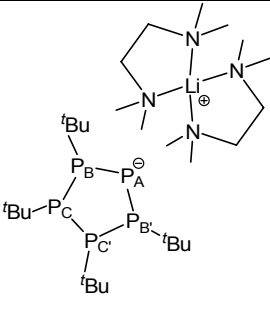
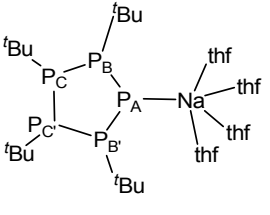
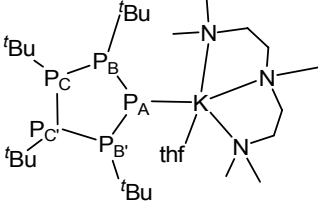


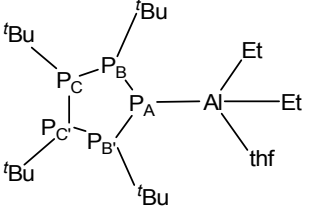
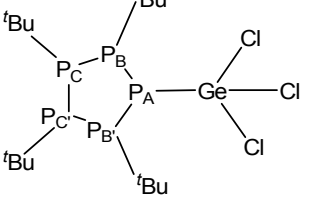
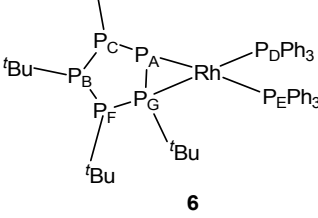
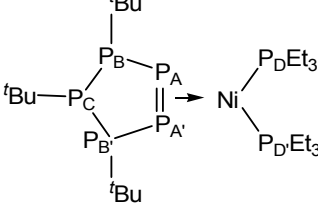
Supplementary Material:

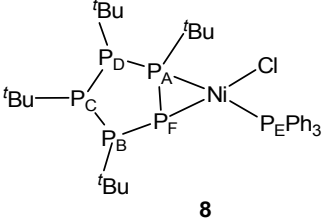
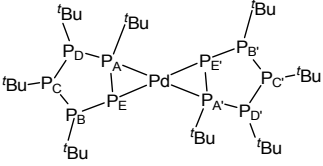
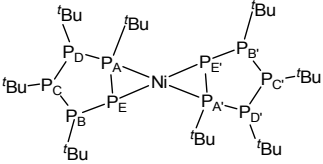
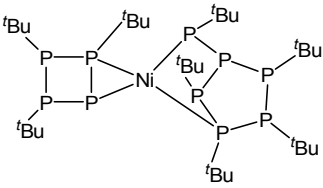
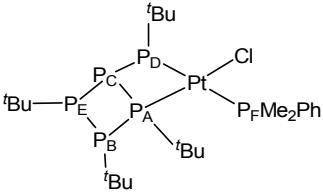
The versatile reactivity of tetra-*tert*-butyl-cyclopentaphosphanide monoanions

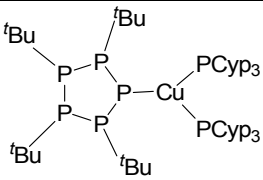
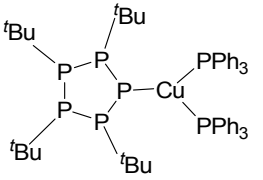
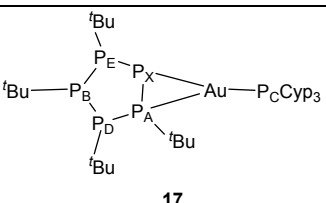
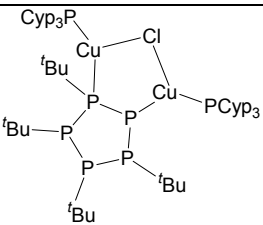
Santiago Gómez-Ruiz and Evamarie Hey-Hawkins

This supplementary information contains $^{31}\text{P}\{^1\text{H}\}$ NMR data of mononuclear compounds containing *cyclo*-(P_5^tBu_4) $^-$, {*cyclo*-(P_4^tBu_3) P^tBu } $^-$ or *cyclo*-(P_5^tBu_3) ligands (25 °C, δ in ppm, J in Hz):

