

Accepted Manuscript

Title: Mechanisms and kinetics of non-isothermal polymerization of N,N'-bismaleimide-4,4'-diphenylmethane with 2-thiobarbituric acid

Authors: Quoc-Thai Pham, Yen-Jung Hsu, Fu-Ming Wang, Chorng-Shyan Chern



PII: S0040-6031(18)30493-3
DOI: <https://doi.org/10.1016/j.tca.2018.08.016>
Reference: TCA 78075

To appear in: *Thermochemica Acta*

Received date: 8-7-2018
Revised date: 15-8-2018
Accepted date: 17-8-2018

Please cite this article as: Pham Q-Thai, Hsu Y-Jung, Wang F-Ming, Chern C-Shyan, Mechanisms and kinetics of non-isothermal polymerization of N,N'-bismaleimide-4,4'-diphenylmethane with 2-thiobarbituric acid, *Thermochemica Acta* (2018), <https://doi.org/10.1016/j.tca.2018.08.016>

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.

Mechanisms and kinetics of non-isothermal polymerization of N,N'-bismaleimide-4,4'-diphenylmethane with 2-thiobarbituric acid

Quoc-Thai Pham,^a Yen-Jung Hsu,^a Fu-Ming Wang,^{b,*} mccabe@mail.ntust.edu.tw, Chorng-Shyan Chern^{a,*} cschern@mail.ntust.edu.tw

^aDepartment of Chemical Engineering, National Taiwan University of Science and Technology, Taipei 106, Taiwan

^bGraduate Institute of Applied Science and Technology, National Taiwan University of Science and Technology, Taipei 106, Taiwan

*Corresponding authors.

Highlights

- Non-isothermal polymerization kinetics for BMI/TBTA system studied.
- Kinetic parameters determined via both model-free and model-fitting methods.
- Polymerization adequately described by reaction first-order model.
- Competition among free radical and (aza) Michael addition reactions characterized.

Abstract

Mechanisms and kinetics of non-isothermal polymerization of N,N'-bismaleimide-4,4'-diphenylmethane (BMI) with 2-thiobarbituric acid (TBTA) were investigated. Competition among free radicals polymerization, Michael addition reaction and aza-Michael

Download English Version:

<https://daneshyari.com/en/article/9952650>

Download Persian Version:

<https://daneshyari.com/article/9952650>

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