

Efficient Oxygen Reduction Reaction Using Ruthenium Tetrakis(diaquaplatinum)Octacarboxyphthalocyanine Catalyst Supported on MWCNT Platform

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ABSTRACT

Electrocatalytic reduction of molecular oxygen in alkaline solution using a novel ruthenium tetrakis(diaquaplatinum) octacarboxyphthalocyanine (RuOCPCPt) electrocatalyst supported on multi-walled carbon nanotube electrode has been described. We show that the oxygen reduction activity follows a direct 4-electron transfer process at high kinetic rate constant, $3.57 \times 10^{-2} \text{ cm}^{-1}$.