Compound	Spin system	Chemical shift (ppm)	Coupling constants (Hz)
 1	ABB'CC'	$\delta_{\text{A}} = -92.5$ $\delta_{\text{BB}'} = +86.2$ $\delta_{\text{CC}'} = +73.8$	$^1J_{\text{AB}} = ^1J_{\text{AB}'} = -394.9$ $^1J_{\text{BC}} = ^1J_{\text{B'C}'} = -328.7$ $^1J_{\text{CC}'} = -313.4$ $^2J_{\text{AC}} = ^2J_{\text{AC}'} = 0.8$
 2	ABB'CC'	$\delta_{\text{A}} = -105.6$ $\delta_{\text{BB}'} = +82.7$ $\delta_{\text{CC}'} = +75.0$	$^1J_{\text{AB}} = ^1J_{\text{AB}'} = -379.2$ $^1J_{\text{BC}} = ^1J_{\text{B'C}'} = -317.3$ $^1J_{\text{CC}'} = -309.4$ $^2J_{\text{AC}} = ^2J_{\text{AC}'} = 0.1$
 3	ABB'CC'	$\delta_{\text{A}} = -104.4$ $\delta_{\text{BB}'} = +86.9$ $\delta_{\text{CC}'} = +79.8$	$^1J_{\text{AB}} = ^1J_{\text{AB}'} = -376.9$ $^1J_{\text{BC}} = ^1J_{\text{B'C}'} = -319.4$ $^1J_{\text{CC}'} = -312.3$ $^2J_{\text{AC}} = ^2J_{\text{AC}'} = 0.9$

 4	ABB'CC'	$\delta_A = -110.6$ $\delta_{BB'} = +47.1$ $\delta_{CC'} = +51.7$	$^1J_{AB} = ^1J_{AB'} = -324.9$ $^1J_{BC} = ^1J_{B'C'} = -298.3$ $^2J_{B'C} = ^2J_{BC'} = -6.2$ $^2J_{BB'} = -15.9$ $^1J_{CC'} = -311.4$ $^2J_{AC} = ^2J_{AC'} = +13.3$
 5	ABB'CC'	$\delta_A = -110.8$ $\delta_{BB'} = -33.1$ $\delta_{CC'} = -28.2$	<i>a</i>
 6	ABCDEFGF	$\delta_A = +106.5$ $\delta_B = +88.6$ $\delta_C = +52.3$ $\delta_D = +36.2$ $\delta_E = +38.2$ $\delta_F = +25.5$ $\delta_G = -73.8$	$^1J_{AC} = -537.5$ $^1J_{AG} = -447.0$ $^1J_{BC} = -347.1$ $^1J_{BF} = -345.3$ $^1J_{FG} = -396.4$ $^2J_{AB} = +16.9$ $^2J_{AD} = +197.8$ $^2J_{AE} = +31.3$ $^2J_{AF} = +16.6$ $^2J_{BG} = +4.2$ $^2J_{CF} = +10.5$ $^2J_{CG} = +18.8$ $^2J_{DE} = +35.0$ $^2J_{DG} = +16.0$ $^2J_{EG} = +7.7$ $^3J_{CD} = +7.0$ $^3J_{CE} = +3.5$ $^3J_{DF} = +1.0$ $^3J_{EF} = +2.5$ $^4J_{BD} = 0.0$ $^4J_{BE} = 0.0$ $^1J_{ARh} = -93.9$ $^1J_{DRh} = -187.0$ $^1J_{ERh} = -179.0$ $^1J_{GRh} = -67.0$ $^2J_{CRh} = +50.1$ $^2J_{FRh} = +7.5$ $^3J_{BRh} = +1.9$
 7	ABB'CC'DD'	$\delta_A = +56.6$ $\delta_{BB'} = +28.0$ $\delta_{CC'} = +98.0$ $\delta_{DD'} = +13.5$	$^1J_{AA'} = -434.6$ $^1J_{AB} = ^1J_{A'B'} = -376.6$ $^1J_{BC} = ^1J_{B'C} = -332.4$ $^2J_{AB'} = ^2J_{A'B} = +18.6$ $^2J_{BB'} = -26.7$ $^2J_{CA} = ^2J_{CA'} = -11.9$ $^2J_{AD} = +17.6$ $^2J_{A'D'} = +31.6$ $^2J_{DD'} = +4.9$ $^3J_{BD} = +6.3$ $^3J_{B'D'} = -9.9$ $^4J_{CD} = +0.02$

