Accepted Manuscript

Title: Investigation of IR and Raman spectra of species present in formaldehyde-water-methanol systems

Authors: Katarzyna Z. Gaca-Zajac, Benjamin R. Smith, Alison Nordon, Ashleigh J. Fletcher, Karen Johnston, Jan Sefcik

PII: S0924-2031(18)30044-4

DOI: https://doi.org/10.1016/j.vibspec.2018.05.001

Reference: VIBSPE 2795

To appear in: VIBSPE

Received date: 12-2-2018 Revised date: 22-4-2018 Accepted date: 2-5-2018

Please cite this article as: Gaca-Zajac KZ, Smith BR, Nordon A, Fletcher AJ, Johnston K, Sefcik J, Investigation of IR and Raman spectra of species present in formaldehyde-water-methanol systems, *Vibrational Spectroscopy* (2010), https://doi.org/10.1016/j.vibspec.2018.05.001

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.

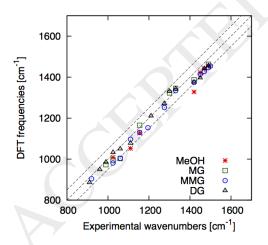


ACCEPTED MANUSCRIPT

Investigation of IR and Raman spectra of species present in formaldehyde-water-methanol systems

Katarzyna Z. Gaca-Zając¹*, Benjamin R. Smith², Alison Nordon^{2,3}, Ashleigh J. Fletcher⁴, Karen Johnston⁴ and Jan Sefcik⁴*

Graphical abstract



ABSTRACT

Formaldehyde forms a variety of hydrated and methoxylated species when reacted with water and methanol. Vibrational spectroscopy has been deployed for both remote and in situ sensing of formaldehyde species and it can be a useful tool for process development, monitoring and control at both laboratory and industrial scale, as well as for environmental, atmospheric and space

¹ Department of Chemistry and Technology of Polymers, Cracow University of Technology, 24 Warszawska Street, 31-155 Cracow, Poland

² WestChem, Department of Pure and Applied Chemistry, University of Strathclyde, 295 Cathedral Street, Glasgow, G1 1XL, U.K.

³ Centre for Process Analytics and Control Technology (CPACT), University of Strathclyde, 295 Cathedral Street, Glasgow, G1 1XL, U.K.

⁴ Department of Chemical and Process Engineering, University of Strathclyde, 75 Montrose Street, Glasgow, G1 1XJ, U.K.

^{*} to whom correspondence should be addressed

Download English Version:

https://daneshyari.com/en/article/7690660

Download Persian Version:

https://daneshyari.com/article/7690660

<u>Daneshyari.com</u>