

RSC Sustainability

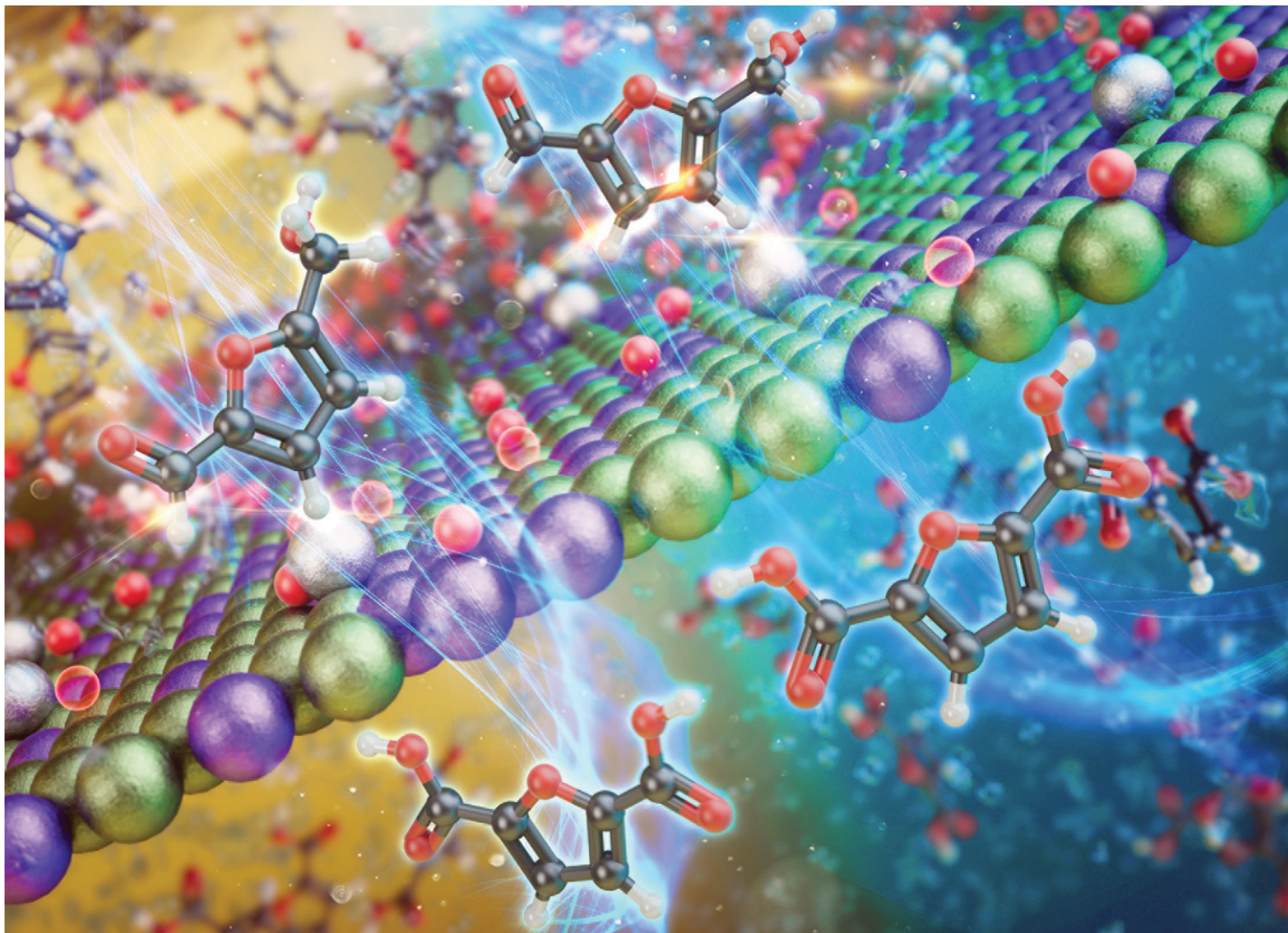
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Fundamental questions
Elemental answers

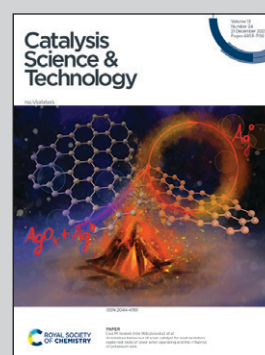


Showcasing research from the laboratory of Dr. Hwang and Dr. Yun at the Green Carbon Research Center, Korea Research Institute of Chemical Technology, Daejeon, Republic of Korea.

Highly active and stable Ru-(OH)-based catalysts supported on Ni-manganite for the base-free aerobic oxidation of 5-hydroxymethyl furfural to 2,5-furan dicarboxylic acid in a noble water-organic solvent system

A novel aerobic oxidation process has been developed for converting high concentrations of 5-hydroxymethyl furfural (HMF) into 2,5-furan dicarboxylic acid (FDCA) using Ru-doped nickel-manganite catalysts. This transformation occurs in a solvent mixture of water and acetone, resulting in high FDCA solubility and eliminating the need for the addition of a homogeneous base.

As featured in:



See Gwang-Nam Yun, Dong Won Hwang *et al.*, *Catal. Sci. Technol.*, 2023, 13, 6921.