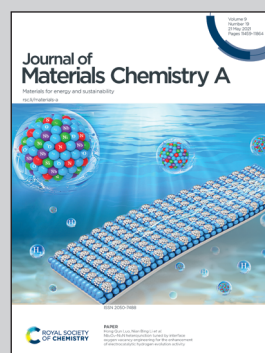


Highlighting an investigation by a group of researchers led by Prof. Meng-Chang Lin from Shandong University of Science and Technology (SDUST).

The mechanism of bulky imidazolium cation storage in dual graphite batteries: a spectroscopic and theoretical investigation

The mechanism of 1,2-dimethyl-3-propylimidazolium (DMPI⁺) storage in dual graphite batteries is investigated by *in situ* X-ray diffraction, *in situ* Raman spectroscopy, and first-principle calculations to reveal that the cations are stored in the shallow surface layer of bulk graphite without dramatic expansion into the deep graphite lattice. We conclude that the storage mechanism of DMPI⁺ cation in graphite is the combination of intercalation and intercalation pseudocapacitance, and is dominated by the latter process.

As featured in:



See Yuxia Li, Meng-Chang Lin *et al.*,
J. Mater. Chem. A, 2021, **9**, 11595.