



*catalysts*

IMPACT  
FACTOR  
3.9

CITESCORE  
6.3

*Special Issue Reprint*

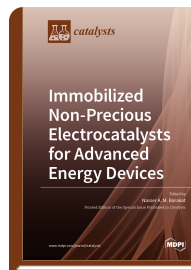
## **Immobilized Non-Precious Electrocatalysts for Advanced Energy Devices**

[www.mdpi.com/books/reprint/5679](http://www.mdpi.com/books/reprint/5679)

Edited by  
Nasser Barakat

ISBN 978-3-0365-4545-5 (Hardback)

ISBN 978-3-0365-4546-2 (PDF)



The successful commercialization of advanced energy devices, including fuel cells and solar cells (e.g., dye-sensitized solar cells) is somewhat dependent on the cost, activity and durability of the electrocatalysts. Nowadays, precious metal electrodes are the most widely used. Accordingly, the manufacturing costs are relatively high, which constrains wide application. Recently, some reports have introduced some promising non-precious electrocatalysts to be exploited in both oxidation and reduction reactions. It was concluded that immobilization of the functional material on a proper support can distinctly improve catalytic activity. Moreover, due to the synergetic effect, metallic alloy nanoparticles show very good electrocatalytic activity in this regard.

This Special Issue aims to cover the most recent progress and the advances in the field of the immobilized non-precious electrocatalysts. This includes, but is not limited to, non-precious electrocatalysts for alcohol (methanol, ethanol, etc.) oxidation, oxygen reduction reaction and electrolyte reduction in dye-sensitized solar cells.



Order Your Print Copy  
You can order print copies at  
[www.mdpi.com/books/reprint/5679](http://www.mdpi.com/books/reprint/5679)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



## Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



## Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



## High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



## High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



## Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.