

University of Groningen

## Pyrolysis oil upgrading to transportation fuels by catalytic hydrotreatment

Wildschut, Jelle

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2009

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Wildschut, J. (2009). *Pyrolysis oil upgrading to transportation fuels by catalytic hydrotreatment*. s.n.

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

## **List of Publications**

### **Oral presentations:**

Wildschut, J.; Mahfud, F.H.; Heeres, H.J. Novel Hydrotreating Catalysts for Upgrading Fast-Pyrolysis Oil. Proceedings of the 8<sup>th</sup> Netherlands' Catalysis and Chemistry Conference 2007, Noordwijkerhout (The Netherlands), 5-7 March 2007.

Wildschut, J.; Huisman, B.; Heeres, H.J. Upgrading Fast-Pyrolysis Oil: a Model Compound Study. Proceedings of the 9<sup>th</sup> Netherlands' Catalysis and Chemistry Conference 2008, Noordwijkerhout (The Netherlands), 3-5 March 2008.

Wildschut, J.; Heeres, H.J. Experimental Studies on the Upgrading of Fast Pyrolysis Oil to Liquid Transportation Fuels. Proceedings of the 235<sup>th</sup> ACS meeting , New Orleans (United States of America), 6-10 April 2008

Wildschut, J.; Heeres, H.J.; Upgrading of Fast Pyrolysis Oil to Liquid Transportation Fuels. Proceedings of Netherlands Process Technology Symposium 2008, Veldhoven (The Netherlands), 28-29 Oktober.

Wildschut, J.; Arendz, J.; Rasrendra, C.B.; Venderbosch, R.H.; Heeres, H.J. Upgrading Fast Pyrolysis Oil: Hydrogenation of Sugar Fraction Molecules from Pyrolysis Oil using Ru/C Catalysts. Proceedings of the 10<sup>th</sup> Netherlands' Catalysis and Chemistry Conference 2009, Noordwijkerhout (The Netherlands), 2-4 March 2008.

Wildschut, J.; Heeres, H.J. Hydrodeoxygenation of Pyrolysis Oil: a Model Compound Study. Proceedings of the 18<sup>th</sup> International conference on Chemical Reactors, Bugibba (Malta), 29 September- 3 October 2008.

### **Poster presentations:**

Wildschut, J.; Mahfud, F.H.; Melian Cabrera, I.V.; Heeres, H.J. Synthesis and Characterization of Hydro-deoxygenated Pyrolysis-oils. Proceedings of the 7<sup>th</sup> Netherlands' Catalysis and Chemistry Conference 2006, Noordwijkerhout (The Netherlands), 6-8 March 2006.

Wildschut, J.; Heeres, H.J. Novel Hydrotreating Catalysts for Upgrading Fast-Pyrolysis Oil. Proceedings of the 7<sup>th</sup> Netherland Process Technology Symposium, Noordwijkerhout (The Netherlands), 29-30 October 2007.

Wildschut, J.; Arentz, J.; Rasrendra, C.B.; Venderbosch, R.H.; Heeres H.J. Catalytic Hydrotreatment of Fast Pyrolysis oil: Model studies on Reaction Pathways for the Carbohydrate Fraction. Environmental Progress and Sustainable Energy, TCBiomass Conference, Chicago (United States of America), 16-18 September, 2009.

### Written publications:

Marsman, J.H.; Wildschut, J.; Mahfud, F.H.; Heeres, H.J. Identification of Components in Fast Pyrolysis Oil and Upgraded Products by Comprehensive Two-Dimensional Gas Chromatography and Flame Ionisation Detection. *J. Chrom. A.* **2007**, 1150, 21.

Marsman, J.H.; Wildschut, J.; Evers, P.; Koning, S.; Heeres, H.J. Analysis and Characterisation of Flash Pyrolysis oil by Two-Dimensional Gas Chromatography and Time of Flight Mass Spectrometry. *Chromatogr. A.* **2008**, 1188, 17.

Wildschut, J.; Heeres, H.J. Experimental Studies on the Upgrading of Fast Pyrolysis Oil to Liquid Transportation Fuels. *Prepr. Pap. - Am. Chem. Soc., Div. Fuel Chem.* **2008**, 53(1), 349.

Wildschut, J.; Arentz, J.; Rasrendra, C.B.; Venderbosch, R.H.; Heeres, H.J. Catalytic Hydrotreatment of Fast Pyrolysis oil: Model studies on Reaction Pathways for the Carbohydrate Fraction. *Environ. Prog.*, **2009**, 28(3),

Wildschut, J.; Mahfud, F.H.; Venderbosch, R.H.; Heeres, H. J. Hydrotreatment of Fast Pyrolysis oil using Heterogeneous Noble Metal Catalysts. *Ind. Eng. Chem. Res.* **2009**, Accepted for Publication.

Leijenhurst, E.J.; Wever, D.A.Z.; Wildschut, J.; Venderbosch, R.H.; van Dam, J.E.G.; Manurung, R.; Broekhuis, A.A.; Heeres, H.J. Valorisation of *Jatropha curcas* L. plant parts: Nut Shell Conversion to Fast Pyrolysis Oil. *Food Bioprod. Process.* **2009**.

Venderbosch, R.H.; Ardiyanti, A.; Wildschut, J.; Oasmaa, A.; Heeres, H. J. Insights in the Hydroprocessing of Biomass Derived Pyrolysis oil. *www.btgworld.com.* **2009**.

Wildschut, J.; Muhammed, I.; Venderbosch, R.H.; Heeres, H.J. Insights in the Hydrotreatment of Fast Pyrolysis Oil using a Ruthenium on Carbon Catalyst. *Biofuel. Bioprod. Bior.* **2009**, submitted.

Venderbosch, R.H.; Ardiyanti, A.; Wildschut, J.; Oasmaa, A.; Heeres, H.J. Stabilisation of Biomass Derived Pyrolysis Oils. *J. Chem. Technol. Biot.* **2009**, Submitted.