

Supplementary Information

Covalent Attachment of Diphosphine Ligands to Glassy Carbon Electrodes via Cu-Catalyzed Alkyne-Azide Cycloaddition. Metallation with Ni(II)

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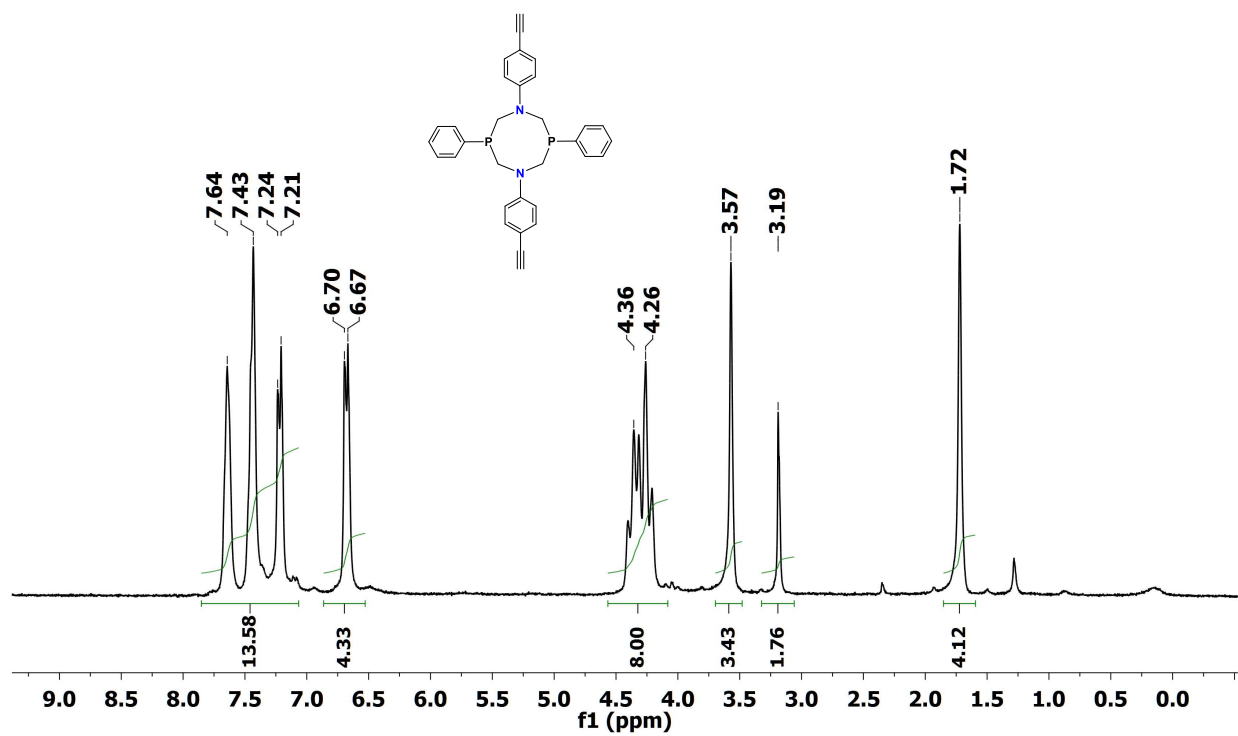


Figure S1: ^1H NMR spectrum of $\text{P}^{\text{Ph}}_2\text{N}^{\text{C}_6\text{H}_4\text{C}\equiv\text{CH}_2}$ (**1**) in THF-d_8 .

