



HAL
open science

Formation of Hexamethylenetetramine – Comment

Vassilissa Vinogradoff, Albert Rimola, Fabrice Duvernay, Grégoire Danger,
Patrice Theulé, Thierry Chiavassa

► **To cite this version:**

Vassilissa Vinogradoff, Albert Rimola, Fabrice Duvernay, Grégoire Danger, Patrice Theulé, et al..
Formation of Hexamethylenetetramine – Comment. *Origins of Life and Evolution of Biospheres*,
2016, 46 (2), pp.223-231. 10.1007/s11084-016-9481-6 . hal-01451926

HAL Id: hal-01451926

<https://amu.hal.science/hal-01451926v1>

Submitted on 18 Oct 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Formation of Hexamethylenetetramine – Comment

**Vassilissa Vinogradoff¹ · Albert Rimola² ·
Fabrice Duvernay³ · Gregoire Danger³ ·
Patrice Theulé³ · Thierry Chiavassa³**

Published online: 23 February 2016

© Springer Science+Business Media Dordrecht 2016

In their recent paper “Formation of Hexamethylenetetramine (HMT) from HCHO and NH₃ - Relevance to Prebiotic Chemistry and B3LYP consideration” Zeffiro et al. (Orig Life Evol Biosph DOI [10.1007/s11084-015-9479-5](https://doi.org/10.1007/s11084-015-9479-5)) stated: “... a complete theoretical study of the formation of HMT has not received due considerations in the literature with regard to the thermodynamic feasibility of many of the mechanistically proposed intermediates in its formation.” We wish to point out that in our publication “The mechanism of hexamethylenetetramine (HMT) formation in the solid state at low temperature” (Phys Chem Chem Phys, 2012, 14, 12309–12320), experimental and theoretical results were fruitfully combined to elucidate the mechanism of HMT formation, providing both thermodynamic and kinetic energy values.

This comment refers to the article available at: <http://dx.doi.org/10.1007/s11084-015-9479-5>.

✉ Albert Rimola
albert.rimola@uab.cat

¹ Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie, UMR CNRS 7590, Muséum National d’Histoire Naturelle, Paris, France

² Departament de Química, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain

³ Aix-Marseille Université, PIIM UMR-CNRS 7345, F-13397 Marseille, France