

High Activity Folic Acid-treated Non-Precious Metal Catalyst for Oxygen Reduction Reaction

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NSC Project No. : NSC 101-2221-E-011-047-MY3

Proton exchange membrane fuel cell (PEMFC) is a power source to convert the chemical energy in fuel and oxidant to electricity. To reduce the cost of the PEMFC, non-precious metal catalysts for the oxygen reduction reaction (ORR) are extremely important, and have attracted substantial attention in recent years. This work demonstrates a carbon black-supported pyrolyzed Folic acid-treated catalyst of the ORR, with high catalytic performance. The ORR measurements reveal that the optimized condition of catalyst shows an excellent ORR activity, via the direct four-electron reduction pathway for the reduction of O₂ to H₂O.

Keywords: Non-precious metal catalysts, oxygen reduction reaction, fuel cells.

報告型式：☐口頭 ☒海報 ☐皆可

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