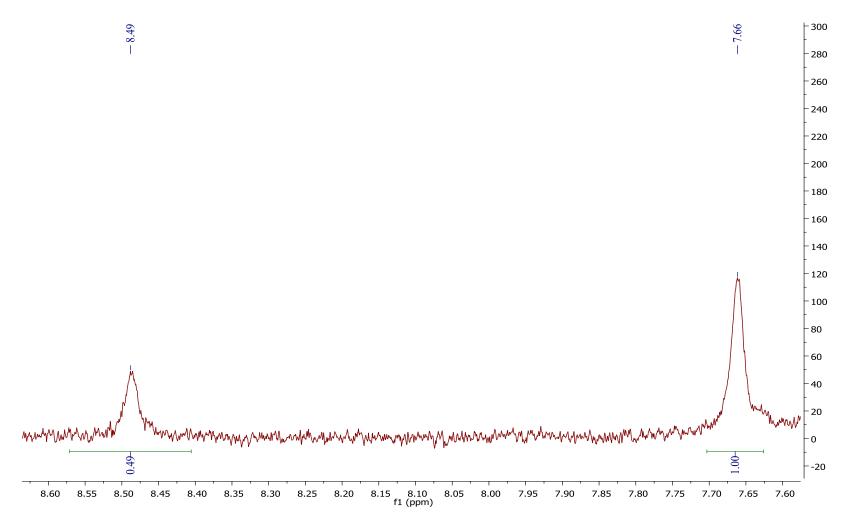
## **Supporting Information**

Half-sandwich rhodium and iridium complexes containing homoquiral imidazolyl-imine ligands: synthesis, characterization and catalytic applications

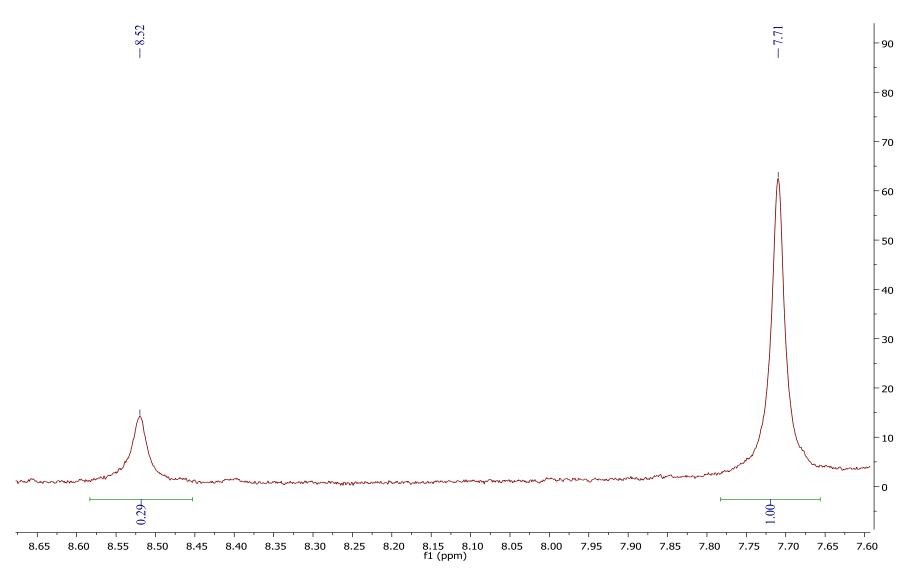
Alexandra Becerra, Raúl Contreras, Daniel Carmona, Fernando J. Lahoz, and Pilar García-Orduña

