

Accepted Manuscript

Title: A sinter resistant Co Fischer-Tropsch catalyst promoted with Ru and supported on titania encapsulated by mesoporous silica

Authors: Tumelo N. Phaahlamohlaka, Mbongiseni W. Dlamini, Mashikoane W. Mogodi, David O. Kumi, Linda L. Jewell, David G. Billing, Neil J. Coville



PII: S0926-860X(17)30570-7
DOI: <https://doi.org/10.1016/j.apcata.2017.12.015>
Reference: APCATA 16495

To appear in: *Applied Catalysis A: General*

Received date: 17-8-2017
Revised date: 17-12-2017
Accepted date: 20-12-2017

Please cite this article as: Phaahlamohlaka TN, Dlamini MW, Mogodi MW, Kumi DO, Jewell LL, Billing DG, Coville NJ, A sinter resistant Co Fischer-Tropsch catalyst promoted with Ru and supported on titania encapsulated by mesoporous silica, *Applied Catalysis A, General* (2010), <https://doi.org/10.1016/j.apcata.2017.12.015>

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.

A sinter resistant Co Fischer-Tropsch catalyst promoted with Ru and supported on titania encapsulated by mesoporous silica

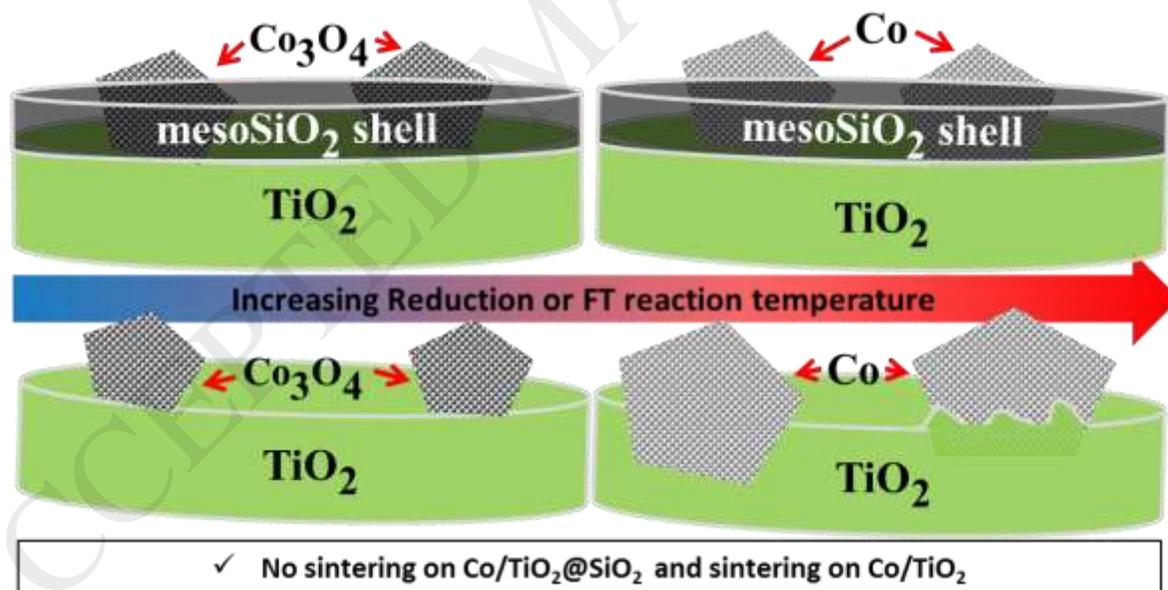
Tumelo N. Phaahlamohlaka,^[a,c] Mbongiseni W. Dlamini,^[a,c] Mashikoane W. Mogodi,^[a] David O. Kumi,^[a] Linda L. Jewell,^[b,c], David G. Billing,^[a] Neil J. Coville*^[a,c]

^aMolecular Sciences Institute, School of Chemistry, University of the Witwatersrand, Johannesburg 2050, South Africa.

^bDepartment of Chemical Engineering, University of South Africa, Florida, 1710, South Africa.

^cDST-NRF Centre of Excellence in Catalysis (c*change)

Graphical abstract



Highlights

- Fischer-Tropsch catalyst with a silica shell coating was prepared
- Silica shell is highly porous
- Shell renders supported Co nanoparticles sinter resistant
- Limited Co crystallite growth during reduction as evidenced by in situ PXRD analysis

Download English Version:

<https://daneshyari.com/en/article/6497046>

Download Persian Version:

<https://daneshyari.com/article/6497046>

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