

Supplementary Information

Extending conjugation in porphyrin dimer carbocations

Karl J. Thorley and Harry L. Anderson*

Department of Chemistry,
Chemistry Research Laboratory,
University of Oxford,
12 Mansfield Road,
Oxford,
UK
OX1 3TA.
E-mail: harry.anderson@chem.ox.ac.uk;
Fax: +44 1865 285002;
Tel: +44 1865 275704

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[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-butadiynyl porphinato] nickel(II) **3**

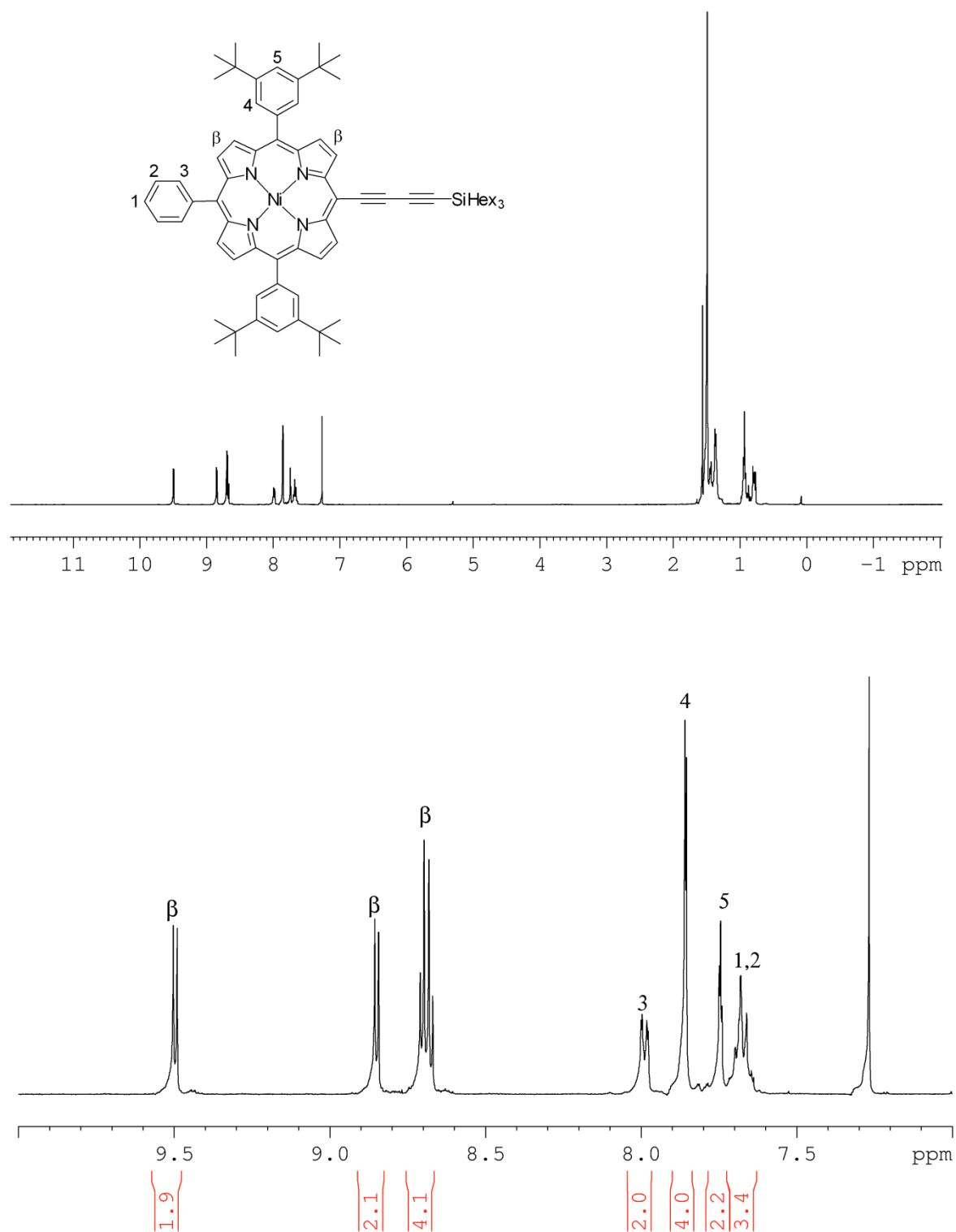


Figure S1. ^1H NMR spectra of porphyrin monomer **3**, recorded in CDCl_3 at 300 K, 400 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-hexatriynyl porphinato] nickel(II) 4

