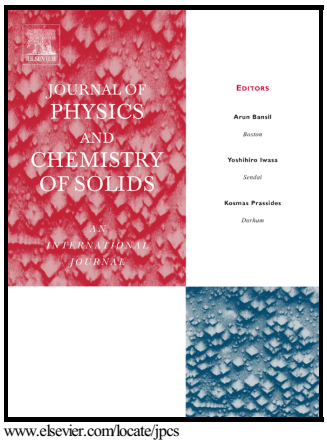

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PII: S0022-3697(15)00148-1
DOI: http://dx.doi.org/10.1016/j.jpcs.2015.05.024
Reference: PCS7556

To appear in: *Journal of Physical and Chemistry of Solids*

Received date: 14 February 2015
Revised date: 27 April 2015
Accepted date: 27 May 2015

Cite this article as: Rajendran Selvakumar, Steven J. Geib, Aathi Muthu Sankar, Thathan Premkumar and Subbaiah Govindarajan, The chemistry of aminoguanidine Derivatives – preparation, crystal structure, thermal properties, and molecular docking studies of aminoguanidinium Salts of several carboxylic Acids, *Journal of Physical and Chemistry of Solids,* http://dx.doi.org/10.1016/j.jpcs.2015.05.024

The Chemistry of Aminoguanidine Derivatives – Preparation, Crystal Structure, Thermal Properties, and Molecular Docking Studies of Aminoguanidinium Salts of Several Carboxylic Acids

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Abstract

The reaction of aminoguanidine bicarbonate (Amg) with oxamic, oxalic, malonic and sulfoacetic acids yielded (AmgH)H_2NOC-COO (**1**), OOC-CONHNHC(NH_2)NH_2 (**2**) (AmgH)HOOC-CH_2-COO (**3**) and O_3S-CH_2-CONHNHC(NH_2)NH_2 (**4**), respectively. For the first time, we studied the salt-forming ability of aminoguanidine with several carboxylic acids, such as oxamic, oxalic, malonic and sulphoacetic acids. We also compared the structural and thermal properties of these salts. Oxamic and malonic acids form only mono-