

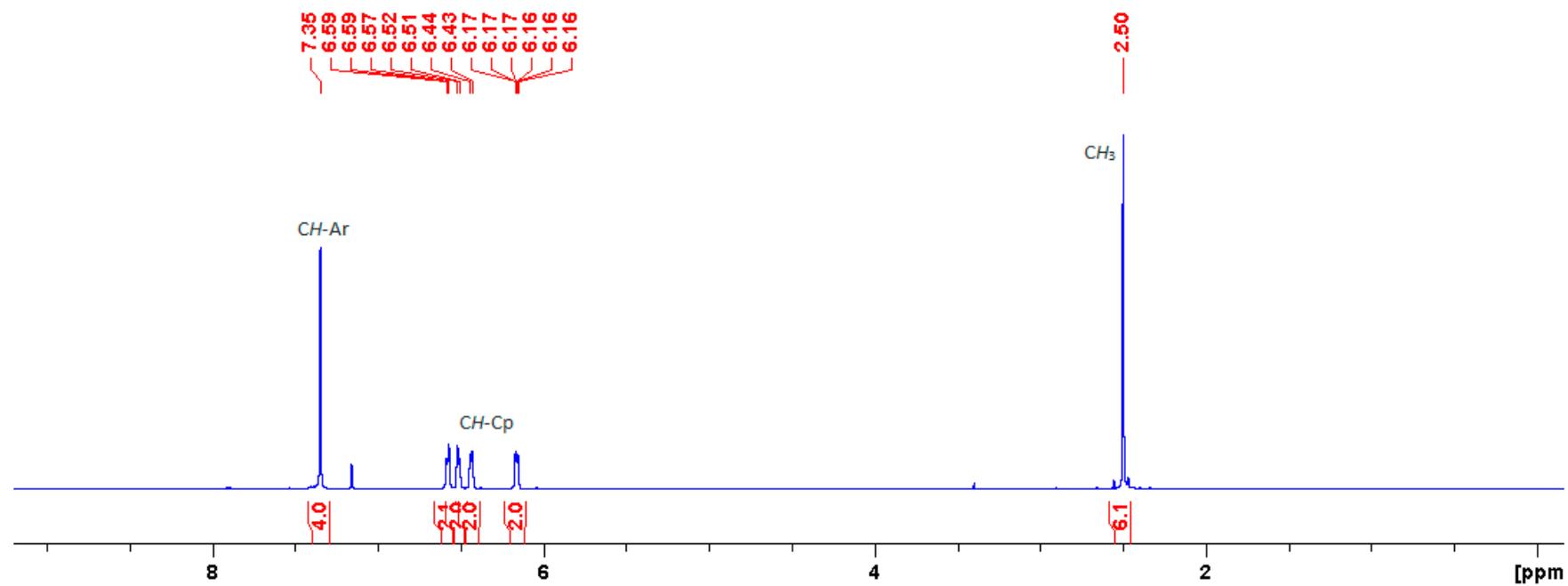
**Synthesis, APPI Mass-Spectrometric Characterization, and Polymerization Studies  
of Group 4 Dinuclear Bis(*ansa*-metallocene) Complexes**

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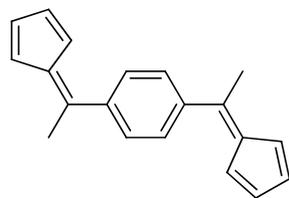
- Figure S1.**  $^1\text{H}$  NMR spectrum of **1a**.  
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of **1a**.  
**Figure S3.** ASAP mass spectrum of **1a**.  
**Figure S4.**  $^1\text{H}$  NMR spectrum of **1b**.  
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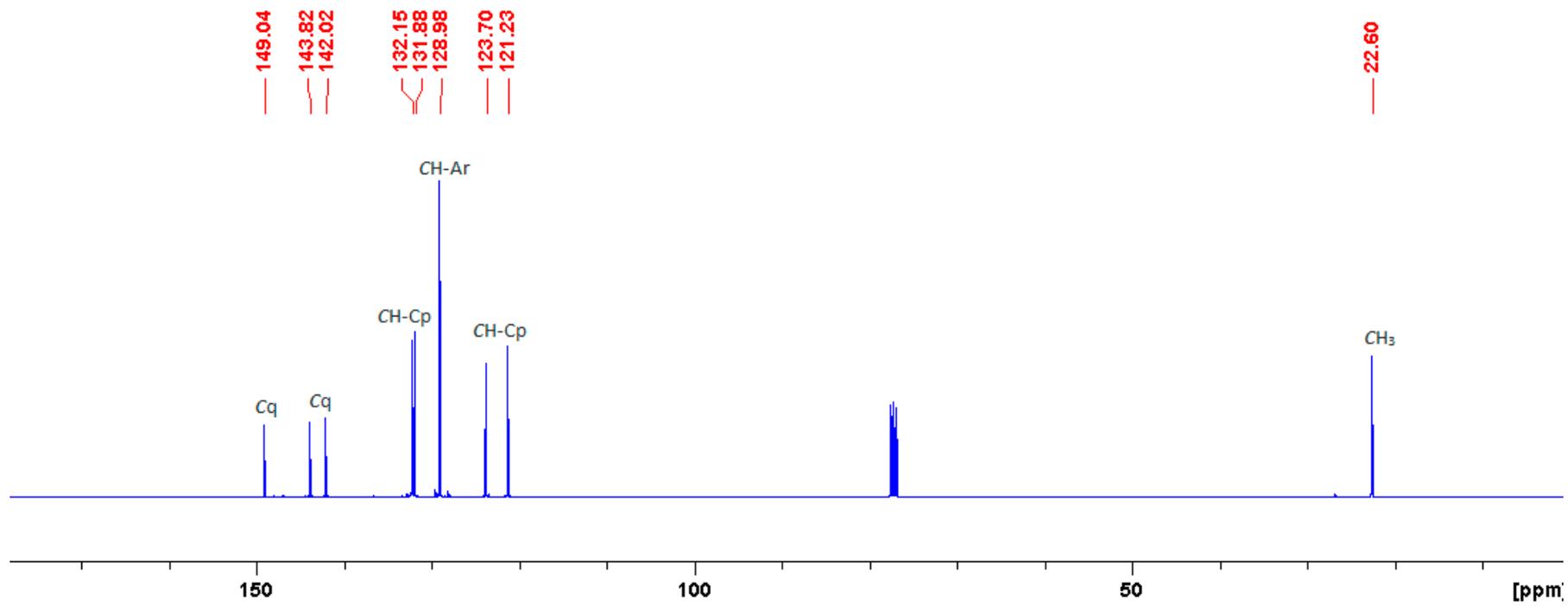
- Figure S41.**  $^{13}\text{C}$  NMR spectrum of **3b'-Zr**.  
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**Figure S68.** DFT-optimized structures of  $C_s$ -symmetric and  $C_i$ -symmetric isomers of **3a-Zr<sub>2</sub>**.  
**Figure S69.** DFT-optimized structures of  $C_s$ -symmetric and  $C_1$ -symmetric isomers of **3c-Zr<sub>2</sub>**.

