

## Reviews

5711 DOI: 10.1021/acs.energyfuels.7b00471  
**Hydroprocessing Catalysts Containing Noble Metals: Deactivation, Regeneration, Metals Reclamation, and Environment and Safety**  
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5751 DOI: 10.1021/acs.energyfuels.7b00641  
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5776 DOI: 10.1021/acs.energyfuels.6b01858  
**Rheology and Phase Behavior of Carbon Dioxide and Crude Oil Mixtures**  
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5785 DOI: 10.1021/acs.energyfuels.6b02500  
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5798 DOI: 10.1021/acs.energyfuels.6b02942  
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5806 DOI: 10.1021/acs.energyfuels.6b02943  
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**Influence of Different Vinyl Acetate Contents on the Properties of the Copolymer of Ethylene and Vinyl Acetate/Modified Nano-SiO<sub>2</sub> Composite Pour-Point Depressant**  
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DOI: 10.1021/acs.energyfuels.7b00355

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5995 DOI: 10.1021/acs.energyfuels.7b00600

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6004 DOI: 10.1021/acs.energyfuels.7b00626

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6019 DOI: 10.1021/acs.energyfuels.7b00642

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Ali A. AlHamadi and Walter G. Chapman\*

6025 DOI: 10.1021/acs.energyfuels.7b00674

Correlations between Coal Compositions and Sodium Release during Steam Gasification of Sodium-Rich Coals

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6034 DOI: 10.1021/acs.energyfuels.7b00675

Pore Structure Characterization of Different Rank Coals Using  $\text{N}_2$  and  $\text{CO}_2$  Adsorption and Its Effect on  $\text{CH}_4$  Adsorption Capacity: A Case in Panguan Syncline, Western Guizhou, China

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6045 DOI: 10.1021/acs.energyfuels.7b00809

The Effect of Carbon-Supported Nickel Nanoparticles in the Reduction of Carboxylic Acids for in Situ Upgrading of Heavy Crude Oil

Kun Guo, Yahe Zhang, Quan Shi,\* and Zhixin Yu\*

## Biofuels and Biomass

6056 DOI: 10.1021/acs.energyfuels.6b03165

Use of Torrefaction and Solvent Extraction To Produce Ash-less Biomass as a Solid Fuel Feedstock for Co-firing

Sukma Hidayat, Ryan Fitriani Sofwan Fauzan, Seongha Jeong, Donghyuk Chun, Jiho Yoo, Sangdo Kim, Jeonghwan Lim, Youngjoon Rhim, Sihyun Lee, and Hokyung Choi\*

6065 DOI: 10.1021/acs.energyfuels.6b03417

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Sina Zadmajid, Steven Albert-Green, Yashar Afarin, and Murray J. Thomson\*

6080 DOI: 10.1021/acs.energyfuels.7b00249

Rapid Detection of Ash and Inorganics in Bioenergy Feedstocks Using Fourier Transform Infrared Spectroscopy Coupled with Partial Least-Squares Regression

Charles W. Edmunds, Choo Hamilton, Keonhee Kim, Nicolas André, and Nicole Labbé\*

6089 DOI: 10.1021/acs.energyfuels.7b00273

Decentralized Production of Fischer–Tropsch Biocrude via Coprocessing of Woody Biomass and Wet Organic Waste in Entrained Flow Gasification: Techno-Economic Analysis

Gonzalo Del Alamo,\* Rajesh S. Kempegowda, Øyvind Skreiberg, and Roger Khalil

6109 DOI: 10.1021/acs.energyfuels.7b00331

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Samuel Erhigare Onoji,\* Sunny E. Iyuke, Anselm I. Igbafe, and Michael O. Daramola

6120 DOI: 10.1021/acs.energyfuels.7b00339

Influence of Inorganic Matter in Biomass on the Catalytic Production of Aromatics and Olefins in a Fluidized-Bed Reactor

Peter Kellona Wani Likun, Huiyan Zhang,\* Tharapong Vitidsant, Prasert Reubroycharoen, and Rui Xiao\*

6132 DOI: 10.1021/acs.energyfuels.7b00434

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M. Amirul Islam, Baranitharan Ethiraj, Chin Kui Cheng, Abu Yousuf, and Md. Maksudur Rahman Khan\*

6140 DOI: 10.1021/acs.energyfuels.7b00446

Reduction of Reactor Corrosion by Eliminating Liquid-Phase Existence in Dry Dilute Acid Pretreatment of Corn Stover

Shuai Shao, Jian Zhang, and Jie Bao\*

6145 DOI: 10.1021/acs.energyfuels.7b00478

Methane Enhancement through Sequential Thermochemical and Sonication Pretreatment for Corn Stover with Anaerobic Sludge

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6154 DOI: 10.1021/acs.energyfuels.7b00536

Influences of Potassium Hydroxide on Rate and Thermicity of Wood Pyrolysis Reactions

C. Di Blasi,\* C. Branca, and A. Galgano

6163 DOI: 10.1021/acs.energyfuels.7b00586

Role of Solvent in Catalytic Conversion of Oleic Acid to Aviation Biofuels

Qirong Tian, Zihao Zhang, Feng Zhou, Kequan Chen, Jie Fu,\* Xiuyang Lu, and Pingkai Ouyang

