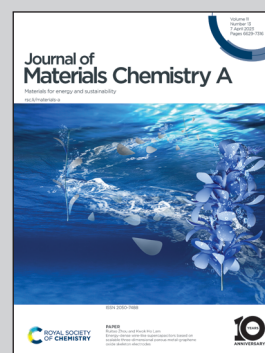


Highlighting a study on europium titanate by a group of researchers led by Prof. Alessio Filippetti from University of Cagliari and CNR-IOM, Italy.

Giant spin-dependent Seebeck effect from fully spin-polarized carriers in n-doped  $\text{EuTiO}_3$ : a prototype material for spin-caloritronic applications

A strong spin-dependent Seebeck effect is calculated in n-doped, 100% spin-polarized europium titanate; a temperature gradient applied to the  $\text{EuTiO}_3$  bar generates a chemical potential unbalance and a spin voltage at the two ends of the bar. By interfacing n-doped  $\text{EuTiO}_3$  with a metallic overlayer with Rashba or spin-Hall capability, the spin current  $J_s$  is converted into an orthogonal electron current  $J_c$ .

As featured in:



See A. Filippetti *et al.*,  
*J. Mater. Chem. A*, 2023, **11**, 6842.