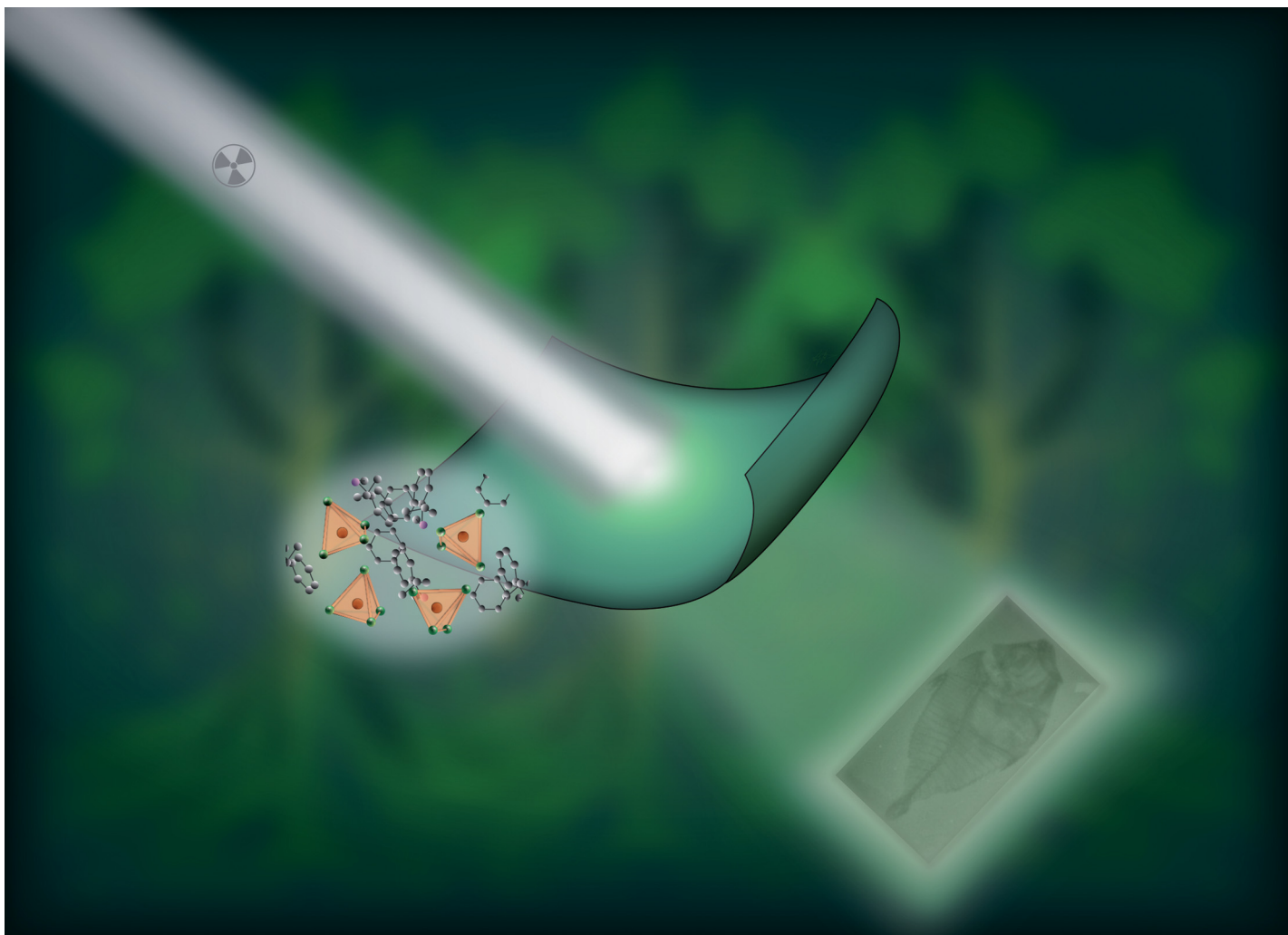


EES Batteries

**Exceptional research on
batteries and energy storage**

Part of the EES family

**Join
in** | Publish with us
rsc.li/EESBatteries

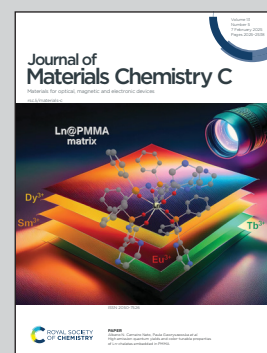


Showing research from Physical Science & Engineering (PSE), King Abdullah University of Science and Technology, Saudi Arabia.

Single crystals of organometallic manganese halides as sustainable high-luminescence materials for X-ray scintillation

Two lead-free hybrid halide crystals, methyl triphenyl phosphonium manganese(II) chloride and phenyltrimethylammonium manganese(II) chloride, are presented. These crystals, grown sustainably *via* solution processing, exhibit remarkable properties, including high photoluminescence quantum yields, strong green emissions, large Stoke shifts, and impressive scintillation yields. A flexible X-ray scintillator screen developed using a composite of poly(methyl methacrylate) and crystal powder achieved a high spatial resolution, demonstrating their potential as an eco-friendly, high-performance material for advanced X-ray imaging applications. Artwork by Maria Joao Castro.

As featured in:



See Javeed Mahmood, Mohamed Eddaoudi, Cafer T. Yavuz *et al.*, *J. Mater. Chem. C*, 2025, **13**, 2165.