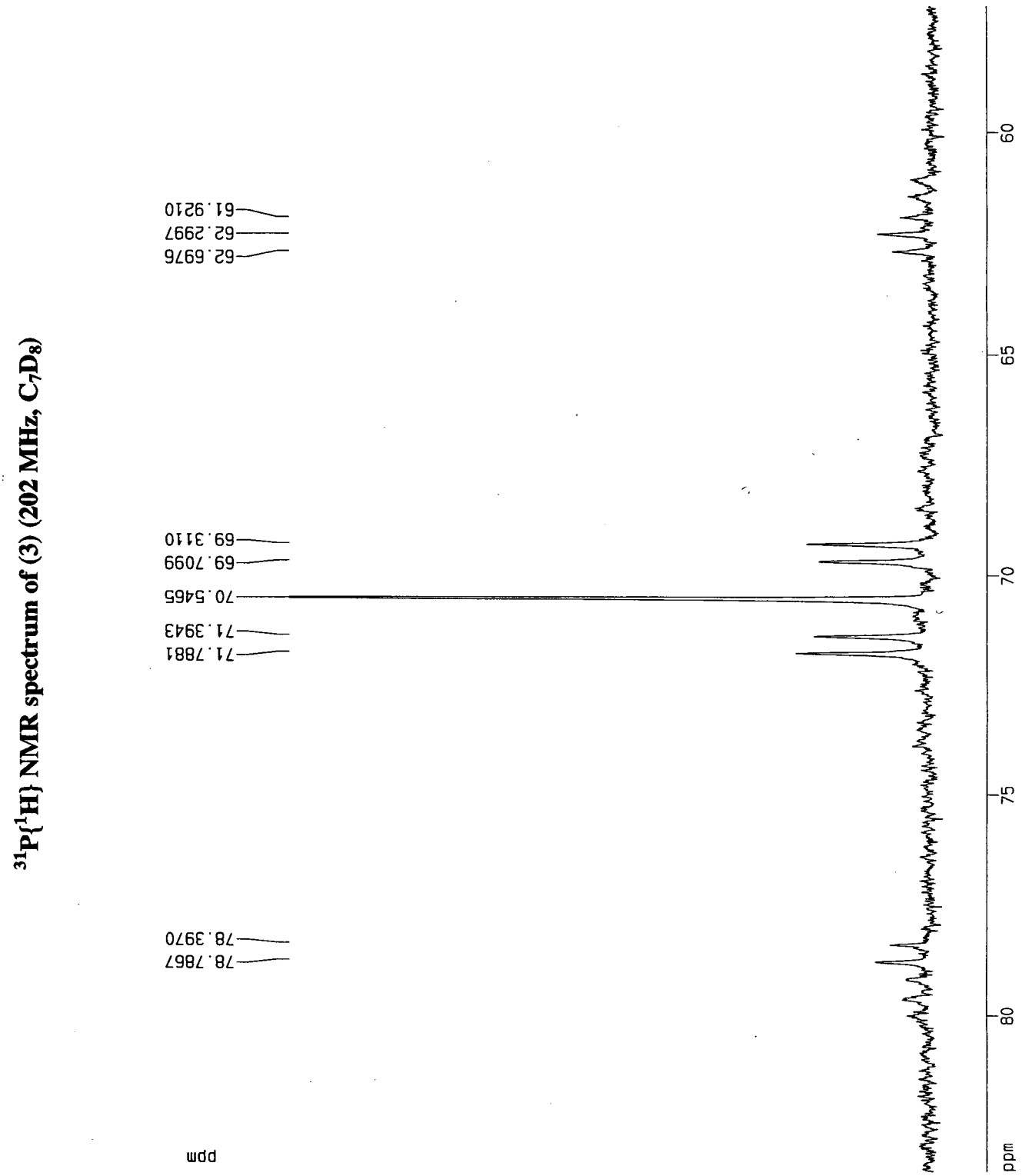
Figure S1



Supporting Information

Experimental for X-ray Crystal Structure Determination of (**3**).

A crystal of appropriate dimensions was mounted on a glass fiber in a random orientation. Preliminary examination and data collection were performed using a Bruker SMART Charge Coupled Detector (CCD) system single crystal X-ray diffractometer using graphite monochromated Mo Kα radiation (λ = 0.71073 Å) equipped with a sealed tube X-ray source at –223K. Preliminary unit cell constants were determined with a set of 45 narrow frames (0.3° in ϖ) scans. The data set collected consisted of 4028 frames of intensity data collected with a frame width of 0.3° in ϖ and counting time of 30 seconds/frame at a crystal to detector distance of 4.930 cm. The double pass method of scanning was used to exclude any noise. The collected frames were integrated using an orientation matrix determined from the narrow frame scans. SMART and SAINT software packages[1] were used for data collection and data integration. Analysis of the integrated data did not show any decay. Final cell constants were determined by a global refinement of xyz centroids of 6853 reflections [θ < 51(25.1°)]. Collected data were corrected for systematic errors using SADABS[2] based upon the Laue symmetry using equivalent reflections (Tmax / Tmin = 0.38/0.62). The integration process yielded 104,473 reflections of which 13,814 (2θ < 50°) were independent reflections.

Crystal data and intensity data collection parameters are listed in Table S1. Structure solution and refinement were carried out using the SHELXTL-PLUS software.[3] The structure was solved by Patterson Methods and refined successfully in the space group $P2_1/n$. Full matrix least-squares refinement was carried out by minimizing $\Sigma w(F_o^2-F_c^2)^2$. The non-hydrogen atoms were refined anisotropically to convergences. The hydrogen atoms were treated using appropriate riding model (AFIX m3). The final residual values were R(F) = 11.2% for 11,672

observed reflections [$I > 2\sigma(I)$] and $wR(F^2) = 21.6\%$; s = 1.4 for all data. Structure refinement parameters are listed in Table S1. The atomic coordinates for the non-hydrogen atoms and the geometrical parameters are listed in Table S2 and a list of the bond distances and angles are given in Table S3. A list of anisotropic displacement parameters for non-hydrogen atoms are given in Table S4 and coordinates and isotropic displacement parameters for hydrogen atoms are given in Table S5.

