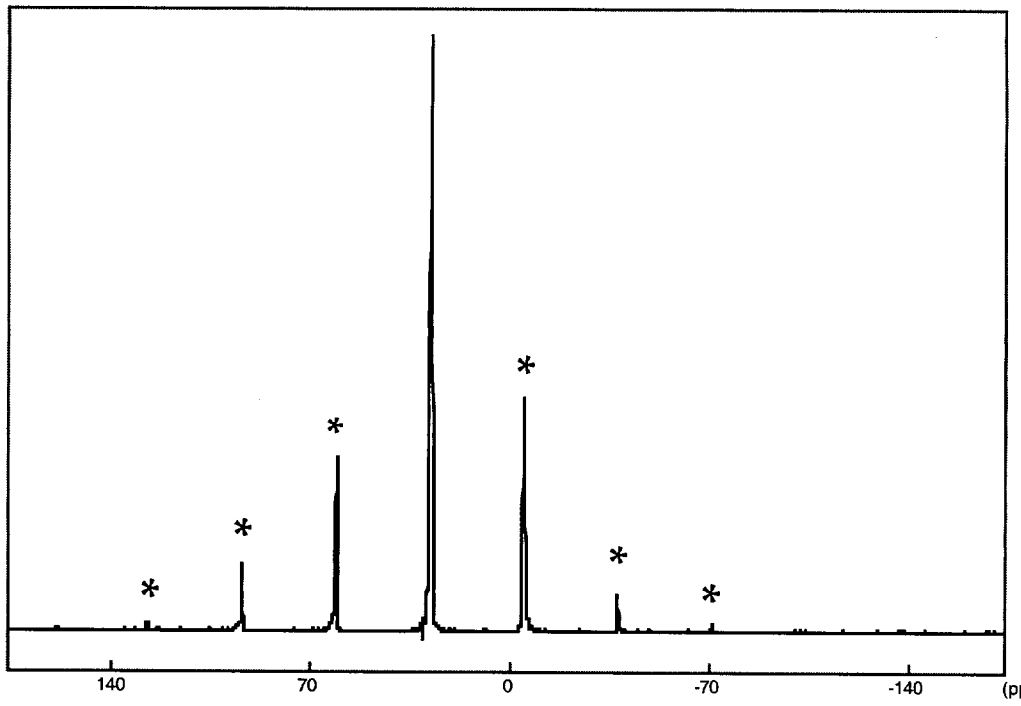

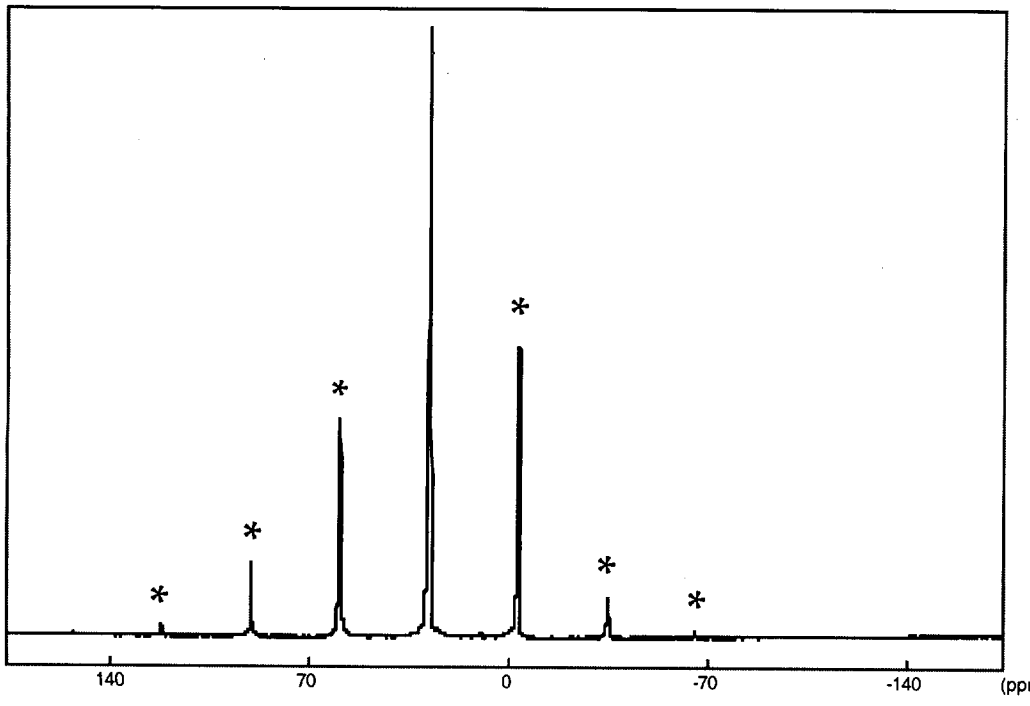

Figure S1. ^{31}P MAS NMR spectra of (a) $Cd(O_3PC_2H_4NH_2)$ and (b) $Cd(O_3PCH_3).n\text{-}NH_2C_4H_9$. Asterisks denote spinning side bands.

