

GCR 2017

Global Conference on
Catalysis and Reaction
Engineering

*Accentuate Innovations and Emerging
Novel Research in Catalysis*

Conference Program

venue:
*Hampton Inn Tropicana and Event Center
4975 Dean Martin Drive |
Las Vegas, NV 89118*

October 19 - 21, 2017 | Las Vegas, USA

Day 1 October 19, 2017 (Thursday) @ Hampton Event Center A

08:00-08:40 Registrations

Moderator: Marc-Andreas Christlieb, Hamburg University of Technology, Germany

08:40-09:00 Introduction to GCR 2017

Keynote Presentations

09:00-09:40

Title: Advances in the direct synthesis of hydrogen peroxide from hydrogen and oxygen

Jennifer Edwards, Cardiff Catalysis Institute, UK

09:40-10:20

Title: Decoration of acyclic amines via metal catalyzed C-H activation reactions

Michael Schnürch, TU Wien, Austria

10:20-11:00

Title: Isotope tracer studies on the mechanism of fischer-tropsch synthesis: Its impacts on selective catalysts developments, geoscience, planetary studies and the origin of hydrocarbons on the earth

Buchang Shi, Eastern Kentucky University, USA

11:00-11:20

Coffee Break @ Foyer Event Center

11:20-12:00

Title: Photodynamic therapy (PDT) of tumors: An overview of long-term team(s) four decades experience

Mohamed El-Far, Mansoura University, Egypt

Sessions on: Environmental Catalysis and Nano Catalysis | Molecular and Heterogeneous Catalysis | Modelling in Catalytic Processes

Session Chairs:

Jennifer Edwards, Cardiff Catalysis Institute, UK

Stanislaw Dzwigaj, Sorbonne Universités, France

12:00-12:20

Title: Assessment of the production of hydroxyl radical using nano zero-valent iron embedded in a meso-porous silica matrix

Erick R. Bandala, Desert Research Institute, USA

12:20-12:40

Title: Catalysis effects over atmospheric particles composed by H₂O, HCl, HNO₃ and H₂SO₄: Quantum analysis

María de los Ángeles Verdes Gago, Universidad Autónoma de Madrid, Spain

12:40-13:00

Title: Computational design of novel catalyst system

Tadashi Ogitsu, Lawrence Livermore National Laboratory, USA

13:00-13:20

Title: CO₂ activation and reduction catalyzed by FeS nanocatalyst: A DFT study

Nelson Y. Dzade, Utrecht University, Netherlands

13:20-13:40

Title: Super-capacitor characteristics based on several composite materials

Hee-Je Kim, Pusan National University, Republic of Korea

Group Photo

13:40-14:30

Lunch Break @ Foyer Event Center

14:30-14:50

Title: Pt and Pd clusters confined in the bulk of fiberglass as an effective heterogeneous catalysts

Bair S. Bal'zhinimaev, Boreskov Institute of Catalysis, Russia

14:50-15:10

Title: Tuning the surface adsorption properties of polymer sorbents via facile methods

Lee D. Wilson, University of Saskatchewan, Canada

- 15:10-15:30** Title: **Metal supported on titania for nitrate reduction**
Peter J. Miedziak, Cardiff University, UK
- 15:30-15:50** Title: **Fischer-Tropsch synthesis catalyzed by small TiO₂ supported cobalt nanoparticles prepared by sodium borohydride reduction**
Jorge A. Delgado Delgado, Centre Tecnològic de la Química, Spain
- 15:50-16:10** Title: **Inline concentration profiles in enzyme catalyzed reactive rectification using infrared spectroscopy**
Marc-Andreas Christlieb, Hamburg University of Technology, Germany
- 16:10-16:30** Title: **Thermal stability study of catalysts in esterification reaction processes**
Edidiong Okon, The Robert Gordon University, UK
- 16:10-16:30** **Coffee Break @ Foyer Event Center**
- 16:30-16:50** Title: **Computational study of the Fischer-Tropsch process catalyzed on small Ru clusters: Beta-elimination versus reductive elimination**
Edward Brothers, Texas A&M University, Qatar
- 16:50-17:10** Title: **Cobalt(III)-supported chemically modified mesoporous silica as heterogeneous oxidation catalyst**
Purabi Sarmah, Nalbari College, India
- 17:10-17:30** Title: **Design of heterostructure photoelectrodes for solar fuels**
Yan-Gu Lin, National Synchrotron Radiation Research Center, Taiwan
- 17:30-17:50** Title: **Photocatalytic hydrogen evolution from water splitting over mixed valence tin oxide semiconductor under visible light irradiation**
Toyokazu Tanabe, Kanagawa University, Japan
- 17:50-18:10** Title: **Active carbons as nanoporous materials for solving of environmental problems**
Victor Mukhin, Neorganika, Elektrostal, Russia

