

Crystal Chemistry Topics

	Structure	Property
1	NaCl (PbTe)	Thermoelectrics
2	CsCl (NiTi)	Shape Memory Alloys
3	ZnS (sphalerite)	Semiconductors
4	ZnS (wurtzite)	Semiconductors
5	NiAs (MnAs)	Magnetocaloric effect
6	PbO (ThCr ₂ Si ₂ -type)	Superconductors
7	GeTe (GST)	Phase Change Materials
8	CaF ₂	Phosphors
9	CaF ₂	Fuel Cells
10	TiO ₂ (anatase)	Photocatalysis
11	TiO ₂ (rutile)	Transparent Conducting Oxides
12	SiO ₂	Polymorphs
13	TiS ₂	Batteries
14	MoS ₂	Hydrogen evolution
15	CdI ₂	Intercalation
16	HgI ₂	Photodetectors
17	ReO ₃ (NTE)	Negative Thermal Expansion
18	ReO ₃ (MOF-5)	Metal Organic Frameworks/Gas Separation
19	ReO ₃	Dimensional Reduction
20	CoAs ₃	Thermoelectrics
21	Al ₂ O ₃	Gemstones
22	Bi ₂ Te ₃	Peltier Cooling
23	In ₂ O ₃	Transparent conducting oxides
24	K ₄ Ge ₉	Zintl phases
25	CaTiO ₃ (LaMnO ₃)	Fuel Cells
26	CaTiO ₃ (BaTiO ₃)	Ferroelectrics
27	CaTiO ₃ (BiFeO ₃)	Multiferroics
28	CaTiO ₃ (CH ₃ NH ₃ PbI ₃)	Semiconductors
29	CaTiO ₃ (YBa ₂ Cu ₃ O ₇)	Superconductors
30	CaTiO ₃ (CsPbBr ₃)	LCAO
31	CuFeS ₂	Second Harmonic Generation
32	Sr ₃ Ti ₂ O ₇	Modular structures
33	LaCrS ₃	Misfit Compounds
34	KBiSe ₂	Homologous Series
35	MgAl ₂ O ₄	Gemstones
36	Y ₃ Al ₅ O ₁₂	Lasers
37	Heusler alloys (Cu ₂ MnAl)	Ferromagnetism
38	K ₂ NaAlF ₆	Phosphors