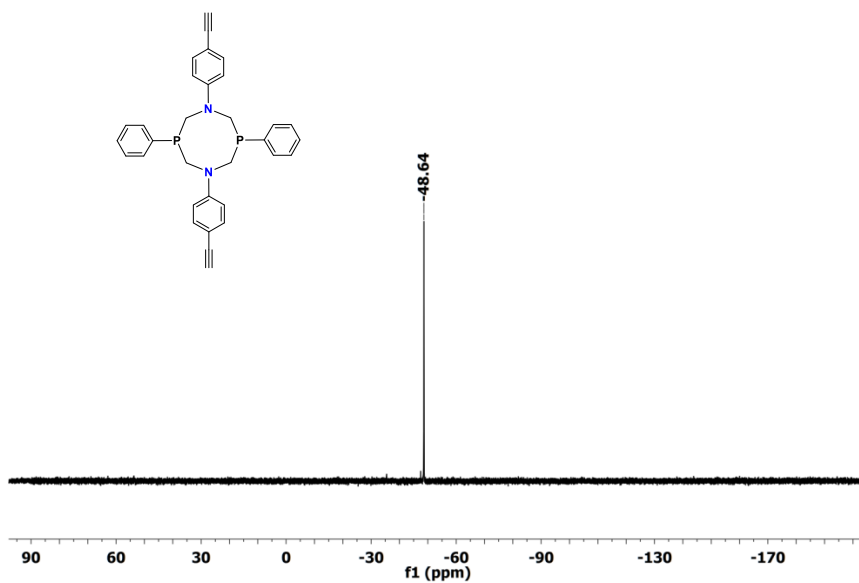


Figure S2: $^{31}\text{P}\{^1\text{H}\}$ NMR spectrum of free ligand (1) in THF- d_8 .

