1. Record Nr. UNINA9910717266903321

Autore	Curtis Taylor L.
Titolo	A survey of federal and state-level solar system decommissioning policies in the United States / / Taylor L. Curtis [and three others]
Pubbl/distr/stampa	Golden, CO : , : National Renewable Energy Laboratory, , 2021
Descrizione fisica	1 online resource (ix, 45 pages) : color maps
Collana	NREL/TP ; ; 6A20-79650
Soggetti	Photovoltaic power systems - United States Solar energy policy - United States Technical reports.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"December 2021." "Funding provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Solar Energy Technologies Office"--Title page verso.
Nota di bibliografia	Includes bibliographical references (pages 32-34).

2.

Record Nr.	UNINA9910741140503321
Titolo	CO2: A Valuable Source of Carbon / / edited by Marcello De De Falco, Gaetano Iaquaniello, Gabriele Centi
Pubbl/distr/stampa	London : , : Springer London : , : Imprint : Springer, , 2013
ISBN	9781447151197 1447151194
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (xvi, 194 pages) : illustrations (some color)
Collana	Green Energy and Technology, , 1865-3537
Altri autori (Persone)	FalcoMarcello de IaquanielloGaetano CentiGabrielle
Disciplina	665.89
Soggetti	Energy policy Energy and state Renewable energy sources Industrial Management Energy Policy, Economics and Management Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 1865-3529."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Foreword; Preface; Acknowledgments; Contents; Contributors; 1 Strategy and Drivers for CO2 (Re)use; Abstract; 1...Introduction; 2... Sources of CO2Sources of CO2; 3...Accounting the use of CO2; 4... Paths for the use of CO2; 4.1 Evaluating the Alternative Routes and Their Possible Impact; 4.2 Steps Toward a CO2 Economy; 5...CO2 as a Valuable Carbon Source; 5.1 CO2-Based Polymers; 5.1.1 PolycarbonatePolycarbonate via Monomeric Cyclic Carbonate; 5.1.2 Alternating Polyolefinpolyolefin Carbonate Polymers; 5.1.3 Polyether CarbonatePolyether carbonate Polyols; 5.2 Synthesis of Light Olefins from CO2 6...A Path to the Future: Multifunctional Single Devices for Converting CO27...Conclusions; Acknowledgments; References; 2 Realizing Resource and Energy Efficiency in Chemical Industry by Using CO2; Abstract; 1...Introduction; 1.1 The Use of Renewable Energyrenewable energy in Chemical Processeschemical processes; 2...CO2 (Re)useCO2

(re)use and Energy Vectors: Toward Solar Fuelssolar fuels; 3...Power-to-Gas; 4...Routes for Converting CO2; 5...Producing Renewable H2; 5.1 Current Status; 5.2 Ongoing Activities to Establish New Sustainable Routes; 6...Conclusions; Acknowledgments; References
3 Renewable Syngas Production via Dry Reforming of MethaneAbstract; 1...Introduction; 2...The Reaction of Dry ReformingDry Reforming of MethaneMethane; 2.1 Thermodynamic Considerations; 2.2 Current Challenges with DRM Reaction; 2.3 Reaction MechanismReaction mechanism; 2.3.1 CH4 Adsorption and Activation; 2.3.2 CO2 AdsorptionCO2 adsorption and Activation; 2.3.3 Surface Reactions; 3... CatalystCatalyst Developments; 3.1 Noble Metal Catalystscatalysts; 3.2 Nickel Catalystscatalysts; 3.3 Bimetallic Catalystcatalysts; 3.4 Perovskite- and Pyrochlore-Based Catalystscatalysts
4...Exploitation of Biogasbiogas for DRM Reaction4.1 BiogasBiogas Purification Methods; 5...Conclusions; Acknowledgments; References; 4 Reuse of CO2 to Make Methanol Using Renewable Hydrogen; Abstract; 1...Introduction; 2...Description of New Process; 3...Economics Evaluations of the Proposed Scheme; 3.1 Capital InvestmentCapital investment Estimation; 3.2 Variable Operating Costs; 3.3 Production CostProduction cost of Methanol; 4...Sensitivity AnalysisSensitivity analysis on the Methanol Production CostProduction cost; 4.1 WACCWACC Impact; 4.2 Cost of CO2 Impact
4.3 Capital InvestmentCapital investment Impact4.4 Electricity Consumption of H2 Production; 5...Conclusion; References; 5 Ionic Liquids Applied to CO2 Fixation and Conversion; Abstract; 1... Introduction; 2...Functionalized ILsFunctionalized ILs for CO2 Capture; 2.1 Functionalized Cations; 2.2 Functionalized ILsFunctionalized ILs anions; 3...Mixtures of ILs and Amines for CO2 Capture; 4...Gas SeparationGas Separation: Ionic LiquidsIonic Liquids and Supported Liquid Membranessupported liquid membranes; 5...CO2 Capture and Utilization: AlgaeAlgae Fixation; 6...MicroalgaeMicroalgae to Biofuels: New Approaches
7...Conclusions

Sommario/riassunto

As the annual production of carbon Dioxide (CO2) reaches 30 billion tones, the growing issue of the greenhouse effect has triggered the development of technologies for CO2 sequestration, storage and use as a reactant. Collecting together the reports of the Congress at University of Rome (Campus Bio-medico) held 16th April 2012, CO2: A Valuable Source of Carbon presents and discusses promising technologies for the industrial exploitation of CO2. Divided into two parts, the current technology is evaluated and summarized before European and national projects are presented. The focus on CO2 recovery, particularly in value-added production, proposes applicable methods to develop sustainable practices and even to mitigate greenhouse gas emission from large-scale fossil fuels usage. Including current data and real-world examples, CO2: A valuable source of carbon provides students, engineers, researchers and industry professional with up-to-date material and potential areas for development and research.