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[1] Bruker Analytical X-ray, Madison, WI, **2000**.

[2] Blessing, R. H. *Acta Cryst.* **1995**, *A51*, 33-38.

[3] Sheldrick, B. M.; Bruker Analytical X-ray Division, Madison, WI, **2000**.

Table S1. Crystal data and structure refinement for $[(Ph_3P)Pt(\mu\text{-}SiC_{12}H_8)]_3$ (3)

Identification code	j16400/1t/ccd
Empirical formula	$C_{97}H_{77}P_3Pt_3Si_3$
Formula weight	2005.04
Temperature	223(2) K
Wavelength	0.71073 Å
Crystal system	Monoclinic
Space group	$P2_1/n$
Unit cell dimensions	a = 9.8929(2) Å alpha = 90° b = 14.4094(2) Å beta = 92.649(1)° c = 55.0754(9) Å gamma = 90°
Volume, Z	7842.7(2) Å^3, 4
Density (calculated)	1.698 Mg/m^3
Absorption coefficient	5.494 mm^{-1}
F(000)	3920
Crystal size	0.33 x 0.08 x 0.02 mm
θ range for data collection	1.60 to 25.00°
Limiting indices	$-11 \le h \le 11$, $-17 \le k \le 17$, $-65 \le l \le 65$
Reflections collected	104473
Independent reflections	13814 (R_{int} = 0.12)
Completeness to θ = 25.00°	99.9 %
Absorption correction	Empirical, sadabs
Max. and min. transmission	0.8981 and 0.2643
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	13814 / 0 / 919
Goodness-of-fit on F^2	1.442
Final R indices [I>2σ(I)]	R1 = 0.1120, wR2 = 0.2101
R indices (all data)	R1 = 0.1327, wR2 = 0.2162
Largest diff. peak and hole	2.611 and -3.606 eÅ^{-3}

Table S2. Atomic coordinates [x 10^4] and equivalent isotropic displacement parameters [$Å^2$ x 10^3] . U(eq) is defined as one third of the trace of the orthogonalized U_{ij} tensor. for $[(Ph_3P)Pt(\mu\text{-}SiC_{12}H_8)]_3$ (3)

	x	y	z	U(eq)
Pt(1)	4338(1)	875(1)	1284(1)	26(1)
Pt(2)	3694(1)	2140(1)	1624(1)	25(1)
Pt(3)	3604(1)	2620(1)	1149(1)	27(1)
P(1)	4511(6)	-619(4)	1178(1)	31(1)
P(2)	3394(6)	2662(4)	2000(1)	29(1)
P(3)	3301(7)	3795(4)	875(1)	39(2)
Si(1)	4241(6)	583(4)	1707(1)	28(1)
Si(2)	2234(6)	3250(4)	1443(1)	29(1)
Si(3)	4199(6)	1444(4)	877(1)	30(1)
C(1)	5250(20)	-922(16)	894(4)	41(6)
C(2)	4600(30)	-1292(16)	693(4)	42(6)
C(3)	5160(40)	-1503(18)	478(4)	66(10)
C(4)	6550(40)	-1320(20)	464(6)	77(11)
C(5)	7210(30)	-900(30)	647(5)	92(13)
C(6)	6630(30)	-630(20)	857(6)	72(9)
C(7)	5390(30)	-1409(14)	1395(4)	37(6)
C(8)	6840(20)	-1470(17)	1409(5)	56(8)
C(9)	7480(30)	-2000(20)	1579(6)	72(9)
C(10)	6780(30)	-2539(19)	1738(5)	65(8)
C(11)	5400(30)	-2480(20)	1731(5)	61(8)
C(12)	4720(30)	-1966(17)	1560(5)	55(7)
C(13)	2850(20)	-1159(14)	1137(4)	36(6)
C(14)	2650(30)	-2100(20)	1122(4)	51(7)
C(15)	1340(30)	-2440(20)	1096(5)	63(8)
C(16)	210(30)	-1850(20)	1088(5)	73(10)
C(17)	420(30)	-950(20)	1117(5)	63(8)
C(18)	1740(20)	-549(17)	1144(4)	41(6)
C(19)	5490(20)	33(15)	1924(3)	32(5)
C(20)	6910(20)	162(18)	1955(4)	43(6)
C(21)	7650(30)	-290(20)	2137(5)	68(9)
C(22)	6990(30)	-890(20)	2284(5)	63(8)
C(23)	5630(30)	-1070(20)	2254(5)	72(9)
C(24)	4910(30)	-586(15)	2075(4)	41(6)
C(25)	2850(20)	-170(16)	1829(4)	39(6)
C(26)	3410(20)	-780(17)	2016(4)	42(6)
C(27)	2560(30)	-1357(19)	2134(5)	60(8)
C(28)	1250(30)	-1410(20)	2046(6)	75(10)
C(29)	680(30)	-880(20)	1870(6)	63(8)
C(30)	1500(20)	-262(19)	1757(5)	50(7)
C(31)	4050(20)	2034(13)	2267(4)	28(3)
C(32)	5420(30)	1870(20)	2283(4)	53(7)
C(33)	6010(30)	1490(20)	2497(5)	64(8)
C(34)	5280(40)	1190(20)	2681(6)	83(12)
C(35)	3920(30)	1290(20)	2658(4)	64(9)
C(36)	3320(30)	1732(15)	2456(4)	47(6)