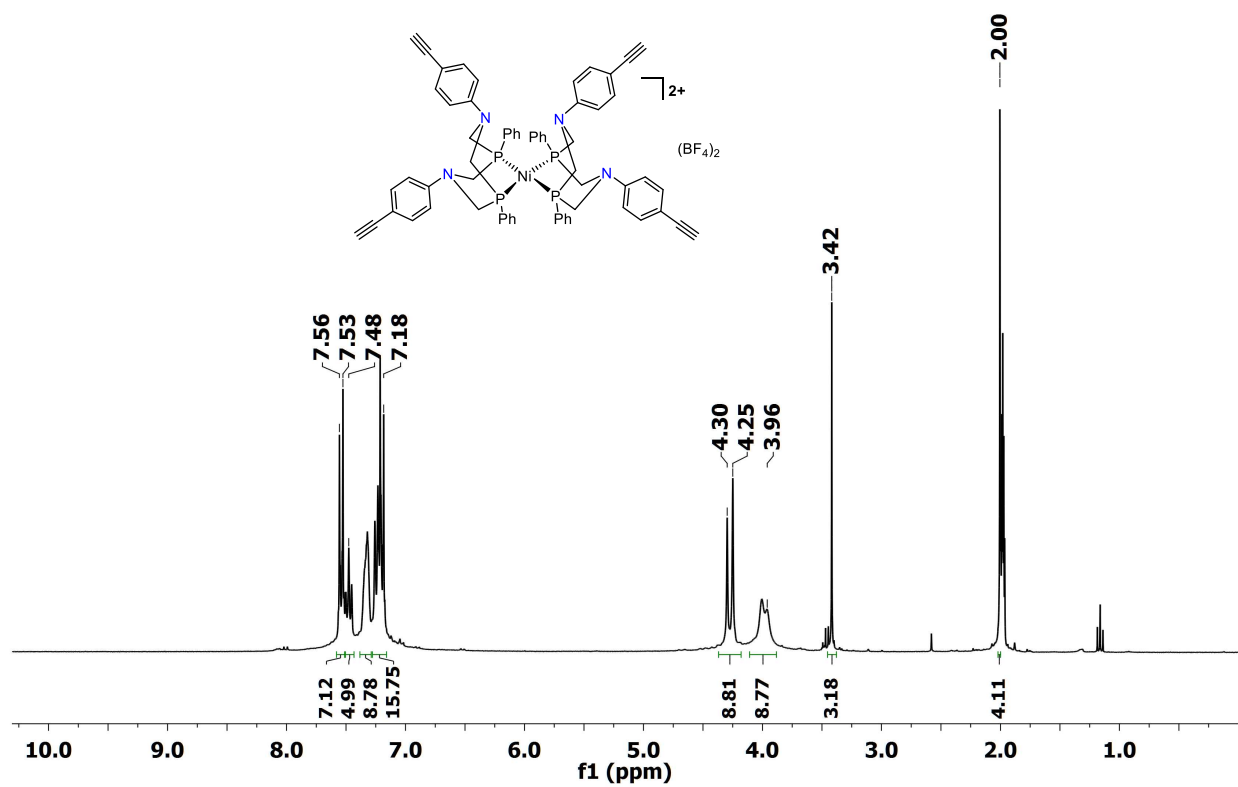


Figure S3: ^1H NMR spectrum of Ni complex (2) in CD_3CN .

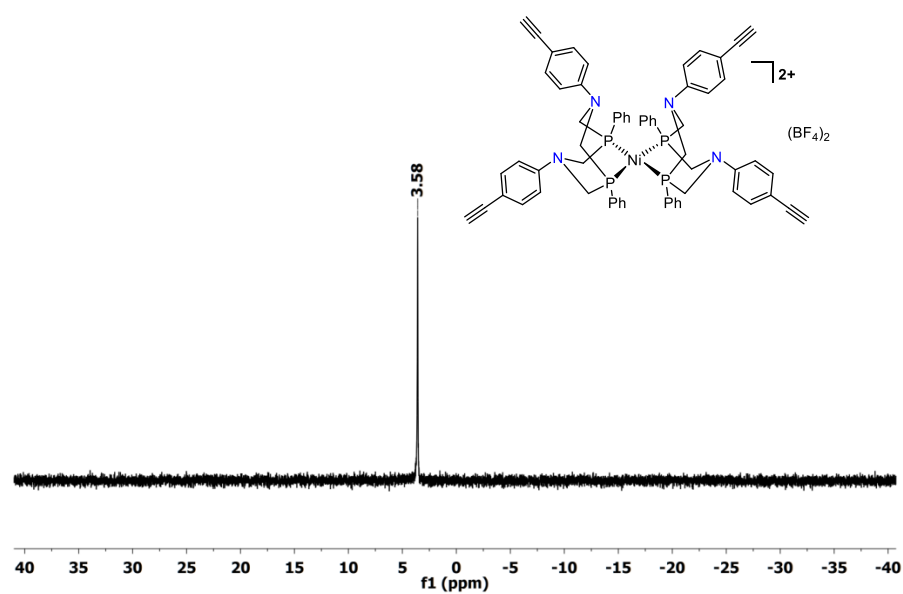


Figure S4: $^{31}\text{P}\{^1\text{H}\}$ NMR spectrum of Ni complex (2) in CD₃CN.

