Industrial Oil Products (IOP) Interest Area
Tentative Technical Program
As of February 12, 2020

This presentation list is not final and is subject to change.

The presenter is the first author, or the author indicted with an asterisk (*).

Monday Morning

BIO 1.1/IOP 1: Biorenewable Polymers
Session Chairpersons: Richard Ashby, USDA, ARS, ERRC, USA; and Timothy Abraham, Cargill Inc., USA

Plant oil-based Poly(Alkyl Methacrylate) as Viscosity Control Additive for Mineral and Vegetable Oils. Sylvain Caillol*, Institut Charles Gerhardt, France

High Functionality Vegetable Oil Based Polymers for High Performance Thermosets. Dean C. Webster*, North Dakota State University, USA

Successes and Challenges of Oils-to-Polymers Conversion Technologies. Zoran Petrovic*, Pittsburg State University, USA

Corn-based Byproducts as Feedstocks for Polyhydroxyalkanoate Biosynthesis. Richard D. Ashby*, Gary Strahan¹, Alberto Nunez¹, and David B. Johnston²; ¹USDA, ARS, ERRC, USA; ²USDA/ARS/ERRC, USA

Bio-based Polyesters and Polyamides from Glycerin and Fatty Methyl Esters. Aman Ullah*, University of Alberta, Canada

Advances in Lipid-Based Epoxy Resins. Jonathan M. Curtis*, Tolibjon S. Omonov², Ereddad Kharraz², and Vinay Patel²; ¹Dept. of Agricultural, Food and Nutritional Science, University of Alberta, Canada; ²University of Alberta, Canada

Synthesis of Biobased Freestanding Nylon Films from Plant Oil. Aman Ullah¹, and Reza Ahmadi*²; ¹University of Alberta, Canada; ²Utilization Of Lipids-Polymers/Materials Chemistry Research Group, Department of Agricultural, Food, and Nutritional Science, University of Alberta, Canada

Downstream corn oil from bioethanol industry: A versatile green feedstock for advanced material application. Manjusri Misra*, Boon Peng Chang, Suman Thakur, and Amar K. Mohanty, University of Guelph, Canada

Thermoplastic Biopolymers from Glycerine Acetal and Ketal Building Blocks. Shailja Goyan¹, Michael J. Forrester², and Eric Cochran*²; ¹Iowa State University, United States; ²Iowa State University, USA
Monday Afternoon

IOP 2: Sustainable Methods for Producing Oleochemicals
Session Chairpersons: Dharma Kodali, University of Minnesota, USA; and Darrell Sparks, Mississippi State University, USA

Sustainable Production of Oleochemicals from Glycerol: Retrospect and Prospect. Xiaofei P. Ye*, University of Tennessee, USA

2-butyloctanoic Acid as Anti-Corrosion Additive for Metalworking and Industrial Lubricants. Govindlal V. Khemchandani*, Sasol Performance Chemicals, USA

Tuesday Afternoon

IOP 3a: New Uses of Glycerine
Session Chairpersons: Franck Dumeignil, Université de Lille, France; and Xiaofei Ye, University of Tennessee, USA

Oligomerization of glycerol in the presence of homogeneous or heterogeneous-acid catalysts. Karine De Oliveira Vigier*, Nassim Sayoud, Jonathan Lai, Claudio Oldani, Armin Liebens, and François Jérôme, University of Poitiers-IC2MP- UMR CNRS 7285, France

Glycerol valorization under continuous flow conditions-Recent advances. Christophe Len1, and Christophe Len*2, Université de Technologie de Compiègne, France; Chimie ParisTech, France

From monometallic to bimetallic systems: Improving glycerol liquid phase catalytic oxidation. Franck Dumeignil*1, Elżbieta Skrzyńska-Ćwiąkalska2, Jean-Sébastien Girardon3, Soraya Zaid2, Ayman El Roz2, and Mickaël Capron4, Université de Lille, France; Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, F-59000 Lille, France; Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide; Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, France

Clarification of key factors promoting selective oxidation of glycerol into glyceric acid on Au catalyst. Tsutomu Chida*1, Kousuke Hiromori1, Naomi Shibasaki-Kitakawa1, Naoki Mimura2, Aritomo Yamaguchi3, and Atsushi Takahashi1, Tohoku University, Japan; National Institute of Advanced Industrial Science and Technology (AIST), Japan; National Institute of Advanced Industrial Science and Technology (AIST), Japan