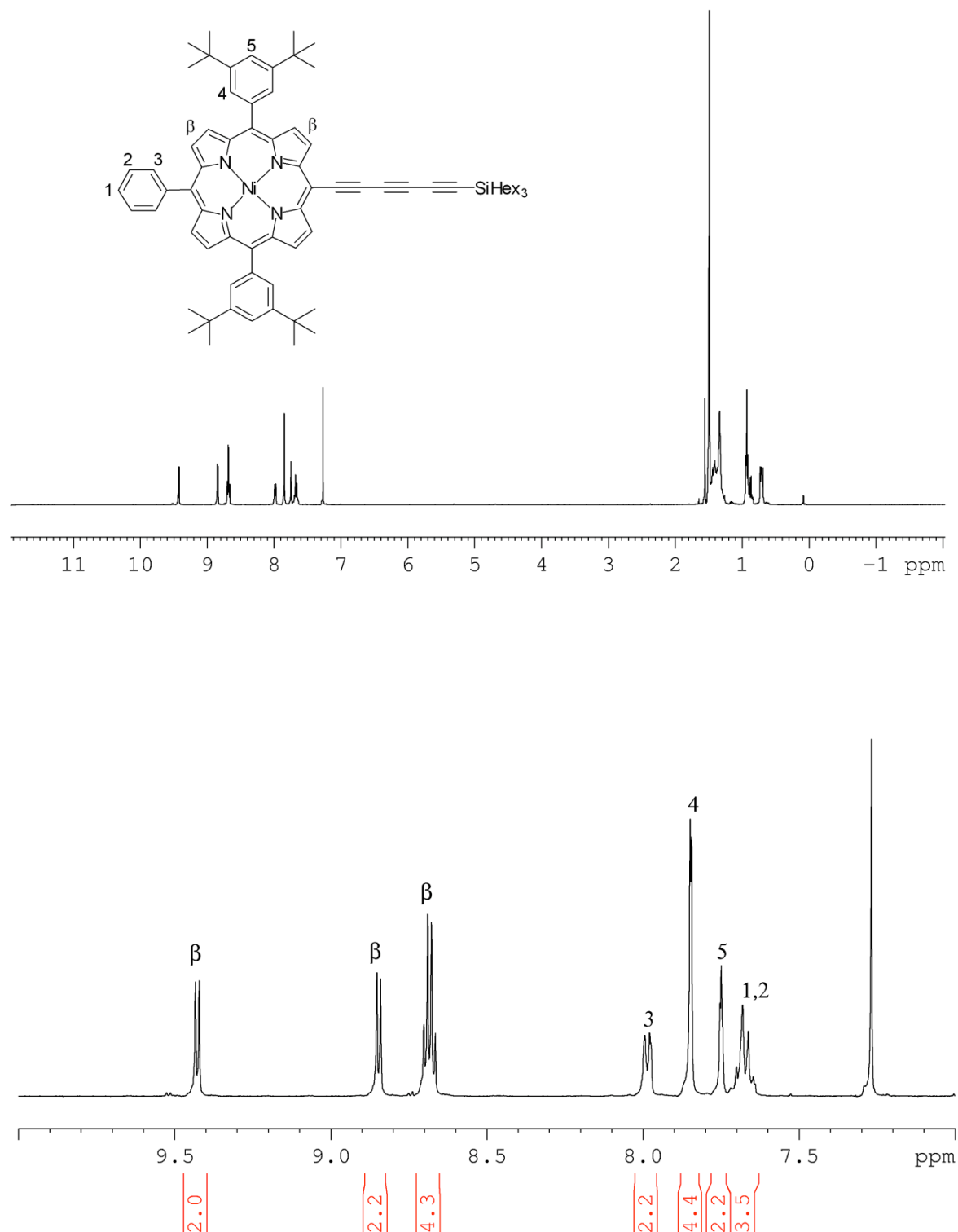


Figure S2. ^1H NMR spectra of porphyrin monomer **4**, recorded in CDCl_3 at 300 K, 400 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-[ethynyl-*p*-(trimethylsilylethynyl)phenyl]porphinato] nickel(II) **10**

