

Plan Overview

A Data Management Plan created using DMPOnline

Title: □□□□□□□ORR□□□□□□□□

Creator:

Principal Investigator:

Data Manager: ☐ ☐ ☐

Affiliation: Other

Template: DCC Template

Project abstract:

The ORR activity of Pt/C was evaluated by linear sweep voltammetry (LSV) at a scan rate of 10 mV s⁻¹. The LSV curves were recorded in O₂-saturated 0.1 M HClO₄ solution at various temperatures ranging from 25 °C to 80 °C. The ORR activity was determined by the onset potential (E_{onset}) and half-wave potential (E_{1/2}). The E_{onset} was defined as the potential at which the current density began to increase significantly. The E_{1/2} was defined as the potential at which the current density was equal to half of the limiting current density. The ORR activity was also evaluated by rotating disk electrode (RDE) measurements at different rotation rates (400, 900, 1600, 2500, 3600 rpm). The RDE measurements were performed in O₂-saturated 0.1 M HClO₄ solution at a scan rate of 10 mV s⁻¹. The RDE measurements were used to determine the kinetic parameters of the ORR reaction, such as the exchange current density (j₀) and the Tafel slope.

ID: 60226

Last modified: 27-03-2021

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Data Collection

What data will you collect or create?

ORR

How will the data be collected or created?

ORR

Documentation and Metadata

What documentation and metadata will accompany the data?

ORR

Ethics and Legal Compliance

How will you manage any ethical issues?

How will you manage copyright and Intellectual Property Rights (IPR) issues?

Storage and Backup

How will the data be stored and backed up during the research?

How will you manage access and security?

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

What is the long-term preservation plan for the dataset?

Data Sharing

How will you share the data?

Are any restrictions on data sharing required?

Responsibilities and Resources

Who will be responsible for data management?

What resources will you require to deliver your plan?