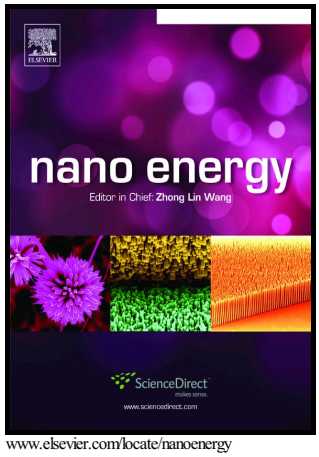

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Partially oxidized Ni nanoparticles supported on Ni-N co-doped carbon nanofibers as bifunctional electrocatalysts for overall water splitting

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Abstract:

The development of efficient and low-cost bifunctional electrocatalysts for hydrogen evolution reaction (HER) and oxygen evolution reaction (OER) is crucial for the successful implementation of water splitting technologies, which represents a promising and appealing solution to the sustainable-energy conversion. In this work, a nanocomposite electrocatalyst based on partially oxidized Ni nanoparticles supported on Ni-N co-doped carbon nanofibers (PO-Ni/Ni-N-CNFs) was developed using low-cost hydrothermal carbonaceous nanofibers, pyrrole, and $NiCl_2$ as precursors. Benefiting from effective active sites, mesoporous structure, and interlinked 1D nanofiber network,

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