

Supporting Information for

**Stereoselective self-aggregation of synthetic zinc 3¹-epimeric
bacteriochlorophyll-*d* analogs possessing a methylene group
at the 13²-position as models of green photosynthetic bacterial
chlorosomes**

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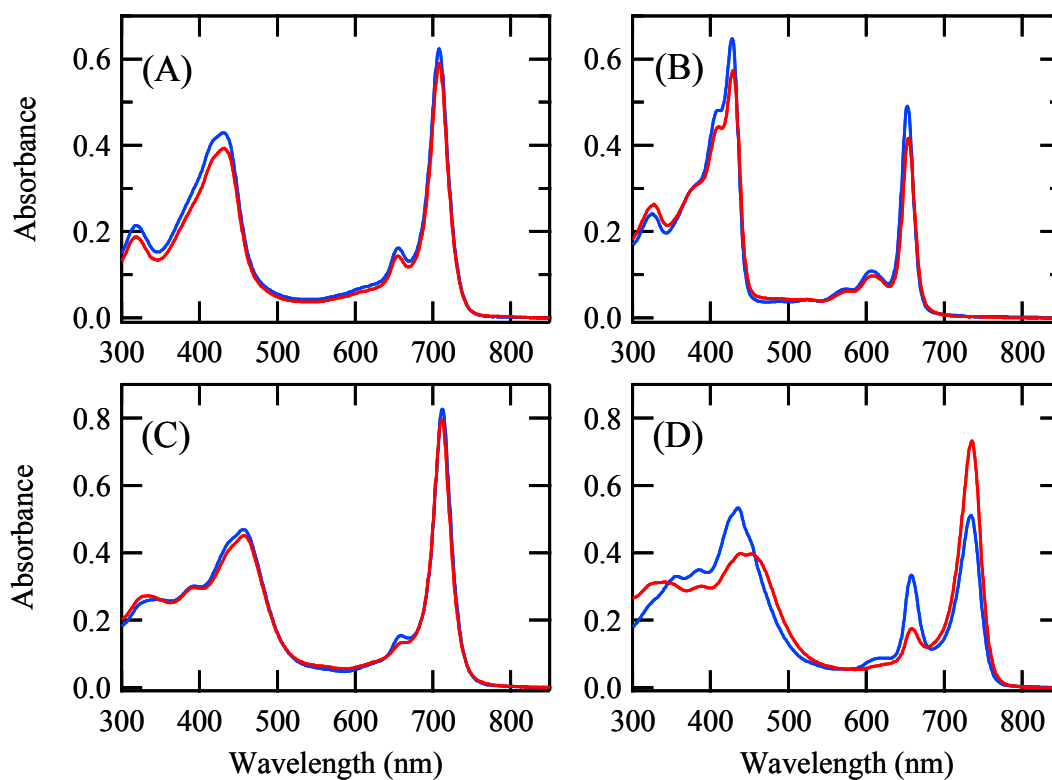


Fig. S1 Visible absorption spectral changes of **1R** (A), **1S** (B), **2R** (C), and **2S** (D) in an aqueous 0.025%(wt/v) Triton X-100 micelle solution just after preparation (blue) and after standing for 1 day (red).