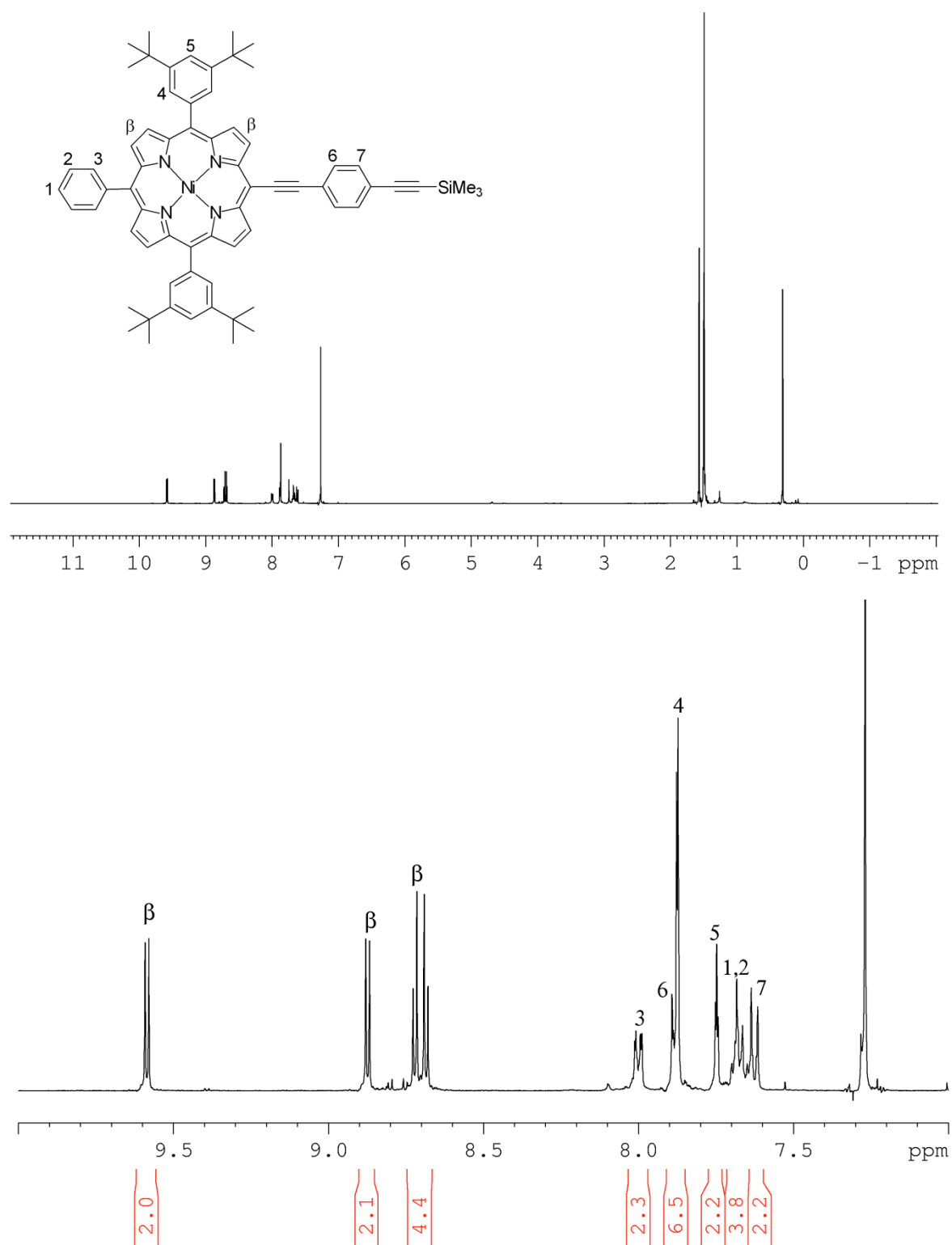


Figure S3. ^1H NMR spectra of porphyrin monomer **10**, recorded in CDCl_3 at 300 K, 400 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-(ethynylphenone) porphinato] nickel(II) 17

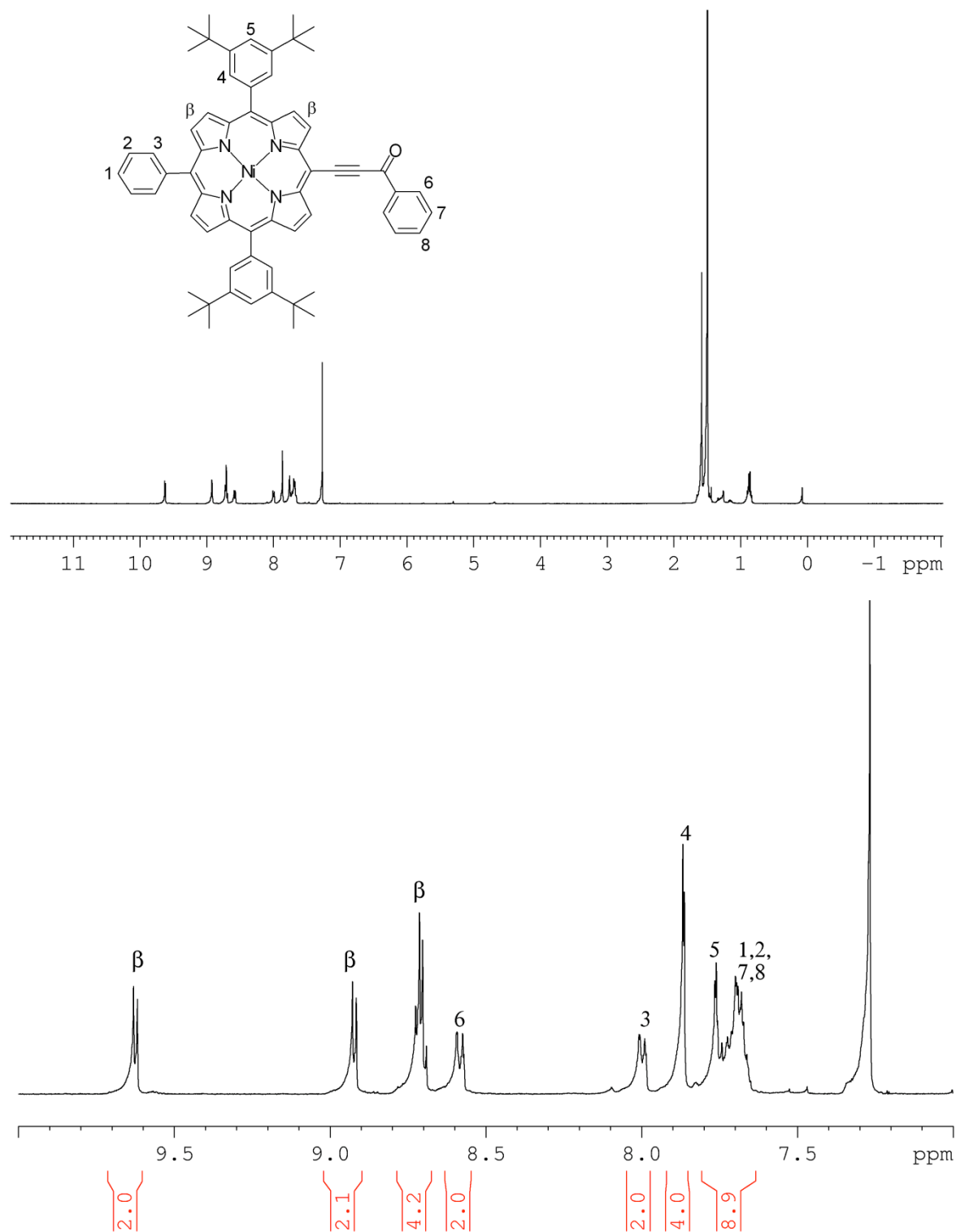


Figure S4. ^1H NMR spectra of porphyrin monomer **17**, recorded in CDCl_3 at 300 K, 400 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-ethynyl porphinato] [5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl porphinato] methanolato nickel(II) **13**

