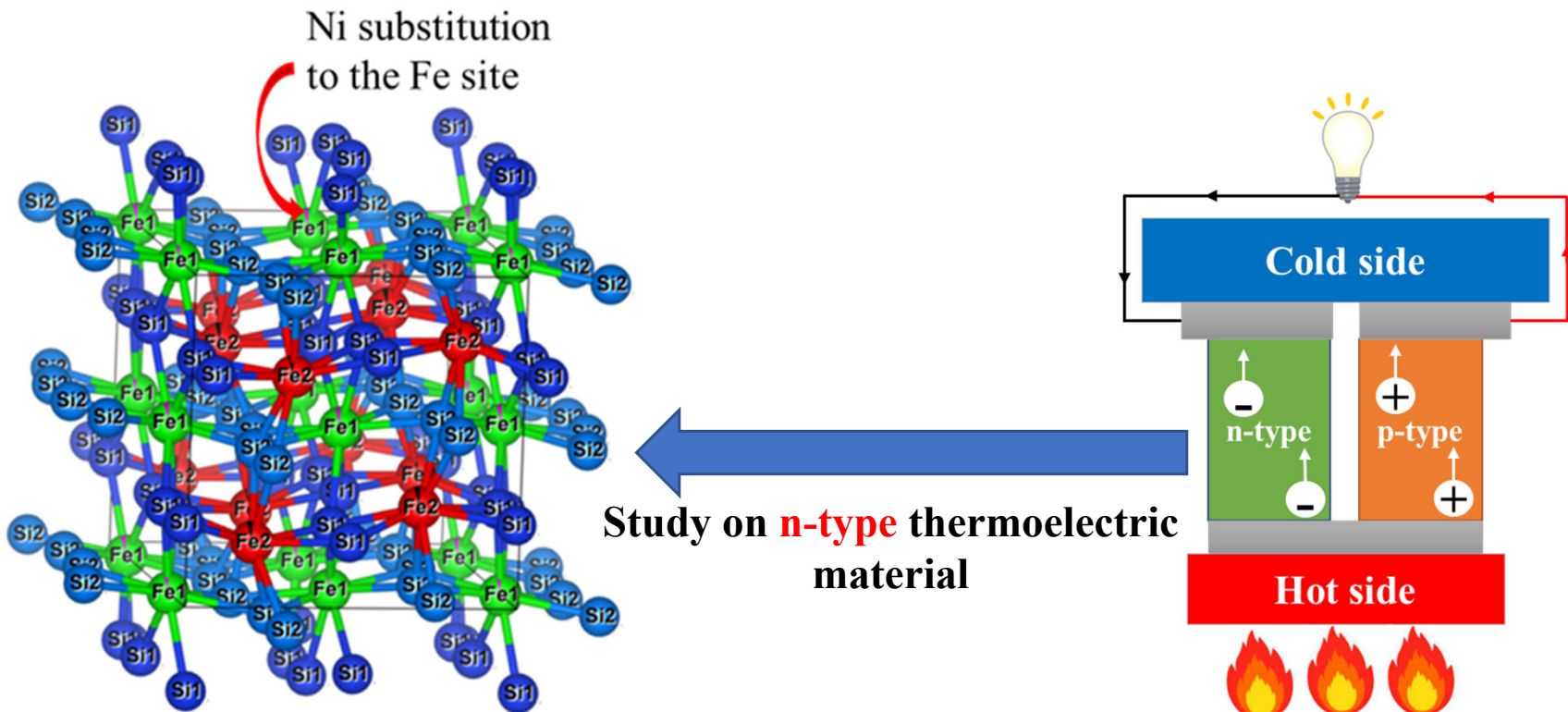


Thermoelectric properties of Ni-doped β -FeSi₂

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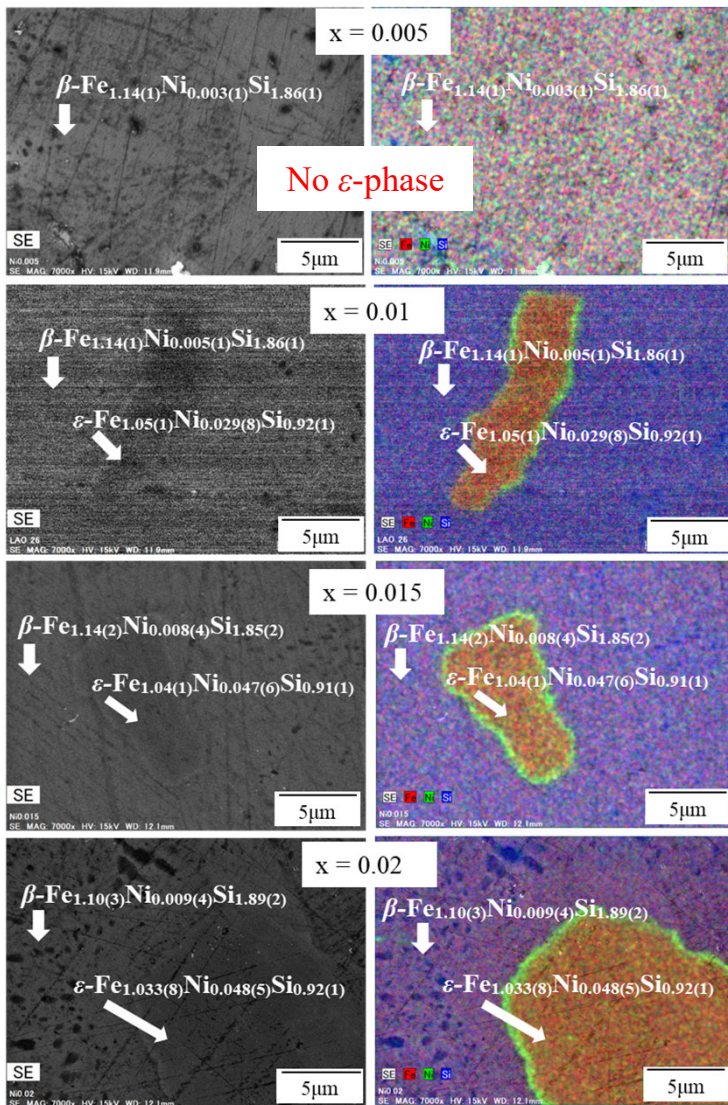
Orthorhombic structure of β -FeSi₂
with Ni doping (n-type).

