Electronic Supporting Information (ESI)

^{31}P-Solid-State NMR Characterization and Catalytic Hydrogenation Tests of Novel heterogeneous Iridium- and Palladium-Catalysts

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Dedicated to Prof. Kev Salikhov on the occasion of his 80th birthday.

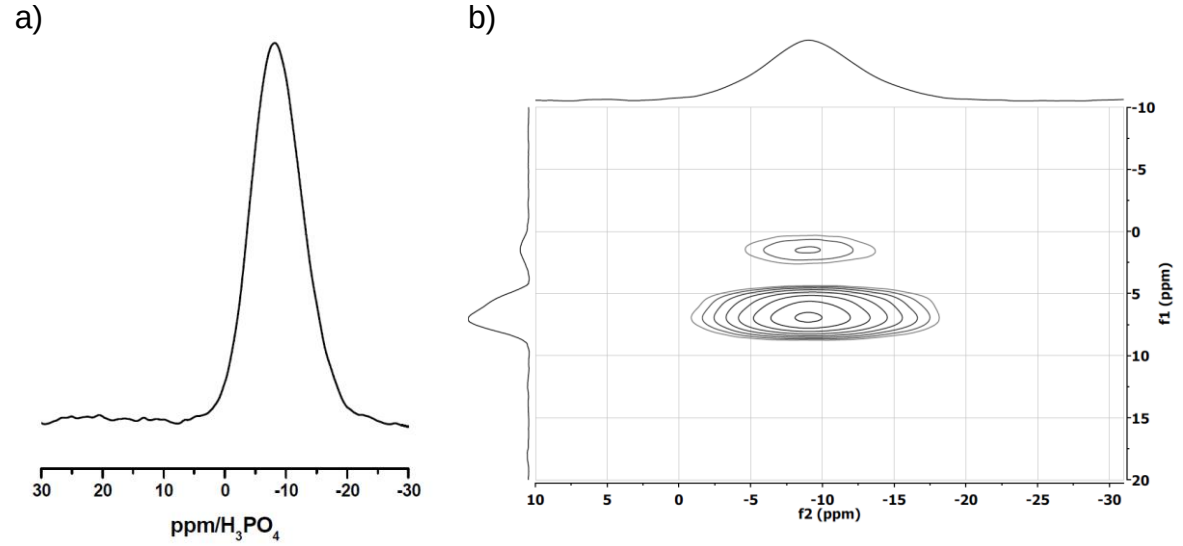

Figure S1. a) ^{31}P CP-MAS NMR spectrum of **Si-PB** at 10 KHz spinning. b) Two-dimensional ^{31}P-^{1}H HETCOR of the **Si-PB** structure. f1 is the ^{1}H dimension, f2 is the ^{31}P dimension. The splitting in the f1-dimension proves that the phosphorous is part of the polymeric shell (adapted from ref. [38]).

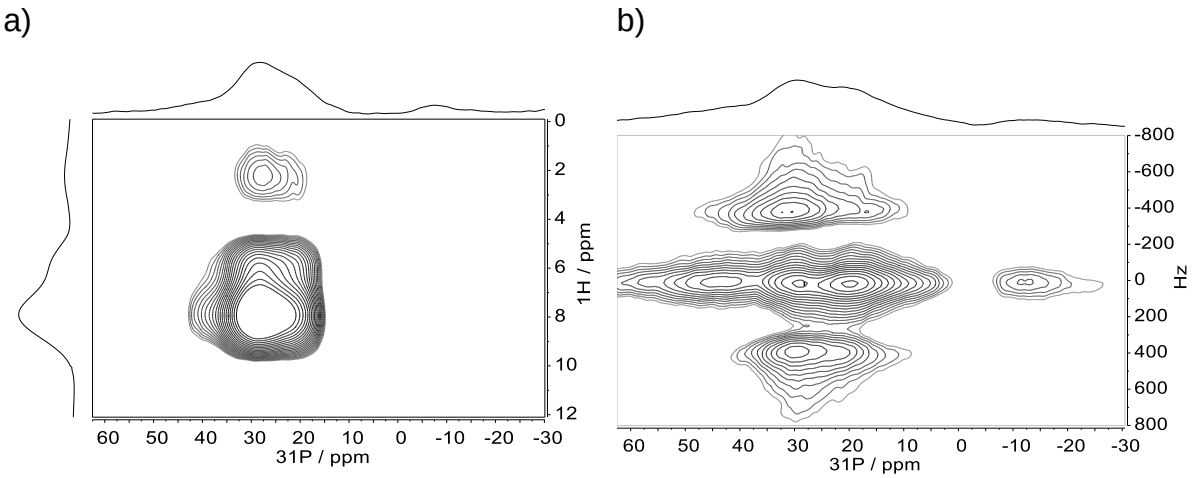

Figure S2: 2D spectra of a **Si-PB-Rh** sample for comparison: a) ^{31}P-^{1}H HETCOR with (f1) ^{1}H spectrum and (f2). b) ^{31}P spectrum *J*-resolved ^{31}P-^{31}P with (f1) *J* coupling in Hz and (f2) ^{31}P 1D spectrum. (spectrum refers to ref. 38)

