

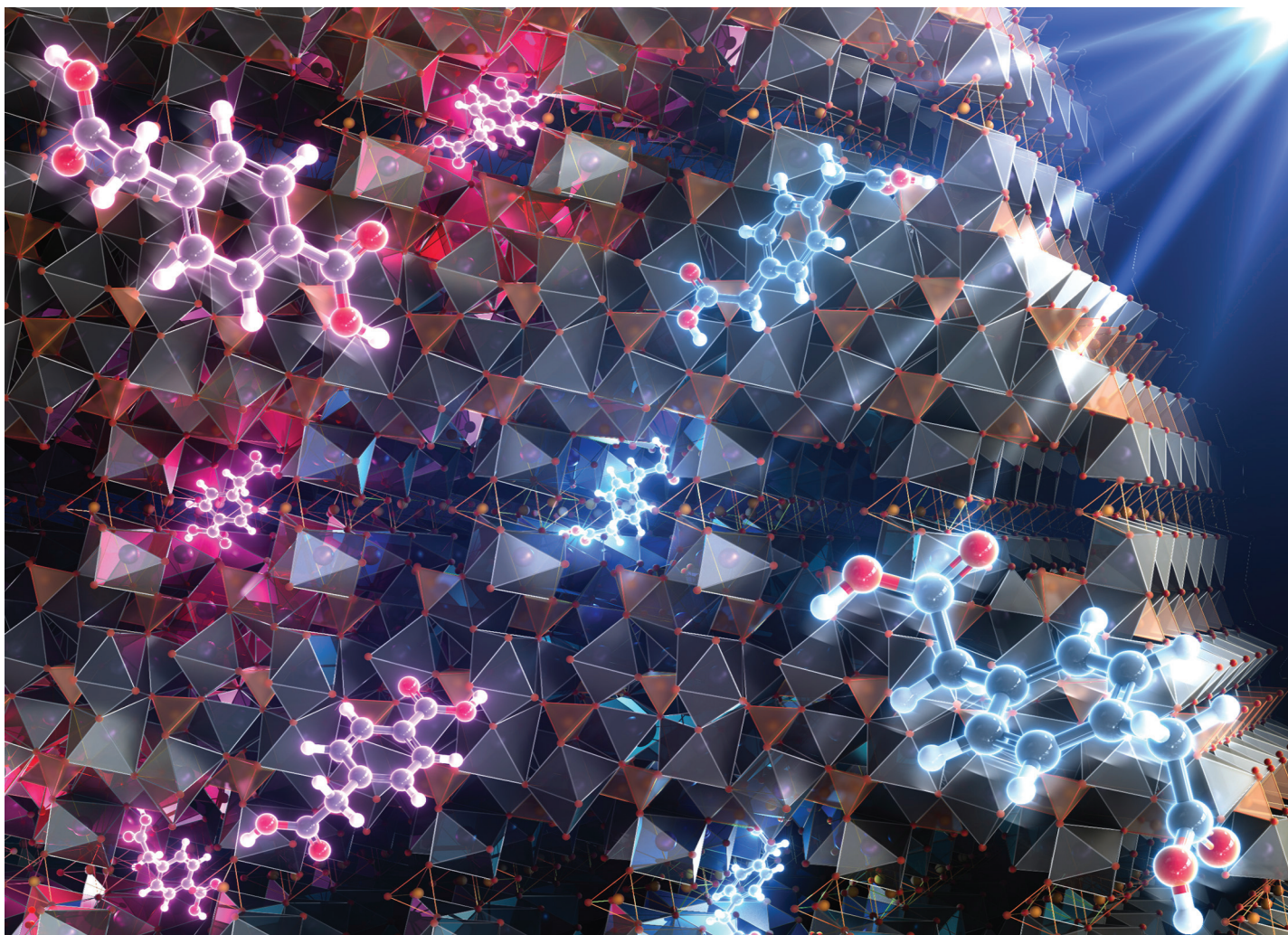
# EES Solar

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**Showcasing research from Professor Yokoi's laboratory,  
Institute of Biomaterials and Bioengineering, Tokyo Medical  
and Dental University, Tokyo, Japan.**

Octacalcium phosphate with incorporated terephthalate ion derivatives: novel guest molecules and unique fluorescence properties

Octacalcium phosphate (OCP) has a layered structure that can incorporate various carboxylic acids, exhibits fluorescence when aromatic carboxylate ions are present in the interlayers. In this study, we incorporated 4-(carboxymethyl)benzoate and 1,4-phenylenediacetate ions into OCP and investigated the resulting fluorescence properties. OCP with incorporated 1,4-phenylenediacetate ions showed blue fluorescence. In contrast, OCP with incorporated 4-(carboxymethyl)benzoate ions exhibited two-colour fluorescence, with pink emission and blue emission. These unique fluorescence characteristics combined with the excellent biological properties of OCP can be exploited to develop novel biofriendly fluorescent probes.

**As featured in:**



See Taishi Yokoi *et al.*, *Dalton Trans.*, 2024, **53**, 14163.