C(37)	1610(20)	2825(16)	2060(4)	35(5)
C(38)	780(20)	2031(18)	2045(4)	47(6)
C(39)	-580(30)	2100(20)	2071(5)	62(8)
C(40)	-1140(30)	2920(30)	2112(5)	69(9)
C(41)	-390(30)	3751(19)	2120(5)	51(7)
C(42)	990(20)	3665(17)	2094(4)	43(6)
C(43)	4210(20)	3757(13)	2072(4)	28(3)
C(44)	4070(30)	4286(19)	2280(5)	52(7)
C(45)	4730(30)	5080(20)	2326(5)	61(8)
C(46)	5640(30)	5415(18)	2180(6)	61(8)
C(47)	5840(30)	4970(20)	1967(6)	70(9)
C(48)	5140(20)	4135(15)	1910(4)	40(6)
C(49)	410(20)	2880(16)	1425(4)	38(5)
C(50)	-120(20)	1993(19)	1374(5)	49(7)
C(51)	-1550(30)	1860(30)	1377(5)	69(9)
C(52)	-2390(30)	2600(20)	1420(5)	66(8)
C(53)	-1860(30)	3470(20)	1464(5)	64(8)
C(54)	-450(20)	3620(20)	1470(4)	46(6)
C(55)	1660(20)	4472(14)	1530(4)	30(5)
C(56)	220(20)	4505(16)	1528(4)	37(5)
C(57)	-370(30)	5350(20)	1586(5)	55(7)
C(58)	410(30)	6120(18)	1646(5)	55(7)
C(59)	1790(30)	6081(18)	1644(5)	50(7)
C(60)	2460(20)	5276(17)	1582(4)	39(6)
C(61)	3730(30)	3652(14)	564(4)	42(4)
C(62)	5120(30)	3560(20)	503(5)	67(8)
C(63)	5450(40)	3480(20)	267(6)	85(11)
C(64)	4550(50)	3400(20)	88(5)	90(12)
C(65)	3180(40)	3400(30)	120(7)	94(12)
C(66)	2840(40)	3500(20)	377(5)	79(11)
C(67)	4350(20)	4778(14)	950(4)	37(6)
C(68)	4480(30)	5469(19)	791(5)	55(5)
C(69)	5360(30)	6260(20)	836(5)	64(9)
C(70)	5920(30)	6316(19)	1070(6)	70(9)
C(71)	5790(30)	5636(19)	1230(6)	72(10)
C(72)	4980(30)	4860(20)	1171(5)	55(5)
C(73)	1570(30)	4186(14)	852(4)	42(4)
C(74)	1190(30)	5090(20)	838(6)	76(10)
C(75)	-90(30)	5390(20)	815(9)	119(17)
C(76)	-1130(30)	4700(20)	814(7)	95(13)
C(77)	-800(30)	3800(20)	838(5)	70(9)
C(78)	510(20)	3526(19)	851(5)	52(7)
C(79)	3000(20)	1058(16)	625(5)	42(4)
C(80)	1630(20)	822(19)	633(5)	53(7)
C(81)	990(30)	522(19)	415(5)	61(8)
C(82)	1670(40)	400(20)	200(5)	73(9)
C(83)	3020(30)	603(19)	202(5)	59(8)
C(84)	3680(30)	923(16)	419(5)	49(7)
C(85)	5630(20)	1419(16)	666(5)	42(4)
C(86)	5140(30)	1160(16)	434(4)	44(6)
C(87)	6010(30)	1154(19)	244(5)	65(9)
C(88)	7390(40)	1400(20)	281(6)	85(11)
C(89)	7830(30)	1660(20)	508(6)	70(9)
C(90)	6940(30)	1690(20)	708(5)	62(8)
C(1S)	1030(40)	-3500(30)	34(6)	230(50)
C(2S)	1930(30)	-3620(30)	233(8)	160(30)
C(3S)	1960(30)	-2980(30)	423(6)	150(20)
C(4S)	1100(40)	-2220(30)	413(6)	150(20)

Table S2. continued

C(5S)	200(30)	-2100(20)	214(8)	144(19)
C(6S)	170(30)	-2730(30)	24(6)	200(40)
C(7S)	1050(80)	-4270(60)	-157(11)	270(50)

Table S3. Bond lengths [Å] and angles [°] for $[(Ph_3P)Pt(\mu\text{-}SiC_{12}H_8)]_3$ (3)

