

## Accepted Manuscript

Title: In situ observation of gelation of methylcellulose aqueous solution with viscosity measuring instrument in the diamond anvil cell

Authors: Zheng Wang, Kun Yang, Haining Li, Chaosheng Yuan, Xiang Zhu, Haijun Huang, Yongqiang Wang, Lei Su, Katsuyoshi Nishinari, Yapeng Fang



PII: S0144-8617(18)30236-4  
DOI: <https://doi.org/10.1016/j.carbpol.2018.02.078>  
Reference: CARP 13340

To appear in:

Received date: 6-9-2017  
Revised date: 22-2-2018  
Accepted date: 23-2-2018

Please cite this article as: Wang, Zheng., Yang, Kun., Li, Haining., Yuan, Chaosheng., Zhu, Xiang., Huang, Haijun., Wang, Yongqiang., Su, Lei., Nishinari, Katsuyoshi., & Fang, Yapeng., In situ observation of gelation of methylcellulose aqueous solution with viscosity measuring instrument in the diamond anvil cell. *Carbohydrate Polymers* <https://doi.org/10.1016/j.carbpol.2018.02.078>

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.

# **In situ observation of gelation of methylcellulose aqueous solution with viscosity measuring instrument in the diamond anvil cell**

Zheng Wang<sup>a,b</sup>, Kun Yang<sup>b</sup>, Haining Li<sup>a,b</sup>, Chaosheng Yuan<sup>b</sup>, Xiang Zhu<sup>b</sup>, Haijun Huang<sup>a,\*</sup>,

Yongqiang Wang<sup>b</sup>, Lei Su<sup>b,c,\*</sup>, Katsuyoshi Nishinari<sup>d</sup> and Yapeng Fang<sup>d,\*</sup>

<sup>a</sup>*School of Sciences, Wuhan University of Technology, Wuhan, Hubei 430070, China*

<sup>b</sup>*Center for High Pressure Science and Technology Research, Zhengzhou University of Light Industry, Zhengzhou, 450002, China*

<sup>c</sup>*Key Laboratory of Photochemistry, Institute of Chemistry, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Beijing, 100190, China*

<sup>d</sup>*School of Food and Biological Engineering, Glyn O Phillips Hydrocolloids Research Centre, Hubei University of Technology, Wuhan, 430068, China*

## **Highlights:**

- The viscosity of sample shows a dramatic change close to the phase transition point.
- MC solution undergoes phase separation prior to gelation upon heating or compression.
- T-P phase diagram of MC solution exhibits a parabola going downward in one direction.

## **Abstract**

Download English Version:

<https://daneshyari.com/en/article/7782947>

Download Persian Version:

<https://daneshyari.com/article/7782947>

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