2018 AOCS Annual Meeting & Expo

May 6–9 | Minneapolis Convention Center | Minneapolis, Minnesota, USA

Indsutrial Oil Products (IOP) Interest Area
Tentative Technical Program

As of January 3, 2018

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 Afternoon

BIO 1.1 / IOP 1: Biorenewable Polymers

Chairs: Richard Ashby, USDA, ARS, ERRC, USA; and Baki Hazer, Bülent Ecevit University, Turkey

Synthesis of Resinic Acid and Lignin Derivative Dimers for Copolymerization with Vegetable Oil-based Monomers. Audrey Llevot, *LCPO, France*

Dual Cure Alkyds. Mark D. Soucek, *University of Akron, USA*

Reflection of Structural Features of Oils on Properties of Polymeric Materials. Zoran Petrovic, *Pittsburg State University, USA*

Bio-based Oil Potential in Additive Manufacturing. Ivan Javni[1], Olivera Bilic[2], Jian Hong[2], Vivek Sharma[1], Xianmei Wan[1], and Jamie M. Messman[3], *[1]Pittsburg State University, USA; [2]Kansas Polymer Research Center/PSU, USA; [3]Department of Energy's National Security Campus, managed by Honeywell FMT, LLC, USA*

Multifunctional Fatty Acid Macroperoxide Initiators Obtained by the Autoxidization. Synthesis of Block/Graft Copolymers via Free Radical and Ring Opening Polymerization. Baki Hazer, *Bülent Ecevit University, Turkey*

Super Palm Stearin from Enzymatic Directed Interesterification of Palm Oil. Noor Lida Habi Mat Dian[1], Miskandar Mat Sahri[1], Tan Chin Ping[2], and Lai Oi Ming[2], *[1]Malaysian Palm Oil Board, Malaysia; [2]Universiti Putra Malaysia, Malaysia*

Tuesday Morning

IOP 2: Biofuels

Chairs: Lieve Laurens, National Renewable Energy Laboratory, USA; *and Steve Howell, M4 Consulting, Inc., USA*

Extractability and Quality of Lipids in Algae, a Study of Species-specific Lipase Activation. Ryan A. Herold and Lieve Laurens*, *National Renewable Energy Laboratory, USA*

Technical Needs for Biodiesel Blends Over B20. Steve Howell, *M4 Consulting, Inc., USA*

The Equilibrium Solubility Behavior of Glycerol in Biodiesel Fuels at Reduced Temperatures. Richard W. Heiden, *RW Heiden Associates LLC, USA*

Green Diesel by Hydrotreatment of Vegetable Oils: Effect of Oil Quality on Hydrocarbon Yield and Composition. Elisa Volonterio, Juan Bussi, Jorge Castiglioni, Ignacio Vieitez, and Iván Jachmanián*, *Facultad de Química, Universidad de la República, Uruguay*

Correlating the Cold Flow Properties of Biodiesel to the Melting Properties of the FAME Components. Robert O. Dunn, *USDA, ARS, NCAUR, USA*

Hydroprocessing Algal Lipids to Renewable Diesel Blend Stock. Jake Kruger, Earl Christensen, Tao Dong, Gina Fioroni, Robert McCormick, and Philip Pienkos, *National Renewable Energy Laboratory, USA*

Tuesday Afternoon

IOP 3: Green Chemistry

Chairs: Nurhan Dunford, Oklahoma State University, USA; Dharma Kodali, University of Minnesota, USA; and Jerry King, Critical Fluid Symposia, USA

Oil and Oilseed Processing with Sustainability in Mind. Nurhan T. Dunford, *Oklahoma State University, USA*

Biobased Surfactants: A Useful Biorefinery Product That Can be Prepared Using Green Manufacturing. Douglas G. Hayes, *University of Tennessee, USA*

Eastern Red Cedar: Critical Fluid Extraction and Bioactivity of Extracts. Fred J. Eller, *USDA, ARS, NCAUR, USA*

Feruloylated Soy Glycerides: UV Absorbance Capacity and Photostability. David L. Compton[1], John R. Goodell[2], and Kervin O. Evans[3], *[1]USDA-ARS-NCAUR, USA; [2]iActive Naturals, USA; [3]USDA-ARS-NCAUR, USA*

Oil Quality of Sesame was Improved by the Application of Bio-inoculants under Reduced Amount of Agrochemicals. Asia Nosheen, *COMSATS Institute of Information Technology, Pakistan*

Subcritical Water Hydrolysis of Hemp Seed Oil in a Continuous Flow Coil Reactor. Andres F. Aldana Rico[1], Ruben O. Morawicki[2], Jerry W. King[3], Marco E. Sanjuan Mejia[1], and Antonio J. Bula Silvera[1], *[1]Universidad del Norte, Colombia; [2]University of Arkansas, USA; [3]Critical Fluid Symposia, USA;*

Synthesis of Biobased Building Blocks from Cashew Nutshell Liquid: A Chemical Platform Approach for Polymer Synthesis. Sylvain Caillol, *Institut Charles Gerhardt, France*

Wednesday Morning

IOP 4: Oleochemicals

Chairs: Xiaofei Ye, University of Tennessee, USA; and Franck Dumeignil, Université de Lille, France

Effective Magnesium Oxide-Zeolite Catalysts to Produce Iso-Oleic Acid, Precursor of Isostearic Acid. Helen Ngo Lew, Jianwei Zhang, and Robert A. Moreau, *USDA, ARS, ERRC, USA*

