A Universal Method to Engineer Porous Carbon-based Electrocatalysts from Cow Dung for Oxygen Reduction

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The oxygen reduction reaction (ORR) is a crucial process in fuel cell systems, and techniques that will enable high-efficiency ORR are challenging and elusive. Here, we report N-doped carbon materials prepared by the medium temperature molten salt method that not only exhibit remarkable ORR performance with a high onset potential, half-wave potential and small Tafel slope comparable to those of state-of-the-art Pt/C catalysts, but also possess long-term stability. This work represents a solid step toward high-efficiency oxygen reduction.

Keywords: Oxygen reduction, Fuel cells, Electrocatalysts, N-doped carbon materials, Molten salt method

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