Pt(1)-P(1)	2.240(6)	Pt(1)-Si(1)	2.374(6)
Pt(1)-Si(3)	2.388(6)	Pt(1)-Pt(2)	2.7080(11)
Pt(1)-Pt(3)	2.7114(11)	Pt(2)-P(2)	2.238(5)
Pt(2)-Si(2)	2.346(6)	Pt(2)-Si(1)	2.348(6)
Pt(2)-Pt(3)	2.7033(11)	Pt(3)-P(3)	2.277(5)
Pt(3)-Si(2)	2.344(6)	Pt(3)-Si(3)	2.355(6)
P(1)-C(1)	1.81(2)	P(1)-C(13)	1.82(2)
P(1)-C(7)	1.84(2)	P(2)-C(43)	1.81(2)
P(2)-C(31)	1.82(2)	P(2)-C(37)	1.82(2)
P(3)-C(67)	1.79(2)	P(3)-C(61)	1.80(2)
P(3)-C(73)	1.81(3)	Si(1)-C(19)	1.86(2)
Si(1)-C(25)	1.90(2)	Si(2)-C(49)	1.88(2)
Si(2)-C(55)	1.92(2)	Si(3)-C(79)	1.86(2)
Si(3)-C(85)	1.87(2)	C(1)-C(2)	1.36(3)
C(1)-C(6)	1.46(4)	C(2)-C(3)	1.37(3)
C(3)-C(4)	1.40(4)	C(4)-C(5)	1.32(5)
C(5)-C(6)	1.37(4)	C(7)-C(12)	1.40(3)
C(7)-C(8)	1.43(3)	C(8)-C(9)	1.35(4)
C(9)-C(10)	1.38(4)	C(10)-C(11)	1.37(4)
C(11)-C(12)	1.36(3)	C(13)-C(14)	1.37(3)
C(13)-C(18)	1.40(3)	C(14)-C(15)	1.38(4)
C(15)-C(16)	1.40(4)	C(16)-C(17)	1.33(4)
C(17)-C(18)	1.43(3)	C(19)-C(24)	1.37(3)
C(19)-C(20)	1.41(3)	C(20)-C(21)	1.38(4)
C(21)-C(22)	1.37(4)	C(22)-C(23)	1.37(4)
C(23)-C(24)	1.38(3)	C(24)-C(26)	1.52(3)
C(25)-C(30)	1.38(3)	C(25)-C(26)	1.45(3)
C(26)-C(27)	1.37(3)	C(27)-C(28)	1.36(4)
C(28)-C(29)	1.34(4)	C(29)-C(30)	1.37(4)
C(31)-C(36)	1.37(3)	C(31)-C(32)	1.37(3)
C(32)-C(33)	1.40(3)	C(33)-C(34)	1.34(4)
C(34)-C(35)	1.35(4)	C(35)-C(36)	1.39(4)
C(37)-C(42)	1.37(3)	C(37)-C(38)	1.41(3)
C(38)-C(39)	1.37(4)	C(39)-C(40)	1.32(4)
C(40)-C(41)	1.41(4)	C(41)-C(42)	1.39(3)
C(43)-C(44)	1.39(3)	C(43)-C(48)	1.42(3)
C(44)-C(45)	1.34(4)	C(45)-C(46)	1.32(4)
C(46)-C(47)	1.36(4)	C(47)-C(48)	1.42(4)
C(49)-C(54)	1.39(3)	C(49)-C(50)	1.41(3)
C(50)-C(51)	1.43(3)	C(51)-C(52)	1.38(4)
C(52)-C(53)	1.37(4)	C(53)-C(54)	1.41(3)
C(54)-C(56)	1.47(3)	C(55)-C(60)	1.42(3)
C(55)-C(56)	1.43(3)	C(56)-C(57)	1.38(3)
C(57)-C(58)	1.39(4)	C(58)-C(59)	1.36(4)
C(59)-C(60)	1.39(3)	C(61)-C(66)	1.34(4)
C(61)-C(62)	1.44(4)	C(62)-C(63)	1.36(4)
C(63)-C(64)	1.30(5)	C(64)-C(65)	1.38(5)
C(65)-C(66)	1.48(4)	C(67)-C(68)	1.34(3)
C(67)-C(72)	1.35(3)	C(68)-C(69)	1.44(4)
C(69)-C(70)	1.38(4)	C(70)-C(71)	1.33(4)
C(71)-C(72)	1.40(4)	C(73)-C(74)	1.35(4)
C(73)-C(78)	1.41(3)	C(74)-C(75)	1.35(4)
C(75)-C(76)	1.44(5)	C(76)-C(77)	1.34(4)
C(77)-C(78)	1.36(4)	C(79)-C(84)	1.36(3)

C(79)-C(80)	1.40(3)	C(80)-C(81)	1.39(3)
C(81)-C(82)	1.40(4)	C(82)-C(83)	1.38(4)
C(83)-C(84)	1.41(4)	C(84)-C(86)	1.48(4)
C(85)-C(90)	1.36(3)	C(85)-C(86)	1.40(3)
C(86)-C(87)	1.39(3)	C(87)-C(88)	1.41(5)
C(88)-C(89)	1.36(4)	C(89)-C(90)	1.44(4)
C(1S)-C(2S)	1.3900	C(1S)-C(6S)	1.3900
C(1S)-C(7S)	1.54(8)	C(2S)-C(3S)	1.3900
C(3S)-C(4S)	1.3900	C(4S)-C(5S)	1.3900
C(5S)-C(6S)	1.3900		

