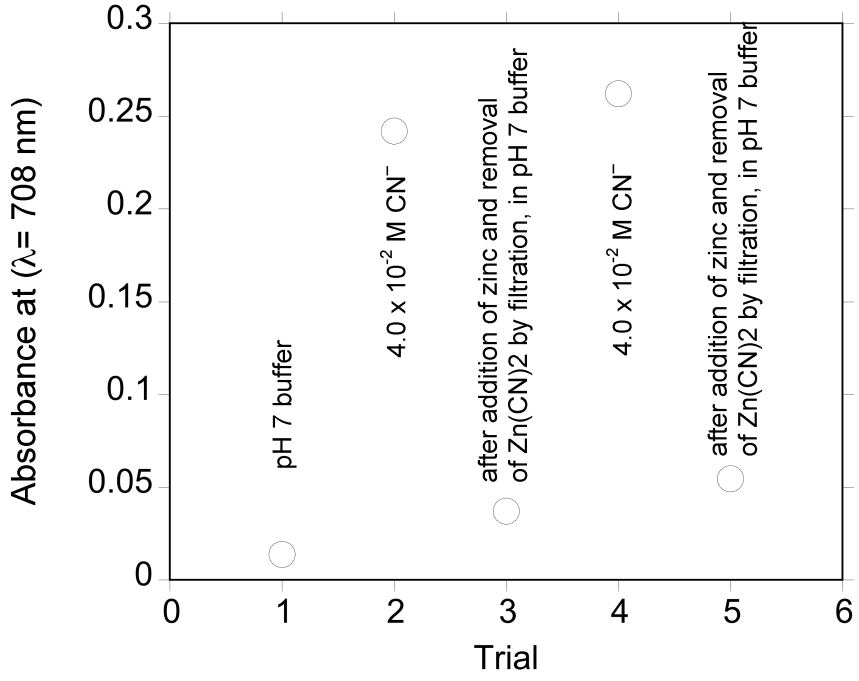

Figure 24. Absorbance intensity at λ_{max} = 708 nm of **6Ga-PEG$_{1000}$** (7.9 × 10-6 M, 3 mL initial volume) in pH 7 phosphate buffer after repeated exposures to NaCN (4.0×10^{-2} M), followed by precipitation of the cyanide with $ZnCl_2$ (200 μL of 100 mM $ZnCl_2$**)**, followed by filtration though a plug of Celite®.

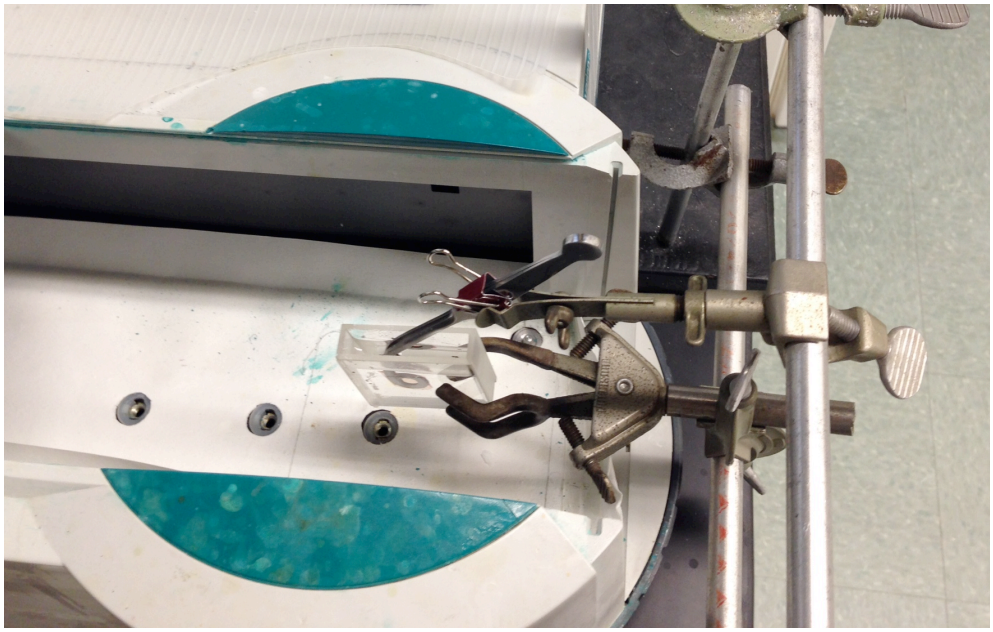

Figure 25. Experimental setup for the Nafion® membrane measurements: Membrane held by stainless steel washers in a cuvette held into the beam of the Cary 50 UV-vis spectrophotometer.

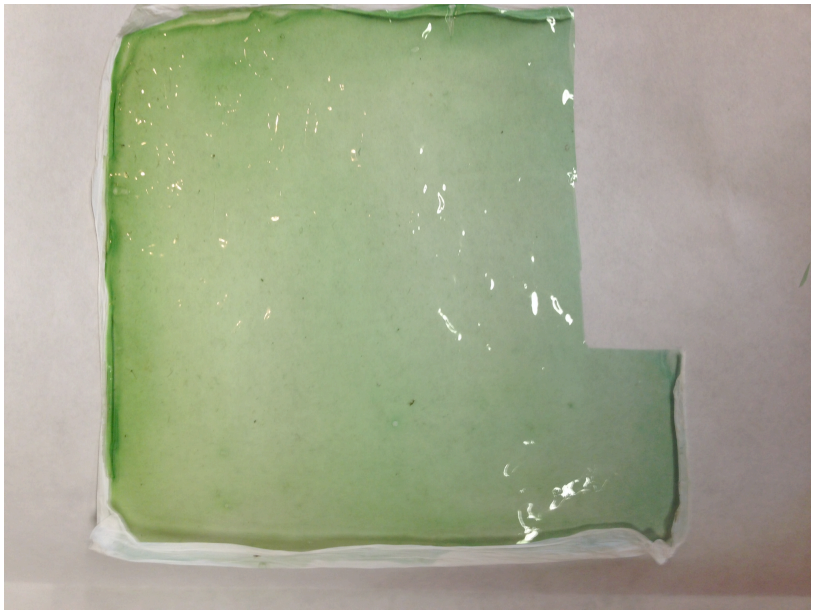

Figure 26. Photograph of the finished 5 x 5 in Nafion® membrane with embedded **6Ga-PEG$_{1000}$** (some small membrane samples taken).