

August 23-25, 2018  
Amsterdam, Netherlands

Aman Ullah, Nano Res Appl 2018, Volume: 4  
DOI: 10.21767/2471-9838-C4-016

## MONOMERS, BIOPOLYMERS AND BIOMATERIALS FROM RENEWABLE LIPID RESOURCES

**Aman Ullah**

University of Alberta, Canada

In recent years, the use of renewable natural resources have become the focus of research in supplementing and/or replacing traditional petrochemical products due to growing energy demands and environmental concerns. The utilization of lipids and other renewable resources has been considered to play a primitive role towards sustainable development due to their large scale availability, built-in-functionality, biodegradability and no net carbon dioxide (CO<sub>2</sub>) production. In addition, a broad range of monomers can be obtained as a single feedstock. These attributes make lipids a good fit for the development of renewable biomaterials. This presentation will focus on the conversion of lipids, from various sources including waste streams such as waste cooking oil and lipids extracted from spent fowl, into monomers, biopolymers and biomaterials for packaging water remediation, biomedical and other applications. The ability for complete conversion of oils in just few minutes under solvent free conditions into monomers, biopolymers and bio-composites/nanocomposites is undoubtedly an attractive concept from both an academic and an industrial point of view.



### Biography

Aman Ullah has received his PhD (with distinction) in Chemical Sciences and Technologies in 2010 at the University of Genova, Italy by also working together at Southern Methodist University, USA. He worked as a Postdoctoral fellow before accepting an Assistant Professor position at the University of Alberta. He has been promoted to Associate Professor with Tenure. He has been teaching a graduate course entitled Renewable Biomaterials. This course deals with fundamentals in bio-based materials development, characterization, and various industrial applications. He has published more than 40 papers in reputed journals and 5 patents/patent applications. His research is focused on the development of biochemicals, biopolymers/biomaterials from lipids and other renewable resources. He has participated and presented his work in more than 90 national and international scientific meetings and conferences, including several invited, keynote and plenary lectures at conferences and research centres in Asia, Europe, and America. In addition, he has received several awards including Canadian Rising Star award by Grand Challenges Canada.

ullah2@ualberta.ca