

Table Consisting of Various Thermoelectric Materials Researched for Power Generation

Material	Composition	Conduction Type	Optimum Temperature (°C)	Production process	ZT	Mechanical Properties'	Thermal Stability	Environmental Impact
Silicides	Mn-Si	P	300-600	Melting & Refining	0.80	Young's Modulus: 12,000MPa Poisson's ratio: 0.34	O	O
	Mg-Si	N	380-600	Melting & refining	1.07	-	Unstable without Coating	O
Si-Ge based	Si _{0.8} Ge _{0.2}	N	730	Hot press	1.00	Compression Strength 653 MPa	Stable for over 10 years	O
	Si _{0.8} Ge _{0.2}	P	730	Hot press	0.70	Compression Strength 473 MPa		O
Oxide Based	NaCo ₂ O ₄	P	30-500	Flux	1.20	-	O	O
	(Ca,Sr,Bi) ₂ Co ₂ O ₄	P	330-730	Glass annealing	-	-	O	O
	(ZnO) ₅ (In _{0.97} Y _{0.03}) ₂ O ₃	N	430-800	RTGG	0.31	-	O	O
	Zn _{0.98} Al _{0.02} O	N	430-700	Solid phase reaction	0.42	-	O	X
PbTe based	PbTe	N	230-577	Hot press	0.70	-	Subject to heat history	Toxic
TAGS based	GeTe-AgSbTe ₂	P	430		1.40	-	O	---
LaTe	LaTe ~1.4	N	-730		1-17-1.43	-	-	---
Filled-Skutterudites	YbCo _{0.9} (PtPd) _{0.1} Sb ₃	N	330-630	Plasma Sintering	1.12	-	-	---
	Ce _{0.12} Fe _{0.7} Co _{3.29} Sb ₁₂	P	330-630	Plasma Sintering	0.93			
Bi-Sb-Te-Se	Bi-Sb-Te-Se	P N	180-250	Hot press Crystalline	0.3-1.01	-	Sufficient Data Available	---
Zn ₄ Sb ₃ based	Zn ₄ (Sb _{0.97} Sn _{0.03}) ₃	P	230-480	Plasma Sintering	1.00	-	Somewhat unstable	---
	Zn ₄ Sb ₃	P	230-480	Plasma Sintering	1.22	-		---