# Supporting Information

# Variable coordination of amine functionalised *N*-heterocyclic carbene ligands to Ru, Rh and Ir: C-H and N-H activation and catalytic transfer hydrogenation

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# 2b <sup>1</sup>H NMR (400 MHz, *d*<sub>4</sub>-MeOH)



**2b** <sup>13</sup>C NMR (100 MHz, *d*<sub>4</sub>-MeOH)



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# 3 <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



# 3 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)



# 4 <sup>1</sup>H NMR (400 MHz, CD<sub>2</sub>Cl<sub>2</sub>)



#### 4 <sup>13</sup>C NMR (125 MHz, CD<sub>2</sub>Cl<sub>2</sub>)



# 5 <sup>1</sup>H NMR (500 MHz, CD<sub>2</sub>Cl<sub>2</sub>)



5 <sup>13</sup>C NMR (125 MHz, CD<sub>2</sub>Cl<sub>2</sub>)



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# 6 <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



#### 6 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)



# 7 <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



7 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)



# 8 <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



#### 8 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)

