



nanomaterials

IMPACT
FACTOR
4.4

Indexed in:
PubMed

CITESCORE
8.5

Special Issue Reprint

Application of New Nanoparticle Structures as Catalysts

www.mdpi.com/books/reprint/2997

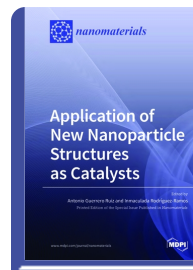
Edited by

Antonio Guerrero Ruiz

Inmaculada Rodríguez-Ramos

ISBN 978-3-03943-250-9 (Hardback)

ISBN 978-3-03943-251-6 (PDF)



Catalysts are made of nanoparticles of metals, metal oxides, and other compounds that may act as active phases, support the latter, or a combination of both. The initial incentive to reduce as much as possible, up to the nano-scale, the size of the particles of active catalyst components is to maximize the surface area exposed to reactants, thus minimizing the specific cost per function and increasing the rate of conversion of feedstocks to products in relatively simple reactions. Nowadays, the interest in nanocatalyst developments has shifted to an emphasis on improving the selectivity of catalysts, allowing one to obtain desirable reactions in more complex synthetic processes. Thus, new generations of nanocatalysts should be designed at the molecular level to display well-defined structural characteristics, in terms of size, shapes, hierarchical porosity, and morphologies, as well as with controlled chemical composition. The development of efficient nanocatalysts supposes the characterization of their various surface active sites at the nanometer scale, which is focused on establishing synthesis–structure–performance relationships.



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/2997

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.