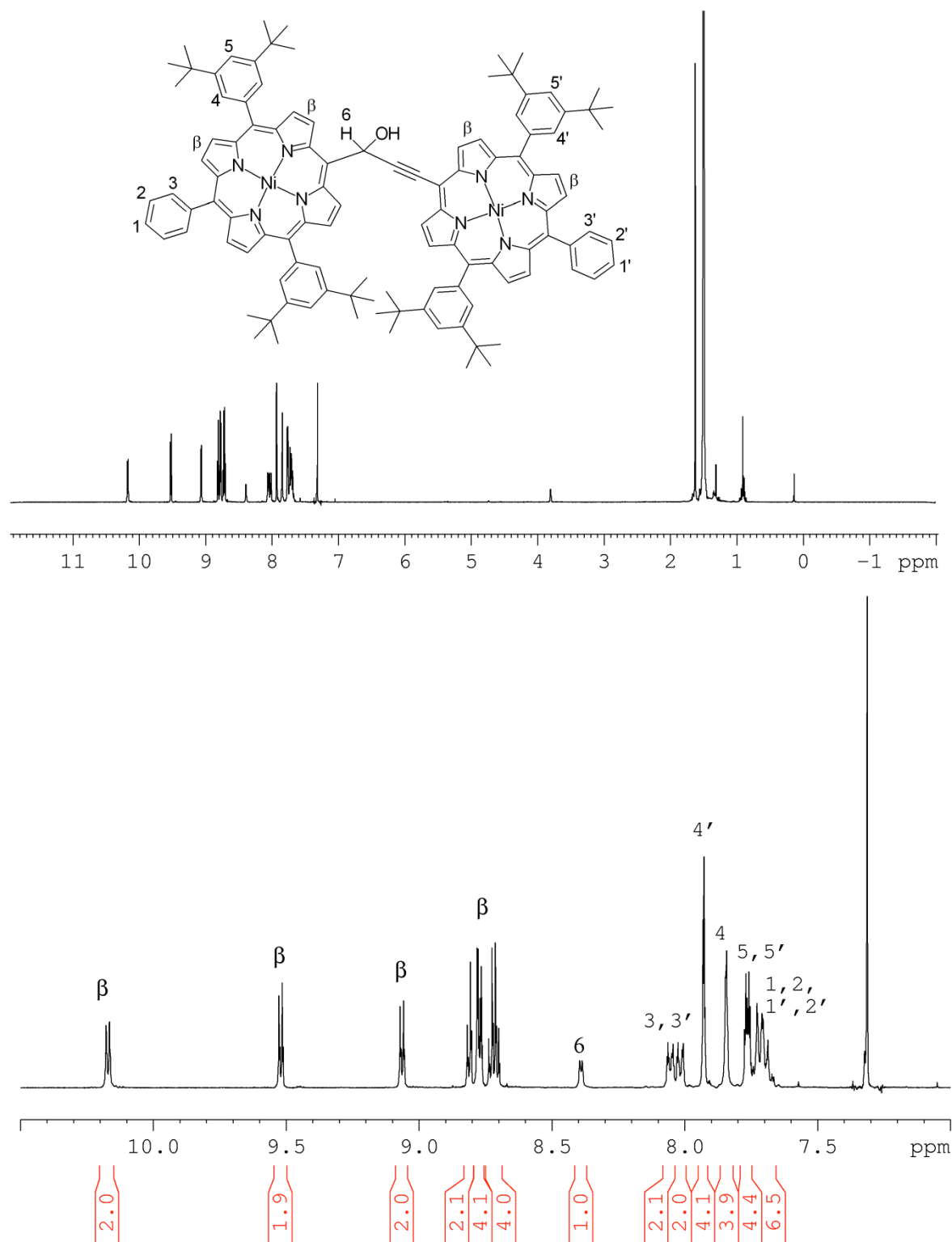


Figure S5. ^1H NMR spectra of porphyrin dimer **13**, recorded in CDCl_3 at 300 K, 400 MHz.

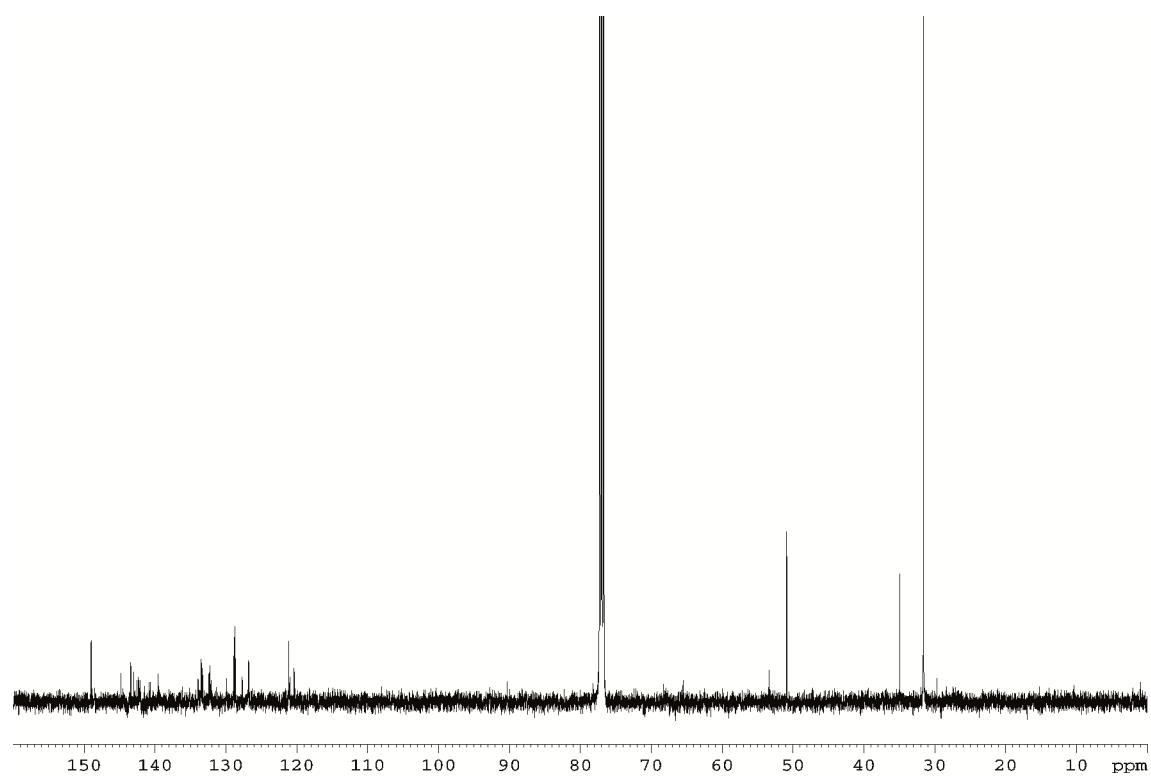


Figure S6. ^{13}C NMR spectrum of porphyrin dimer **13**, recorded in CDCl_3 at 300 K, 125 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-butadiynyl porphinato] [5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl porphinato] methanolato nickel(II) **15**

