Accepted Manuscript

Title: Hydrothermal reaction of tryptophan over Ni-based bimetallic catalysts

Authors: Yang Guo, Zhifeng Chen, Robert M. Rioux, Phillip

E. Savage

PII: S0896-8446(18)30477-7

DOI: https://doi.org/10.1016/j.supflu.2018.09.006

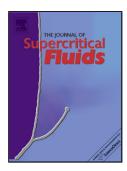
Reference: SUPFLU 4368

To appear in: J. of Supercritical Fluids

Received date: 17-7-2018 Revised date: 11-9-2018 Accepted date: 11-9-2018

Please cite this article as: Guo Y, Chen Z, Rioux RM, Savage PE, Hydrothermal reaction of tryptophan over Ni-based bimetallic catalysts, *The Journal of Supercritical Fluids* (2018), https://doi.org/10.1016/j.supflu.2018.09.006

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

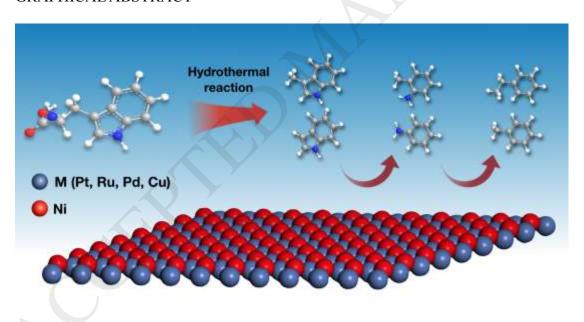
Hydrothermal reaction of tryptophan over Ni-based bimetallic catalysts

Yang Guo^{a,b}, Zhifeng Chen^b, Robert M. Rioux^{b,c}, Phillip E. Savage^{b*}

^aKey Laboratory of Thermo-Fluid Science and Engineering, Ministry of Education, School of Energy and Power Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi 710049, PR China
^bPennsylvania State University, Department of Chemical Engineering, University Park, PA 16802, United States

^cPennsylvania State University, Department of Chemistry, University Park, PA 16802, United States

GRAPHICAL ABSTRACT



Highlights

- Tryptophan undergoes both deoxygenation and deamination in hot, compressed water
- NiPt provided the highest yield of hydrocarbon products (substituted benzenes)
- NiRu provided the highest yield of aniline and substituted anilines.
- Bimetallic particles were smaller than the pure Ni particles

Download English Version:

https://daneshyari.com/en/article/11032959

Download Persian Version:

https://daneshyari.com/article/11032959

<u>Daneshyari.com</u>