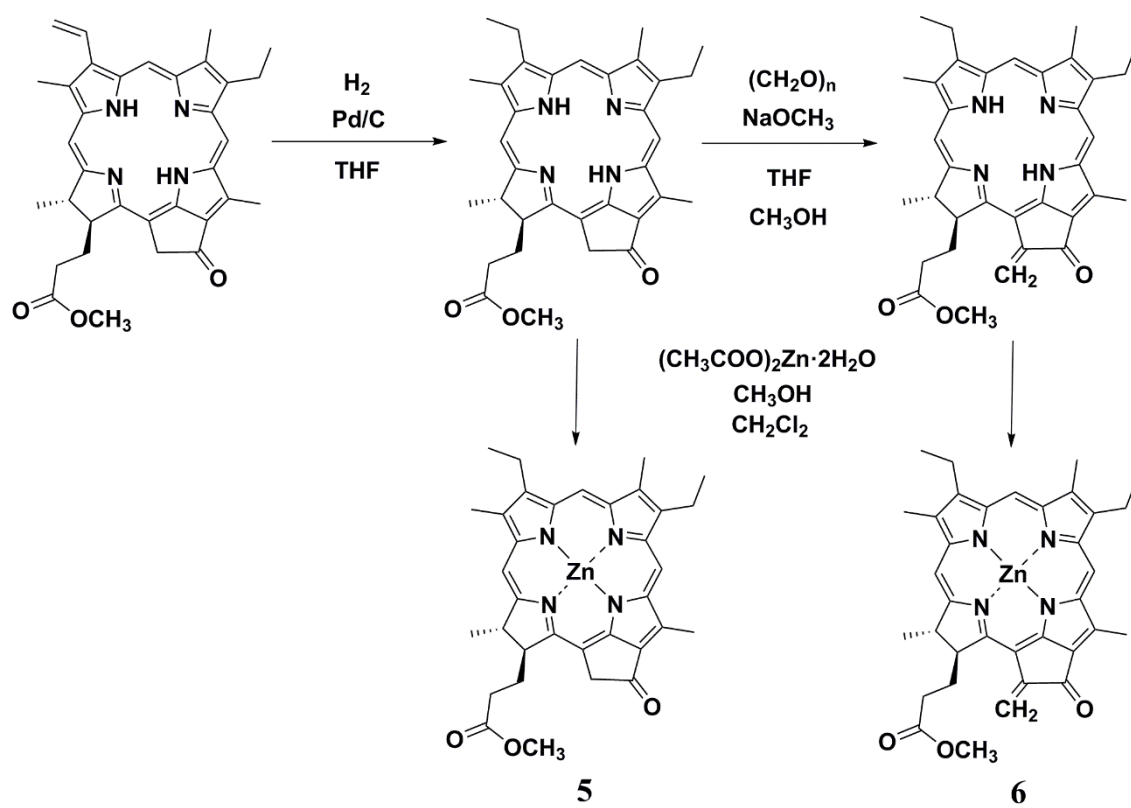


Fig. S2 Synthesis of zinc methyl mesopyropheophorbide-*a* (**5**) and its 13²-methylenated derivative **6**.