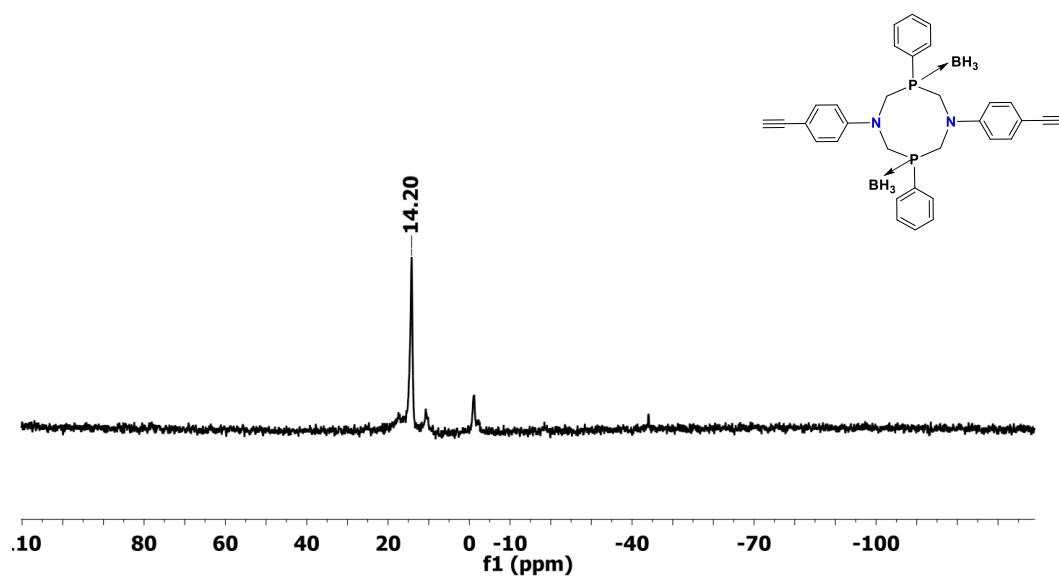


Figure S5: $^{31}\text{P}\{^1\text{H}\}$ NMR spectrum of BH₃ protected P₂N₂ (3) in THF-d₈ (Small peaks originate from impurities).

