

**C–H $\cdots$  H–Fe Dihydrogen Bonding: Synthesis and Structure of *trans*-  
[FeH(NCS(*i*-Pr)-*S*)(dppe)<sub>2</sub>]I (dppe = Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)**

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Compound *trans*-[FeH(NCS)(dppe)<sub>2</sub>] (**1**) reacted with isopropyl iodide (*i*-PrI) to give an Fe(II)-organic isothiocyanide complex, *trans*-[FeH(NCS(*i*-Pr)-*S*)(dppe)<sub>2</sub>]I (**2**). Compound **2** was structurally characterized, in which the hydride ligand appears to be involved in the “dihydrogen” bonding, M–H $\cdots$  H–C. Crystallographic data for **2**: monoclinic space group *P*2<sub>1</sub>/*n*, *a* = 13.490(2) Å, *b* = 17.269(3) Å, *c* = 21.384(3) Å,  $\beta$  = 90.682(7)°, *Z* = 4, *R*(*wR*<sub>2</sub>) = 0.0348(0.0894).