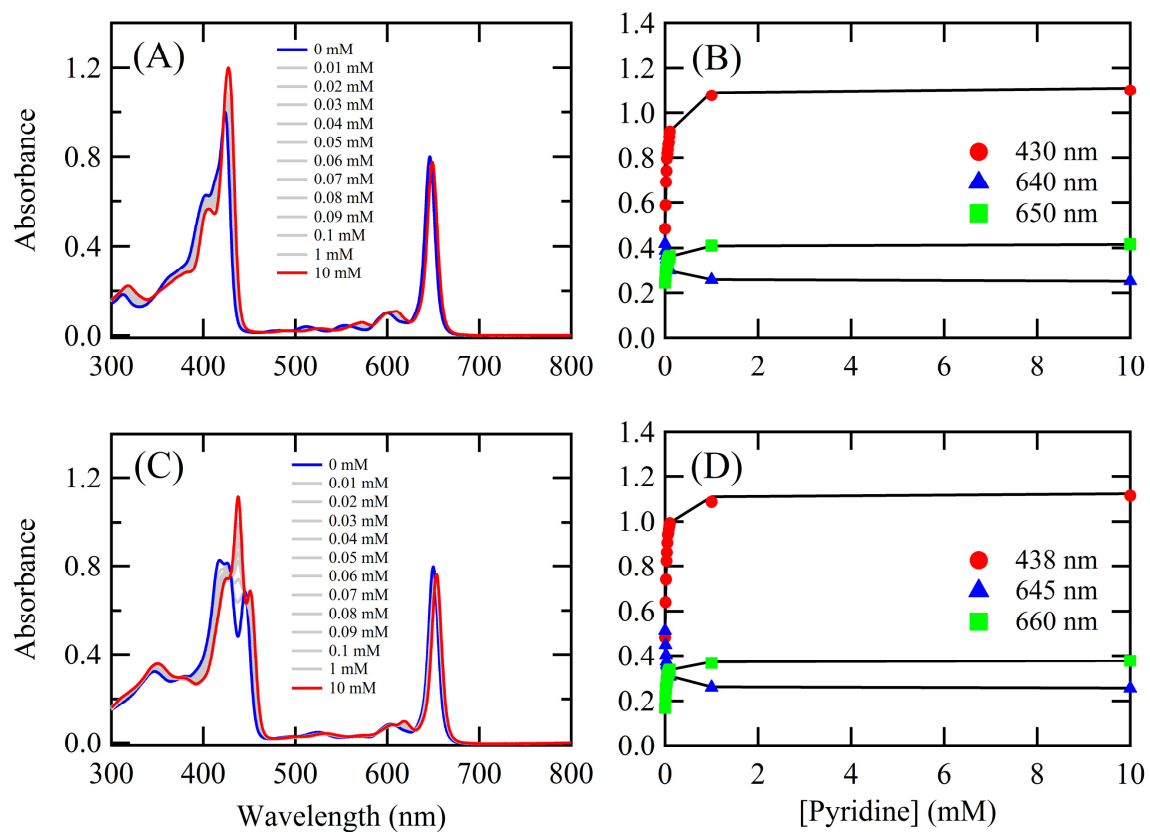


Fig. S3 Visible absorption spectral changes of **5** (A) and **6** (C) in dry benzene (10 μ M) by addition of pyridine and their curve fitting analyses (B) and (D).