P(1)-Pt(1)-Si(1)	95.3(2)	P(1)-Pt(1)-Si(3)	95.0(2)
Si(1)-Pt(1)-Si(3)	168.6(2)	P(1)-Pt(1)-Pt(2)	148.20(15)
Si(1)-Pt(1)-Pt(2)	54.56(14)	Si(3)-Pt(1)-Pt(2)	114.40(15)
P(1)-Pt(1)-Pt(3)	147.43(15)	Si(1)-Pt(1)-Pt(3)	114.33(15)
Si(3)-Pt(1)-Pt(3)	54.56(14)	Pt(2)-Pt(1)-Pt(3)	59.84(3)
P(2)-Pt(2)-Si(2)	93.3(2)	P(2)-Pt(2)-Si(1)	100.3(2)
Si(2)-Pt(2)-Si(1)	150.1(2)	P(2)-Pt(2)-Pt(3)	144.15(15)
Si(2)-Pt(2)-Pt(3)	54.77(15)	Si(1)-Pt(2)-Pt(3)	115.52(14)
P(2)-Pt(2)-Pt(1)	155.69(15)	Si(2)-Pt(2)-Pt(1)	109.02(15)
Si(1)-Pt(2)-Pt(1)	55.45(14)	Pt(3)-Pt(2)-Pt(1)	60.14(3)
P(3)-Pt(3)-Si(2)	96.1(2)	P(3)-Pt(3)-Si(3)	98.2(2)
Si(2)-Pt(3)-Si(3)	152.7(2)	P(3)-Pt(3)-Pt(2)	145.89(17)
Si(2)-Pt(3)-Pt(2)	54.83(14)	Si(3)-Pt(3)-Pt(2)	115.72(15)
P(3)-Pt(3)-Pt(1)	153.74(16)	Si(2)-Pt(3)-Pt(1)	108.97(15)
Si(3)-Pt(3)-Pt(1)	55.70(15)	Pt(2)-Pt(3)-Pt(1)	60.02(3)
C(1)-P(1)-C(13)	100.6(11)	C(1)-P(1)-C(7)	102.4(10)
C(13)-P(1)-C(7)	102.4(10)	C(1)-P(1)-Pt(1)	119.7(8)
C(13)-P(1)-Pt(1)	111.3(8)	C(7)-P(1)-Pt(1)	117.8(7)
C(43)-P(2)-C(31)	96.8(9)	C(43)-P(2)-C(37)	105.9(10)
C(31)-P(2)-C(37)	103.2(10)	C(43)-P(2)-Pt(2)	114.8(7)
C(31)-P(2)-Pt(2)	121.6(7)	C(37)-P(2)-Pt(2)	112.5(7)
C(67)-P(3)-C(61)	98.7(11)	C(67)-P(3)-C(73)	107.9(11)
C(61)-P(3)-C(73)	103.4(11)	C(67)-P(3)-Pt(3)	112.2(7)
C(61)-P(3)-Pt(3)	121.1(7)	C(73)-P(3)-Pt(3)	112.1(8)
C(19)-Si(1)-C(25)	90.1(10)	C(19)-Si(1)-Pt(2)	132.4(7)
C(25)-Si(1)-Pt(2)	116.7(7)	C(19)-Si(1)-Pt(1)	130.7(7)
C(25)-Si(1)-Pt(1)	120.7(7)	Pt(2)-Si(1)-Pt(1)	69.99(17)
C(49)-Si(2)-C(55)	89.0(10)	C(49)-Si(2)-Pt(3)	115.9(7)
C(55)-Si(2)-Pt(3)	135.6(7)	C(49)-Si(2)-Pt(2)	113.5(8)
C(55)-Si(2)-Pt(2)	134.8(7)	Pt(3)-Si(2)-Pt(2)	70.40(17)
C(79)-Si(3)-C(85)	90.4(11)	C(79)-Si(3)-Pt(3)	121.2(8)
C(85)-Si(3)-Pt(3)	128.8(7)	C(79)-Si(3)-Pt(1)	127.0(8)
C(85)-Si(3)-Pt(1)	124.3(8)	Pt(3)-Si(3)-Pt(1)	69.74(17)
C(2)-C(1)-C(6)	114(2)	C(2)-C(1)-P(1)	127(2)
C(6)-C(1)-P(1)	118(2)	C(1)-C(2)-C(3)	126(3)
C(2)-C(3)-C(4)	116(3)	C(5)-C(4)-C(3)	120(3)
C(4)-C(5)-C(6)	124(3)	C(5)-C(6)-C(1)	118(3)
C(12)-C(7)-C(8)	115(2)	C(12)-C(7)-P(1)	124(2)
C(8)-C(7)-P(1)	121.0(17)	C(9)-C(8)-C(7)	121(3)
C(8)-C(9)-C(10)	122(3)	C(11)-C(10)-C(9)	118(3)
C(12)-C(11)-C(10)	121(3)	C(11)-C(12)-C(7)	122(3)
C(14)-C(13)-C(18)	121(2)	C(14)-C(13)-P(1)	124(2)
C(18)-C(13)-P(1)	115.4(15)	C(13)-C(14)-C(15)	119(3)
C(14)-C(15)-C(16)	122(3)	C(17)-C(16)-C(15)	117(3)
C(16)-C(17)-C(18)	123(3)	C(13)-C(18)-C(17)	117(2)
C(24)-C(19)-C(20)	117(2)	C(24)-C(19)-Si(1)	112.4(18)
C(20)-C(19)-Si(1)	130.3(18)	C(21)-C(20)-C(19)	121(3)

