Synthesis of New Tricyclic Phosphines and Phosphinites by Intramolecular Diels-Alder Reactions of Trivalent Phospholes.

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P(1)-O(1)	1.620(2)	C(1)-C(6)	1.586(4)	O(1)-P(1)-C(1)	99.2(1)	C(2)-C(1)-P(1)	101.1(2)
P(1)-C(1)	1.826(3)	C(2)-C(3)	1.335(3)	O(1)-P(1)-C(4)	107.4(1)	C(6)-C(1)-P(1)	91.1(2)
P(1)-C(4)	1.851(3)	C(3)-C(4)	1.522(4)	C(1)-P(1)-C(4)	82.7(1)	C(3)-C(4)-P(1)	99.2(2)
P(1)-S(1)	1.918(1)	C(4)-C(5)	1.557(4)	O(1)-P(1)-S(1)	113.11(8)	C(5)-C(4)-P(1)	100.4(2)
O(1)-C(7)	1.484(4)	C(5)-C(6)	1.547(4)	C(4)-P(1)-S(1)	122.0(1)	C(7)-O(1)-P(1)	108.3(2)
C(1)-C(2)	1.509(3)	C(6)-C(7)	1.535(4)	C(1)-P(1)-S(1)	127.3(1)		

SI1: ORTEP Drawing of one molecule of 2(PS). Selected bond distances (Å) and angles (deg.)

P(1)-C(8)	1.821(2)	C(1)-C(6)	1.571(3)	C(8)-P(1)-C(1)	97.3(1)	C(2)-C(1)-P(1)	101.1(1)
P(1)-C(1)	1.840(2)	C(2)-C(3)	1.337(3)	C(8)-P(1)-C(4)	106.6(1)	C(6)-C(1)-P(1)	93.0(1)
P(1)-C(4)	1.839(2)	C(3)-C(4)	1.523(3)	C(1)-P(1)-C(4)	82.1(1)	C(3)-C(4)-P(1)	100.1(1)
P(1)-S(1)	1.948(1)	C(4)-C(5)	1.565(3)	C(8)-P(1)-S(1)	118.8(1)	C(5)-C(4)-P(1)	100.6(1)
C(7)-C(8)	1.547(3)	C(5)-C(6)	1.557(3)	C(4)-P(1)-S(1)	119.46(8)	C(7)-C(8)-P(1)	103.3(2)
C(1)-C(2)	1.515(3)	C(6)-C(7)	1.535(3)	C(1)-P(1)-S(1)	125.37(8)		

SI2: ORTEP Drawing of one molecule of 11(PS). Selected bond distances (Å) and angles (deg.)

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SI3: $\{^1\text{H}, ^{31}\text{P}\}^{13}\text{C}$ spectrum of 2(PS)

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SI4: $\{^1\text{H}, ^{31}\text{P}\}^{13}\text{C}$ spectrum of 10.

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SI5: $\{^1\text{H}, ^{31}\text{P}\}^{13}\text{C}$ spectrum of 12

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SI6: $\{^1\text{H}, ^{31}\text{P}\}^{13}\text{C}$ spectrum of 14.

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SI7: $\{^1\text{H}, ^{31}\text{P}\}^{13}\text{C}$ spectrum of 15.