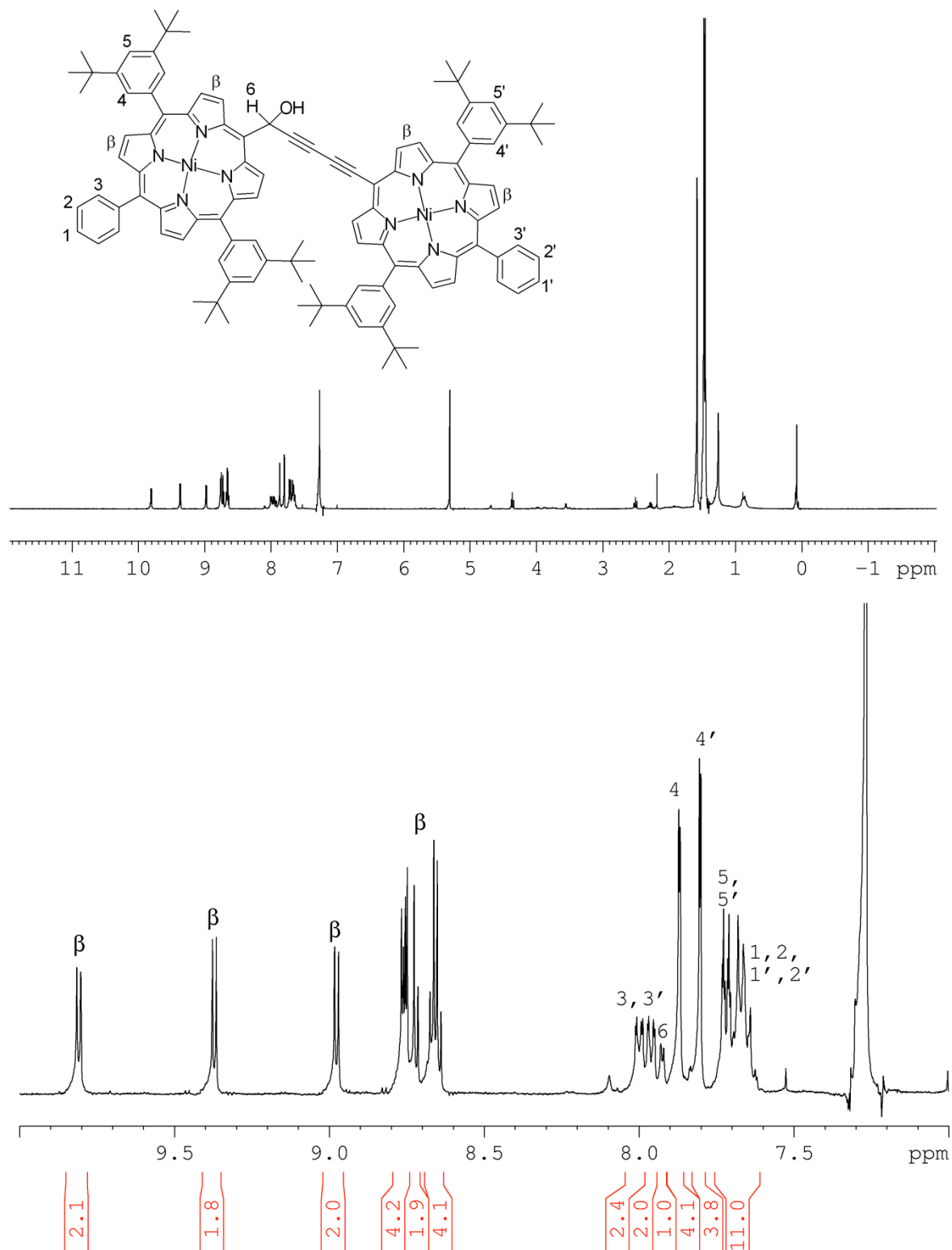


Figure S7. ^1H NMR spectra of porphyrin dimer **15**, recorded in CDCl_3 at 300 K, 400 MHz.