Panel Discussion

Day 2 October 20, 2017 (Friday) @ Hampton Event Center A

Moderator: Jiri Tuma, University of Chemistry and Technology Prague, Czech Republic

Keynote Presentations

- 09:00-09:40** Title: **Design and applications of single-site zeolite catalysts**
Stanislaw Dzwigaj, Sorbonne Universités, France
- 09:40-10:20** Title: **Photocatalysis for degradation of environmental pollutants under VUV irradiation**
Dennis Y.C. Leung, The University of Hong Kong, Hong Kong
- 10:20-11:00** Title: **Mesoporous silica is a mysterious material: From viewpoints of its catalysis for direct amidation reaction of carboxylic acids and amines**
Kenichi Komura, Gifu University, Japan
- 11:00-11:20** **Coffee Break @ Foyer Event Center**

Sessions on: Kinetics and Catalysis | Advances in Catalysis | Chemical Reaction Engineering | Applied Catalysis

Session Chairs:

Buchang Shi, Eastern Kentucky University, USA
Dibakar Chandra Deka, Gauhati University, India

- 11:20-11:40** | **Title: GaN a novel catalyst material for the direct non-oxidative methane aromatization**
Jan Kopyscinski, McGill University, Canada
- 11:40-12:00** | **Title: Sub-micromolar reaction screening in flow**
Neal Sach, Pfizer Inc, USA
- 12:00-12:20** | **Title: Development of a new approach to study of catalytic reaction mechanisms**
Irina Khalfina, Novosibirsk State University, Russia
- 12:20-12:40** | **Title: Microkinetic rate theory: Generalization, application to catalysis, prospects as basis for continuum rate theory**
Michael Frederick Francis, Los Alamos National Laboratories, USA
- 12:40-13:00** | **Title: Transesterification of non-edible vegetable oils to biodiesel using a heterogeneous catalyst derived from banana plant**
Md. Abdul Halim Shah, Dhanamanjuri University, India
- 13:00-13:20** | **Title: Solar water splitting by doping-treated BiVO₄**
Won Jun Jo, Lawrence Berkeley National Lab, USA
- 13:20-14:10** | **Lunch Break @ Foyer Event Center**
- 14:10-14:30** | **Title: Oxidation of sulfur dioxide to sulfur trioxide over V₂O₅/TiO₂ catalyst and sulfur balance**
Tingyu Zhu, Institute of Process Engineering, Chinese Academy of Sciences, China
- 14:30-14:50** | **Title: High performance catalysts for hydrogen & oxygen evolution reactions and water electrolysis**
Zhifeng Ren, University of Houston, USA
- 14:50-15:10** | **Title: Photo-oxidation reaction scheme triggered by the nozzle of submerged plasma torch**
Florent Lemont, Atomic Energy Commission, Marcoule, Bagnols-sur Cèze Cedex, France
- 15:10-15:30** | **Title: OsO₄ catalysed oxidation of atropine sulphate monohydrate with chloramine-T in alkaline medium: Delineation of mechanistic pathways and kinetic modelling**
Nirmala Vaz, Jyoti Nivas College Autonomous, India
- 15:30-15:50** | **Title: Novel nickel-palladium catalyst for hydrogenation aromatic compound**
Su Ying-Chou, National Cheng Kung University, Taiwan
- 15:50-16:10** | **Title: Silica-immobilized bifunctional L-prolinol organocatalysts: Stereoselective michael addition in heterogeneous environment**
Jiri Tuma, University of Chemistry and Technology Prague, Czech Republic
- 16:10-16:30** | **Title: Nanocrystalline synthetic ferrihydrite as a catalyst for Fischer-Tropsch synthesis**
Dong Hyun Chun, Korea Institute of Energy Research, Republic of Korea
- 16:30-16:50** | **Coffee Break @ Foyer Event Center**
- 16:50-17:10** | **Title: A novel heterogeneous catalyst from red cotton flowers and its applications**
Hitesh Barman, Rangia College, India
- 17:10-17:30** | **Title: Study of the use of ceramic membranes coated with Copper and Zirconium oxides in the oxidation of Carbon monoxide**
María Dolores Sosa Lucio, Escuela Politécnica Nacional, Ecuador
- 17:30-17:50** | **Title: Innovative hydrocarbons recovery and utilization technology using reactor-separation membranes for off-gases emission**
Habiba Shehu, Robert Gordon University, UK
- 17:50-18:10** | **Title: Observation of dynamic Cu redox behavior in MFI-zeolite during NH₃-SCR using in-situ XAFS**
Kakuya Ueda, Nagoya University, Japan