 8	ABCDEF	$\delta_A = +88.8$ $\delta_B = +77.5$ $\delta_C = +52.1$ $\delta_D = +47.9$ $\delta_E = +23.9$ $\delta_F = -17.1$	$^1J_{AD} = -393.8$ $^1J_{AF} = -470.2$ $^1J_{BC} = -332.4$ $^1J_{BF} = -422.9$ $^1J_{CD} = -332.5$ $^2J_{AB} = 0$ $^2J_{DF} = +22.5$ $^2J_{EF} = +36.8$ $^2J_{CF} = -0.3$ $^2J_{AE} = -172.1$ $^2J_{AC} = -16.4$ $^2J_{BD} = -10.4$ $^3J_{BE} = 0$ $^3J_{DE} = +0.2$ $^4J_{CE} = 0$
 9	AA'BB'CC'DD' EE'	$\delta_{AA'} = +103$ $\delta_{BB'} = +87$ $\delta_{CC'} = +63$ $\delta_{DD'} = +55$ $\delta_{EE'} = -30$	<i>a</i>
 10	AA'BB'CC'DD' EE'	$\delta_{AA'} = +98$ $\delta_{BB'} = +88$ $\delta_{CC'} = +64$ $\delta_{DD'} = +52$ $\delta_{EE'} = -65$	<i>a</i>
 11	ABCDEFGHIX	$\delta_A = +163$ $\delta_B = +148$ $\delta_C = +30$ $\delta_D = +13$ $\delta_E = -6$ $\delta_F = -21$ $\delta_G = -41$ $\delta_H = -49$ $\delta_I = -75$ $\delta_X = -103$	<i>a</i>
 12	ABCDEF	$\delta_A = -124.97$ $\delta_B = +14.61$ $\delta_C = -13.07$ $\delta_D = -23.57$ $\delta_E = -50.50$ $\delta_F = -8.81$	$^1J_{AB} = \pm 196.7$ $^1J_{AC} = -75.4$ $^1J_{BE} = \pm 150.3$ $^1J_{CD} = \pm 159.8$ $^1J_{CE} = \pm 150.5$ $^2J_{AD} = -45.5$ $^2J_{AE} = -6.5$ $^2J_{AF} = -450.6$ $^2J_{BC} = -2.8$ $^2J_{DE} = -230.8$ $^2J_{DF} = -12.2$ $^3J_{BD} = \pm 0.1$ $^3J_{CF} = \pm 7.5$ $^4J_{BF} = \pm 2.9$ $^4J_{EF} = \pm 0.02$ $^1J_{APt} = \pm 1899$ $^1J_{DPt} = -892$ $^1J_{FPt} = -2403$ $^2J_{BPt} = -59$ $^2J_{CPt} = 41$

 13	<i>b</i>	$\delta = +75$ $\delta = +67$ $\delta = +8$ $\delta = -94$	<i>b</i>
 14	<i>b</i>	$\delta = +71$ $\delta = +67$ $\delta = -94$	<i>b</i>
 17	ABCDEX	$\delta_A = +65.4$ $\delta_B = +63.7$ $\delta_C = +64.6$ $\delta_D = +42.3$ $\delta_E = +29.6$ $\delta_X = -55.8$	$^1J_{AX} = +199.4$ $^1J_{AD} = +272.5$ $^1J_{BD} = +304.9$ $^1J_{BE} = +330.9$ $^1J_{EX} = +408.4$ $^2J_{AB} = +0.1$ $^2J_{AC} = +11.3$ $^2J_{AE} = +6.6$ $^2J_{BX} = +0.2$ $^2J_{CX} = +99.8$ $^2J_{DE} = +8.9$ $^2J_{DX} = +25.4$ $^3J_{CE} = +7.1$ $^4J_{BC} = +0.2$
 20	<i>b</i>	$\delta = +64$ $\delta = +12$ $\delta = +5$ $\delta = -80$	<i>b</i>

^a Severe overlap of the signals precluded numerical analysis of the coupling constants.

^b Severe line broadening precluded numerical analysis of the coupling patterns.

See article for further discussion and references.