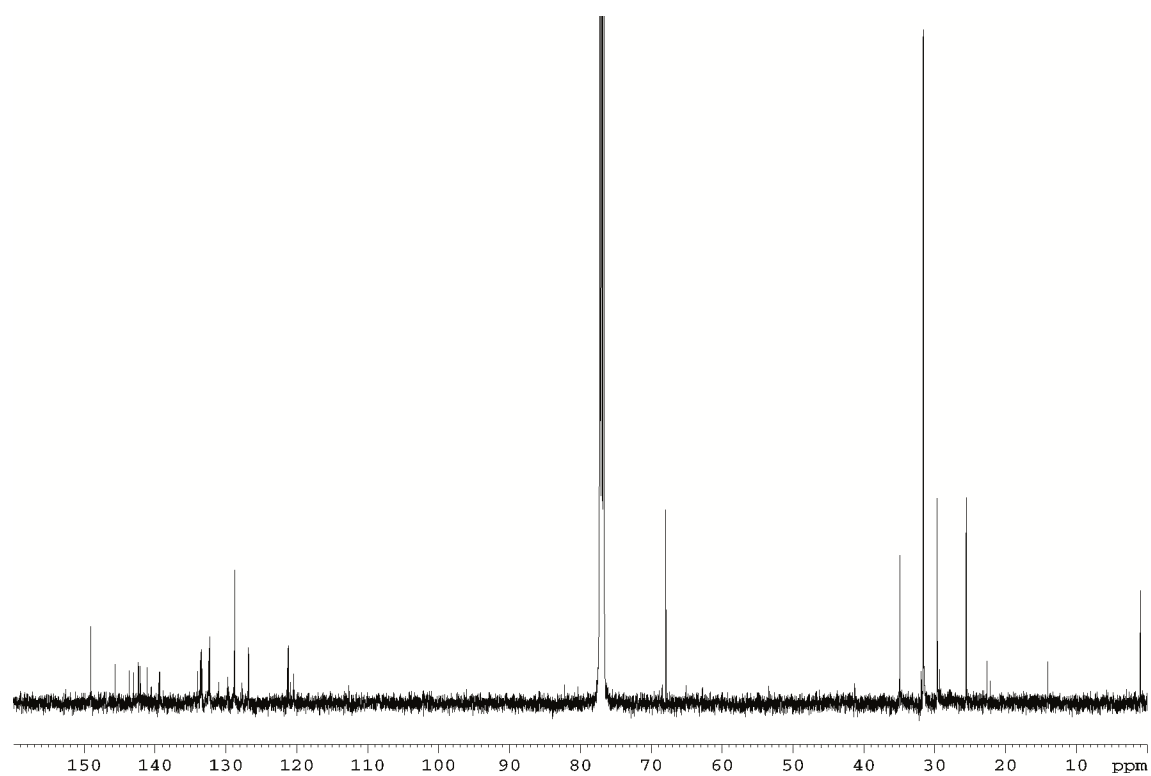


Figure S8. ^{13}C NMR spectrum of porphyrin dimer **15**, recorded in CDCl_3 at 300 K, 125 MHz.

[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-butadiynyl porphinato] [5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-ethynyl porphinato]benzenemethanolato nickel(II) 18

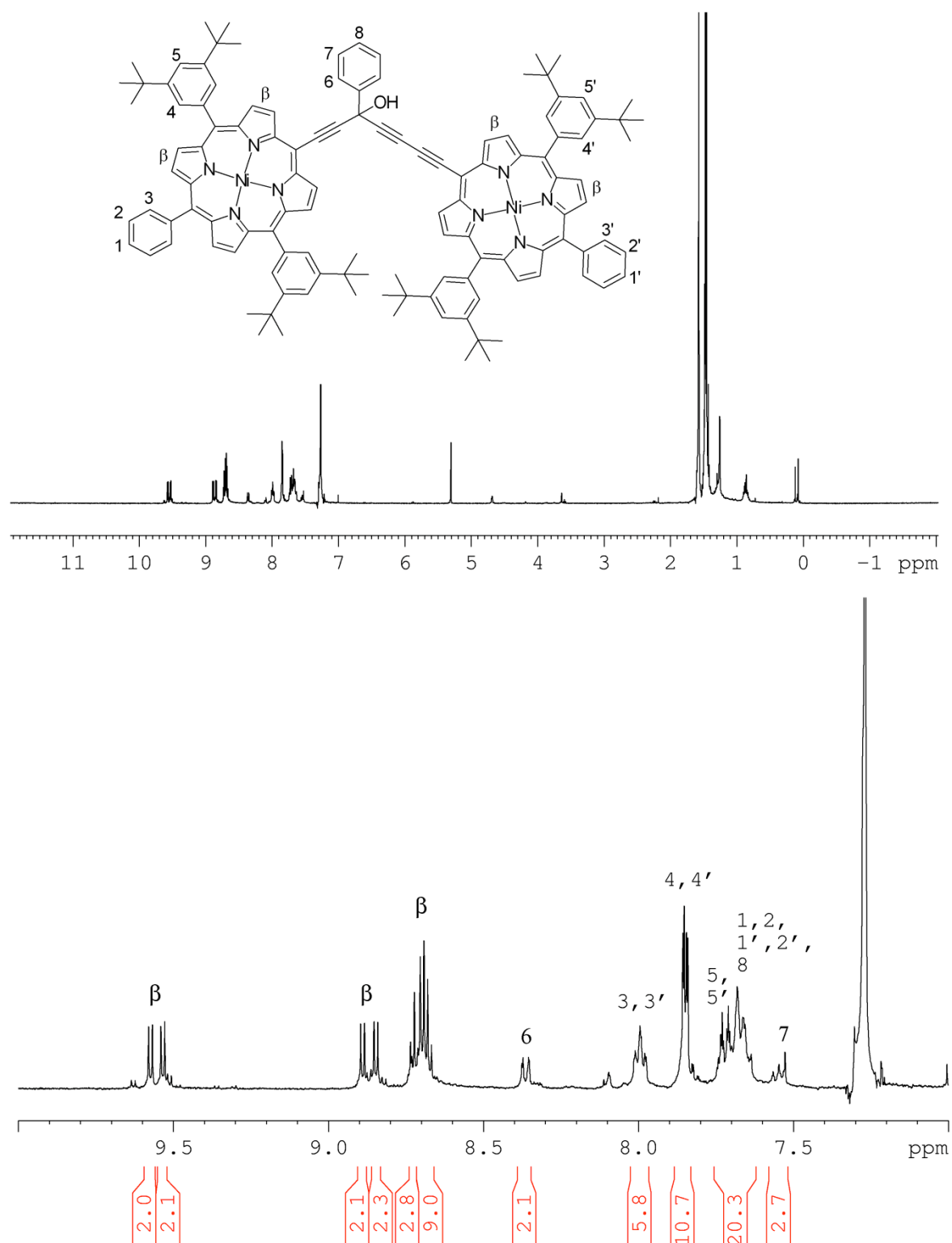


Figure S9. ^1H NMR spectra of porphyrin dimer **18**, recorded in CDCl_3 at 300 K, 400 MHz.