IOP 3b: Catalysis and Green Chemistry
Session Chairpersons: Helen Ngo, USDA, ARS, ERRC, USA; and Zheng Guo, Aarhus University, Denmark

Formulation and Evaluation of a Moisturizing Cream Containing Neem Oil. Chima C. Igwe1, Ukachi E. Igbo*2, Ruth O. Ishola3, Abisola O. Siedoks3, and Emmanuel U. Akubueze3, Federal Institute of Industrial
Design of selective ester synthesis process by controlling reaction field in porous resin catalyst.
Kousuke Hiromori*, Kazuki Murakami, Atsushi Takahashi, and Naomi Shibasaki-Kitakawa, Tohoku University, Japan

Fatty Acid Hydratase for Value-added Biotransformation. Yan Zhang, Bekir E. Eser, and Zheng Guo*, Aarhus University, Denmark

Vegetable oil refinery by a unique Lipase from Penicillium camembertii. Keita Okuda*, Amano Enzyme,, USA

Wednesday Morning

IOP 4/PRO 4: Biofuels
Session Chairpersons: Robert Dunn, USDA, ARS, NCAUR, USA; and Bruce Patsey, Oil-Dri Corporation of America, USA

Full enzymatic catalyzed biodiesel process. Anders Rancke-Madsen¹, Morten Moldrup¹, Hans Christian Holm², and Per Munk Nielsen*², ¹Novozymes, Denmark; ²Novozymes A/S, Denmark

The Use of Controlled Flow Cavitation (CFC™) to Enhance Biofuel Processing. Darren J. Litle*, Arisdyne Systems, Inc., USA

Adsorptive Removal of Contaminants from Fats and Oils for Production of BioFuels. Brian S. Cooke*, Clariant, USA

Compositional and Physicochemical Properties of Deposits Formed from Commercial Biodiesel Fuels. Richard W. Heiden*¹, Sigurd Schober², and Martin Mittelbach², ¹R.W. Heiden Associates, LLC, USA; ²Institute of Chemistry, University of Graz, Austria

Enzymatic Conversion of Sludge Palm Oil to Biodiesel for Sustainable Energy Production in Remote Areas. Eng Seng Chan*¹, Jun Mann Loh², and Cher-Pin Song², ¹Monash-Industry Palm Oil Research Platform, Monash University Malaysia, Malaysia; ²Monash.Industry Palm Oil Research Platform, Monash University Malaysia, Malaysia

Correlation of Biodiesel Cold Flow Properties Using the Long-chain Saturation Factor. Robert O. Dunn*, USDA, ARS, NCAUR, USA

Oil Recovery from Spent Adsorbent in Renewable Diesel Pretreatment. Alex Slichter*, Crown Iron Works, USA

Processing Technologies for Pretreatment of HVO/HEFA Feedstocks. Wim De Greyt¹, Antonios Papastergiadis*², and Bogumila Wozniak³, ¹Desmet Ballestra Group, Belgium; ²Desmet Ballestra; ³Desmet Ballestra Engineering, Belgium

Gums: Alternative treatment to add value to that stream. Anibal Demarco*, Desmet Ballestra, Argentina

IOP-P: Industrial Oil Products Poster Session

Poster Session Chairperson: Darrell Sparks, Mississippi State University, USA

Posters will be available for viewing from Sunday at 5:30 p.m. until Wednesday at 10:30 a.m.

Dedicated Poster Sessions with Authors Present

Monday, April 27  5:30–6:30 p.m.
Tuesday, April 28  5:30–6:30 p.m.

Characterization of Used Cooking Oil to produce Drop-in Fuels via Hydrolysis-Pyrolysis. Andres Merino Restrepo*, Justice Asomaning, Michael Chae, and David C. Bressler, University of Alberta, Canada

Effect of tree age on the characterizations of Chinese virgin olive oil. Le Yu*, Yongjin Wang, Gangcheng WU, Qingzhe Jin, and Xingguo Wang, Jiangnan University, China

Techno-economic analysis of solvent extraction of soybean oil and coproduction of fermented meal. Yining Wang*,1, Haile Ma2, and Xiaofei P. Ye3, 1Visiting scholar, The University of Tennessee, USA; 2Jiangsu University, China; 3University of Tennessee, USA