

UT ENERGY WEEK 2015



A FIVE DAY CONFERENCE ON ENERGY
TECHNOLOGY AND POLICY ISSUES, WITH
TOURS, DEMOS, TRAINING COURSES,
COMPETITIONS AND OTHER ENERGY-
RELATED ACTIVITIES

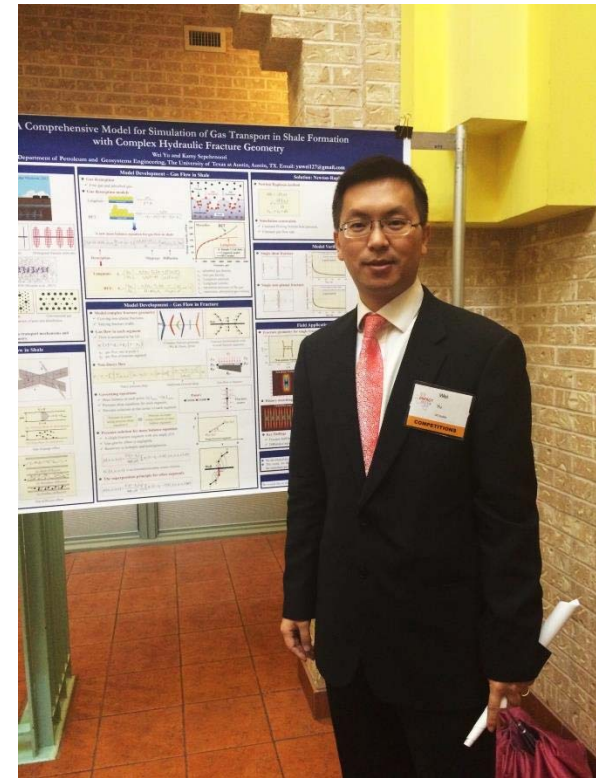
FEBRUARY 16-20, 2015



Longhorn Energy Club

- Connects students from different disciplines
- Undergraduate and graduate
- Promotes
 - Research
 - Entrepreneurship
 - Professional Development

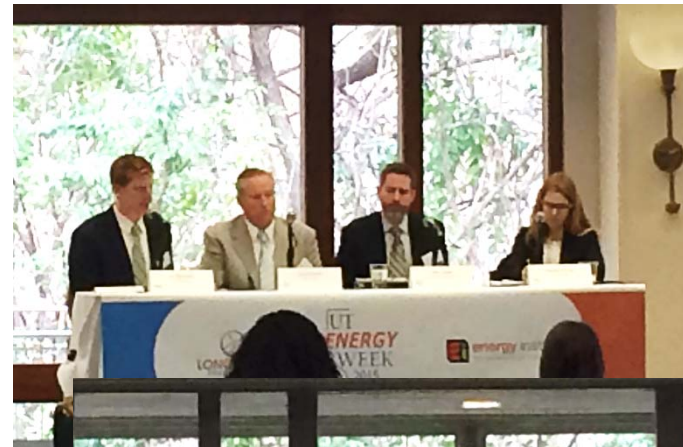
Longhorn Energy Promotes Student Research



