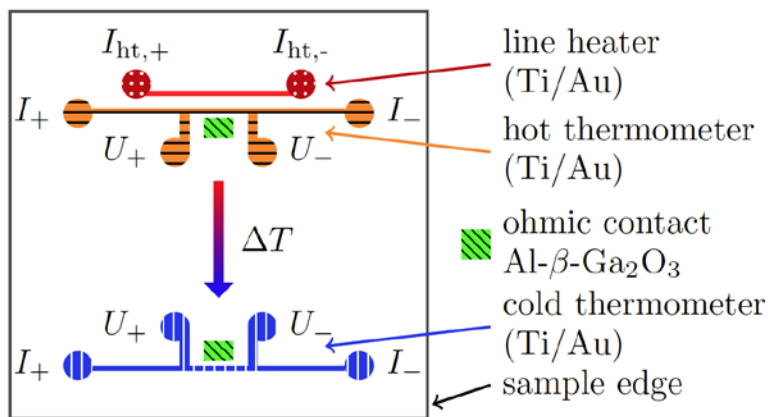


## Temperature dependence of the Seebeck coefficient of epitaxial $\beta\text{-Ga}_2\text{O}_3$ thin films

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### Short Abstract

We measured the temperature dependence of the Seebeck coefficient of homoepitaxial metal organic vapour phase grown, silicon doped  $\beta\text{-Ga}_2\text{O}_3$  thin films. For room temperature, we found the relative Seebeck coefficient of  $S_{\beta\text{-Ga}_2\text{O}_3\text{-Al}} = -300 \pm 20 \mu\text{V/K}$ . At high bath temperatures  $T > 240 \text{ K}$ , the scattering is determined by electron-phonon-interaction. Between  $T = 100 \text{ K}$  and  $300 \text{ K}$ , an increase in the magnitude of the Seebeck coefficient is explained in the frame of Stratton's formula.



**Above.** Schematic of the thermoelectric measurement setup.