

Electronic supplementary information

for

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**Table S1.** Crystal data and structure refinement for **3a**

Empirical formula	C <sub>37</sub> H <sub>60</sub> Al O <sub>3</sub> P	
Formula weight	610.80	
Temperature	200(2) K	
Wavelength	0.71073 Å	
Crystal system	Monoclinic	
Space group	P 21/n	
Unit cell dimensions	a = 16.878(2) Å	α = 90°.
	b = 11.5558(14) Å	β = 106.507(2)°.
	c = 20.130(3) Å	γ = 90°.
Volume	3764.4(8) Å <sup>3</sup>	
Z	4	
Density (calculated)	1.078 Mg/m <sup>3</sup>	
Absorption coefficient	0.127 mm <sup>-1</sup>	
F(000)	1336	
Crystal size	0.32 x 0.29 x 0.10 mm <sup>3</sup>	
Theta range for data collection	1.86 to 25.07°.	
Index ranges	-16 ≤ h ≤ 20, -10 ≤ k ≤ 13, -23 ≤ l ≤ 23	
Reflections collected	25475	
Independent reflections	6649 [R(int) = 0.0405]	
Completeness to theta = 25.07°	99.5 %	
Absorption correction	multi-scan	
Max. and min. transmission	0.9874 and 0.9604	
Refinement method	Full-matrix least-squares on F <sup>2</sup>	
Data / restraints / parameters	6649 / 0 / 371	
Goodness-of-fit on F <sup>2</sup>	0.956	
Final R indices [I > 2σ(I)]	R1 = 0.0630, wR2 = 0.1652	
R indices (all data)	R1 = 0.0883, wR2 = 0.1884	
Largest diff. peak and hole	0.802 and -0.560 e.Å <sup>-3</sup>	

**Table S2.** Crystal data and structure refinement for **4a**

Empirical formula	C78 H112 Al2 O6 P2	
Formula weight	1261.58	
Temperature	150(2) K	
Wavelength	0.71073 Å	
Crystal system	Trigonal	
Space group	P3221	
Unit cell dimensions	a = 17.8220(4) Å	$\alpha = 90^\circ$ .
	b = 17.8220(4) Å	$\beta = 90^\circ$ .
	c = 21.4837(8) Å	$\gamma = 120^\circ$ .
Volume	5909.5(3) Å <sup>3</sup>	
Z	3	
Density (calculated)	1.063 Mg/m <sup>3</sup>	
Absorption coefficient	0.124 mm <sup>-1</sup>	
F(000)	2052	
Crystal size	0.30 x 0.20 x 0.20 mm <sup>3</sup>	
Theta range for data collection	2.80 to 29.26°.	
Index ranges	-24 ≤ h ≤ 24, -21 ≤ k ≤ 22, -28 ≤ l ≤ 29	
Reflections collected	17649	
Independent reflections	9056 [R(int) = 0.0422]	
Completeness to theta = 25.00°	99.4 %	
Absorption correction	Semi-empirical from equivalents	
Max. and min. transmission	0.9757 and 0.9638	
Refinement method	Full-matrix least-squares on F <sup>2</sup>	
Data / restraints / parameters	9056 / 1 / 386	
Goodness-of-fit on F <sup>2</sup>	1.007	
Final R indices [I > 2σ(I)]	R1 = 0.0766, wR2 = 0.1943	
R indices (all data)	R1 = 0.1166, wR2 = 0.2231	
Absolute structure parameter	1.00(15)	
Largest diff. peak and hole	1.107 and -0.438 e.Å <sup>-3</sup>	