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Building block nanoparticles engineering induces multi-element Perovskite hollow nanofibers structure evolution to trigger enhanced oxygen evolution

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ABSTRACT: Oxygen evolution reaction (OER) plays an important role in various renewable energy systems. Owing to its complex four-electron redox process, the OER process with sluggish kinetics often requires electrocatalysts to reduce the overpotential and promote the reaction rate. Herein, we have proposed an “all-in-one” strategy to synthesize multi-elemental perovskite oxides nanofibers (NFs) with hollow and porous structures by using electrospinning technology and Ostwald ripening approach. The hollow $\text{La}_{0.7}\text{Sr}_{0.3}\text{Co}_{0.25}\text{Mn}_{0.75}\text{O}_3$ nanofibers (LSCM NFs) consist of large amounts of building block $\text{La}_{0.7}\text{Sr}_{0.3}\text{Co}_{0.25}\text{Mn}_{0.75}\text{O}_3$ nanoparticles (LSCM NPs), forming the unique architecture and the morphologies can be engineering by

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