Specification of SnSe-Based Thermoelectric Ingot（TIG-SnSe-P-1）

Description

The SnSe-based thermoelectric ingot is grown by the Thermonamic with the alloy of Sn, Se and others, and our unique crystallizing processes. The SnSe-Based thermoelectric ingot is used to fabricate the modules for power generation, good for converting 600~1000 K heat sources into electricity. The peak dimensionless figure of merit (*ZT*) of our p-type ingots is larger than 1.9 around 850 K, and good for waste heat recovery. Meanwhile, our ingot is featured with good mechanical strength and highly stable property, providing the key elements for producing the high performance and reliable power generation modules used for middle temperature range heat sources.

Features

- Silver-white Color
- p-Type ingot $ZT \geq 1.9$@850 K

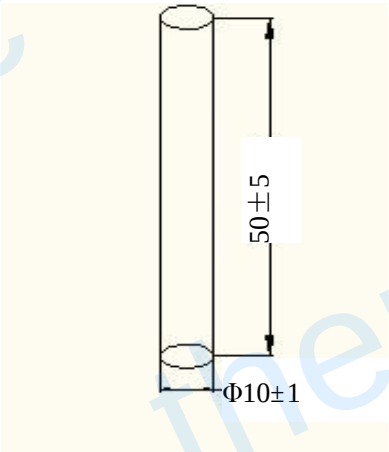
Application

- High performance and reliable power generation modules

Peformance Specification Sheet

Performance Specification	p-Type	Note
Part Number	TIG-SnSe-P-1	
Diameter (mm)	10 ± 1	
Length (mm)	50 ±5	
Weight (g)	20±5	
Electrical Conductivity σ ($10^2 Sm^{-1}$)	15 ~ 60	300 ~ 850 K
Seebeck Coefficient α (μVK^{-1})	400 ~ 580	300 ~ 850 K
Thermal Conductivity ($Wm^{-1}K^{-1}$)	0.45 ~ 0.6	600 ~ 850 K
Power Factor P (WmK^{-2})	≥ 0.0009	600 K
Peak Dimensionless *ZT* value	≥ 1.9	850 K

Geometric Characteristics (in millimeters)



P-type Ingot

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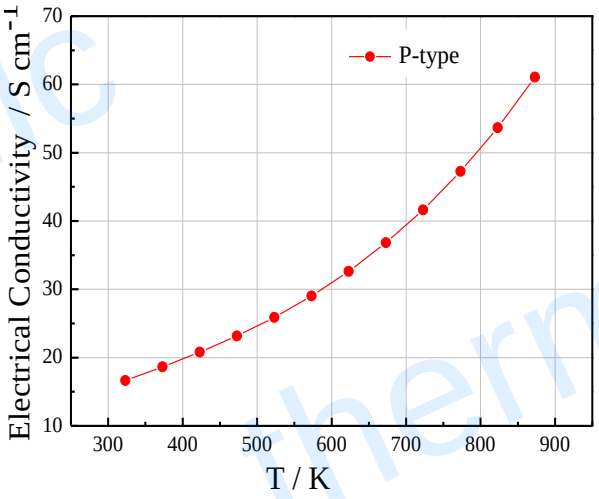
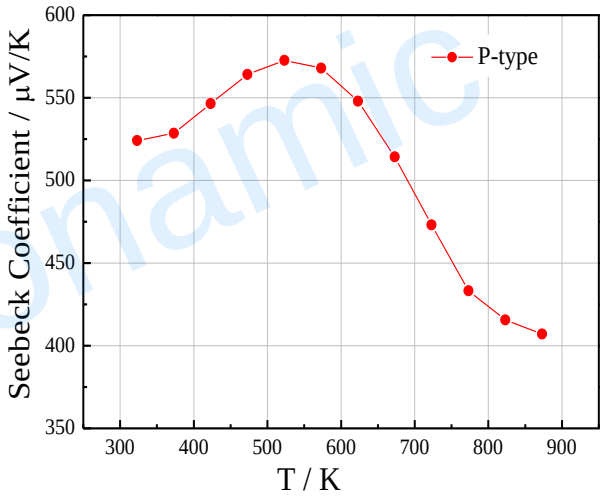
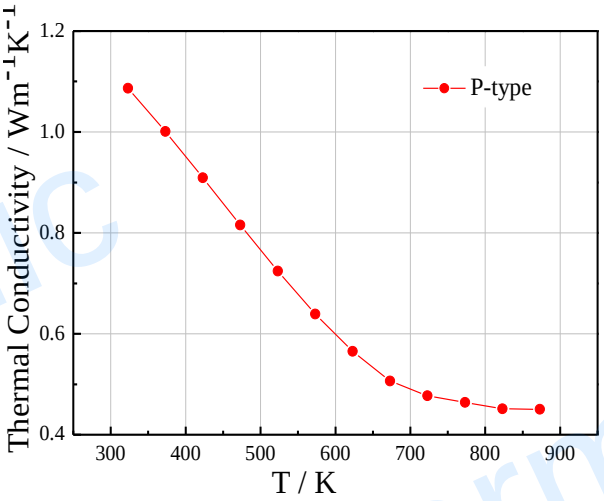


