



The 2023 AOCS Annual Meeting & Expo is coming up, and you won't want to miss the industrial oil products program!

Register today

Message from the Chair

Dear Colleague,

We have a great program coming together for the [2023 AOCS Annual Meeting & Expo](#) and hope that you can join us in beautiful Denver, Colorado, to see for yourself!

The IOP Division exists “to provide a forum for the exchange and dissemination of information, and to promote contact and collaboration among professionals involved in research, development, engineering, marketing, and testing of industrial products from fats and oils.” We have a great group of members, and I truly appreciate the willingness of members to step up and serve on award committees, chair technical sessions, and provide technical expertise in industrial applications of oils and fats.

The IOP Division is only as strong as the involvement of its members, and we encourage you to continue to be engaged, as well as invite your colleagues who may have an interest in industrial oil products to get involved in our Division.

As always, feel free to contact any one of the Executive Steering Committee members if you have ideas on how to improve our Division and make it stronger.

Best Regards,

Eric Cochran, Ph.D.
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Industrial Oil Products Division Officers

Chair

Vice Chair

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2023 AOCS Annual Meeting & Expo

April 30–May 3

Colorado Convention Center, Denver, Colorado, USA

Network with new and familiar faces and discover the latest industrial oil products research

Register today

Online registration closes today!

Today, Monday, April 24, is the last day to register online! Register now to reserve your spot.

If you miss the online registration deadline and still want to attend, you will have the opportunity to register at the Colorado Convention Center upon arrival. Contact Karen Kesler at karen.kesler@aoacs.org for more details.

Industrial Oil Products Technical Program

The Vice-Chairperson of the Division has put together a fabulous program of the following sessions:

- Valorization of Glycerol and Fatty Acid Esters
- Green Chemistry and Oleochemicals
- Biorenewable Polymers (joint session with Biotechnology Division), Biofuels (joint session with Processing Division)
- New Crops for Oils/Feedstock
- Engineering (joint session with Biotechnology Division)
- General Industrial Oil Products
- Industrial Oil Products Poster Session



If you have any questions about the programming, please contact [B.K. Sharma](#).

Register today

Network with Colleagues

Make the most of your annual meeting experience by attending one of our networking events. Browse a few events of interest below.

Industrial Oil Products Division Luncheon

Tuesday, May 2 | 1 pm

The Industrial Oil Products Division will give you the opportunity to connect with colleagues and friends over lunch.

AOCS Member and Volunteer Appreciation Luncheon

Wednesday, May 3 | 1–2:25 pm



We appreciate you! All meeting attendees are welcome to enjoy complimentary food and fun as we recognize our volunteers. You will also have a chance to win prizes! Learn more about how to volunteer and get inspired by those who make a difference through volunteering with AOCS.

Register now

Broaden your knowledge with the AOCS Continuing Education Program

Statistical Design of Experiments Training

This two-hour course offers statistical design of experiments (DOE) training intended to provide a basic level of understanding of DOE concepts so that all parties will have a better idea of good design and analysis practices.

The training is on-demand to fit your busy schedule. On-demand access



Get on-demand access

includes access to recordings, slides,
and course materials for 30 days.

AOCS membership benefits corner

Each year, enjoy 10 issues of INFORM — the official member magazine of AOCS.

INFORM magazine

Dogma vs. data: Rethinking linoleic acid?

New research confirms linoleic acid, an omega-6 fatty acid, has many positive implications on human health, including promoting the accumulation of lean mass, the proper functioning of the mitochondria, and the ability to stave off heart disease, diabetes, and fatty liver disease.

