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Nota di contenuto	Hydrogen from Fossil Fuels without Co2 Emissions -- Hydrogen Production from Western Coal Including CO2 Sequestration and Coalbed Methane Recovery: Economics, CO2 Emissions, and Energy Balance -- Unmixed Reforming: A Novel Autothermal Cyclic Steam Reforming Process -- Fuel Flexible Reforming of Hydrocarbons for Automotive Applications -- The Production of Hydrogen from Methane Using Tubular Plasma Reactors -- A Novel Catalytic Process for Generating Hydrogen Gas from Aqueous Borohydride Solutions -- Production of Hydrogen from Biomass by Pyrolysis/Steam Reforming -- Evaluation and Modeling of a High-temperature, High-pressure, Hydrogen Separation Membrane for Enhanced Hydrogen Production from the Water-gas Shift Reaction -- A First-principles Study of Hydrogen Dissolution in Various Metals and Palladium-silver Alloys -- Investigation of a Novel Metal Hydride Electrode for Ni-Mh Batteries -- Hydrogen Storage Using Slurries of Chemical Hydrides -- Advances in Low Cost Hydrogen Sensor Technology -- The Application of a Hydrogen Risk Assessment Method to Vented Spaces -- Modeling of Integrated Renewable Hydrogen Energy Systems for Remote Applications.

Sommario/riassunto

In the future, our energy systems will need to be renewable and sustainable, efficient and cost-effective, convenient and safe. Hydrogen has been proposed as the perfect fuel for this future energy system. The availability of a reliable and cost-effective supply, safe and efficient storage, and convenient end use of hydrogen will be essential for a transition to a Hydrogen Economy. Research is being conducted throughout the world for the development of safe, cost-effective hydrogen production, storage, and end-use technologies that support and foster this transition. This book is a collection of important research and analysis papers on hydrogen production, storage, and end-use technologies that were presented at the American Chemical Society National Meeting in New Orleans, Louisiana, USA, in August 1999.