C(22)-C(21)-C(20)	118(3)	C(21)-C(22)-C(23)	123(3)
C(22)-C(23)-C(24)	117(3)	C(19)-C(24)-C(23)	123(3)
C(19)-C(24)-C(26)	115(2)	C(23)-C(24)-C(26)	122(2)
C(30)-C(25)-C(26)	119(2)	C(30)-C(25)-Si(1)	131.2(19)
C(26)-C(25)-Si(1)	109.5(16)	C(27)-C(26)-C(25)	119(2)
C(27)-C(26)-C(24)	128(2)	C(25)-C(26)-C(24)	112.4(19)
C(28)-C(27)-C(26)	117(3)	C(29)-C(28)-C(27)	126(3)
C(28)-C(29)-C(30)	117(3)	C(29)-C(30)-C(25)	121(3)
C(36)-C(31)-C(32)	117(2)	C(36)-C(31)-P(2)	126.3(18)
C(32)-C(31)-P(2)	116.7(16)	C(31)-C(32)-C(33)	120(2)
C(34)-C(33)-C(32)	123(3)	C(33)-C(34)-C(35)	118(3)
C(34)-C(35)-C(36)	121(3)	C(31)-C(36)-C(35)	122(3)
C(42)-C(37)-C(38)	118(2)	C(42)-C(37)-P(2)	125.4(18)
C(38)-C(37)-P(2)	116.7(18)	C(39)-C(38)-C(37)	120(2)
C(40)-C(39)-C(38)	120(3)	C(39)-C(40)-C(41)	123(3)
C(42)-C(41)-C(40)	116(3)	C(37)-C(42)-C(41)	123(2)
C(44)-C(43)-C(48)	114(2)	C(44)-C(43)-P(2)	126.8(17)
C(48)-C(43)-P(2)	119.6(15)	C(45)-C(44)-C(43)	124(2)
C(46)-C(45)-C(44)	123(3)	C(45)-C(46)-C(47)	119(3)
C(46)-C(47)-C(48)	120(3)	C(47)-C(48)-C(43)	121(2)
C(54)-C(49)-C(50)	120(2)	C(54)-C(49)-Si(2)	111.6(18)
C(50)-C(49)-Si(2)	128.3(19)	C(49)-C(50)-C(51)	119(3)
C(52)-C(51)-C(50)	120(3)	C(53)-C(52)-C(51)	121(3)
C(52)-C(53)-C(54)	121(3)	C(49)-C(54)-C(53)	120(3)
C(49)-C(54)-C(56)	116(2)	C(53)-C(54)-C(56)	125(2)
C(60)-C(55)-C(56)	121(2)	C(60)-C(55)-Si(2)	129.2(17)
C(56)-C(55)-Si(2)	109.6(16)	C(57)-C(56)-C(55)	117(2)
C(57)-C(56)-C(54)	129(2)	C(55)-C(56)-C(54)	114(2)
C(56)-C(57)-C(58)	122(2)	C(59)-C(58)-C(57)	121(2)
C(58)-C(59)-C(60)	122(3)	C(59)-C(60)-C(55)	118(2)
C(66)-C(61)-C(62)	114(3)	C(66)-C(61)-P(3)	125(2)
C(62)-C(61)-P(3)	120(2)	C(63)-C(62)-C(61)	121(3)
C(64)-C(63)-C(62)	123(4)	C(63)-C(64)-C(65)	123(3)
C(64)-C(65)-C(66)	113(3)	C(61)-C(66)-C(65)	125(4)
C(68)-C(67)-C(72)	118(2)	C(68)-C(67)-P(3)	120.9(18)
C(72)-C(67)-P(3)	121(2)	C(67)-C(68)-C(69)	124(3)
C(70)-C(69)-C(68)	115(2)	C(71)-C(70)-C(69)	122(3)
C(70)-C(71)-C(72)	121(3)	C(67)-C(72)-C(71)	121(3)
C(74)-C(73)-C(78)	117(2)	C(74)-C(73)-P(3)	124(2)
C(78)-C(73)-P(3)	119.3(16)	C(75)-C(74)-C(73)	125(3)
C(74)-C(75)-C(76)	116(3)	C(77)-C(76)-C(75)	120(3)
C(76)-C(77)-C(78)	121(3)	C(77)-C(78)-C(73)	120(3)
C(84)-C(79)-C(80)	120(2)	C(84)-C(79)-Si(3)	110.2(17)
C(80)-C(79)-Si(3)	129(2)	C(81)-C(80)-C(79)	117(2)
C(80)-C(81)-C(82)	124(3)	C(83)-C(82)-C(81)	118(3)
C(82)-C(83)-C(84)	119(3)	C(79)-C(84)-C(83)	122(3)
C(79)-C(84)-C(86)	116(2)	C(83)-C(84)-C(86)	122(3)
C(90)-C(85)-C(86)	121(2)	C(90)-C(85)-Si(3)	129(2)
C(86)-C(85)-Si(3)	109.3(17)	C(87)-C(86)-C(85)	119(3)
C(87)-C(86)-C(84)	126(3)	C(85)-C(86)-C(84)	114(2)
C(86)-C(87)-C(88)	121(3)	C(89)-C(88)-C(87)	118(3)
C(88)-C(89)-C(90)	122(3)	C(85)-C(90)-C(89)	118(3)
C(2S)-C(1S)-C(6S)	120.0	C(2S)-C(1S)-C(7S)	115(4)
C(6S)-C(1S)-C(7S)	125(4)	C(1S)-C(2S)-C(3S)	120.0
C(2S)-C(3S)-C(4S)	120.0	C(5S)-C(4S)-C(3S)	120.0
C(4S)-C(5S)-C(6S)	120.0	C(5S)-C(6S)-C(1S)	120.0

Symmetry transformations used to generate equivalent atoms:

x

Table S4. **Anisotropic displacement parameters [Å^2 x 10^3] for [(Ph$_3$P)Pt(μ-SiC$_{12}$H$_8$)]$_3$ (3)**

The anisotropic displacement factor exponent takes the form:

