NASCRE POSTER SESSIONS

Monday, March 11 – 4:30 pm to 6:30 pm
Tuesday, March 12 – 5:30 pm to 6:30 pm

Woodway II – 4th Level

KINETIC MODELLING OF FENTON'S REACTION OF PRODUCED WATER
***Varsha Govindarajan**, Debashis Roy, Shikha Sinha, Sirshendu De and Sudarsan Neogi*
(Abstract #1)

EPOXIDATION OF STYRENE OVER BARIUM OXIDE USING CUMENE HYDROPEROXIDE AS OXYGEN INDUCING REAGENT
***Sudip Das** and Sanjay Mahajani*
(Abstract #17)

PROCESS DEVELOPMENT FOR METHYL PENTENONE SYNTHESIS USING CATION EXCHANGE RESIN
***Sumit Kamal** and Sanjay Mahajani*
(Abstract #26)

CO2-GASIFICATION MODELING STUDY OF SINGLE GARDEN-WASTE BIOMASS CHAR PELLET
***Haseen Siddiqui** and Sanjay M. Mahajani*
(Abstract #35)

EFFECTIVE HEAT TRANSFER PROPERTES OF OPEN CELLULAR STRUCTURES AS CATALYST SUPPORTS FOR NON-ADIABATIC APPLICATIONS
***Mauro Bracconi**, Matteo Ambrosetti, Matteo Maestri, Gianpiero Groppi and Enrico Tronconi*
(Abstract #39)

TWO-PHASE, LIQUID-LIQUID MICROREACTOR FOR THE REACTIVE EXTRACTION OF HMF
***Pierre Desir**, Basudeb Saha and Dionisios G. Vlachos*
(Abstract #47)

FAST PYROLYSIS OF MANIHOT ESCULENTA (CASSAVA) PEEL: EFFECTS OF TEMPERATURE, HEATING RATE, AND BIOMASS-TO-CATALYST RATIO ON PYROLYSIS VAPOR COMPOSITION
*Adegbola Balogun, **Arvind Nanduri** and Patrick L. Mills*
(Abstract #50)

MODELING OF SO2 OXIDATION FIXED-BED REACTORS USING RING AND MULTI-LOBE COMMERCIAL CATALYST SHAPES
Anuradha Nagaraj *and Patrick Mills*
(Abstract #55)

ENHANCING THE PRODUCTIVITY OF SUPERCRITICAL WATER FOR ZEOLITE CATALYZED CRACKING OF DODECANE
Azadeh Zaker*, Geoffrey A. Tompsett and Michael T. Timko*
(Abstract #57)

TOWARDS THE IDENTIFICATION OF INTENSIFIED REACTION CONDITIONS USING RESPONSE SURFACE METHODOLOGY: A CASE STUDY ON 3-METHYLPYRIDINE N-OXIDE SYNTHESIS
Jingyao Wang*, Yanyan Huang, Benjamin Wilhite, Maria Papadaki and M. Mannan*
(Abstract #73)

MODELING AND OPTIMIZING FUEL PRODUCTION VIA LIGHT ALKENE OLIGOMERIZATION ON NICKEL-EXCHANGED ZEOLITES
Elsa Koninckx*, Sergio Vernuccio, Ravi Joshi, Rajamani Gounder and Linda Broadbelt*
(Abstract #74)

NANOPHOTONICS ENABLED SOLAR MEMBRANE DISTILLATION REACTOR
Ibrahim Abdallah*, Amy Jiang, James Sanders, Johnny Brown and Qilin Li*
(Abstract #76)

IDENTIFICATION OF SINGLE ENZYMATIC CASCADE OPERATING REGIME GOVERNING ENSEMBLE LEVEL DATA
Akshay Parundekar, Girija Kalantre, Akshada Khadpekar and ***Ganesh A.Viswanathan***
(Abstract #79)

KINETICS FOR LIQUID PHASE SELECTIVE OXIDATION OF 1,2,3,4-TETRAMETHYLBENZENE TO MELLOPHANIC ACID
Quanming Lyu*, Weizhen Sun and Ling Zhao*
(Abstract #80)

PORE ENGINEERING OF HYDRODEMETALLIZATION CATALYST PELLETS BASED ON REACTION-DIFFUSION MODEL
Yao Shi*, Xue Zhi Duan, Wei Kang Wei and Xing Gui Zhou*
(Abstract #82)

CATALYTIC HYDROGENATION OF SHORT CHAIN CARBOXYLIC ACIDS TYPICAL OF MODEL COMPOUND FOUND IN BIO-OILS
Ahmed Mashi Lawal*, Abarasi Hart, Helen Daly, Christopher Hardacre and Joseph Wood*
(Abstract #83)

EXPERIMENTAL AND MODELING STUDY OF PASSIVE NOX ADSORPTION: PD-EXCHANGED-ZSM-5
Mugdha Ambast *and Michael Harold*
(Abstract #87)

EXPERIMENTAL AND MODELING STUDY TO INVESTIGATE NH3 OXIDATION OVER MULTI-STRUCTURED PT AND CU CATALYST
Pritpal Singh Dhillon*, Michael Harold, Di Wang, Saurabh Joshi and Ashok Kumar*
(Abstract #88)

MECHANISTIC STUDY OF A PALLADIUM EXCHANGED PASSIVE NOX ADSORBER
Yuntao Gu*, Sreshtha Sinha Majumdar, Josh Pihl, Todd Toops and William Epling*
(Abstract #91)