[Read the article.](#)

Cloaking a cure: Lipid capsules save the world

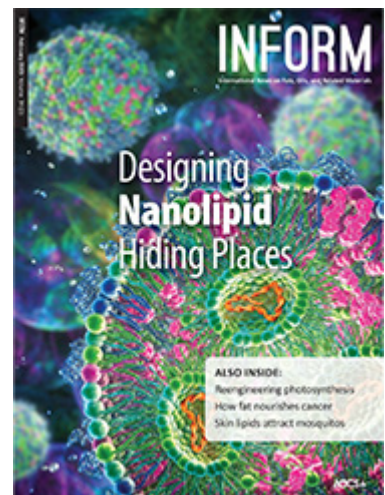
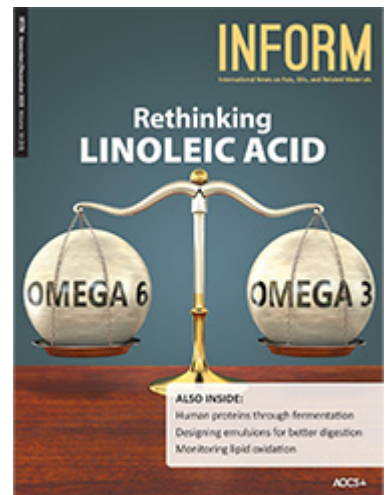
Researchers have designed new structures of liposomes which are tiny lipid capsules that are nontoxic, biocompatible, and biodegradable. This new design is being developed to improve their stability and longevity in the human body in order to deliver drugs to targeted cells at a particular time. The cosmetic and food industries have also found the benefit of liposomes and lipid nanoparticles.

[Read the article.](#)

Genetic alterations increase soybean productivity

A research team at the University of Illinois has investigated soybean plant genetics and found that plants go into a photoprotect mode to avoid damage from overexposure to the sun. However, by shortening this biological process of photoprotection, it can be possible to increase the soybean crop yield.

[Read the article.](#)



Broaden your knowledge with full access to AOCS's four peer-reviewed journals.

Journal of the American Oil Chemists' Society (JAOCS)

Esters from castor oil functionalized with aromatic amines as a potential lubricant

Authors: Laura de Andrade Souza; Denise Ramos Moreira; Nágila Maria Pontes Silva Ricardo; Martin Edmund Maier; Paulo Roberto Campos Flexa Ribeiro Filho; Francisco Murilo Tavares Luna; Cesar Liberato Petzhold

Vegetable oils are very promising alternatives to fossil lubricants due to their abundance, low cost, excellent performance, and environmental friendliness. Due to its multifunctional structure, castor oil is an excellent precursor in the synthesis of new biolubricants. However, it showed poor thermal-oxidative stability and a higher pour point. This study used castor oil fatty acids prepared by transesterification (EHRO), epoxidation (TEPO), and oxirane ring opening with the aromatic amines aniline (ANIL) and *p*-anisidine (ANIS).

[Read the article.](#)



Effect of roasting on the physico-chemical properties, fatty acids, polyphenols and mineral contents of tobacco (*Nicotiana tabacum* L.) seed and oils

Authors: Mehmet Musa Özcan; Nurhan Uslu; Viktor Lemiasheuski; Duygu Akçay Kulluk; Sait Gezgin

The physico-chemical properties, phytochemicals, and mineral contents of tobacco (*Nicotiana tabacum* L.) seeds grown in the Samsun Province in Turkey were evaluated. Data showed that this seed had the potential to be considered an ideal source of edible oil in terms of its fatty acid composition.

[Read the article.](#)

Mineral saturated hydrocarbons and mineral aromatic hydrocarbons in tropical plant oils and their removal by molecular distillation

Authors: Mingming Zhang; Hai Zhang; Tosin Michael Olajide; Wenming Cao; Yan Wang; Hong Zhang; Yuanrong Jiang

Nowadays, tropical plant oils (e.g., palm oil and coconut oil) are extensively used in consumer products, especially in infant formulas. However, there is a lack of statistical data on the levels of mineral oil in these oils, including mineral saturated hydrocarbons (MOSH) and mineral aromatic hydrocarbons (MOAH). This study

reported a survey of MOSH/MOAH in tropical oils and provided an effective strategy (i.e., molecular distillation) to reduce their contents.

