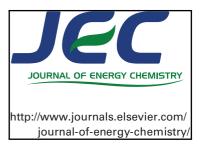
### Accepted Manuscript

A review of electrocatalyst characterization by transmission electron microscopy



Liyun Zhang, Wen Shi, Bingsen Zhang

 PII:
 S2095-4956(17)30804-5

 DOI:
 10.1016/j.jechem.2017.10.016

 Reference:
 JECHEM 440

To appear in: Journal of Energy Chemistry

Received date:	14 September 2017
Revised date:	19 October 2017
Accepted date:	20 October 2017

Please cite this article as: Liyun Zhang, Wen Shi, Bingsen Zhang, A review of electrocatalyst characterization by transmission electron microscopy, *Journal of Energy Chemistry* (2017), doi: 10.1016/j.jechem.2017.10.016

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

#### Review

# A review of electrocatalyst characterization by transmission electron

#### microscopy

Liyun Zhang<sup>a,1</sup>, Wen Shi<sup>a,b,1</sup>, Bingsen Zhang<sup>a,\*</sup>

<sup>a</sup>Shenyang National Laboratory for Materials Science, Institute of Metal Research,

Chinese Academy of Sciences, Shenyang 110016, Liaoning, China

<sup>b</sup>School of Materials Science and Engineering, University of Science and Technology

of China, Hefei 230026, Anhui, China

\* Corresponding author: E-mail: <u>bszhang@imr.ac.cn</u>, Tel: 86-24-83970027, Fax: 86-24-83970019. <sup>1</sup> These authors contributed equally to this work.

#### Abstract

At present, the development of highly efficient electrocatalysts with more rational control of microstructures (e.g. particle size, morphology, surface structure, and electronic structure) and chemical composition is needed and remained great challenges. Transmission electron microscopy (TEM) can offer the information about the microstructures and chemical compositions of the electrocatalysts on nano and atomic scale, which enables us to establish the synthesis-structure-performance relationship and further direct the design of new electrocatalysts with high performance. In this minireview paper, a brief introduction on the basic characterization of electrocatalysts in electrochemical reactions with identical location-TEM, is discussed.

Keywords: Electrocatalyst, Microstructure, TEM, Dynamic process, IL-TEM

Download English Version:

## https://daneshyari.com/en/article/6529928

Download Persian Version:

https://daneshyari.com/article/6529928

Daneshyari.com