

Special Issue on
Microbial Production of Lipid-Based Chemicals and Fuels

CALL FOR PAPERS

The increasing energy demands, challenges in enhancing energy security, and concerns with fossil fuel related environmental issues drive the interest in seeking alternative renewable energy. Productions of lipid-derived fuels such as fatty acid ether ester and alkane from microbes can provide alternative sources to replace fossil fuels. Microbial production of lipid-based chemicals also has potentials to transform the existing petrochemical industry to a more sustainable and economical oleochemical industry. Microbes utilize renewable feedstocks like lignocellulosic materials through heterotrophic fermentation process to produce lipid-derived chemicals and fuels. Another route is to directly harness the renewable solar energy through photosynthesis of algae. To realize microbial lipid-based chemical and fuel production in a biorefinery, advances need to be made in strain development, bioprocess design, product recovery, and techno-economic analysis.

In this special issue, we encourage the submission of high quality manuscripts covering the recent advances in research and reviews on microbial production of lipid-based chemical and fuels.

Potential topics include but are not limited to the following:

- ▶ Screening and characterization of novel oleaginous microbes including fungi, yeast, bacteria, and algae
- ▶ Metabolic engineering of conventional and novel microorganisms to produce lipids or lipid-derived chemicals and fuels
- ▶ Microbial utilization of renewable materials for lipid production
- ▶ Algal lipid production include omega-3 fatty acids
- ▶ Lipid-based product separation and recovery from microbial cells
- ▶ Techno-economic analysis of lipid-based biorefinery

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jl/mlcf/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Difeng Gao, Clemson University,
Clemson, USA
difengg@clemson.edu

Guest Editors

Xiaochen Yu, Sichuan University of
Science and Engineering, Sichuan,
China
xiaochen.yu@email.wsu.edu

Tao Dong, National Renewable Energy
Laboratory, Golden, USA
tao.dong@nrel.gov

Submission Deadline

Friday, 23 March 2018

Publication Date

August 2018