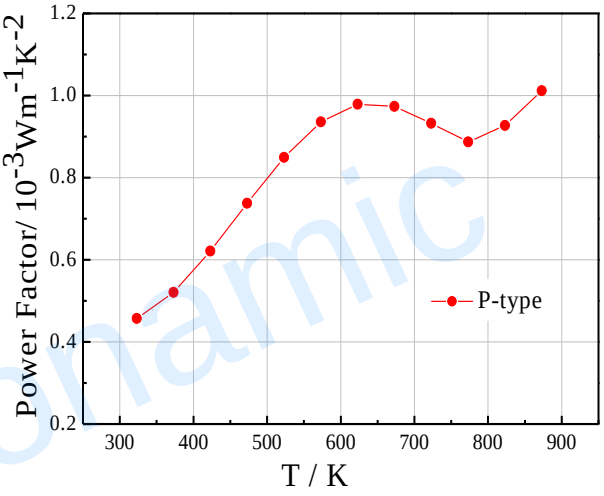
Electrical conductivity of the SnSe-based ingot



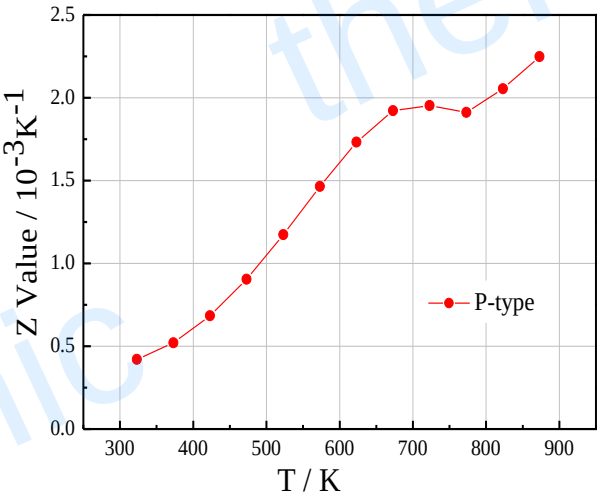
Seebeck coefficients of the SnSe-based ingot



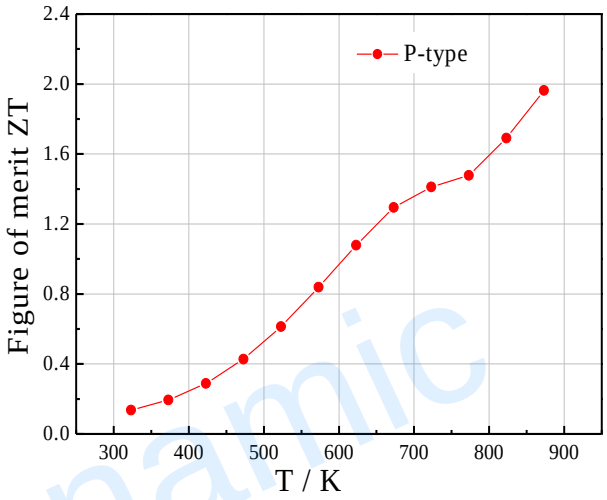
Thermal conductivity of the SnSe-based ingot



Power factors of the SnSe-based ingot



Z values of the SnSe-based ingot



ZT values of the SnSe-based ingot

Operation Cautions

- Caution on handling
- Storage in dry environment

Remarks:

All measurements are performed in the temperature range from 300 to 875 K.