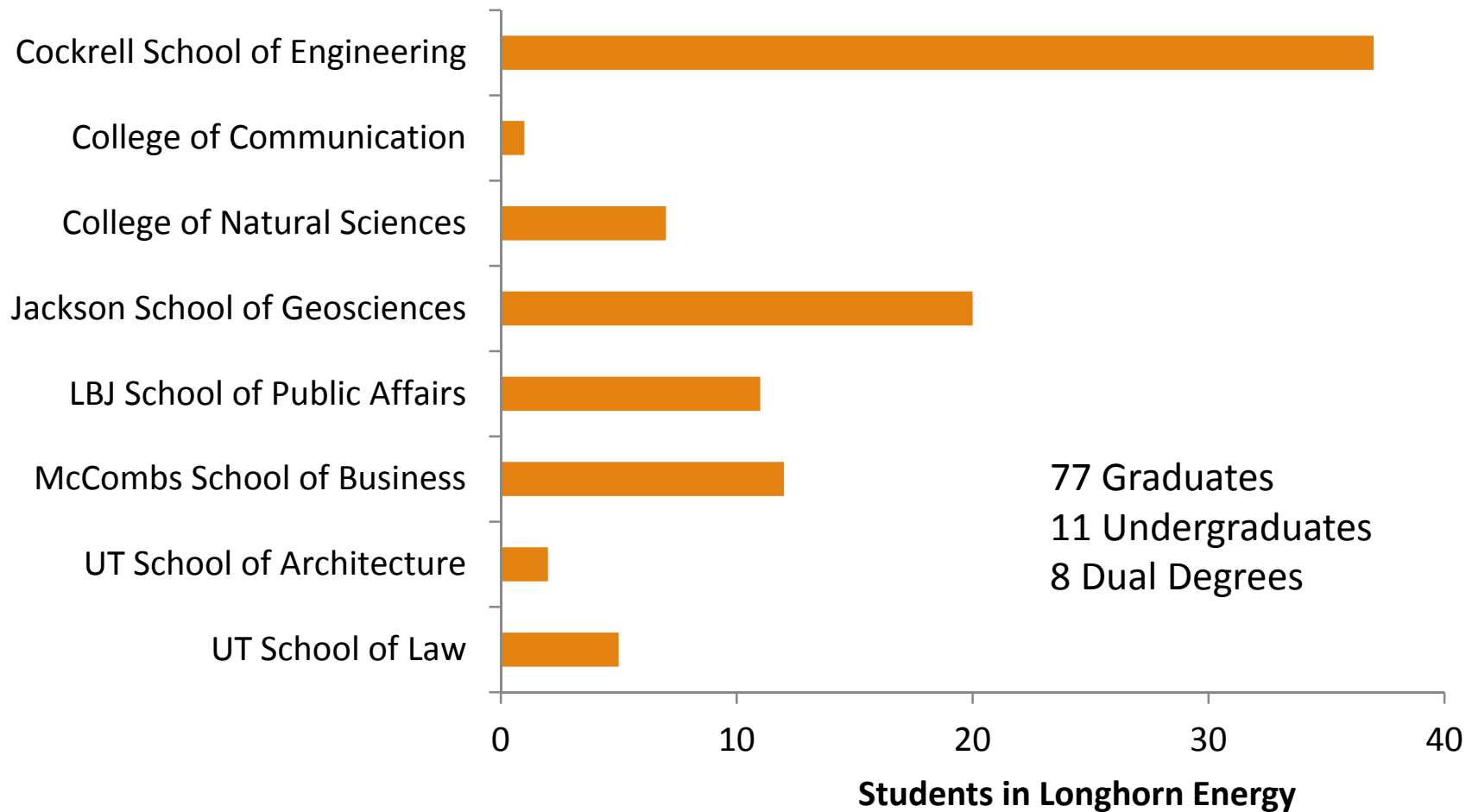
Longhorn Energy Promotes Entrepreneurship



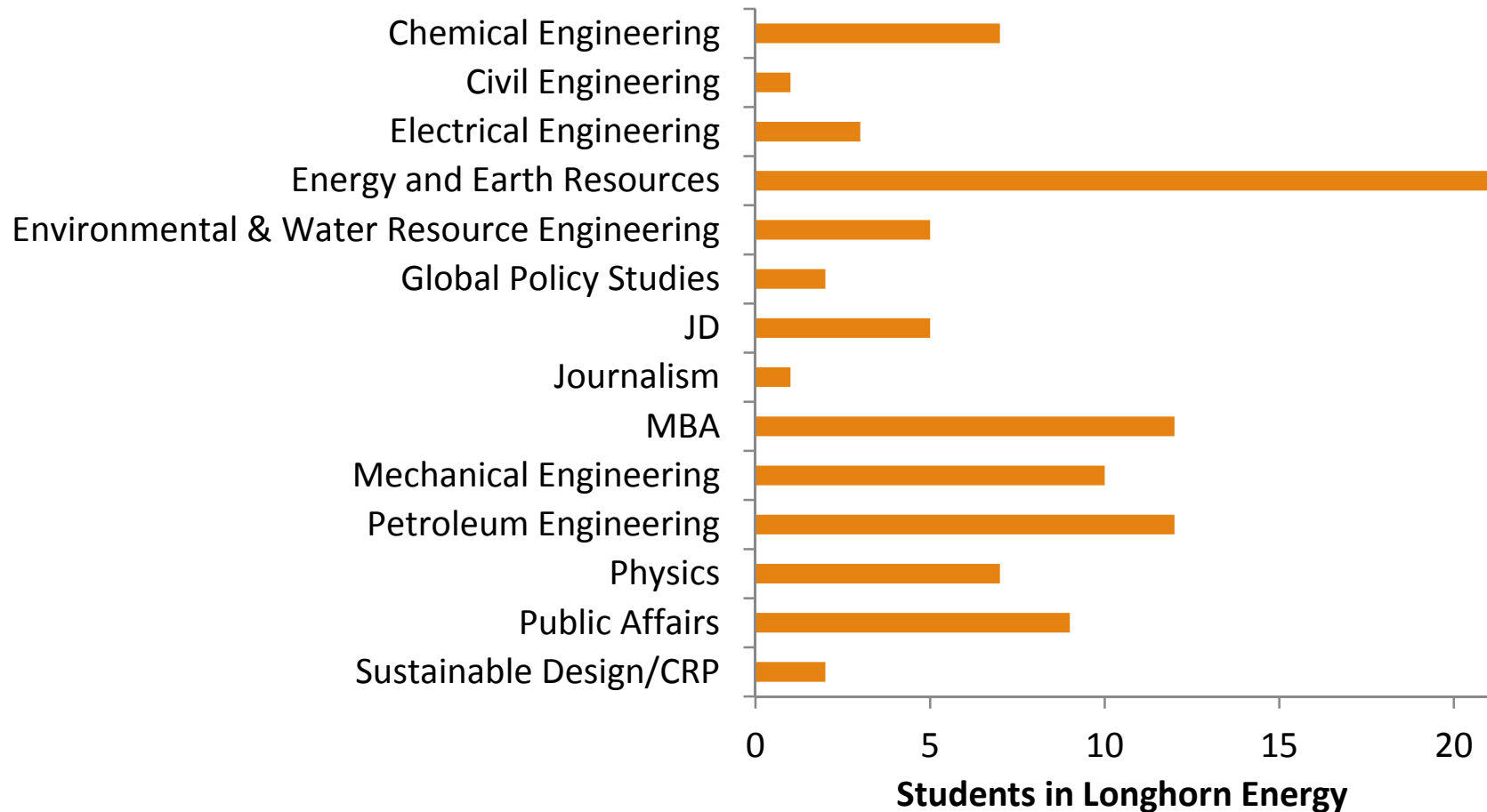
Longhorn Energy Promotes Professional Development



