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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 mutil-elemental perovskite oxides nanofibers (NFs) with hollow and porous structures by using electrospinning technology and Ostwald ripening approach. The hollow $La_{0.7}Sr_{0.3}Co_{0.25}Mn_{0.75}O_3$ nanofibers (LSCM NFs) consist of large amounts of building block $La_{0.7}Sr_{0.3}Co_{0.25}Mn_{0.75}O_3$ nanoparticles (LSCM NPs), forming the unique architecture and the morphologies can be engineering by