## $^{1}\text{H}$ NMR data, at low temperature, in the HN=C region for the aqua-complexes 7-12

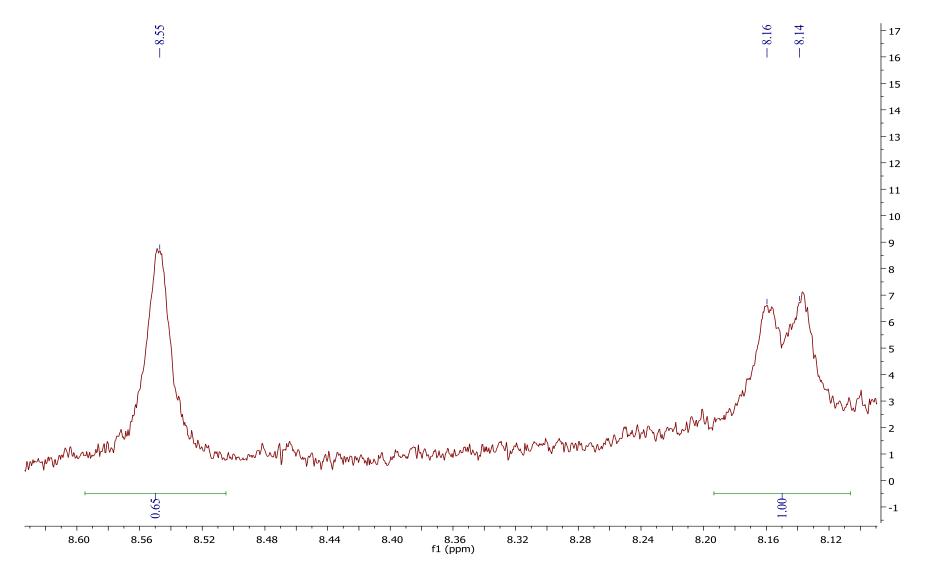
Complex **7**, <sup>1</sup>H, 300 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 183 K



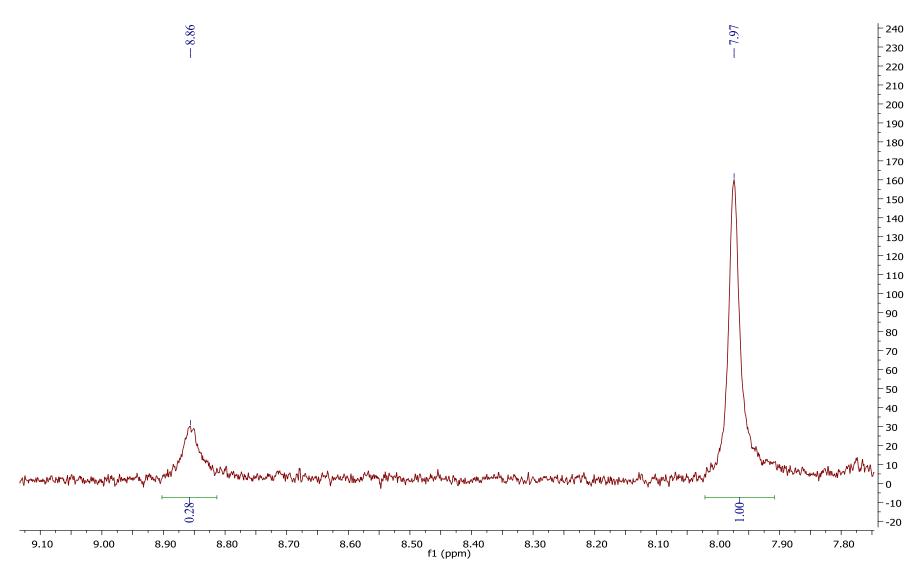
Complex **8**, <sup>1</sup>H NMR, 400 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 183 K



