Supporting Information

1,1’-Bis(N-benzimidazolylidene)ferrocene: Synthesis and Study of a Novel Ditopic Ligand and Its Transition Metal Complexes

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General Considerations

Figure S1. Cyclic voltammogram of bisurea 5

Figure S2. Cyclic voltammogram of {Ir₂(cod)₂Cl₂}(4)(6)

Figure S3. Cyclic voltammograms of {Ir₂(cod)₂Cl₂}(4)(6) at different scan rates

Figure S4. Cyclic voltammogram of {Ir₂(CO)₄Cl₂}(4)(7)

NMR Spectra

¹H and ¹³C NMR spectra of 1 S5–S6
¹H and ¹³C NMR spectra of 2 S7–S8
¹H and ¹³C NMR spectra of 3 S9–S10
¹H and ¹³C NMR spectra of 4 S11–S12
¹H and ¹³C NMR spectra of 5 S13–S14
¹H and ¹³C NMR spectra of 6 S15–S16
¹H and ¹³C NMR spectra of 7 S17–S18
**General Considerations.** Electrochemical analyses were performed on CH Instruments Electrochemical Workstations (series 660B and 700B) using an air-free three electrode cell under an atmosphere of nitrogen. The electrochemical cell contained platinum working and counter electrodes and a silver wire as a quasi-reference electrode. All measurements were performed in dry CH₂Cl₂ using 1 mM analyte, 0.1 M [(Bu₄N)(PF₆) as the electrolyte, and decamethylferrocene (Fc*) as the internal standard (Fc*⁺⁻ = −0.057 V vs. saturated calomel electrode). Unless otherwise noted, the potentials listed were determined at 100 mV/s scan-rates and adjusted to saturated calomel electrode.

![Cyclic voltammogram of bisurea 5](image)

**Figure S1.** Cyclic voltammogram of bisurea 5.

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**Figure S2.** Cyclic voltammogram of \{\text{Ir}_2(\text{cod})_2\text{Cl}_2\}\(4\) \(6\).

**Figure S3.** Cyclic voltammograms of \{\text{Ir}_2(\text{cod})_2\text{Cl}_2\}\(4\) \(6\) at different scan rates (indicated).
Figure S4. Cyclic voltammogram of $\{\text{Ir}_2(\text{CO})_4\text{Cl}_2\}(4)$ (7).
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PULSE SEQUENCE
Relax. delay 2.000 sec
Pulse 36.0 degrees
Acq. time 1.777 sec
Width 18098.9 Hz
6 repetitions

OBSERVE G13, 75.6700134
DECOUPLE H1, 300.1499525
Power 40 dB
continuously on
WALIC-16 modulated
Single precision data

DATA PROCESSING
Line broadening 1.0 Hz
FT size 65536
Total time 1 minute

DV022109C
Pulse Sequence: s2pu1
Solvent: CDC13
Ambient temperature
UNITYplus-300 "nmr2"
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