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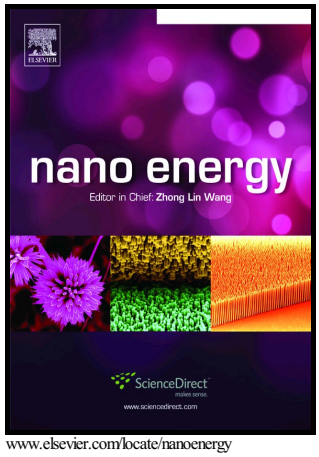

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Abstract

Electrochemical reduction of CO_2 to fuels is a promising way to reduce CO_2 emission and address the environment and energy crisis. However, the H_2 evolution reaction competes with CO_2 electrochemical reduction, which would lower the overall efficiency for carbonaceous products. In this work, a new electrocatalyst (cubic-shaped Cu inverse opals) was reported to reduce CO_2 to useful chemicals, which was synthesized from an electrochemical reduction of Cu_2O inverse opals. The Cu inverse opals could electrochemically reduce CO_2 to CO and HCOOH with a Faradaic