bis[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-butadiynyl porphinato] benzenemethanolato nickel(II) 6

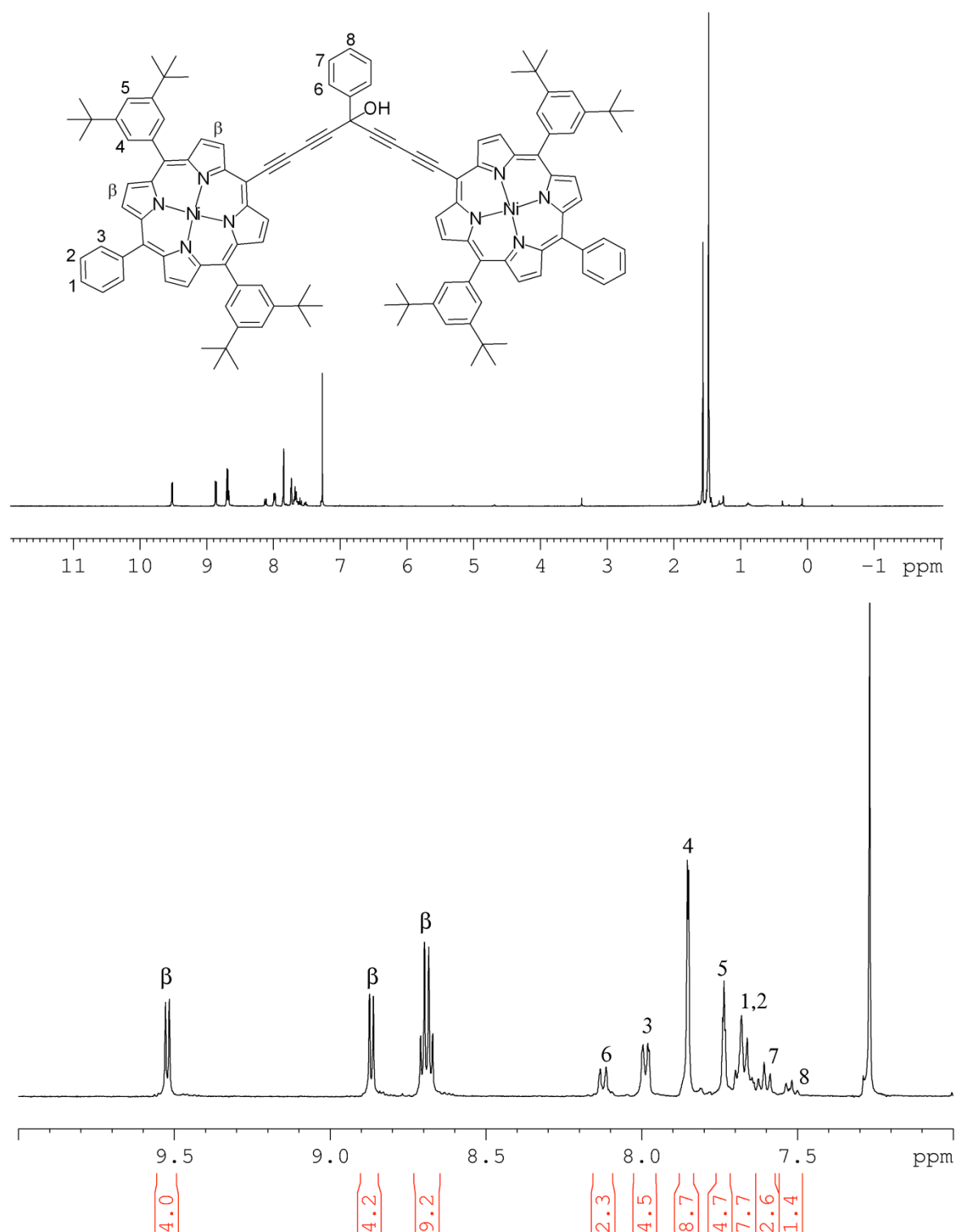


Figure S10. ^1H NMR spectra of porphyrin dimer **6**, recorded in CDCl_3 at 300 K, 400 MHz.

