

Accepted Manuscript

Thermal stability of choline based amino acid ionic liquids

Shubhankar Bhattacharyya, Faiz Ullah Shah



PII: S0167-7322(18)32641-2
DOI: doi:[10.1016/j.molliq.2018.06.096](https://doi.org/10.1016/j.molliq.2018.06.096)
Reference: MOLLIQ 9294
To appear in: *Journal of Molecular Liquids*
Received date: 21 May 2018
Revised date: 21 June 2018
Accepted date: 23 June 2018

Please cite this article as: Shubhankar Bhattacharyya, Faiz Ullah Shah , Thermal stability of choline based amino acid ionic liquids. Molliq (2018), doi:[10.1016/j.molliq.2018.06.096](https://doi.org/10.1016/j.molliq.2018.06.096)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Thermal Stability of Choline Based Amino Acid Ionic Liquids

Shubhankar Bhattacharyya* and Faiz Ullah Shah

^aChemistry of Interfaces, Lulea University of Technology, Lulea-97187, Sweden

*E-mail: shubhankar.bhattacharyya@ltu.se

Abstract

Thermal stability of different choline based amino acid ionic liquids were studied. Both short term as well as long term thermal studies were carried out. Long term thermal studies of all ILs were carried out by isothermal TGA and short term thermal studies were measured by temperature ramped TGA. Isothermal TGA were studied at two different temperatures 100°C and 150°C for 500 minutes. Whereas, short term thermal stability represents as $T_{2\%}$, $T_{5\%}$ and $T_{10\%}$ which are the temperature at which 2%, 5% and 10% mass loss of ILs were observed. The effect of alkyl side chain on the cation, etherification of the cation as well structural variation of anion on the thermal stability of choline based ILs were investigated. It was observed that thermal characteristics of ILs towards temperature ramped TGA were different compared to isothermal TGA.

Key words:

Amino acids, ionic liquids, choline, thermal stability

Download English Version:

<https://daneshyari.com/en/article/7841926>

Download Persian Version:

<https://daneshyari.com/article/7841926>

[Daneshyari.com](https://daneshyari.com)