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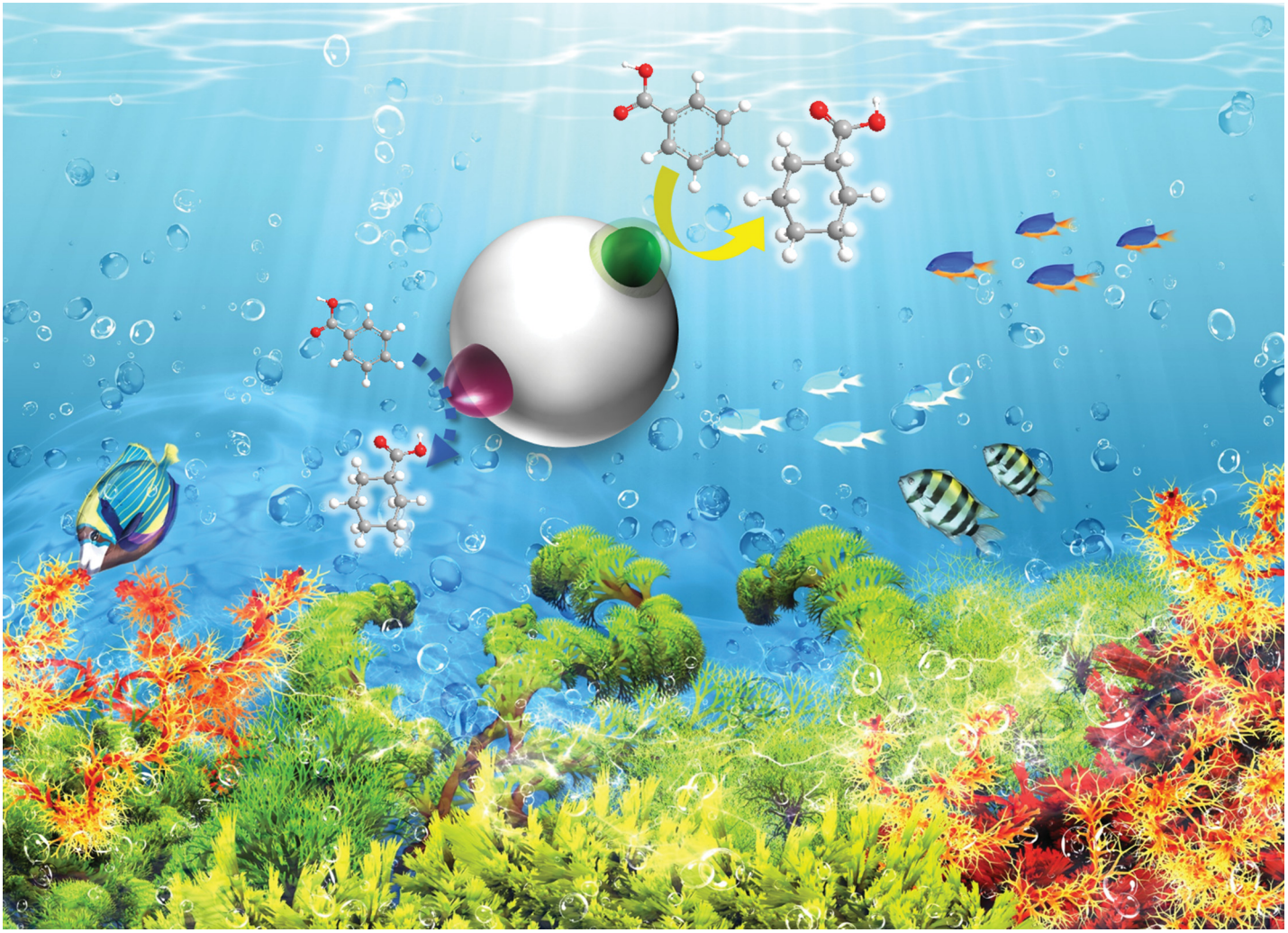

Showcasing research from the group of Dr Hiroshi Kominami, Department of Applied Chemistry, Kindai University, Japan

Ruthenium and palladium bimetallic nanoparticles achieving functional parity with a rhodium cocatalyst for TiO_2-photocatalyzed ring hydrogenation of benzoic acid

This work explores ring hydrogenation under Rh-free conditions by using two types of cocatalysts that are inactive for this reaction when used alone. Cyclohexanecarboxylic acid as the ring hydrogenation product of benzoic acid was successfully obtained in an aqueous suspension of TiO_2 photocatalyst modified with Pd@Ru nanoparticles, indicating that this bimetallic system can be used in place of an Rh cocatalyst.

As featured in:

See Hiroshi Kominami *et al.*, *Phys. Chem. Chem. Phys.*, 2023, **25**, 21868.

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