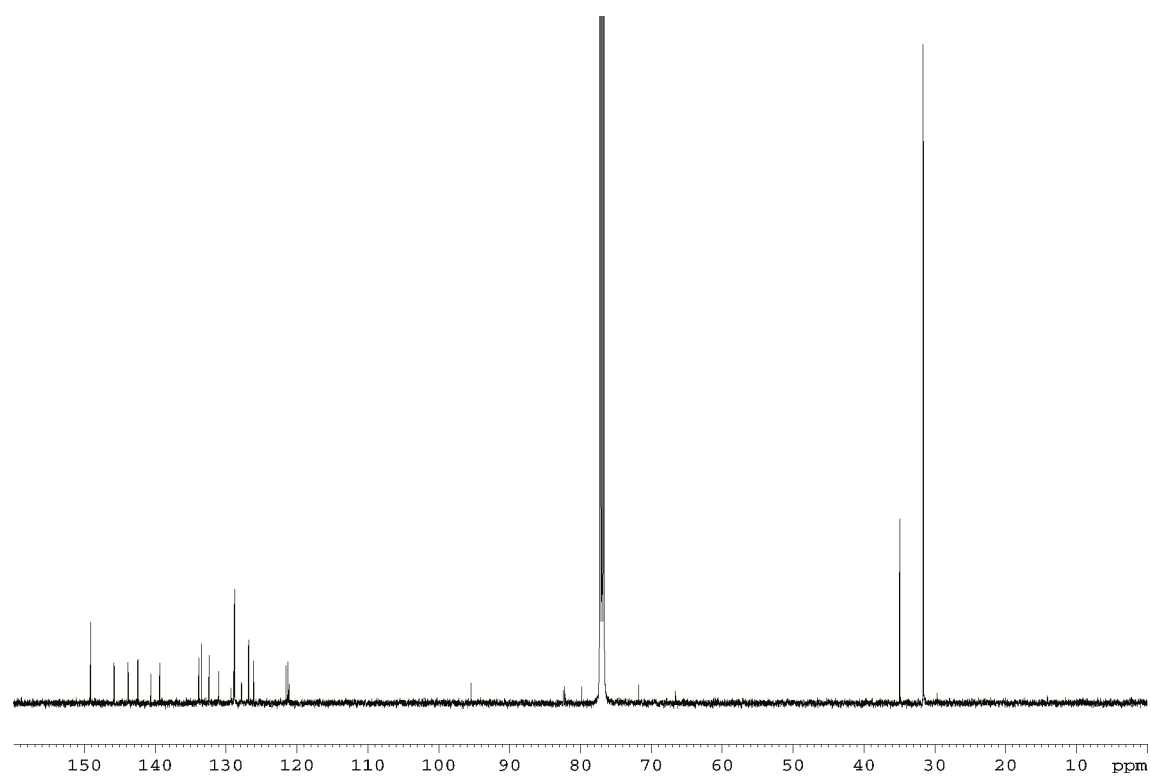


Figure S11. ^{13}C NMR spectrum of porphyrin dimer **6**, recorded in CDCl_3 at 300 K, 125 MHz.

bis[5,15-bis(3,5-di-*tert*-butylphenyl)-10-phenyl-20-[ethynyl-*p*-(trimethylsilylethynyl)phenyl]porphinato] benzenemethanolato nickel(II) 11

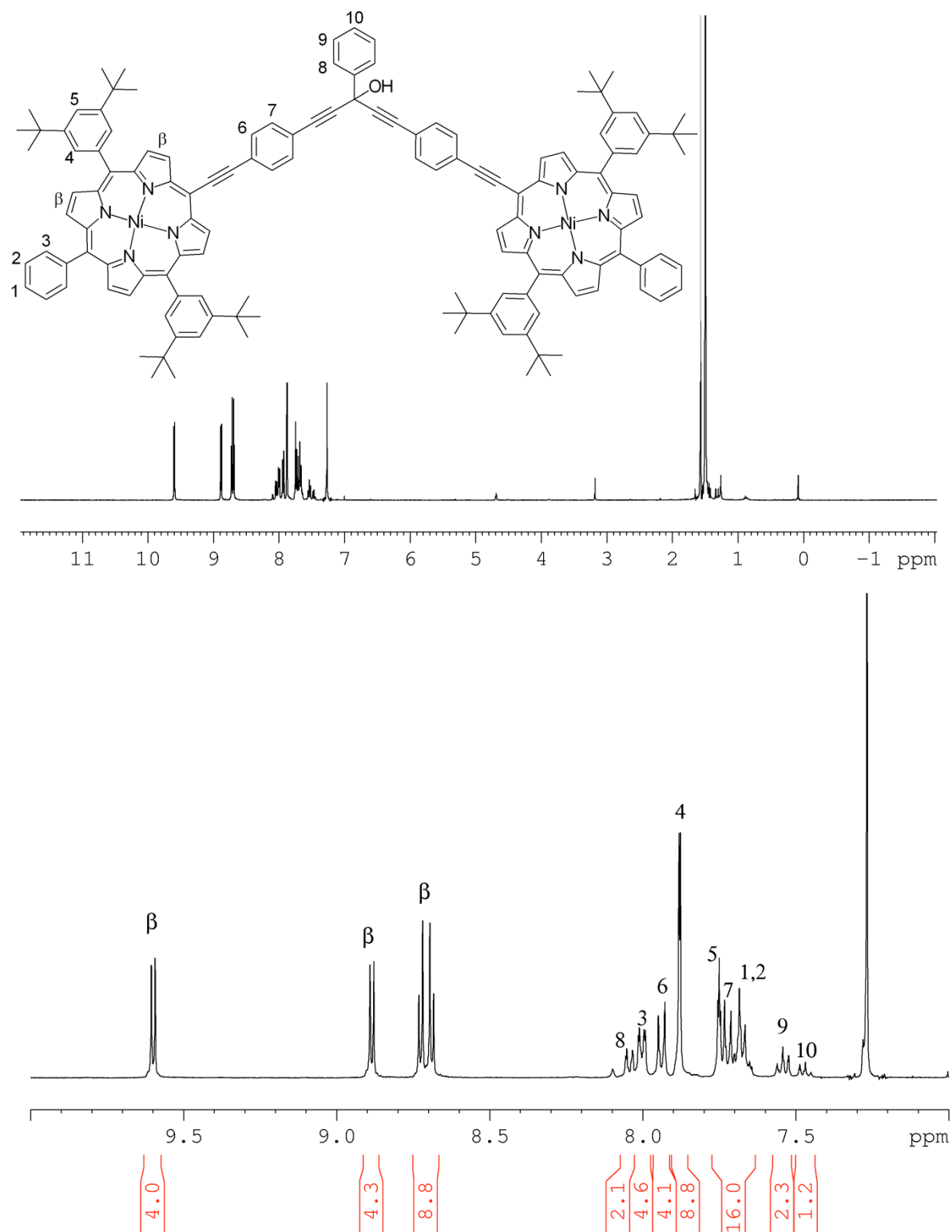


Figure S12. ^1H NMR spectra of porphyrin dimer **11**, recorded in CDCl_3 at 300 K, 400 MHz.