Supporting Information

Coordination of bis(azol-1-yl)methane-based bisphosphines towards Ru^{II}, Rh^I, Pd^{II} and Pt^{II}: synthesis, structural and catalytic studies

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Figure S1:³¹P{¹H} NMR spectrum of 1 in CDCl₃.



Figure S2:¹H NMR spectrum of 1 in CDCl₃.



Figure S3:¹³C NMR spectrum of 1 in CDCl₃.



Figure S4:³¹P{¹H} NMR spectrum of 2 in CDCl₃.



Figure S5:¹H NMR spectrum of 2 in CDCl₃.



Figure S6:¹³C NMR spectrum of 2 in CDCl₃.



Figure S7:³¹P{ 1 H} NMR spectrum of 3 in CDCl₃.



Figure S8:¹H NMR spectrum of 3 in CDCl₃.



Figure S9:¹³C NMR spectrum of 3 in CDCl₃.



Figure S10:³¹P{¹H} NMR spectrum of 4 in CDCl₃.



Figure S11:¹H NMR spectrum of 4 in CDCl₃.



Figure S12:³¹P{¹H} NMR spectrum of 5 in CDCl₃.



Figure S13:¹H NMR spectrum of 5 in CDCl₃.



Figure S14:³¹P{¹H} NMR spectrum of 6 in CDCl₃.



Figure S15:¹H NMR spectrum of 6 in CDCl₃.



Figure S16:³¹P{¹H} NMR spectrum of 7 in CDCl₃.



Figure S17:¹H NMR spectrum of 7 in CDCl₃.



Figure S18:³¹P{¹H} NMR spectrum of 8 in CDCl₃.



Figure S19:¹H NMR spectrum of 8 in CDCl₃.



Figure S20:³¹P{¹H} NMR spectrum of 9 in CDCl₃.



Figure S21:¹H NMR spectrum of 9 in CDCl₃.



Figure S22:³¹P{ 1 H} NMR spectrum of 10 in CDCl₃.



Figure S23:¹H NMR spectrum of 10 in CDCl₃.



Figure S24:³¹P{¹H} NMR spectrum of 11 in CDCl₃.



Figure S25:¹H NMR spectrum of 11 in CDCl₃.



Figure S26:³¹P{ 1 H} NMR spectrum of 12 in CDCl₃.



Figure S27:¹H NMR spectrum of 12 in CDCl₃.



Figure S28:¹H-¹H COSY spectrum of 12 in CDCl₃.



Figure S29:³¹P{ 1 H} NMR spectrum of 13 in CDCl₃.



Figure S30:¹H NMR spectrum of 13 in CDCl₃.



Figure S31:³¹P{¹H} NMR spectrum of **14** in DMSO.



Figure S32:³¹P{¹H} NMR spectrum of **15** in DMSO.



Figure $S33:^{31}P{^{1}H}$ NMR spectrum of 16 in DMSO.



Figure S34:¹H NMR spectrum of 16 in DMSO.



Figure S35:³¹P{¹H} NMR spectrum of **17** in DMSO.



Figure S36:¹H NMR spectrum of 17 in DMSO.



Figure S37:³¹P{ 1 H} NMR spectrum of **18** in DMSO.



Figure S39:³¹P{ 1 H} NMR spectrum of **19** in DMSO.



Figure S40:¹H NMR spectrum of 19 in DMSO.



Figure S41:³¹P{ 1 H} NMR spectrum of 20 in CDCl₃.



Figure S42:¹H NMR spectrum of 20 in CDCl₃.



Figure S43:³¹P{ 1 H} NMR spectrum of 21 in CDCl₃.



Figure S44:¹H NMR spectrum of 21 in CDCl₃.



Figure S45:³¹P{¹H} NMR spectrum of 22 in CDCl₃.



Figure S46:¹H NMR spectrum of 22 in CDCl₃.