

# **High-Entropy Nanomaterials for Hydrogen-Related Applications**

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High-entropy materials are a new group of materials consisting of five or more elements with equal atomic fractions in the solid solution form. These materials have received significant attention in recent years due to their unique mechanical and functional properties. Our group recently started a project on high-entropy nanomaterials with a focus on hydrogen-related applications. This talk review our ongoing works on three main topics: (i) high-entropy alloys with high strength under hydrogen, (ii) high-entropy hydrides for hydrogen storage and (iii) high-entropy oxides for photocatalytic hydrogen production.