Cartesian coordinates

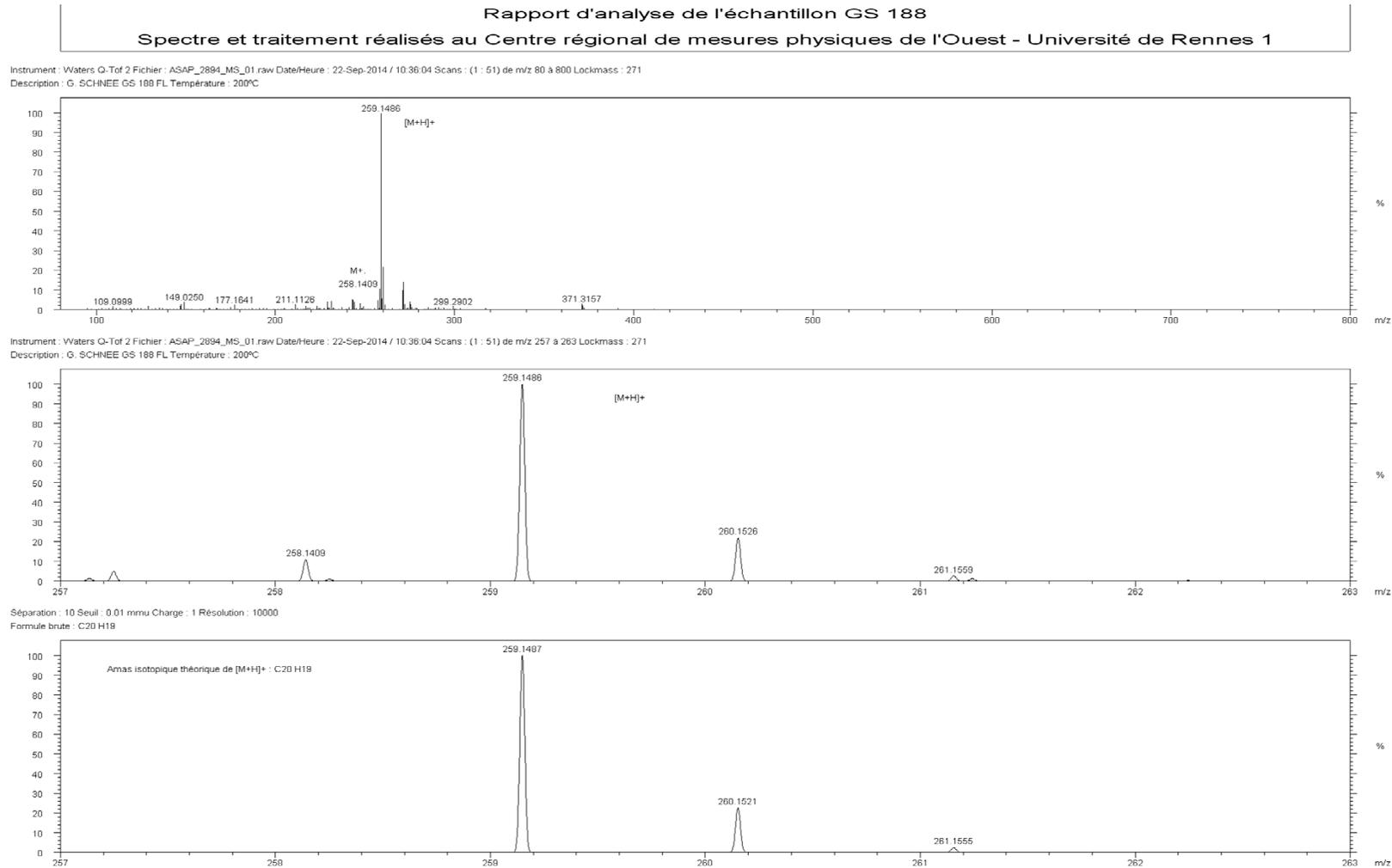


**Figure S1.** <sup>1</sup>H NMR spectrum (CDCl<sub>3</sub>, 400 MHz, 25 °C) of **1a**. jfc-gs190-1





**Figure S2.**  $^{13}\text{C}$  NMR spectrum ( $\text{CDCl}_3$ , 125 MHz, 25 °C) of **1a**.



**Figure S3.** ASAP mass spectrum of **1a**.