

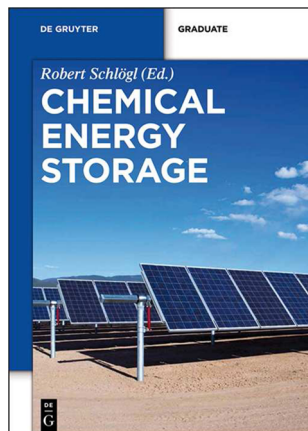
Review of *Chemical Energy Storage*

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Chemical Energy Storage, edited by Robert Schlögl. Walter de Gruyter GmbH: Berlin/Boston, 2013. 479 pp. ISBN 9783110264074 (paper). \$112.00.

The new energy economy is rife with challenges that are fundamentally chemical. *Chemical Energy Storage* is a monograph edited by an inorganic chemist in the Fritz Haber Institute of the Max Planck Gesellschaft in Berlin that takes a broad view of the subject. The contributors Robert Schlögl has chosen are all European and, with the exception of 7 of the 45, German. They provide an informative and comprehensive survey of the most important science, without much repetition (although Figure 1.1.7 that displays the temperature dependence of methanol yield from hydrogenation of carbon dioxide is identical to Figure 5.3.5).



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An introductory three chapters by Schlögl (“The Solar Refinery”), Ferdi Schüth (“Energy Storage Strategies”), and Gerhard Hofmann (“Energy and Society: A Practical Guide”) are followed by four about biomass and its conversion to biofuels, chemicals, thermal energy, and in a role in carbon sequestration. Five chapters on electrochemical topics, including water-splitting, fuel cells, and batteries are led off by an overview “Electrochemical Concepts: A Practical Guide”, by Karl Doblhofer of the Fritz Haber Institute.

Catalysis is important in many aspects of energy conversion and these are discussed in five chapters by various authors that begin with another overview, “Chemical Kinetics: A Practical Guide”, by Sebastian Arndt and Reinhard Schomäcker of the Technische Universität Berlin. The final section is four chapters dealing with aspects of artificial leaves and reforming carbon dioxide or synthesis gas to methanol other synthetic fuels.

I did not find a clue as to where this book originated; it looks to be the kind of thing that results from a conference (usually after about two years of nagging from the organizers), but that may not have been the case here. Those “proceedings” volumes

are seldom as cohesive as this one is. It is clear that the editor and contributors to *Chemical Energy Storage* intend to encourage young researchers to consider contributing to this field, and for established scientists to find new research topics here. By beginning each section with an introduction bridging traditional academic subjects and the research forefront, providing clear descriptions of the current status of their fields, and using cogent and attractive graphics, they extend an invitation that many may find difficult to refuse.

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Notes

The authors declare no competing financial interest.