Supporting Information

Reversible CO Dissociation of Tricarbonyl Iodide [Fe]-hydrogenase Models Ligating Acylmethylpyridyl Ligands
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Figure S1. IR spectrum of 3 in CH$_3$CN.
Figure S2. IR spectra: (a), 6 in acetone; (b), 6 in acetone for 1h; (c), 6 in acetone for 3h; (d), 3 in acetone.
Figure S3. IR spectrum of 3 and 6 in acetone.

Figure S4. IR spectra: (a), a mixture of 2 and 5 in CH₂Cl₂; (b), 2 in CH₂Cl₂.
Figure S5. IR spectra of 1: (a), dissolved in acetone; (b), dissolved in CH₃OH; (c) dissolved in THF.
Figure S6. Top: $^1$H NMR spectrum of a solution of 6 dissolved in D$_6$-acetone for 24h; bottom: pure 3. (From these two spectra, 6 almost converted back to 3 completely, except some decomposition)
Figure S7. $^1$H NMR spectrum of 7 in CD$_3$CN.
Figure S8. $^1$H NMR spectrum of 1 in D$_6$-acetone.
Figure S9. $^1$H NMR spectrum of 8 in D$_6$-acetone.
Figure S10. $^{31}$P NMR spectrum of 8 in D$_6$-acetone.