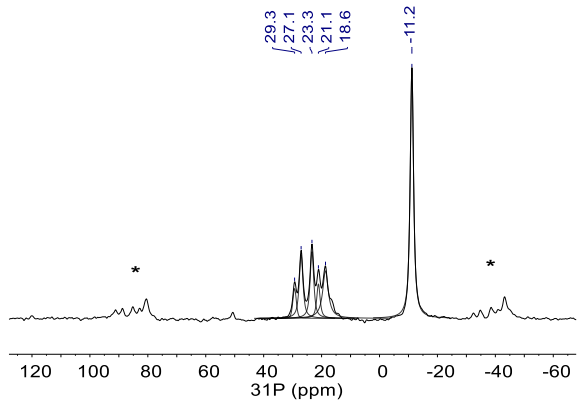

Figure S3: ^{31}P CP-MAS spectrum of the neat $IrCl(PPh_3)_3$ measured at 10 kHz spinning rate. *Note:* Spinning side bands are marked with asterisks.

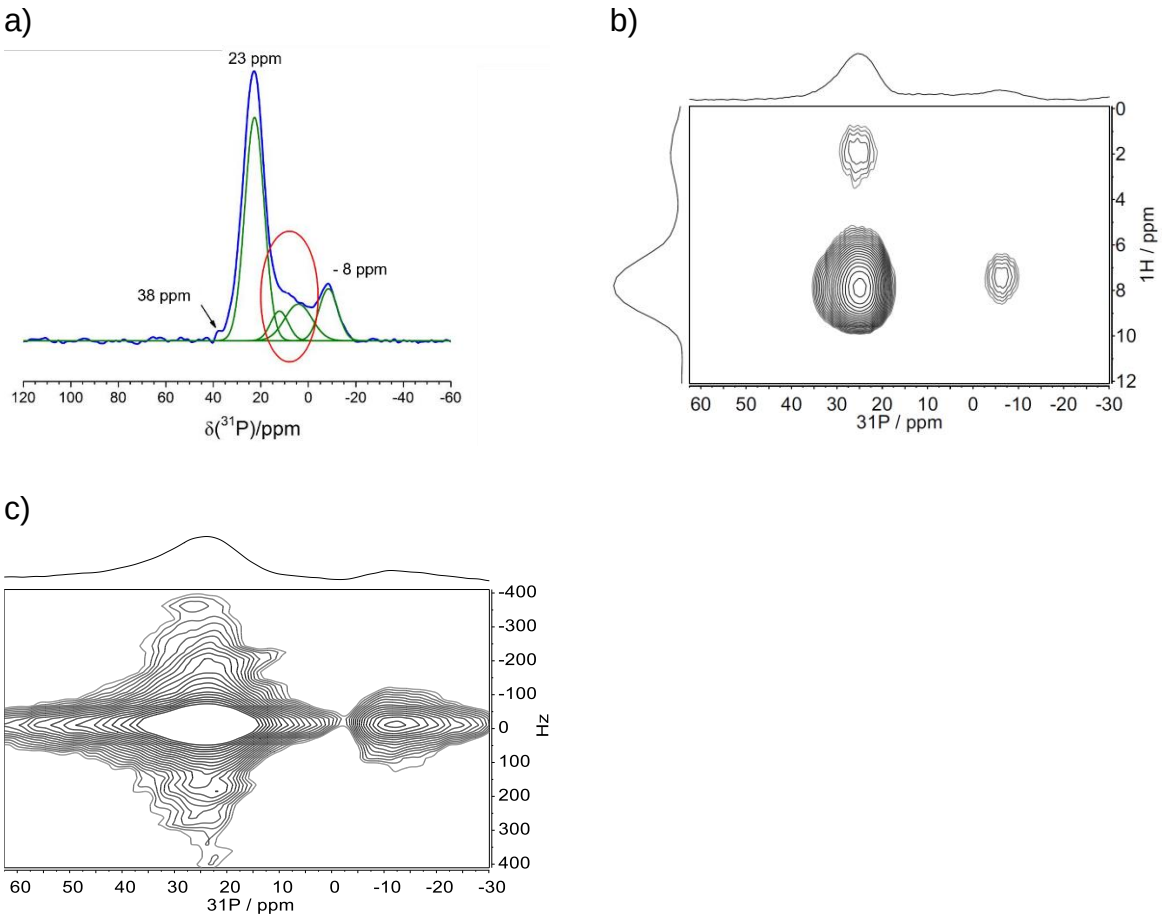

Figure S4: ^{31}P CP-MAS spectrum of **Si-PB-Ir** synthesized at 85 °C. (a) 2D spectra for **Si-PB-Ir** sample synthesized at 85 °C: ^{31}P-^{1}H HETCOR with (f1) ^{1}H spectrum and (f2) ^{31}P spectrum (b), and ^{31}P *J*-resolved spectra (f1) *J*-coupling in Hz and (f2) ^{31}P 1D spectrum (c).

Note: Spectra were recorded at 10 kHz spinning. The spectrum (a) was measured employing an additional TOSS sequence [67] to suppress the spinning sidebands.