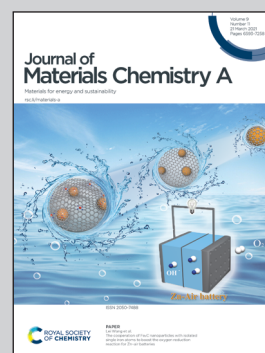


Showcasing research from Professor Imai's laboratory,
Department of Applied Chemistry, Keio University,
Yokohama, Japan.

Effective 3D open-channel nanostructures of a MgMn_2O_4
positive electrode for rechargeable Mg batteries operated at
room temperature

Room-temperature operations of rechargeable Mg coin-
cell batteries have been achieved using a Mg alloy negative
electrode and a spinel MgMn_2O_4 positive electrode having
a triple-tiered 3D open-channel nanostructure. We clarified
the effects of the physiochemical properties of MgMn_2O_4
powder including specific surface area and porosity of the
positive electrode on the Mg battery performances. The
maximum discharge capacity of 220 mA h g^{-1} was realized
at 25°C in the full cell of the 3D open-channeled MgMn_2O_4
powder with a large specific surface area $> 200 \text{ m}^2 \text{ g}^{-1}$.

As featured in:



See Hiroaki Imai *et al.*,
J. Mater. Chem. A, 2021, **9**, 6851.