1. Record Nr. UNINA9910465437403321

Titolo	Biological barriers to cellulosic ethanol [[electronic resource] /] / Ernest V. Burkheisser, editor
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
ISBN	1-61122-448-9
Descrizione fisica	1 online resource (265 p.)
Collana	Renewable energy : research, development and policies series
Altri autori (Persone)	BurkheisserErnest V
Disciplina	662/.88
Soggetti	Cellulose - Biotechnology Biomass energy Electronic books.
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 and index.
Nota di contenuto	""BIOLOGICAL BARRIERSTO CELLULOSIC ETHANOL""; ""BIOLOGICAL BARRIERS TO CELLULOSIC ETHANOL""; ""TABLE OF CONTENTS""; ""PREFACE""; ""INTRODUCTION""; ""JOINT WORKSHOP CHALLENGES BIOFUEL SCIENCE ANDTECHNOLOGY COMMUNITIES""; ""AMERICAa€?S ENERGY CHALLENGES""; ""The Promise of Biofuels""; ""A GROWING MANDATE FOR BIOFUELS: POLICY,LEGISLATIVE, AND OTHER DRIVERS""; ""BENEFITS OF BIOFUELS""; ""National Energy Security Benefits""; ""Economic Benefits""; ""Environmental Benefits""; ""Climate Change""; ""Other Environmental Benefits""; ""FEASIBILITY OF BIOFUELS""; ""Land Availability"" ""A BILLION-TON ANNUAL SUPPLY OF BIOMASS: SUMMARY OFPOTENTIAL FOREST AND AGRICULTURAL RESOURCES""""""Agricultural Sustainability of Biomass Production""; ""Today a€? Fuel Ethanol Production from Corn Grain (Starch Ethanol)""; ""Tomorrow a€? Biorefinery Concept to Produce Fuel Ethanol from CellulosicBiomass""; ""Ethical, Legal, and Social Issues (ELSI)""; ""EERE OBP PLATFORM FOR INTEGRATED BIOREFINERIES""; ""ETHICAL, LEGAL, AND SOCIAL ISSUES FOR WIDESPREADDEVELOPMENT OF CELLULOSIC BIOFUELS""; ""DOE OFFICE OF SCIENCE PROGRAMS"" ""BIOMASS TO BIOFUELS WORKSHOP: CREATING A COMMONRESEARCH AGENDA TO OVERCOME TECHNOLOGY BARRIERS""""""CITED REFERENCES""; ""BACKGROUND READING""; ""TECHNICAL STRATEGY:

DEVELOPMENTOF A VIABLE CELLULOSIC BIOMASSTO BIOFUEL INDUSTRY""; ""RESEARCH PHASE (WITHIN 5 YEARS)""; ""Feedstock Use and Optimization""; ""Deconstruction""; ""Fermentation and Recovery""; ""TECHNOLOGY DEPLOYMENT PHASE (WITHIN 10 YEARS)""; ""Feedstocks""; ""Deconstruction""; ""Fermentation and Recovery""; ""SYSTEMS INTEGRATION PHASE (WITHIN 15 YEARS)""; ""Integration and Consolidation""
""SYSTEMS BIOLOGY TO OVERCOME BARRIERS TOCELLULOSIC ETHANOL""""""LIGNOCELLULOSIC BIOMASS CHARACTERISTICS""; ""Makeup, Structure, and Processability""; ""IMAGE ANALYSIS OF BIOENERGY PLANT CELL SURFACES AT THEOBP BIOMASS SURFACE CHARACTERIZATION LAB (BSCL)""; ""STRUCTURE AND ASSEMBLY OF CELL WALLS""; ""OPTIMIZING LIGNIN COMPOSITION FOR MORE EFFICIENTBIOETHANOL PRODUCTION""; ""FACTORS IN RECALCITRANCE OF LIGNOCELLULOSEPROCESSING TO SUGARS""; ""Plant Architecture""; ""Cell-Wall Architecture""; ""Molecular Structure""; ""OPTIMIZING HEMICELLULOSE ACETYLATION IN CELL WALLS""
""Hemicellulose Acetylation Degradation Products Are Toxic to Microbes""""""OPTIMIZATION OF PLANT CELL WALLS""; ""Understanding Cell-Wall Structure and Function""; ""Control of Lignin Synthesis and Structure""; ""IMPROVED METHODS, TOOLS, AND TECHNOLOGIES""; ""Technical Milestones""; ""Within 5 years""; ""Within 10 years""; ""Within 15 years""; ""CITED REFERENCES""; ""FEEDSTOCKS FOR BIOFUELS""; ""THE ARGUMENT FOR PERENNIAL BIOMASS CROPS""; ""CREATION OF A NEW GENERATION OF LIGNOCELLULOSICENERGY CROPS""; ""Maximizing Biomass Productivity""; ""Domestication of Energy Crops""
""ENHANCING POPLAR TRAITS FOR ENERGY APPLICATIONS""