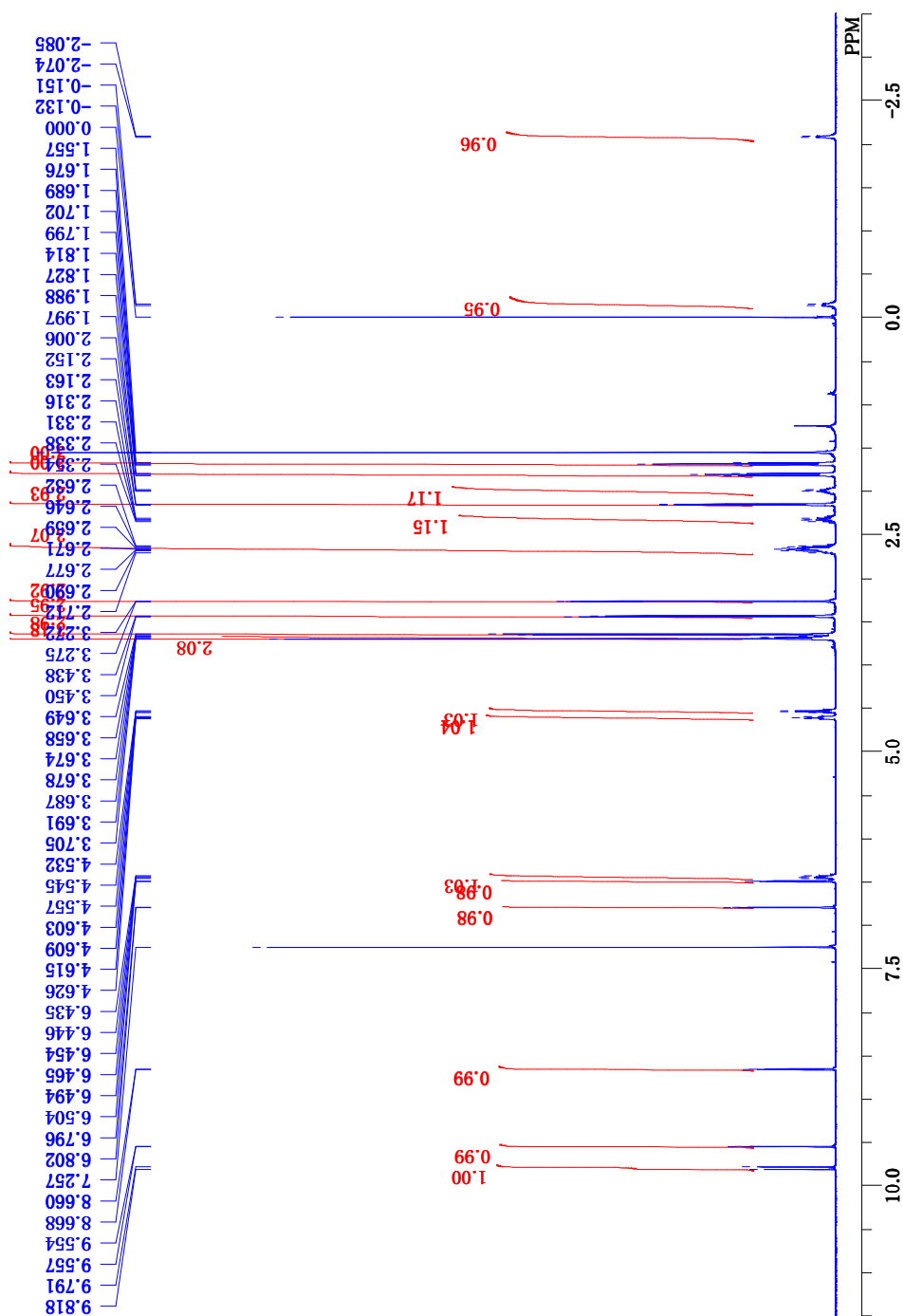


Fig. S4 ¹H-NMR spectrum of methyl ¹³C₂-methylene-bacteriopheophorbide-*d* (4, 3¹R:3¹S = 1:1) in CDCl₃.

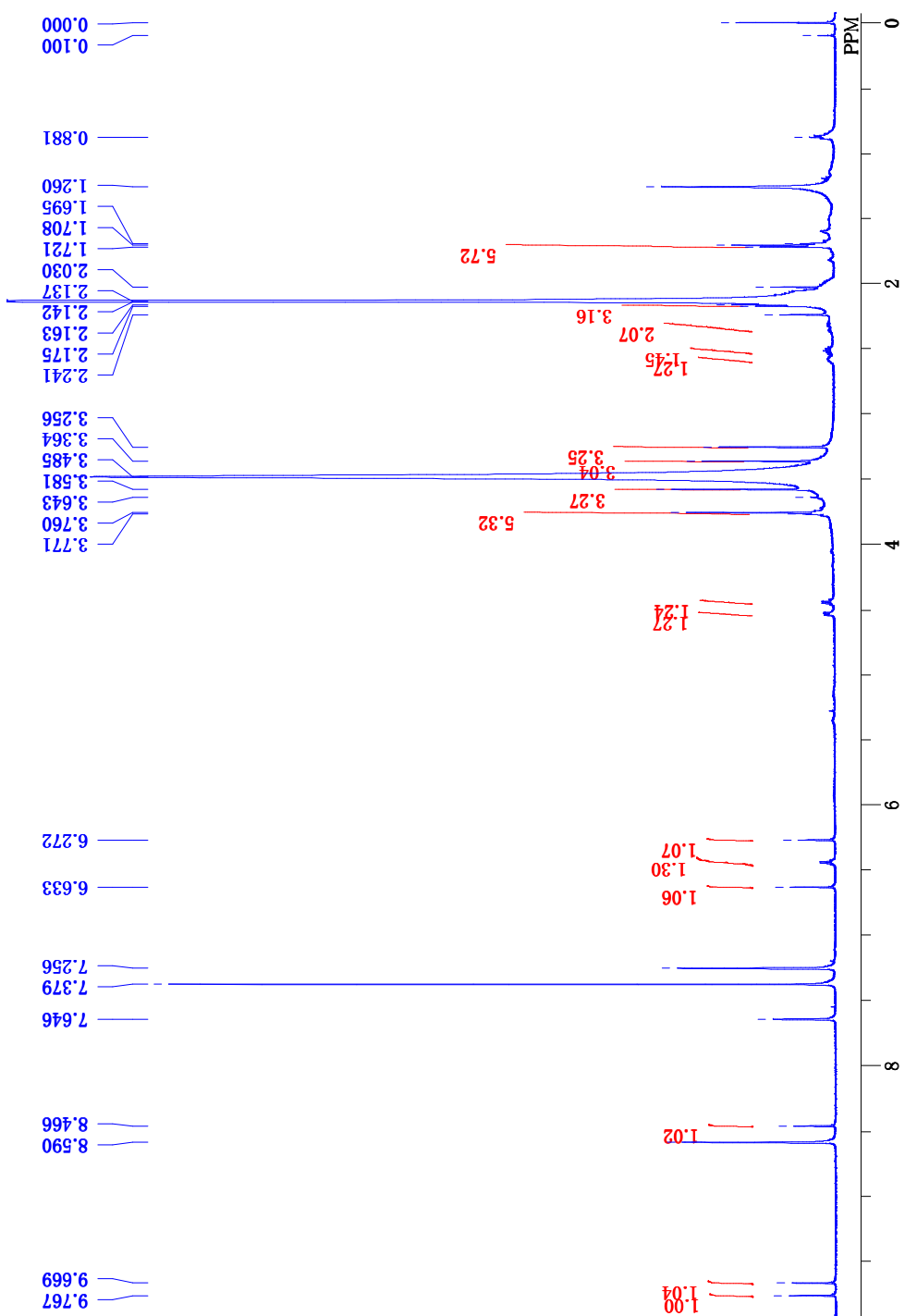


Fig. S5 ¹H-NMR spectrum of zinc methyl (3¹R)-13²-methylene-bacteriopheophorbide-*d* (**2R**) in CDCl₃-5% pyridine-d₅.

