

Katase Lab

Advanced Materials Design for Energy and Electronics

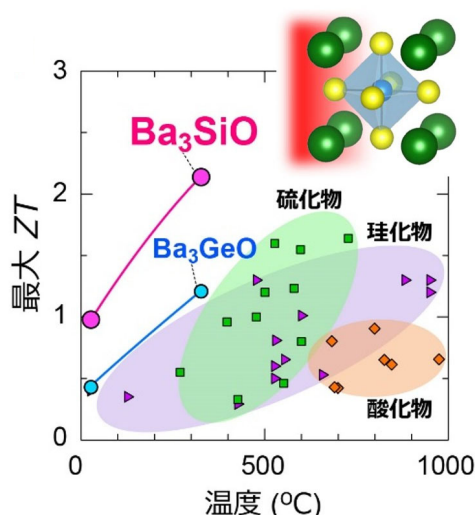
Division of Materials Design, Materials and Structures Laboratory

<https://www.katase.msl.iir.isct.ac.jp/>

With the vision of **exploring new frontiers in materials**, we pursue the development and device application of innovative thermal, electronic, and optical materials for **next-generation energy and electronics**.

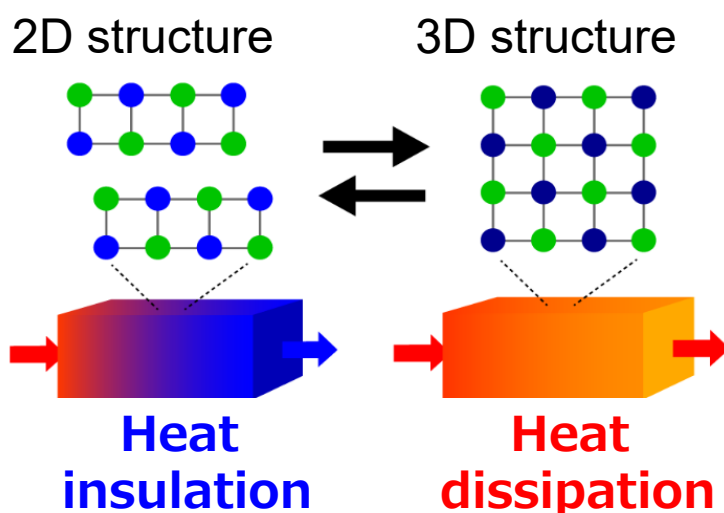
Eco-friendly high-efficiency thermoelectric material

X. He, T. Katase* et al., *Adv. Sci.* 11, 2307058 (2024).



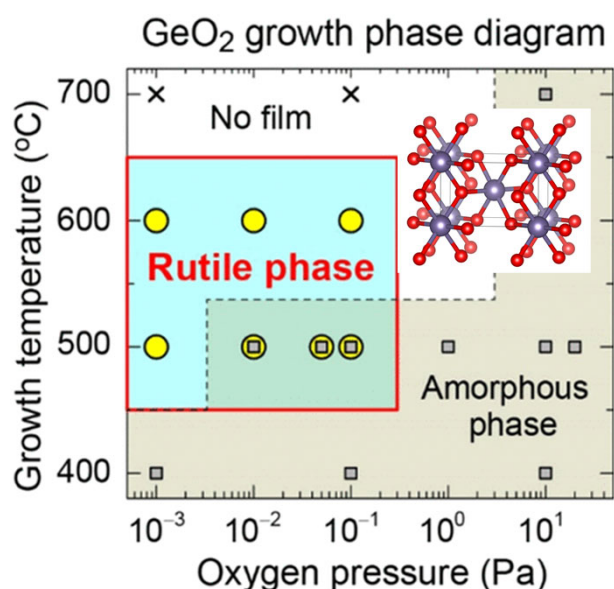
Thermal switching material

T. Katase* et al., *Science Adv.* 7, eabf2725 (2021).



Widegap oxide semiconductor for power electronics

T. Suzuki, T. Katase* et al., *ACS Appl. Electron. Mater.* (2025).



High-power transmission superconducting tape

T. Katase et al., *Nat. Commun.* 2, 409 (2011).

