**Mesoscopic Fabric Sheet Racks and Blocks as Catalysts with Efficiently Exposed Surfaces for Methanol and Ethanol Electrooxidation**

Electrode designs based on sheet racks and blocks with multidiffuse groove spaces and enriched active sites and scales would promote the commercial applications of electroactive materials. A facile one-pot hydrothermal approach is reported to synthesize mesoscopic porous Co3O4 or hybrid graphene (GO)/Co3O4 sheet-on-sheet racks and blocks. Three basic types of sheet scalability racks can be built in vertical and nonstacked edge orientations, such as neat micro/nanogroove rooms, butterfly wing scales, and wall groves, leading to highly exposed surface converges and sites. In particular, the stacked GO/Co3O4 sheet-on-sheet blocks (GO/Co3O4 blocks) can be oriented in vertical tower buildings. The atomic structures of the developed Co3O4 catalysts are dominant along the highly dense {112/111} interfaces and single crystal {111} and {112} facets. The electrochemical performance of the mesoscopic porous Co3O4 catalyst toward methanol and ethanol electrooxidation is evaluated in alkaline conditions. The mesoscopic hybrid GO/Co3O4 racks reveal superior catalytic activity in terms of oxidation currents and onset potentials, indicating the effect of the synergetic role of active Co3+ sites along the densely exposed {112} facets, graphene counterparts, and hierarchically nonstacked sheet racks on the electroactive functionality. Results indicate that the mesoscopic GO/Co3O4 sheet catalyst is suitable for highly efficient electrochemical reactions.