

Tentative Outline
Special Issue for Current Organic Chemistry
Guest Editor(s): Hui Wang

TITLE: Organic chemistry in application of renewable energy

Aims & Scope:

Renewable energy, has been considered as an important alternative to substitute coal, oil, and natural gas. A variety of new technologies and methods, including biochemical and thermochemical processes, are being developed to convert bioresource to energy and chemicals. Some polymers, like PUF, are used as isolation materials in the auto and furniture industry and can be synthesized based on the products of thermochemical conversion of renewable energy resource. The bio-based polymers have the similar properties to the traditional polymers and are environment-friendly. In addition, the residue from energy conversion (wood gasification and algae extraction) has rich content of metal ion or nitrogen and can be made into biofertilizers to partially substitute the chemical fertilizer. Applications in other fields are also being studied and the future of renewable energy resource will be promising.

This proposed thematic issue will try to provide update information about the recent developments on chemicals, organic materials and energy from renewable resource. It will include bioresourced acrylic acid, ethyl Levulinate from corn stover, 6-Hydroxynicotinic Acid, Water-based Tetramethylol Melamine Formaldehyde Resin, extraction of hemicellulose from grape seed, syngas production, multi-layer graphene-encapsulated iron nanoparticles. It is anticipated that this thematic issue will advance the knowledge related to organic chemistry in application of renewable energy. It will also help entry-level researchers quickly understand the basic background and shed light on their future research directions.

Keywords: organic chemistry, renewable energy, chemical, polymer, biomass

Subtopics:

- Synthesis of Multi-layer Graphene-encapsulated Iron Nanoparticles by Hydrothermal of Carbonization Cellulose Nanofibrils for Production Olefin-rich Hydrocarbons from Syngas.
- Efficient Microwave-assisted Production of Ethyl Levulinate from Corn Stover in Ethanol Medium
- Production of Acrylic acid from Bioresourced Glycerol Oxidehydration Using WVNb(La)/HBEA and WVNb(La)/HZSM-5 Catalysts
- Extraction of hemicellulose from grape seed in a biorefinery concept
- Synthesis and Characterization of Water-based Tetramethylol Melamine Formaldehyde Resin
- Isolation, Identification and Culture Optimization of a Marine Strain Producing 6-Hydroxynicotinic Acid
- Dilute sulfuric acid pretreatment increased biogas production from herbaceous peat

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