

Tentative Outline
Special Issue for Current Organic Chemistry
Guest Editor(s): Xiaowei Zhou, Qingang Xiong, Rui Xiao, Shurong Wang
**TITLE: Catalytic Conversion of Macromolecules and
Product Upgrading**

Aims & Scope:

Macromolecules are indispensable for our everyday living, and a number of natural and synthetic macromolecules find application in both domestic and industrial sectors such as household appliances, furniture, textile, packaging, agriculture, healthcare, building and construction, medicine, electrical and electronics, automotive and aerospace components, fuel, and energy. Nature macromolecules such as lignocellulosic biomass are identified as the most abundant raw materials on earth with annual production of 170 million metric tons. Lignocellulosic biomass, which refers to plant and plant-derived matter produced by photosynthesis, is chemically composed of cellulose, hemicellulose, and lignin, and is the only renewable source of carbon on earth. In fact, only 3% of the 170 million metric tons is utilized for food and nonfood applications. The growth of environmental awareness and dwindling of fossil fuel reserves have ignited interest in utilizing these renewable feedstocks for energy and fuels. Moreover, with the increase in production and per capita utilization of synthetic polymers comes the issue of their disposal. Tremendous efforts have been made in past decades to derive energy, fuels, and chemicals from these waste plastics and natural biomass through a variety of technologies such as direct combustion, torrefaction, pyrolysis, gasification, anaerobic digestion, fermentation, and catalytic fast pyrolysis and hydrothermal liquefaction. The purpose of this special issue is to highlight recent advances in catalytic conversion of macromolecules and catalytic upgrading of derived products.

Subtopics:

- Catalytic fast pyrolysis of biomass
- Catalytic decomposition of polymers
- Catalytic upgrading of bio-oil
- Catalytic effects of inorganics on biomass pyrolysis
- Fuels and chemicals
- Catalysts

Approximate Schedule:

- Manuscript Submission Deadline: 12/31/2017
- Peer Review Due: 1/31/2018
- Revision Due: 02/15/2018
- Notification of Acceptance by the Guest Editor: 02/28/2018
- Final Manuscript Due: 03/15/2018