Longhorn Energy Volunteers Represent Eight UT Colleges and Schools



Longhorn Energy Volunteers Represent Fourteen Disciplines



Longhorn Energy Volunteers Have Experience in the Energy Industry

Akca Energy

Anadarko

Apache

Austin Chamber of Commerce

Austin Energy

Booz & Company (now Strategy&)

Centerpoint Energy

Centro Mario Molina

Chesapeake Energy

Chevron

CleanEdison

CleanTX

CODA Automotive (now CODA Energy)

Conoco

Delaware Department of Natural Resources and
Environmental Control

Dow Chemical

Energy Alternatives India

Exxon

Kiewit Energy

Mitsubishi Heavy Industries America

Peru LNG

Petro tech Peruana

Shell

Solar Energy Industries Association

Statoil

Suncor Energy

Syncrude Canada

Tata Steel Ltd.

Texas Commission on Environmental Quality

Texas House of Representatives

Texas Railroad Commission

U.S. Department of Energy

Longhorn Energy Alumni – Where are they now?

Riveron Consulting

ClearResult

Moody's Investors Service

Texas Health & Human Services
Commission

Opower

Stanford PhD Program

GE Digital Energy

Robert W. Baird & Co

World Bank

FCS Group

Schweitzer Engineering Laboratories

Gerson Lehrman Group

Calpine

ExxonMobil

IHS - CERA

Lionakis

KPMG

Montague DeRose and Associates

Department of Energy

Longhorn Energy Volunteers Conduct Research

Battery storage

Cleantech concentration

Drilling

Energy finance

Energy policy

Energy security

Environmental policy

Enhanced oil recovery

Fission

Fusion plasma

Hydraulic fracturing simulation

Oil development and environmental
conversation in Latin America

Power systems

Renewable energy

Reservoir characterization, simulation,
and business

Sedimentology

Solar PV propagation

Water-energy nexus

Thank you to Longhorn Energy Officers and Volunteers





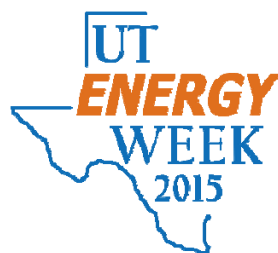
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Human Energy



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UT Energy Institute

The Energy Institute fosters interdisciplinary interactions among colleges and schools across campus, while serving as a portal for external audiences interested in learning more about energy research carried out at The University of Texas at Austin. The Institute leverages the expertise of faculty to study critical energy policy questions, and is dedicated to broadening the educational experience of students by creating a community of scholars around energy issues of importance to Texas, the nation and the world.