Poster Presentations 17:30 - 18:30

- P1** **Title: Supported silver nanoparticles for catalytic reduction processes**
Lee D. Wilson, University of Saskatchewan, Canada
- P2** **Title: Selective conversion of methanol to para-xylene over Zn doped core-shell zeolite catalyst**
Koji Miyake, Osaka University, Japan
- P3** **Title: Reusable Cu catalysts dispersed on two types of supports and its application in the [3+2] cycloaddition in water: Reverse phase silica gel and thermoresponsive poly(NIPAM-co-4-VP)**
Minkyung Lim, Hanyang University, Republic of Korea
- P4** **Title: Trinuclear microporous coordination polymers as catalysts for oxidation of arylboronic acids into phenols**
Sanchay Jyoti Bora, Pandu College, India
- P5** **Title: Development of new Pd(0) catalysts immobilized on silica-gel : Study of reactivity according to stationary phases for Suzuki-Miyaura coupling reaction in water**
Jaeyoung Ban, Hanyang University, Republic of Korea
- P6** **Title: Preparation and reduction behavior of carbon composite iron oxide pellets using woody biomass**
Hirokazu Konishi, Osaka University, Japan
- P7** **Title: Copper(II)-catalyzed synthesis of 1,2,3-Triazoles from azidoformates, electron-deficient azides**
Jaeyoung Ban, Hanyang University, Republic of Korea
- P8** **Title: Plasma assisted catalysis system for diesel PM combustion**
Yoshiyasu Ehara, Tokyo City University, Japan
- P9** **Title: Dopamine-mediated graphene/Ag NP hybrids for enhanced electrochemical activity**
Wonoh Lee, Chonnam National University, Republic of Korea
- P10** **Title: Design of a highly efficient natural gas fuel processor for residential PEM fuel cells**
Wang Lai Yoon, Korea Institute of Energy Research, Republic of Korea
- P11** **Title: Quantification of ligand packing density on Cu nanoparticles and determination of nanoparticles surface area and sizes through quantitative ligand adsorption-chemisorption**
Matumuene Joe Ndolomingo, University of Johannesburg, South Africa
- P12** **Title: Effect of transition metal promoter on cobalt based syngas to olefin synthesis**
Jayen Barochia, SABIC Research and Technology Centre, Saudi Arabia

Day 3 October 21, 2017 (Saturday) @ Hampton Event Center A

Moderator: Jiri Tuma, University of Chemistry and Technology Prague, Czech Republic

Keynote Presentations

- 09:00-09:40** **Title: Base modified Bi₂WO₆: A facile route to improved photocatalytic activity under visible light**
Dionysios (Dion) Demetriou Dionysiou, University of Cincinnati, USA
- 09:40-10:20** **Title: Heterogeneous catalysts from waste biomass and their applications**
Dibakar Chandra Deka, Gauhati University, India

Session Chair:

Dionysios (Dion) Demetriou Dionysiou, University of Cincinnati, USA
Allen Apblett, Oklahoma State University, USA

10:20-10:40	Title: Single source precursor approach for the synthesis of bimetallic molybdate catalysts Allen Apblett, Oklahoma State University, USA
10:40-11:00	Coffee Break @ Foyer Event Center
11:00-11:20	Title: Synthesis of new water-soluble platinum(II) complexes by Phase Transfer Catalysis Ja'afar Kadhum Jawad, International University of Erbil, Iraq
11:20-11:40	Title: Flexible CNT/metal-sulfide composite electrode for energy conversion and energy storage applications Chandu Venkata Veera Muralee Gopi, Pusan National University, Republic of Korea
11:40-12:00	Title: Pycnopus laccase production, properties and its novel application Jiayang Liu, Huanghuai University, China
12:00-12:20	Title: CO₂ conversion from flue gas using a catalytic hybrid inorganic membranes Edidiong Okon, The Robert Gordon University, UK
12:20-12:40	Title: Nanostructured metallic glasses and their powders as catalytic, chemical and biological materials Dmitri V. Louzguine, Tohoku University, Japan
12:40-13:00	Title: Edible Lentinula edodes carbon with NiCo₂O₄ based hybrid super capacitive material for high capacitance Vivekanandan Raman, Pusan National University, Republic of Korea
13:00-13:20	Title: Visible-light-induced degradation of polybrominated diphenyl ethers Chunyan Sun, Shaoxing University, China
13:20-14:20	Lunch Break @ Foyer Event Center

End Note

We wish to meet you again at

GCR-2018

September 20-22, 2018 | Rome, Italy

Program

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