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Nota di contenuto	<p>""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""</p> <p>""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""</p> <p>""BIOMASS TO BIOFUELS WORKSHOP: CREATING A COMMONRESEARCH AGENDA TO OVERCOME TECHNOLOGY BARRIERS""""CITED REFERENCES""; ""BACKGROUND READING""; ""TECHNICAL STRATEGY: DEVELOPMENTOF A VIABLE CELLULOSIC BIOMASSTO BIOFUEL</p>

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 TO CELLULOSE ETHANOL"

"LIGNOCELLULOSIC BIOMASS CHARACTERISTICS"; "Makeup, Structure, and Processability"; "IMAGE ANALYSIS OF BIOENERGY PLANT CELL SURFACES AT THE OBP BIOMASS SURFACE CHARACTERIZATION LAB (BSCL)"; "STRUCTURE AND ASSEMBLY OF CELL WALLS"; "OPTIMIZING LIGNIN COMPOSITION FOR MORE EFFICIENT BIOETHANOL PRODUCTION"; "FACTORS IN RECALCITRANCE OF LIGNOCELLULOSE PROCESSING 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 LIGNOCELLULOSIC ENERGY CROPS"; "Maximizing Biomass Productivity"; "Domestication of Energy Crops"

"ENHANCING POPLAR TRAITS FOR ENERGY APPLICATIONS"