The activities of the Energy Institute are organized around four pillars:

POLICY

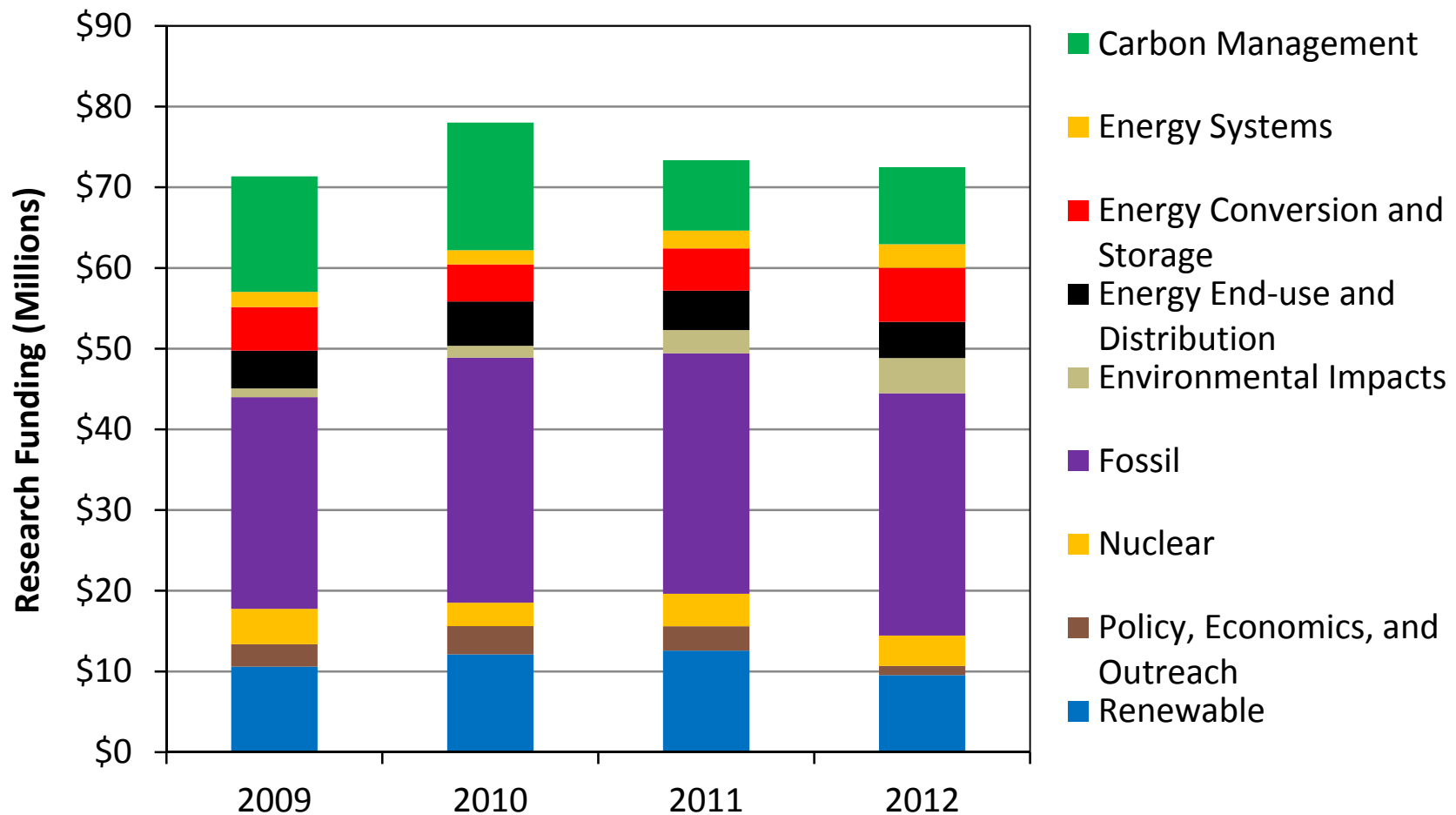
EDUCATION

RESEARCH

COMMERCIALIZATION



UT Energy Research Covers Many Areas



UT Energy Funding Promotes LEC Student Research

Battery storage

Cleantech concentration

Drilling

Energy finance

Energy policy

Energy security

Environmental policy

Enhanced oil recovery

Fission

Fusion plasma

Hydraulic fracturing simulation

Oil development and environmental
conversation in Latin America

Power systems

Renewable energy

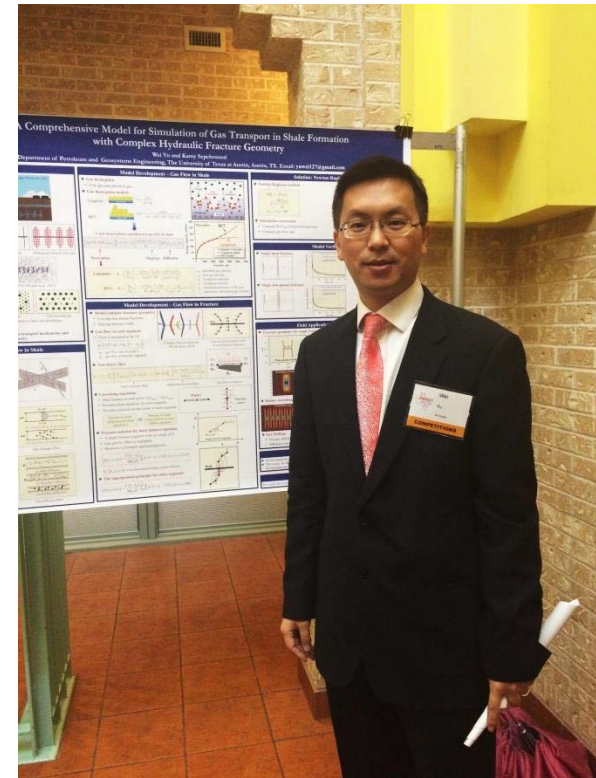
Reservoir characterization, simulation,
and business

Sedimentology

Solar PV propagation

Water-energy nexus

UT Energy Funding Promotes Energy Week Student Research



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Chemical Engineering

Petroleum Engineering

Electrical and Computer Engineering

Mechanical Engineering

Chemistry

Civil Engineering

Computer Science

Energy Systems

Environmental and Water Resources Engineering

MBA

Petroleum & Geosystems Engineering

Sustainable Design, Community and Regional Planning



UT Energy Funding Promotes Energy Week Student Research

Maximizing Efficiency of the Electric Grid through Optimal Management of Thermal Energy Storage in Buildings

Energy Performance Improvement of Industrial H₂ Plants through Smart Manufacturing

Model-Based Energy Management of High-Temperature Materials Processing

Back to the micro: how reversible, stable cycling is achieved in commercially viable, high energy density micro-sized Ge particles infused with a sub-stoichiometric ratio of Se

