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Titolo	Hydrogen Production and Remediation of Carbon and Pollutants // edited by Eric Lichtfouse, Jan Schwarzbauer, Didier Robert
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ISBN	3-319-19375-9
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Descrizione fisica	1 online resource (295 p.)
Collana	Environmental Chemistry for a Sustainable World, , 2213-7114 ; ; 6
Disciplina	660.0286
Soggetti	Environmental chemistry Environmental engineering Biotechnology Plant science Botany Renewable energy resources Environmental Chemistry Environmental Engineering/Biotechnology Plant Sciences Renewable and Green Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1. Hydrogen production by homogeneous catalysis: alcohol acceptorless dehydrogenation -- 2. Photocatalytic reduction of carbon dioxide -- 3. Carbon sequestration in terrestrial ecosystems -- 4. Selenium phytoremediation by giant reed -- 5. Redox processes in water remediation technologies -- 6. Eco-friendly textile dyeing processes.
Sommario/riassunto	This book details first the chemistry of hydrogen production from biomass. Solutions to the CO2 issue are given in three chapters, which describe CO2 photo catalytic reduction, CO2 sequestration in terrestrial biomass, and plants as renewable fuels. Further chapters review the selenium cycle in ecosystems, advanced processes to treat water and ecological ways to dye textiles. Society growth during the last century

has almost entirely relied on the carbon economy, which is the use of fossil fuels for energy and materials. The carbon economy has provided and will still provide many benefits. However, the increasing use of fossil fuels is partly responsible for the increase of atmospheric CO₂ concentrations, and, in turn, global warming. There is therefore an urgent need for cleaner fuels such as hydrogen, as well as a need for a carbon neutral economy where each emitted CO₂ molecule is fast sequestered in plants, algae, soils, sub soils and sediments.