INTENSIFICATION OF THE THERMAL MANAGEMENT IN FISCHER-TROPSCH COMPACT TUBULAR REACTORS USING PACKED-METAL FOAMS
Laura Fratalocchi, Carlo Giorgio Visconti, Gianpiero Groppi, Luca Lietti and ***Enrico Tronconi***
(Abstract #95)

SHORT CONTACT TIME CATALYTIC PARTIAL OXIDATION OF METHANE OVER RHODIUM SUPPORTED ON CERIA BASED 3-D PRINTED SUPPORTS
Corey Leclerc *and Rohan Gudgila*
(Abstract #100)

KINETIC MONTE CARLO STUDY OF THE EFFECTS OF PAIRED ALUMINUM SITES IN ZEOLITE CATALYSTS
Grant Marsden*, Philip Kester, Rajamani Gounder and Linda Broadbelt*
(Abstract #102)

BIFURCATION ANALYSIS OF COUPLED HOMOGENEOUS-HETEROGENEOUS REACTIONS IN MONOLITHS
Bhaskar Sarkar *and Vemuri Balakotaiah*
(Abstract #104)

COUPLED NO AND C3H6 TRAPPING, RELEASE AND CONVERSION ON PD-BEA
Sotirios Malamis*, Mugdha Ambast, Michael Harold and William Epling*
(Abstract #106)

A COMMERCIALLY-VIABLE ONE-STEP SYNTHESIS METHOD TO PREPARE MWW ZEOLITE NANOSHEETS
Yunwen Zhou*, Ming-Feng Hsieh, Bernd Kabius, Robert Rioux and Jeffrey Rimer*
(Abstract #113)

EFFECT OF DIFFUSIONAL CONSTRAINTS ON LIFETIME AND SELECTIVITY IN METHANOL-TO-OLEFINS CATALYSIS ON HSAPO-34
Heng Dai*, Thuy Le, Andrew Hwang, Zhichen Shi, Aditya Bhan and Jeffrey Rimer*
(Abstract #114)

TUNING ZSM-11 CATALYST PERFORMANCE IN THE METHANOL-TO-HYDROCARBON REACTION
***Thuy T. Le**, Heng Dai and Jeffrey D. Rimer*
(Abstract #115)

DYNAMICALLY-INTENSIFIED ADSORPTION-REACTION PROCESSES FOR UTILIZING UNCONVENTIONAL GAS RESOURCES
*Akhil Arora, Shachit S. Iyer, Ishan Bajaj and **M. M. Faruque Hasan***
(Abstract #117)

AUTOMATED SYSTEM FOR PRESSURE DROP, FLOW REGIME, AND HOLD-UP MEASUREMENTS IN PACKED BEDS WITH SINGLE AND MULTIPHASE GAS-LIQUID FLOW
*Mrudalini Moturu, **Patrick Mills** and Brian West*
(Abstract #121)

PYROLYSIS STUDY OF LIGNOCELLULOSIC GARDEN WASTE
***Ankita Gupta** and Sanjay Mahajani*
(Abstract #135)

CATALYST SCREENING METHOD DEVELOPMENT FOR OPTIMAL PLANT PERFORMANCE
***Eric Hukkanen**, Eric Standland, Marvin Tegen, Martin Slominski and Laura Allington*
(Abstract #138)

SELECTIVE OXIDATION OF METHYL-GLUCOSIDE USING PD-DECORATED AU CATALYSTS
***Yiyuan B. Yin**, Li Chen, Kimberly N. Heck, Conrad Z. Zhang and Michael S. Wong*
(Abstract #139)

HIGHLY DISPERSED MOLYBDENUM CONTAINING MESOPOROUS SILICATE FOR OLEFIN METATHESIS
***Anoop Uchagawkar**, Anand Ramanathan, Yongfeng Hu and Bala Subramaniam*
(Abstract #141)

CATALYTIC CONTROL OF NITRITE REDUCTION CHEMISTRY TOWARDS AMMONIA AND HYDRAZINE
***Chelsea A. Clark**, C. Prakash Reddy, Hao Xu, Kimberly N. Heck, Guohua Luo, Thomas P. Senftle and Michael S. Wong*
(Abstract #144)

NITRATE ANIONS DEGRADE RAPIDLY ON INDIUM-DECORATED PALLADIUM NANOCUBES
***Welman Curi Elias**, Kimberly Heck, Sujin Guo, Sadegh Yazdi, Ciceron Ayala, Sophia Grossweiler, Josiel Domingos, Emilie Ringe and Michael Wong*
(Abstract #149)

STABLE MAGNETICALLY RECYCLABLE IN-PD CATALYSTS FOR NITRATE DEGRADATION
Sujin Guo
(Abstract #152)

NEGATIVE ORDER REACTIONS IN PACKED-BED REACTORS
Shephali Singh *and Divesh Bhatia*
(Abstract #154)

EXPLANATORY BIG DATA MODELS FOR PROCESS CONTROL IN CHEMICAL ENGINEERING
Zelimir Kurtanjek
(Abstract #156)

MEASURING POLYMERIZATION INDUCTION TIME WITH MICRO REACTION CALORIMETRY
Jing Liu*, Sarah Hadd, Min Sheng, Stephan Weinberg, Steven Horsch, Robert Bellair, Jeff Sweeney, Wenyu Su and William Edsall*
(Abstract #163)

NEW INSIGHTS IN THE EFFECT OF CRYSTALLINITY ON THE CELLULOSE REACTIVITY TOWARDS ACID CATALYZED HYDROLYSIS
Maksim Tyufekchiev*, Alex Kolodziejczak, James Meyer, Pu Duan, Frederick Greenaway, Marcus Foston, Klaus Schmidt-Rohr and Michael Timko*
(Abstract #164)