Novel piperazine-based amine solvents for CO₂ capture

Absorber Performance with High CO₂

Assessing Environmental Sustainability of Novel Carbon nanotube-Titania-Platinum Nano-Hybrid Fuel Cell Electrocatalysts

Analysis of Energy Use and CO₂ Emissions in Petroleum Production

Mapping Energy Access

Development of a Multi-Objective Optimization Tool for Selecting Thermal Insulation Materials in Sustainable Designs

Accessing Stranded Gas: Controlling Intensified Gas-To-Liquids Processes

Efficient Hydrocarbon Exploitation from Quasi-brittle Shale Formations through Optimal Hydraulic Fracturing

Utilizing Surface Treated Nanoparticles for Improved Geologic Carbon Sequestration

Inverse source problems for enhanced oil recovery by maximization of wave motion in reservoirs

Modeling Profile Control of Preformed Particle Gel for Enhanced Oil Recovery after Polymer Flooding

Investigation of Effect of Temperature on Wax Deposition in Flow Loop

An Efficient Semi-Analytical Model for Simulation of Gas Flow in Shale Reservoirs with Complex Hydraulic Fractures

Residential Microgrid Planning and Control: The Lochem Case Study

TacTex'13: A Champion Adaptive Power Trading Agent

Analysis of Distribution System Faults using Intelligent Electronic Device Data

Polymer/Fullerene Bicontinuous Microemulsions for Use as Organic Solar Cell Active Layers

Integrated Optical Nanostructures for Omnidirectional, Broad-spectrum Improvement of Photovoltaic Performance for III/V Solar Cells



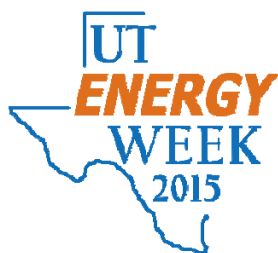
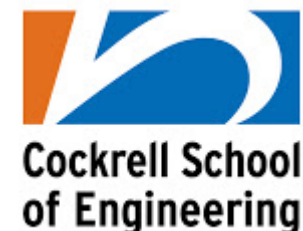
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