[Read the article.](#)

Synthesis of high hydroxyl value polyol from rubber seed oil by using $\text{Na}_2\text{WO}_4/\text{H}_3\text{PO}_4/\text{H}_2\text{O}_2$ -based catalyst complex formed in aqueous phase

Authors: Nguyen Thi Thuy; Pham Ngoc Lan

High hydroxyl value polyol has been synthesized from rubber seed oil by using a complex catalyst. Both very high acid value rubber seed oil (RSO) and low acid value esterified rubber seed oil (RSOE) are used for synthesis.

[Read the article.](#)

AOCS Webinars are your opportunity to connect with researchers, industry experts, and thought leaders from across the globe. Invest an hour of your day and be inspired. AOCS members have exclusive access to the [AOCS Member Webinar Library](#) to watch past webinars.

AOCS Webinars

Past Webinars of Interest

Rediscovering Soap: Luis Spitz and friends present!

Presenters: George Smith, Research Associate, Sasol Performance Chemicals, USA; Ricardo Diez, Adjunct Professor, Rutgers University, USA

Soap—it is a necessary commodity that everyone has in their home and uses every day. But how are your favorite soap-based products formulated? How did soap begin as a simple, three-ingredient formula and evolve into a mass-produced good with a variety of ingredients and home and personal care uses? Find out in this innovative webinar.

[Watch the recording.](#)

Enhancing Cosmetic and Therapeutic Ingredient Development Through Fermentation Technologies

Presenter: Dr. James (Vince) Gruber, Director of New Technologies at Jeen and BotanicalsPlus

This webinar was co-sponsored by the [Society of Cosmetic Chemists \(SCC\)](#) and the [Society for Industrial Microbiology and Biotechnology \(SIMB\)](#).

Presented by Dr. James (Vince) Gruber, the Director of New Technologies at Jeen and BotanicalsPlus, this webinar introduces the ideas around use of fermentation to

develop ingredients for cosmetics and skin care.

[Watch the recording.](#)

Driving sustainable innovation through value-added oleochemicals

Presenter: Dr. Tuan Noor Maznee Tuan Ismail, Head Synthesis & Product Development Unit, Malaysian Palm Oil Board

This webinar was hosted by the [Asian section of AOCS](#).

This webinar explores the efforts carried out by the Malaysian Palm Oil Board (MPOB) to achieve sustainable and environmentally friendly value-added oleochemicals for the advancement of the oleochemical downstream industry.

[Watch the recording.](#)

New and emerging microbial approaches to produce sustainable and functional fats for food applications

Presenters: Professor Maria Barbosa, Microalgal Biotechnology, AlgaePARC, Wageningen University, Netherlands; Dr. Yulin Lu, Co-founder and CEO of Yali Biosciences Inc., South San Francisco, California, USA

This webinar is hosted by the [Biotechnology](#) and [Edible Applications Technology](#) Divisions of AOCS.

As plant-based food that mimic their animal-based counterparts continue to emerge, researchers are looking for ways to accurately mimic animal-based fats. This interactive panel discussion features invited speakers who will discuss some of the recent advances and emerging opportunities in this space.

[Watch the recording.](#)

IOP Member Initiative

Please encourage your colleagues to get involved in the [IOP Division](#)! We want to make sure that we are effectively reaching the oil and fats community, and the best way to do that is through our current membership – you included! Annual dues are only \$15.

Share Your Thoughts

The IOP Division leadership would greatly appreciate your input! Are there certain things you would like to see in the Newsletter? Do you have an idea for a technical session? Is there a potential sponsor that you think would be a good fit for IOP? What

ideas do you have to enhance the effectiveness of the Division? We want to hear from you!

Majher I. Sarker, Ph.D.
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Newsletter Editor

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