



Cerium-based Materials for Energy Conversion

Guest Editors:

Prof. Dr. Ulrich F. Vogt

1. Empa, Swiss Federal
Laboratories for Materials
Science and Technology,
Überlandstrasse 129, 8600
Dübendorf, Switzerland
2. Albert-Ludwigs-University
Freiburg, Crystallography,
Institute of Earth and
Environmental Sciences,
Hermann-Herder-Str. 5, D-79104
Freiburg i.Br., Germany

Prof. Dr. Paolo Fornasiero

Department of Chemical and
Pharmaceutical Sciences,
Università degli Studi di Trieste,
34127 Trieste, Italy

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Message from the Guest Editors

Ceria (CeO_2) plays a key role in many catalytic processes. Due to its excellent oxygen storage capacity (OSC), ceria-based mixed oxides are widely used for industrially-relevant applications, like three-way catalysis, catalytic oxidation in exhaust converters, SOFC fuel cells, SOEC electrolysis, water–gas shift reactions, or thermochemical- and photocatalytic water splitting. There is no doubt that ceria is able to reduce the energetic requirements of catalytic process, particularly relevant are the direct application in energy sector. This is the case of ceria-based materials used as electrolytes in SOFS, as co-catalyst in anodes of SOFC or in DAFC, as active components in the formulation of reforming catalysts for hydrogen production. Applications in photo- or photoelectrochemical processes for solar fuel production are also exponentially growing. This Special Issue aims to bring together the actual status of research on the use of ceria-based materials for energy-related applications. Therefore, we invite you to contribute with a paper in the above-mentioned areas.

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Prof. Dr. Paolo Fornasiero
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Editor-in-Chief

Prof. Dr. Duncan H. Gregory

School of Chemistry, University of
Glasgow, University Avenue,
Glasgow G12 8QQ, UK

Message from the Editor-in-Chief

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