

POSTER SESSION A

TUESDAY, JUNE 9, 2009

8:30 pm to 10:00 pm

DESIGN FOR SUSTAINABILITY AND ENERGY EFFICIENCY

Chair: *Rafiqul Gani, Technical University of Denmark*

Process Integration and Kinetic Analysis of Seawater Cooling in Industrial Facilities

Abdullah Bin Mahfouz

(Paper #5)

Significance of Dead-state-based Thermodynamics in Designing a Sustainable Process

Tengyan Zhang

(Paper #21)

Analysis and Generation of Sustainable Alternatives: Continuous and Batch Processes Using SustainPro Package

Ana Carvalho

(Paper #36)

Process Synthesis Using Integrated Energy Networks

Iftekhar Karimi

(Paper #44)

Optimal Synthesis of Compressor Networks

Iftekhar Karimi

(Paper #45)

Developing Sustainable Processes for Natural Gas Utilization by Using Novel Process Synthesis Methods and Tools

Truls Gundersen

(Paper #71)

An MILP Approach with Extensive Logic Cuts for the Optimal Design of Petroleum Refinery Configuration

Cheng Seong Khor

(Paper #72)

Synthesis of Property-Based Recycle and Reuse Mass Exchange Networks

José María Ponce-Ortega

(Paper #99)

Analysis and Design of Sustainability Assessment Standards Using Life Cycle Principles

Matthew Realff

(Paper #105)

Process Synthesis and Design of Sustainable Systems: A Case Study in Long-Term Distant Space Exploration

Selen Aydogan-Cremaschi

(Paper #113)

EMERGING TECHNOLOGIES AND PROCESSES FOR THE ENVIRONMENT

Chair: Paul Stuart, École Polytechnique de Montréal

Equilibrium-Staged Separation of CO₂ and H₂ Using Hydrate Formation and Dissociation

Jae Lee

(Paper #33)

Dynamic Simulation Model of Pipeline to Avoid Problem of 2-Phase Unstability

Youngsub Lim

(Paper #37)

Energy Integration of an IGCC Plant for Combined Hydrogen and Electricity Production - Methodology and Tools Integration

Truls Gundersen

(Paper #48)

The Application of a Task Based Design Approach to Solution Crystallization

Johan Grievink

(Paper #103)

Solar Salt Harvest Planning

Luis Cisternas

(Paper #104)

DESIGN OF BIOFUELS, BIOLOGICAL PROCESSES AND BIOREFINERIES

Chair: Patrick Linke, Texas A&M University-Qatar

Development of a New Group Contribution Method for Product Design of Biofuels

Sven Kossack

(Paper #11)

Developing Sustainable Chemical Processes to Utilize Waste Crude Glycerol from Biodiesel Production

Jeffrey Seay

(Paper #19)

Extraction Of Biofuels And Biofeedstocks Using Ionic Liquids

Mark Stadtherr

(Paper #31)

The Influence of the Thermodynamic Model on the Energy Consumption Calculation in Bio-Ethanol Purification

Simone Gamba

(Paper #38)

Choice of a Sustainable Forest Biorefinery Product Platform Using an MCDM Method

Matty Janssen

(Paper #69)

On the Sustainability Metrics for Highly-Integrated Biofuel Production Facilities

Dennis Spriggs
(Paper #77)

Capacity Optimization of Dry Grind Bio-Ethanol Separation Process Using Aspen Plus Based Computer Simulations
Bruce Vrana
(Paper #92)

Design and Control of Fermentation Processes with Gas Stripping of Product
Michael Luyben
(Paper #98)

A Hierarchical Approach to the Synthesis and Analysis of Integrated Biorefineries
Denny K. S. Ng
(Paper #102)

ENERGY SYSTEMS DESIGN AND ALTERNATIVE ENERGY SOURCES

Chair: Luke Achenie, Virginia Tech University
Co-Chair: Gavin Towler, UOP

An Optimization Approach to Heat Integration with Incorporation of Solar Energy and Biofuels
Eman Tora
(Paper #2)

Energy Saving Potential Identification in the Batch Chemical Industry
Konrad Hungerbuehler
(Paper #42)

Synthetic Production of Methanol Using Solar Power
Christos Maravelias
(Paper #63)

Multi-Objective Optimization Analysis of the IGCC System with Chemical Looping Combustion
Urmila Diwekar
(Paper #64)

Design of Compact Heat Exchangers Using Parameter Plots
Martín Picón-Núñez
(Paper #66)

Design Challenge – Towards Zero Emissions Fossil Fuel Power Plants
Vladimir Mahalec
(Paper #93)