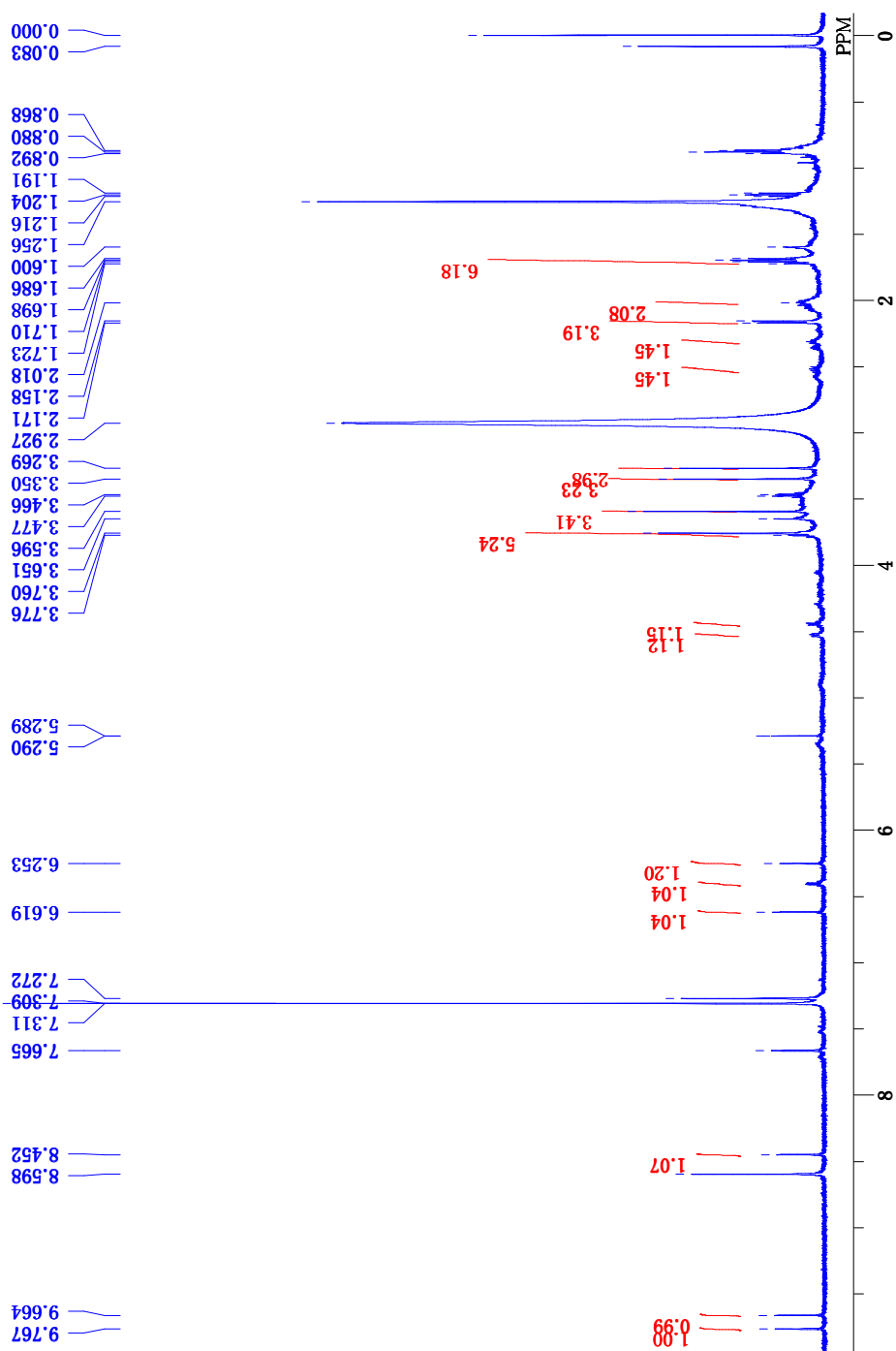


Fig. S6 $^1\text{H-NMR}$ spectrum of zinc methyl (3¹S)-13²-methylene-bacteriopheophorbide-*d* (**2S**) in CDCl_3 -5% pyridine- d_5 .

