**SUPPLEMENTARY INFORMATION**

# **Rhodium(I) metallacycles based on alkylated-PTA scaffolds: Synthesis and evaluation as hydroformylation catalyst precursors**

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**Figure 1:** 1H NMR spectrum of the 1,4-mononuclear Rh(I)-PTA complex (**4**).



**Figure 2:** 31P NMR spectrum of the 1,4-mononuclear Rh(I)-PTA complex (**4**).



 **Figure 3:** 13C NMR spectrum of the 1,4-mononuclear Rh(I)-PTA complex (**4**).

 **Figure 4:** FT-IR spectrum of the 1,4-mononuclear Rh(I)-PTA complex **4**.

Acetone



b, d

c

DMSO-*d6*

HCOD

HCOD

HCOD

ArH

a

e

**Figure 5:** 1H NMR spectrum (DMSO-*d6*) for complex **5**.



PF6

*J*Rh-P = 125.6 Hz

**Figure 6:** 31P NMR spectrum (DMSO-*d6*) for complex **5**.



**Figure 7:** 13C NMR spectrum (DMSO-*d6*) for complex **5**.

**Figure 8:** FT-IR spectrum of complex **5**.

**Figure 9:** FT-IR spectrum of complex **6**.

**Figure 10:** FT-IR spectrum of complex **7**.



**Figure 11:** Mass spectrum of complex 4.



**Figure 12:** Mass spectrum of complex **5**.



**Figure 13:** Mass spectrum of complex **6**.



**Figure 14:** Mass spectrum of complex **7**.