$-2\pi^2 [(ha^*)^2 U_{11} + ... + 2hka^*b^* U_{12}]$

	U11	U22	U33	U23	U13	U12
Pt(1)	26(1)	26(1)	25(1)	-1(1)	2(1)	1(1)
Pt(2)	28(1)	22(1)	25(1)	-2(1)	1(1)	1(1)
Pt(3)	35(1)	20(1)	27(1)	-1(1)	2(1)	2(1)
P(1)	28(3)	29(3)	37(3)	-6(2)	1(2)	0(2)
P(2)	31(3)	31(3)	25(3)	2(2)	-4(2)	-5(2)
P(3)	50(4)	42(4)	25(3)	18(3)	0(3)	10(3)
Si(1)	22(3)	33(3)	29(3)	-4(3)	3(2)	1(2)
Si(2)	28(3)	30(3)	29(3)	1(2)	0(2)	4(3)
Si(3)	27(3)	29(3)	34(3)	2(3)	1(3)	3(3)
C(1)	45(14)	34(13)	41(14)	5(11)	-9(11)	19(11)
C(2)	63(16)	38(13)	25(12)	11(10)	-4(11)	16(12)
C(3)	150(30)	43(16)	9(11)	-8(10)	26(15)	-17(18)
C(4)	100(30)	90(20)	47(19)	22(17)	41(19)	50(20)
C(5)	60(20)	180(40)	35(17)	-10(20)	35(15)	40(20)
C(6)	46(17)	70(20)	100(30)	-12(19)	25(17)	0(15)
C(7)	73(17)	15(10)	22(11)	5(9)	-5(11)	-7(11)
C(8)	34(14)	36(14)	100(20)	25(14)	-21(14)	-2(11)
C(9)	43(17)	80(20)	90(20)	14(19)	-18(16)	-3(16)
C(10)	90(20)	41(16)	62(19)	13(14)	-24(17)	2(16)
C(11)	70(20)	58(18)	54(17)	16(14)	-6(15)	21(15)
C(12)	48(16)	43(15)	80(20)	28(14)	14(14)	16(13)
C(13)	61(16)	25(11)	22(11)	-2(9)	-1(10)	-30(11)
C(14)	40(15)	70(19)	44(15)	12(14)	-1(12)	-1(14)
C(15)	80(20)	53(18)	53(17)	-11(14)	27(16)	-12(17)
C(16)	48(18)	100(30)	70(20)	-38(19)	-2(15)	-37(18)
C(17)	29(14)	80(20)	80(20)	-12(17)	-10(13)	1(14)
C(18)	24(12)	39(13)	60(16)	-5(12)	-4(11)	0(10)
C(19)	43(13)	40(13)	14(10)	-2(9)	-6(9)	9(10)
C(20)	49(15)	57(16)	23(12)	-11(11)	-10(11)	1(12)
C(21)	57(18)	90(20)	54(18)	-18(17)	-15(15)	20(17)
C(22)	70(20)	55(18)	59(18)	10(15)	-18(16)	11(16)
C(23)	90(20)	80(20)	46(17)	15(16)	-16(16)	10(19)
C(24)	59(16)	30(12)	36(13)	4(10)	25(12)	13(11)
C(25)	42(14)	40(13)	34(13)	-1(11)	-2(11)	0(11)
C(26)	49(15)	49(15)	30(12)	-13(11)	26(11)	-28(12)
C(27)	80(20)	49(16)	52(17)	14(13)	7(15)	-30(15)
C(28)	70(20)	80(20)	80(20)	-6(19)	33(19)	-28(19)
C(29)	65(19)	60(19)	70(20)	-20(16)	21(16)	-10(16)
C(30)	43(15)	60(17)	48(16)	-1(13)	6(12)	-14(13)
C(31)	36(9)	17(7)	30(8)	2(6)	11(7)	10(6)
C(32)	55(16)	90(20)	15(11)	9(12)	0(11)	1(15)
C(33)	90(20)	58(19)	45(17)	2(14)	-26(16)	5(16)
C(34)	130(30)	70(20)	50(20)	-2(16)	-10(20)	60(20)
C(35)	80(20)	80(20)	28(14)	24(14)	19(14)	-15(18)
C(36)	73(19)	27(12)	42(15)	4(11)	8(13)	12(12)
C(37)	43(13)	37(13)	27(11)	-3(10)	13(10)	-5(11)
C(38)	43(15)	44(15)	51(16)	-9(12)	-6(12)	-3(12)

C(39)	58(19)	59(19)	70(20)	-14(16)	11(15)	-17(16)
C(40)	35(15)	120(30)	54(18)	-14(19)	7(13)	-10(18)
C(41)	46(16)	53(17)	56(17)	-8(13)	8(13)	4(13)
C(42)	46(15)	43(14)	39(14)	-12(11)	1(11)	1(12)
C(43)	36(9)	17(7)	30(8)	2(6)	11(7)	10(6)
C(44)	53(16)	57(17)	47(15)	2(13)	15(13)	-20(14)
C(45)	54(18)	70(20)	57(18)	-21(16)	-13(15)	12(16)
C(46)	62(19)	33(14)	90(20)	0(15)	-16(17)	-32(14)
C(47)	43(17)	80(20)	90(20)	2(19)	3(16)	-22(16)
C(48)	62(16)	23(11)	38(13)	0(10)	11(11)	-7(11)
C(49)	45(14)	38(13)	31(12)	-1(10)	-7(10)	-8(11)
C(50)	27(13)	57(17)	62(17)	9(14)	-12(12)	-2(12)
C(51)	55(18)	100(30)	53(18)	-9(17)	-15(14)	-36(18)
C(52)	58(19)	80(20)	61(19)	-11(17)	-12(15)	-9(17)
C(53)	42(16)	70(20)	80(20)	-6(17)	6(15)	17(15)
C(54)	30(13)	77(19)	31(13)	8(13)	5(10)	17(13)
C(55)	33(12)	27(11)	29(11)	8(9)	1(9)	10(9)
C(56)	41(14)	38(13)	31(12)	2(10)	2(10)	2(11)
C(57)	52(17)	63(18)	49(16)	9(14)	-8(13)	21(14)
C(58)	70(20)	43(16)	51(16)	-12(13)	2(14)	23(14)
C(59)	49(16)	42(15)	59(17)	2(13)	10(13)	10(12)
C(60)	44(14)	53(15)	19(11)	6(10)	-12(10)	-9(12)
C(61)	72(12)	10(7)	41(10)	8(7)	-3(9)	14(8)
C(62)	90(20)	61(19)	47(17)	-1(14)	3(16)	14(17)
C(63)	120(30)	90(30)	50(20)	-12(18)	30(20)	-20(20)
C(64)	150(40)	90(30)	28(16)	2(16)	0(20)	-30(30)
C(65)	80(30)	120(30)	80(30)	-20(20)	0(20)	30(20)
C(66)	150(30)	49(18)	39(17)	-14(14)	2(19)	20(20)
C(67)	49(14)	23(11)	36(13)	-13(10)	-31(11)	-4(10)
C(68)	69(13)	57(12)	41(11)	-10(9)	20(10)	10(10)
C(69)	90(20)	57(18)	46(17)	21(14)	34(16)	-22(17)
C(70)	90(20)	25(14)	100(30)	-1(16)	9(19)	-8(15)
C(71)	70(20)	43(17)	100(20)	-25(17)	-36(18)	-5(15)
C(72)	69(13)	57(12)	41(11)	-10(9)	20(10)	10(10)
C(73)	72(12)	10(7)	41(10)	8(7)	-3(9)	14(8)
C(74)	38(16)	60(20)	120(30)	1(19)	-29(17)	-19(15)
C(75)	60(20)	50(20)	240(50)	-20(30)	-50(30)	10(17)
C(76)	60(20)	60(20)	160(40)	-30(20)	-50(20)	20(18)
C(77)	57(19)	90(20)	60(20)	9(17)	-14(15)	-15(18)
C(78)	37(15)	53(16)	64(18)	18(14)	-20(13)	-4(12)
C(79)	31(9)	31(9)	62(12)	-10(8)	3(8)	-6(7)
C(80)	46(15)	67(18)	49(16)	-6(14)	25(12)	-25(14)
C(81)	59(18)	57(18)	70(20)	-10(15)	-17(15)	-3(14)
C(82)	90(30)	80(20)	46(18)	-21(16)	-18(17)	8(19)
C(83)	80(20)	47(17)	46(16)	3(13)	7(15)	4(15)
C(84)	73(19)	26(12)	46(15)	5(11)	-17(14)	-5(12)
C(85)	31(9)	31(9)	62(12)	-10(8)	3(8)	-6(7)
C(86)	70(18)	34(13)	29(13)	0(10)	18(12)	12(12)
C(87)	80(20)	52(17)	70(20)	1(14)	46(17)	25(16)
C(88)	90(30)	90(30)	70(20)	0(20)	50(20)	30(20)
C(89)	55(18)	90(20)	70(20)	-7(18)	41(16)	-10(17)
C(90)	80(20)	70(20)	36(15)	11(14)	6(14)	-16(17)
C(1S)	180(70)	180(70)	350(120)	-130(80)	170(80)	-90(60)
C(2S)	130(40)	220(70)	120(40)	40(50)	-60(40)	-50(40)
C(3S)	110(40)	190(60)	140(50)	-40(50)	0(30)	-30(40)
C(4S)	150(50)	180(60)	120(40)	30(40)	-20(40)	30(50)
C(5S)	110(40)	130(50)	190(60)	20(50)	40(40)	0(30)
C(6S)	240(70)	240(80)	110(40)	-70(50)	70(40)	-180(70)
C(7S)	340(110)	340(120)	140(60)	10(70)	40(60)	-150(100)