Bioplasticizers Derived from Regular and High Oleic Soybean Oil. Lucas J. Stolp and Dharma R. Kodali, *University of Minnesota, USA*

Recapitulation of Triacylglycerol Biosynthesis Pathways to Increase Hydroxy-Fatty Acid Accumulation. Daniel Lunn, James Wallis, and John Browse, *Washington State University, USA*

Synthesis and Modification of Africa Pear Seed Oil as Potential Basestock for Lubricating Fluid. Matthew Menkiti[1] and Ochoje Ocholi[2], *[1]Nnamdi Azikiwe University, Nigeria; [2]Nnamdi Azikiwe University, Nigeria*

The Global Challenges in Chemicals and Energy. Mischa Schneider, *Chemspeed Technologies AG, Switzerland*

Laser-assisted Catalytic Oxidation of Glycerol over Gold Supported Catalysts. Zeinab Chehadi[1], Jean-Sébastien Girardon[2], Mickaël Capron[2], Franck Dumeignil*[3], and Safi Jradi[1], *[1]Laboratoire de Nanotechnologie et d'Instrumentation Optique, Institut Charles Delaunay, UMR 6281 CNRS, Université de Technologie de Troyes, France; [2]Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide; [3]Université de Lille, France*

Preliminary Confirmation on Novel Utilization of Terminalia catappa L Oil as Transformer Insulating Fluid. Matthew Menkiti[1], Chinedu Agu[2], Albert Agulanna[3], and Emeka Udokporo[4], *[1]Nnamdi Azikiwe University, Nigeria; [2]Nnamdi Azikiwe University, Nigeria; [3]Project Development Institute, Nigeria; [4]University of Nigeria, Enugu Campus, Nigeria*

Wednesday Afternoon

EAT 5 / IOP 5: Waxes and Phase Change Materials

Chairs: Nuria Acevedo, Iowa State University, USA; and Chelsey Castrodale, Clasen Quality Chocolate, USA

Multiple β Forms of Tripalmitin in Different Crystallization Pathway. Seiya Takeguchi[1], Hironori Hondoh[2], Hidetaka Uehara[3], and Satoru Ueno[2], *[1]The Nisshin OilliO Group, Ltd./Hiroshima University, Japan; [2]Graduate School of Biosphere Science, Hiroshima University, Japan; [3]The Nisshin OilliO Group, Ltd., Japan*

The Effect of Processing on Hybrid Shortenings Containing Diacylglycerols. Iris Tavernier[1], Tom Rimaux[2], Koen Dewettinck[3], and Ian T. Norton[4], *[1]Ghent University, Belgium; [2]Vandemoortele R&D Centre, Belgium; [3]University of Gent, Belgium; [4]Chemical Engineering, University of Birmingham, United Kingdom*

Engineering Lipid Properties Through Glycerolysis. Reed A. Nicholson and Alejandro G. Marangoni, *University of Guelph, Canada*

An Emerging Natural Wax: Sorghum Wax from Bioethanol Production. Jeffrey T. Cafmeyer, *Battelle, USA*

Role of Rice Bran Wax on Crystallization and Rheological Properties of Oleogels from Rice Bran Oil. Khakhanang Wijarnprecha[1], Pravit Santiwattana[2], Sopark Sonwai[3], and Dérick Rousseau[4], *[1]Department of Food Technology, Silpakorn University, Thailand; [2]Thai Edible Oil Co., Ltd., Thailand; [3]Silpakorn University, Thailand; [4]Ryerson University, Canada*

Phase Change Analysis of Waxes and Wax Blends by Thermal Microstructure Evolution Analysis. Matt Vanden Eynden[1], Roland Ramsch[2], Giovanni Brambilla[2], Pascal Bru[2], and Gerard Meunier[2], *[1]Formulaction, Inc., USA; [2]Formulaction, France*

IOP-P: Industrial Oil Products Poster Session
Chair: Jerry King, Critical Fluid Symposia, USA

Posters will be available for viewing from noon on Monday, May 7 through 2:00 p.m. Wednesday, May 9, 2018.

An Emerging Natural Wax: Sorghum Wax from Bioethanol Production. Jeffrey T. Cafmeyer, *Battelle, USA*

Soy-based Polyester Polyols for Flexible Polyurethane Foams and Elastomers. Dragana Radojcic, and Mihail Ionescu, *Pittsburg State University, USA*

Algal Oil Derived Polyurethane Foams. Olivera Bilic[1], Zoran Petrovic[2], Ivan Javni[3], Milica Lovric[3], and Scott Franklin[4], *[1]Kansas Polymer Research Center/PSU, USA; [2]Pittsburg State University, USA; [3]Pittsburg State University, USA; [4]Checkerspot, Inc., USA*

Copolymers from Photochemical Thiol-ene Polycondensation of Fatty Dienes with Alkyl Dithiols. Bryan R. Moser, *USDA Agricultural Research Service, USDA*

Polyol and Polyurethane Prepared from Rubber Seed Oil by Hydroformylation. Jian Hong[1], Xiao-Qin Yang[2], Xianmei Wan[3], Zhifeng Zheng[2], and Zoran Petrovic[3], *[1]Kansas Polymer Research Center, Pittsburg State University, USA; [2]Southwest Forestry University, China; [3]Pittsburg State University, USA*

Chemometric Comparison of Neutral Lipids in Camellia Oil with Other Cooking oils. Ling Peng[1], Chi Chen, and Yiwei Ma, *University of Minnesota, USA*