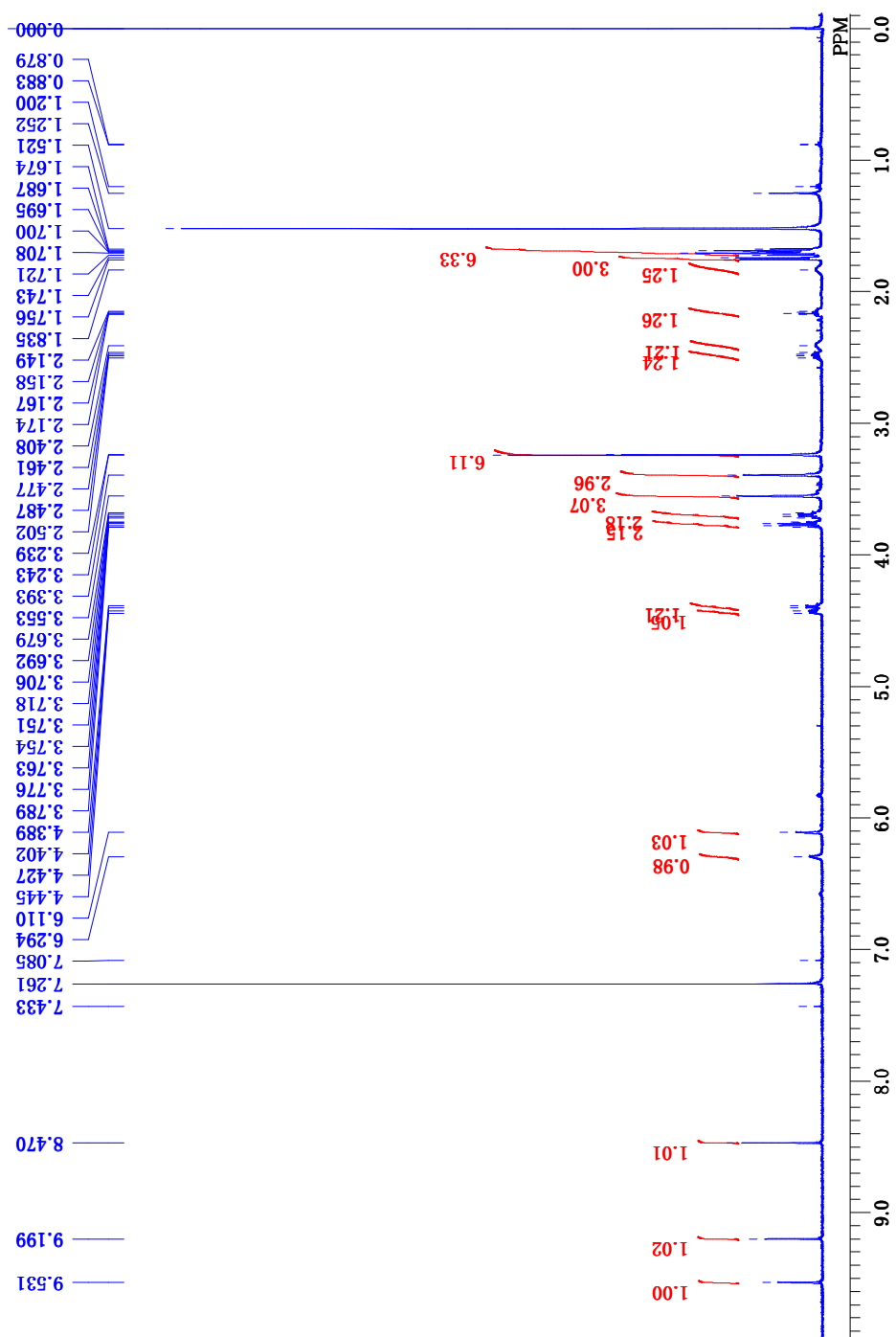


Fig. S7 $^1\text{H-NMR}$ spectrum of zinc methyl 132 -methylene-mesopyropheorbide-*a* (6)

in CDCl_3 .