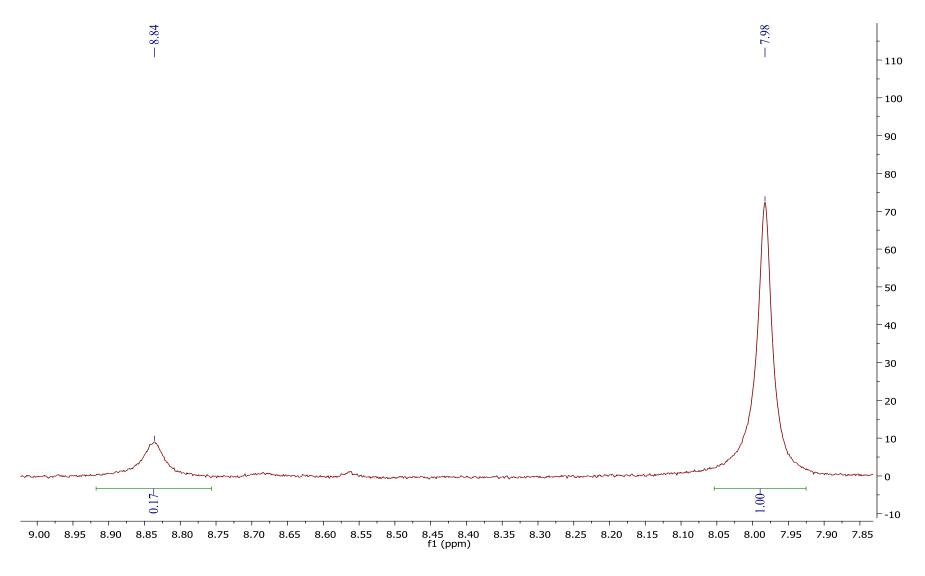
Complex **9**, <sup>1</sup>H, 400 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 183 K



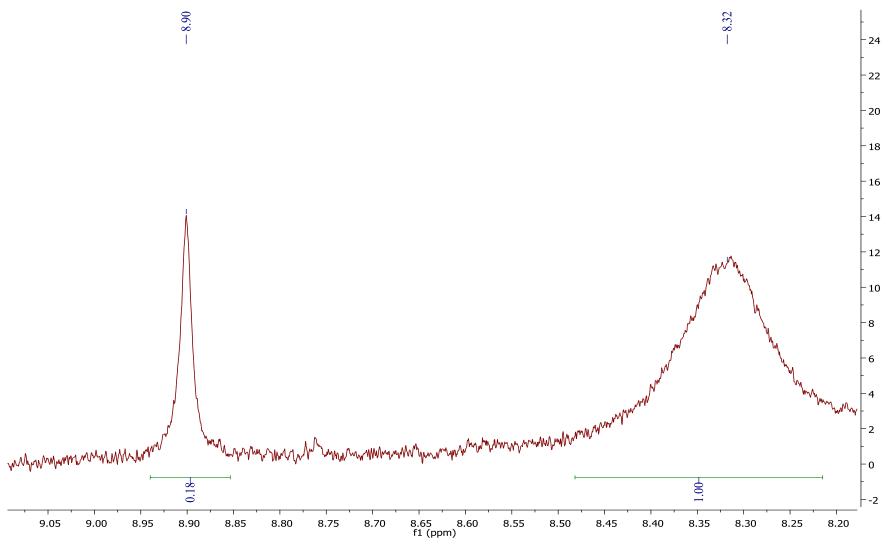
Complex **10**, <sup>1</sup>H NMR, 300 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 183 K



Complex **11**, <sup>1</sup>H NMR, 400 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 193 K

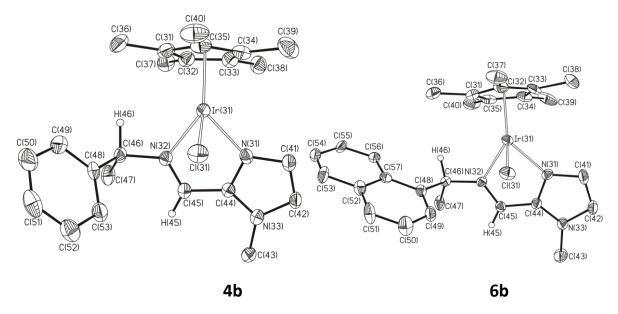


Complex **12**, <sup>1</sup>H NMR, 400 MHz, CD<sub>2</sub>Cl<sub>2</sub>, 223 K



## Crystallographic data

Molecular structure of the epimers **4b** and **6b** of complexes **4** and **6**.Only hydrogen atoms bonded to the stereogenic centres and to the iminic carbon C(45) have been represented.



## Molecular structure of the cation of complex 10