Table S5. **Hydrogen coordinates (x 10^4) and isotropic displacement parameters ($Å^2$ x 10^3) for** $[(Ph_3P)Pt(\mu\text{-}SiC_{12}H_8)]_3$ **(3)**

	x	y	z	U(eq)
H(2A)	3666	-1414	703	50
H(3A)	4652	-1760	346	80
H(4A)	7009	-1489	325	92
H(5A)	8139	-773	633	110
H(6A)	7114	-268	974	87
H(8A)	7344	-1134	1299	67
H(9A)	8430	-2008	1589	86
H(10A)	7248	-2935	1849	78
H(11A)	4918	-2805	1847	73
H(12A)	3771	-1984	1551	66
H(14A)	3389	-2505	1129	62
H(15A)	1216	-3080	1083	76
H(16A)	-673	-2095	1064	88
H(17A)	-331	-549	1119	75
H(18A)	1869	93	1165	49
H(20A)	7348	562	1849	52
H(21A)	8589	-194	2160	82
H(22A)	7482	-1185	2412	76
H(23A)	5205	-1513	2351	87
H(27A)	2863	-1701	2271	72
H(28A)	705	-1868	2114	90
H(29A)	-246	-926	1826	76
H(30A)	1139	103	1628	60
H(32A)	5953	2016	2152	64
H(33A)	6957	1449	2512	77
H(34A)	5700	928	2821	100
H(35A)	3382	1047	2779	77
H(36A)	2376	1829	2450	56
H(38A)	1171	1447	2016	56
H(39A)	-1127	1571	2059	74
H(40A)	-2068	2947	2137	83
H(41A)	-800	4331	2141	62
H(42A)	1531	4204	2101	51
H(44A)	3471	4074	2395	62
H(45A)	4554	5410	2468	73
H(46A)	6133	5954	2222	73
H(47A)	6449	5213	1858	84
H(48A)	5288	3828	1763	48
H(50A)	452	1496	1338	59
H(51A)	-1927	1269	1351	83
H(52A)	-3330	2515	1418	79
H(53A)	-2445	3971	1492	76
H(57A)	-1313	5392	1585	66
H(58A)	-12	6677	1688	66
H(59A)	2294	6614	1685	60
H(60A)	3405	5262	1575	47
H(62A)	5800	3563	627	81
H(63A)	6375	3477	231	102

Table S5. continued

H(64A)	4855	3340	-70	108
H(65A)	2527	3354	-9	112
H(66A)	1919	3441	413	95
H(68A)	3983	5440	642	66
H(69A)	5530	6701	716	77
H(70A)	6416	6849	1117	84
H(71A)	6238	5675	1384	86
H(72A)	4877	4393	1288	66
H(74A)	1886	5533	844	91
H(75A)	-296	6029	801	143
H(76A)	-2046	4874	797	114
H(77A)	-1492	3357	845	84
H(78A)	721	2890	860	63
H(80A)	1160	863	777	64
H(81A)	58	396	414	74
H(82A)	1203	181	58	88
H(83A)	3511	530	61	71
H(87A)	5674	986	88	79
H(88A)	7978	1379	153	102
H(89A)	8743	1823	536	84
H(90A)	7256	1888	863	74
H(2SA)	2507	-4139	240	189
H(3SA)	2566	-3069	558	178
H(4SA)	1124	-1790	541	181
H(5SA)	-377	-1581	207	173
H(6SA)	-436	-2650	-111	235
H(7SA)	1706	-4743	-104	409
H(7SB)	1300	-4018	-311	409
H(7SC)	160	-4554	-175	409