Thermoelectric Generator
for energy conversion

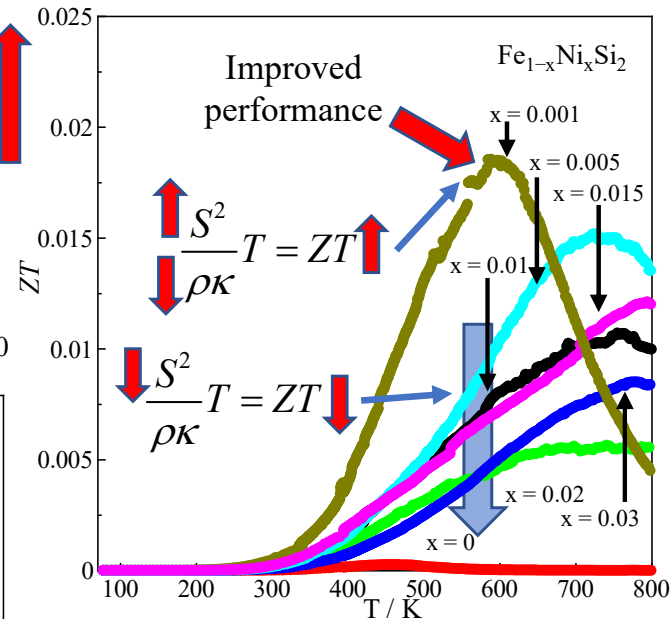
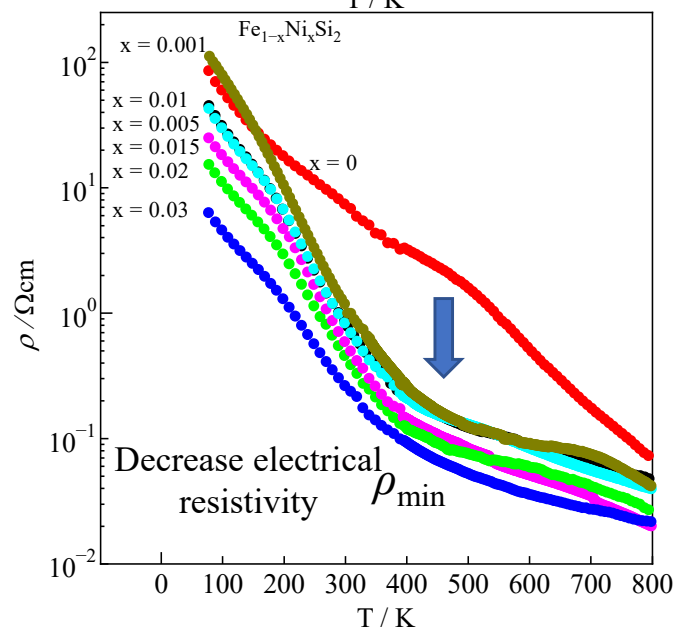
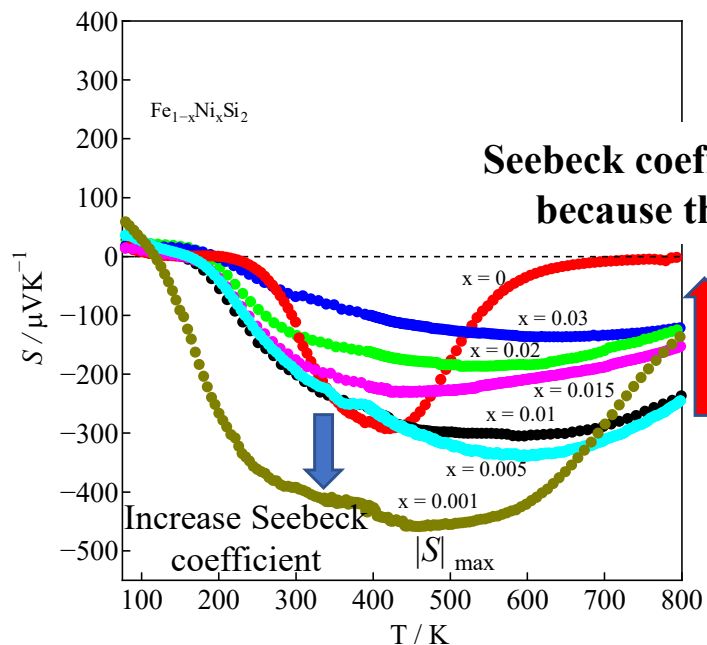
Thermoelectric properties of Ni-doped β -FeSi₂

Metallic ϵ -phase increases with Ni(x).

ϵ -phase $\uparrow \Rightarrow |S| \downarrow \Rightarrow ZT \downarrow$



SEM-EDS analysis of $\text{Fe}_{1-x}\text{Ni}_x\text{Si}_2$



ZT : material's performance.
 S : Seebeck coefficient [V/K].
 ρ : resistivity [Ωm].
 κ : thermal conductivity [W/mK].

Thermoelectric properties of Ni-doped β -FeSi₂

Thank you!