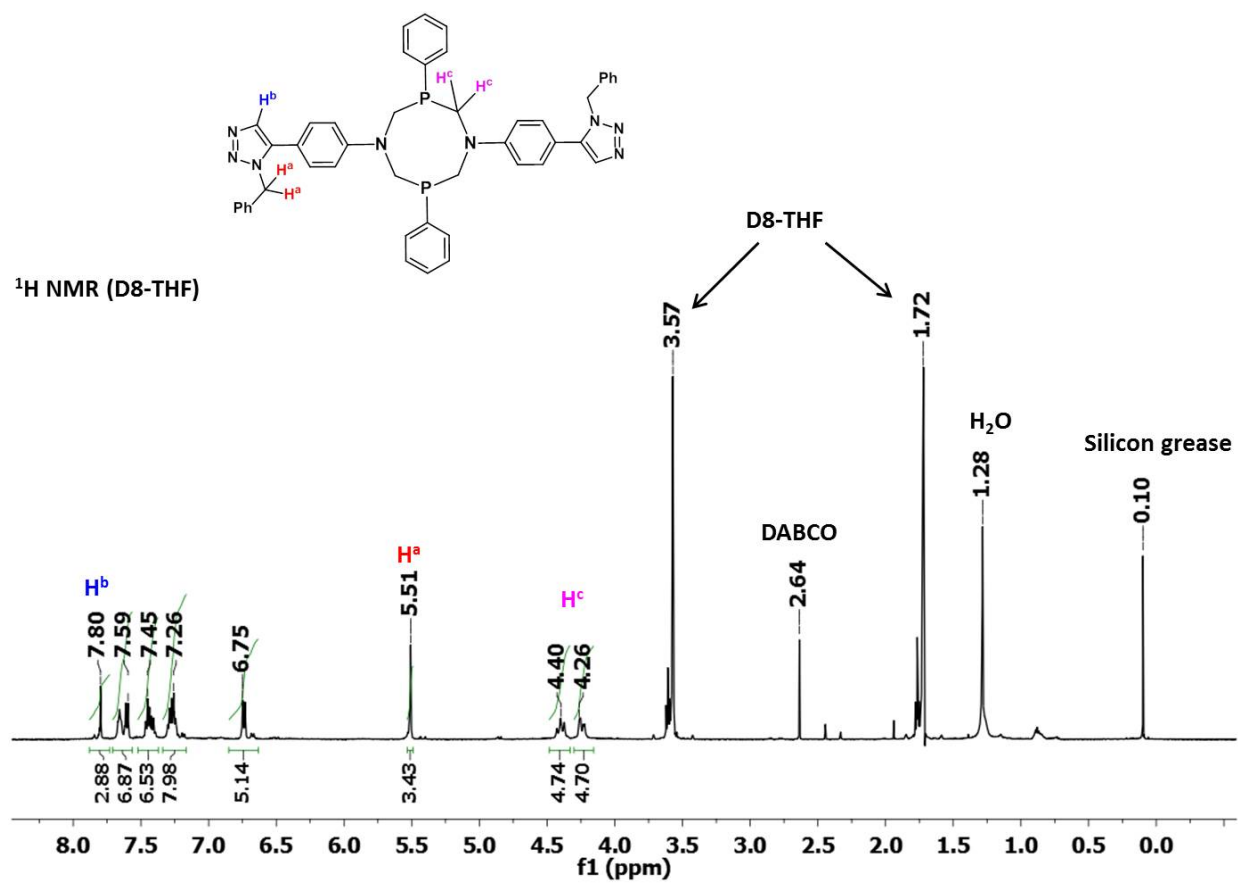


Figure S6: ¹H NMR spectrum of **5** in THF-d₈.

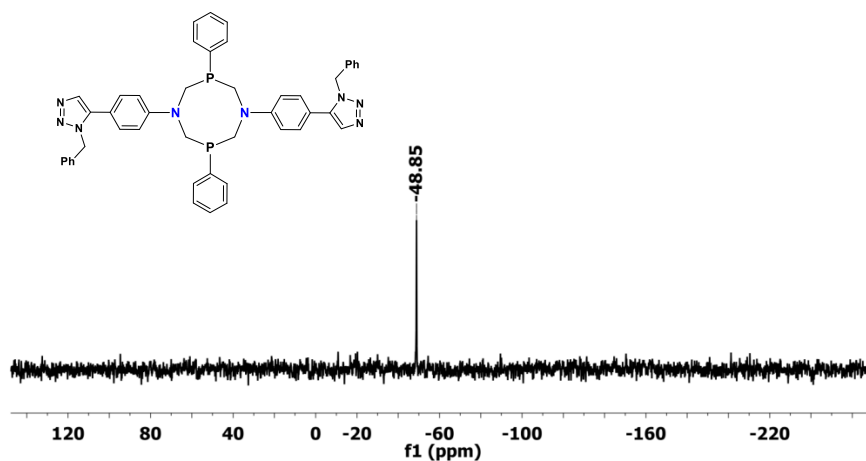


Figure S7: $^{31}\text{P}\{^1\text{H}\}$ NMR spectrum of (**5**) in THF-d_8 .

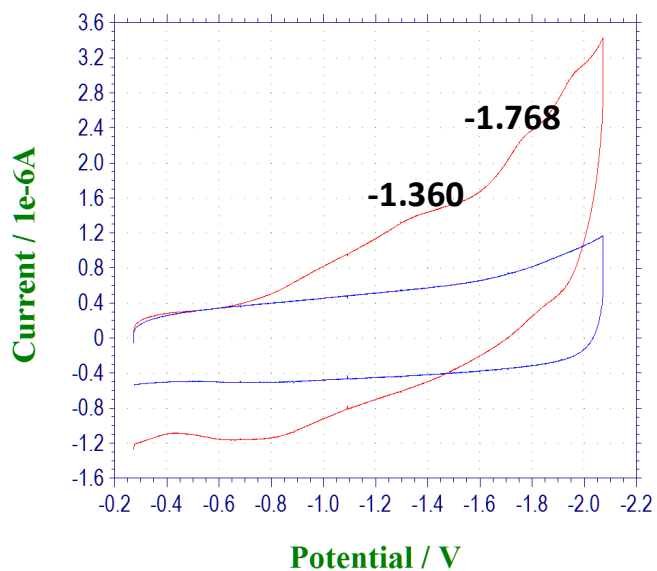


Figure S8: Cyclic voltammograms in MeCN (0.1 M $[\text{Bu}_4\text{N}]\text{PF}_6$ of **9** (red) and unmodified electrode (blue). Conditions: 1 mm glassy carbon working electrode, 25 °C, scan rate 100 mV s^{-1} .