

The below were all obtained, *via* powder X-ray diffraction, from phase-pure powder samples synthesized in the laboratories of A. C. Tas.

<u>Phase name</u>	<u>Structure</u>	<u>Lattice parameters</u>	<u>ICDD entry#</u>
1. Ce _{4.67} (SiO ₄) ₃ O	Hexagonal	(a= 9.6578, c=7.1187 Å)	43-0441
2. CeAlO ₃	Tetragonal	(a=3.7630, c=3.7919 Å)	48-0051
3. CeAl ₁₁ O ₁₈	Hexagonal	(a=5.55812, c=22.0121 Å)	48-0055
4. Ce ₂ SiO ₅	Monoclinic	(a=9.2780, b=7.3820, c=6.9560 Å, β=108.2°)	48-0054
5. Ce ₂ Si ₂ O ₇	Monoclinic	(a=13.0803, b=8.727, c=5.4054 Å, β=90.134°)	48-0058
6. Pr ₂ Si ₂ O ₇	Monoclinic	(a=13.015, b=8.6717, c=5.4033 Å, β=90.510°)	48-0057
7. Nd ₂ Si ₂ O ₇	Monoclinic	(a=12.946, b=8.6326, c=5.3908 Å, β=90.120°)	48-0056
8. Sm ₂ Si ₂ O ₇	Monoclinic	(a=12.8553, b=8.5603, c=5.385 Å, β=91.470°)	48-0053
9. La ₂ Si ₂ O ₇	Monoclinic	(a=13.1914, b=8.7935, c=5.410 Å, β=92.060°)	48-0052
10. Y Cr _{0.9} Co _{0.1} O ₃	Orthorhombic	(a=7.5202, b=5.514, c=5.2349 Å)	48-0470
11. Y Cr _{0.8} Co _{0.2} O ₃	Orthorhombic	(a=7.5043, b=5.5039, c=5.2252 Å)	48-0471
12. Y Cr _{0.7} Co _{0.3} O ₃	Orthorhombic	(a=7.4881, b=5.4952, c=5.2156 Å)	48-0472
13. Y _{0.9} Ca _{0.1} Cr _{0.9} Co _{0.1} O ₃	Orthorhombic	(a=7.5158, b=5.4996, c=5.2411 Å)	48-0473
14. Y _{0.9} Ca _{0.1} Cr _{0.8} Co _{0.2} O ₃	Orthorhombic	(a=7.4963, b=5.4903, c=5.2302 Å)	48-0474
15. 9Al ₂ O ₃ ·2B ₂ O ₃	Orthorhombic	(a=15.0077, b=7.6850, c=5.3088 Å)	53-1233
16. LaAl(OH(CO ₃)) ₂	Orthorhombic	(a=8.5945, b=7.4247, c=5.0449 Å)	52-1059
17. Ca ₁₀ (PO ₄) ₆ (OH) ₂	Hexagonal	(a=9.4189, c=6.8827 Å)	55-0592
18. GaOOH	Orthorhombic	(a=4.5545, b=9.8007, c=2.9738 Å)	54-0910
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19. (La _{0.8} Sr _{0.2} Ga _{0.8} Zn _{0.2})(OH(CO ₃)) _{1.867} ·H ₂ O	Orthorhombic	(a=8.5932, b=7.4085, c=5.0498 Å)	Download
20. La _{0.8} Sr _{0.2} Ga _{0.8} Zn _{0.2} O _{2.80}	Orthorhombic	(a=7.8231, b=5.5310, c=5.5115 Å)	Download
21. BaTiO ₃	Cubic	(a = 4.0186 Å)	Download