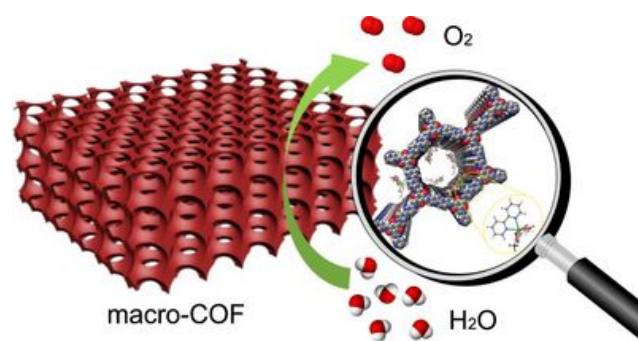


UniSysCat researchers develop hierarchically porous covalent organic frameworks

Start Time: Thursday, April 18, 2019

End Time:



UniSysCat researchers have developed hierarchically porous covalent organic frameworks (COFs) for the first time. These materials feature small pores (< 2 nm) providing a high accessible surface area with abundant active sites and additionally larger pores (> 100 nm) for efficient mass transport through the material. The pore walls of these COFs can be equipped with metal-coordinating moieties to immobilize a range of molecular catalysts. The benefit of introducing large macropores in the otherwise purely nanoporous COFs was proven by the enhanced catalytic activity of a hierarchically porous, Cobalt-bipyridine-linked COF for the oxygen evolution reaction (OER). The work results from the interdisciplinary collaboration between the groups of Arne Thomas (Functional Materials, Institute of Chemistry) and Birgit Kanngießner (Analytical X-Ray Physics, Institute of Physics) at Technische Universität Berlin.

Macro/Microporous Covalent Organic Frameworks for Efficient Electrocatalysis

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