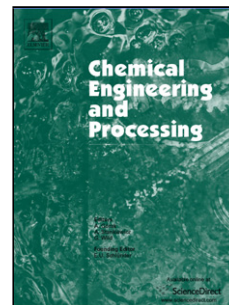


Accepted Manuscript

Title: Fischer-Tropsch synthesis in a microchannel reactor using mesoporous silica supported bimetallic Co-Ni catalyst: process optimization and kinetic modeling

Authors: Yong Sun, Gang Yang, Lian Zhang, Zhi Sun



PII: S0255-2701(17)30347-1
DOI: <http://dx.doi.org/doi:10.1016/j.cep.2017.05.017>
Reference: CEP 7001

To appear in: *Chemical Engineering and Processing*

Received date: 7-4-2017
Revised date: 22-5-2017
Accepted date: 24-5-2017

Please cite this article as: Yong Sun, Gang Yang, Lian Zhang, Zhi Sun, Fischer-Tropsch synthesis in a microchannel reactor using mesoporous silica supported bimetallic Co-Ni catalyst: process optimization and kinetic modeling, *Chemical Engineering and Processing* <http://dx.doi.org/10.1016/j.cep.2017.05.017>

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.

Fischer-Tropsch synthesis in a microchannel reactor using mesoporous silica supported bimetallic Co-Ni catalyst: process optimization and kinetic modeling

Yong Sun^{1#*}, Gang Yang^{2,3#}, Lian Zhang⁴, Zhi Sun⁵

1 Edith Cowan University School of Engineering, 270 Joondalup Drive Joondalup WA 6027 Australia

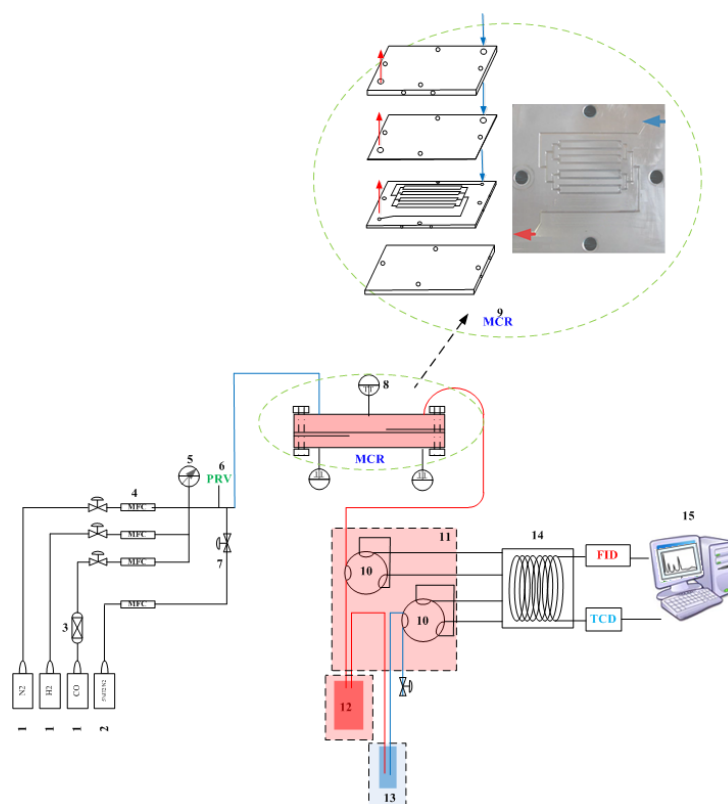
2 Anpeng High-tech Energy Corp, Beijing, China

3 National Engineering Laboratory for Coupled-acid and alkaline Production Technology, Institute of Process Engineering, Chinese Academy of Sciences, Beijing, 100190, China

4 Monash University Department of Chemical Engineering, VIC Australia, 3800

5 National Engineering Laboratory for Hydrometallurgical Cleaner Production Technology, Institute of Process Engineering, Chinese Academy of Sciences, Beijing 100190, China.

Graphical abstract



Fischer-Tropsch (FT) synthesis was carried out in a microchannel reactor under a wide range of operating conditions using mesoporous supported bimetallic Co-Ni catalyst for process intensification. The response surface methodology (RSM) and central composite design (CCD) were employed in determining the optimal condition for light olefin production. □New

* Corresponding author address: Dr Yong Sun School of Engineering, 270 Joondalup Drive Joondalup WA 6027 Edith Cowan University; Email: y.sun@ecu.edu.au; ysunipecas@gmail.com; # authors have the equal contribution in experimental works.

Download English Version:

<https://daneshyari.com/en/article/4998193>

Download Persian Version:

<https://daneshyari.com/article/4998193>

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