Table S1. Data collection and refinement parameters for $Cd(O_3PC_2H_4NH_2)$

Data collection	
Diffractometer :	Rigaku computer-automated diffractometer
Wavelenghts (Å)	1.540598 ($\lambda_{K\alpha1}$) - 1.544380 ($\lambda_{K\alpha2}$)
2θ angular range (°)	2-80
Step (°) ; time per step (s)	0.02 ; 20
Refinement	
Diffractometer / sample :	
No. of background parameters (shifted Chebyshev function)	12
K ratio	0.39(1)
Scale factor	52.0(2)
preferred orientation	1.016(4)
Sample shift	4.73(4)
Crystal system :	
Space group	$Pna2_1$
Cell parameters (Å)	15.4643(2) 5.16512(7) 6.27650(8)
Volume ($Å^3$) ; Z	501.33(2) ; 4
M ($g\ mol^{-1}$) ; ρ_{calcd} ($g\ cm^{-3}$)	253.46 ; 3.12
No. of reflections	368
No. of refined parameters	55
Profiles :	
Function	Pseudovoigt with Finger-Cox-Jephcoat asymmetry
Halfwidth parameters (centideg^2) (U ; V ; W)	1(1) ; 0 ; 5.1(2)
Strain broadening (Y, centideg)	17.7(2)
Particle size broadening (X)	0.43 (fixed)
Asymmetry parameters (S/L ; H/L)	0.0289 ; 0.0272 (fixed)
Agreement factors :	
R_p (%)	5.7
R_{wp} (%)	4.0
$R(F^2)$ (%)	3.0

Table S2. Bond Lengths (Å) and Angles (deg) for the Non-Hydrogen Atoms of $Cd(O_3PC_2H_4NH_2)$

Cd-O(1)[a]	2.373(9)	P-O(1)	1.481(10)
Cd-O(1)[b]	2.339(8)	P-O(2)	1.559(5)
Cd-O(2)[c]	2.266(6)	P-O(3)	1.575(10)
Cd-O(3)[a]	2.516(9)	P-C(1)	1.826(5)
Cd-O(3)[d]	2.189(8)	C(1)-C(2)	1.524(6)
Cd-N	2.320(7)	C(2)-N	1.492(6)
O(1)[a]-Cd-O(1)[b]	146.8(5)	O(3)[a]-Cd-O(3)[d]	159.4(3)
O(1)[a]-Cd-O(2)[c]	88.4(5)	O(3)[a]-Cd-N	83.1(3)
O(1)[a]-Cd-O(3)[a]	60.9(2)	O(3)[d]-Cd-N[c]	98.5(3)
O(1)[a]-Cd-O(3)[d]	98.9(4)	O(1)-P-O(2)	107.2(9)
O(1)[a]-Cd-N	82.5(2)	O(1)-P-O(3)	108.4(4)
O(1)[b]-Cd-O(2)[c]	91.3(5)	O(1)-P-C(1)	105.9(5)
O(1)[b]-Cd-O(3)[a]	86.0(4)	O(2)-P-O(3)	113.9(9)
O(1)[b]-Cd-O(3)[d]	114.3(2)	O(2)-P-C(1)	106.6(4)
O(1)[b]-Cd-N	92.3(3)	O(3)-P-C(1)	105.7(5)
O(2)[c]-Cd-O(3)[a]	86.2(3)	P-C(1)-C(2)	123.1(3)
O(2)[c]-Cd-O(3)[d]	90.0(5)	C(1)-C(2)-N	114.2(3)
O(2)[c]-Cd-N	168.4(2)		

[a]Atom related by $1/2 + x, 3/2 - y, z$; [b] $1 - x, 1 - y, -1/2 + z$; [c] $1/2 + x, 1/2 - y, z$; [d] $1 - x, 1 - y, 1/2 + z$

Table S3. Positional Parameters and Thermal Parameters for the Atoms of $Cd(O_3PC_2H_4NH_2)$

atom	x	y	z	U_{iso}, Å^2
Cd	0.73057(6)	0.3378(2)	0.3881(2)	0.0456(6)
P	0.3570(1)	0.7230(3)	0.3757(17)	0.037(1)
O(1)	0.3136(5)	0.839(2)	0.5629(12)	0.034(1)
O(2)	0.3482(4)	0.4235(6)	0.397(2)	0.034(1)
O(3)	0.3217(6)	0.859(2)	0.1687(12)	0.034(1)
N	0.6302(6)	0.6707(5)	0.3653(4)	0.039(1)
C(1)	0.4730(6)	0.8035(7)	0.3978(9)	0.058(2)
C(2)	0.5424(9)	0.6028(6)	0.4465(9)	0.058(2)