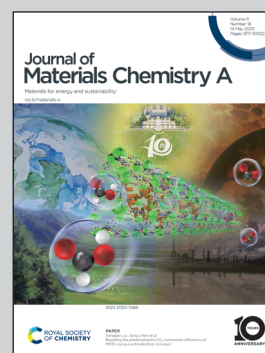


Showcasing research from Dr. Toshihiko Mandai's group, Center for Green Research on Energy and Environmental Materials, National Institute for Materials Science (NIMS), Japan.

Oxygen – a fatal impurity for reversible magnesium deposition/dissolution

Systematic research revealed that O_2 , even in miniscule amounts, in the electrolyte solution is a fatal impurity for the reversible electrochemistry of magnesium metals. Complex interfacial processes induced by O_2 , magnesium, and electrolyte make firm insulating layer on the surface. The authors also demonstrated the feasibility of constructing an alloy barrier layer on the surface of magnesium to improve its air stability.

As featured in:



See Toshihiko Mandai and Mariko Watanabe, *J. Mater. Chem. A*, 2023, 11, 9755.