6173 DOI: 10.1021/acs.energyfuels.7b00603

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Anton M. Reiter, Nikolai Schubert, Andreas Pfennig, and Thomas Wallek\*

6182 **5** DOI: 10.1021/acs.energyfuels.7b00604  
Two-Step Conversion of Neem (*Azadirachta indica*) Seed Oil into Fatty Methyl Esters Using a Heterogeneous Biomass-Based Catalyst: An Example of Cocoa Pod Husk  
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6194 **5** DOI: 10.1021/acs.energyfuels.7b00686  
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6206 DOI: 10.1021/acs.energyfuels.7b00700  
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6211 **5** DOI: 10.1021/acs.energyfuels.7b00818  
Enzymatic Hydrolysis of Steam-Treated Sugarcane Bagasse: Effect of Enzyme Loading and Substrate Total Solids on Its Fractal Kinetic Modeling and Rheological Properties  
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6221 **5** DOI: 10.1021/acs.energyfuels.7b00864  
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6228 **5** DOI: 10.1021/acs.energyfuels.7b00932  
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6240 DOI: 10.1021/acs.energyfuels.7b00972  
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6248 **5** DOI: 10.1021/acs.energyfuels.7b01091  
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6257 DOI: 10.1021/acs.energyfuels.6b03453  
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6266 DOI: 10.1021/acs.energyfuels.7b00107  
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6274 DOI: 10.1021/acs.energyfuels.7b00313  
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6284 DOI: 10.1021/acs.energyfuels.7b00346  
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6298 DOI: 10.1021/acs.energyfuels.7b00456  
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6305 DOI: 10.1021/acs.energyfuels.7b00489  
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6314 DOI: 10.1021/acs.energyfuels.7b00549  
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6320 DOI: 10.1021/acs.energyfuels.7b00629  
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6329 DOI: 10.1021/acs.energyfuels.7b00745  
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A. Z. Al-Yaseri,\* H. Roshan, Y. Zhang, T. Rahman, M. Lebedev, A. Barifcani, and S. Iglauer

6334 **5** DOI: 10.1021/acs.energyfuels.7b00894  
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- 6345 DOI: 10.1021/acs.energyfuels.7b00743  
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- 6352 DOI: 10.1021/acs.energyfuels.6b03500  
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Ann Cecilie Gulbrandsen\* and Thor Martin Svartaas

- 6358 DOI: 10.1021/acs.energyfuels.7b00318  
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Seong Deok Seo, Hyun-jong Paik, Dong-ha Lim, and Ju Dong Lee\*

- 6364 DOI: 10.1021/acs.energyfuels.7b00428  
Efficient Production of the Liquid Fuel 2,5-Dimethylfuran from 5-Hydroxymethylfurfural in the Absence of Acid Additive over Bimetallic PdAu Supported on Graphitized Carbon  
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- 6374 DOI: 10.1021/acs.energyfuels.7b00418  
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- 6378 DOI: 10.1021/acs.energyfuels.7b00452  
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- 6389 DOI: 10.1021/acs.energyfuels.7b00657  
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- 6397 DOI: 10.1021/acs.energyfuels.7b00733  
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- 6413 DOI: 10.1021/acs.energyfuels.6b03011  
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- 6422 DOI: 10.1021/acs.energyfuels.6b03375  
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- 6435 DOI: 10.1021/acs.energyfuels.6b03456  
Gasification Characteristics and Sodium Transformation Behavior of High-Sodium Zhundong Coal  
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- 6445 DOI: 10.1021/acs.energyfuels.7b00050  
On the Fuel Spray Transition to Dense Fluid Mixing at Reciprocating Engine Conditions  
Farzad Poursadegh, Joshua S. Lacey, Michael J. Brear,\* and Robert L. Gordon

- 6455 DOI: 10.1021/acs.energyfuels.7b00077  
Effects of H<sub>2</sub>O and HCl on Particulate Matter Reduction by Kaolin under Oxy-coal Combustion  
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- 6463 DOI: 10.1021/acs.energyfuels.7b00197  
Oxygen-Carrier-Aided Combustion in a Bench-Scale Fluidized Bed  
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- 6472 DOI: 10.1021/acs.energyfuels.7b00423  
Investigation of the Relationship between Droplet and Fine Particle Emissions during the Limestone-Gypsum Wet Flue Gas Desulfurization Process  
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- 6478 DOI: 10.1021/acs.energyfuels.7b00438  
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- 6493 DOI: 10.1021/acs.energyfuels.7b00430  
Comparative Study of the Ignition of 1-Decene, *trans*-5-Decene, and *n*-Decane: Constant-Volume Spray and Shock-Tube Experiments  
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6501 DOI: 10.1021/acs.energyfuels.7b00599  
Carbon Deposition and Sintering Characteristics on Iron-Based Oxygen Carriers in the Catalytic Cracking Process of Coal Tar  
Yongpeng Li, Jian Gong, Fei Huang, Hongcun Bai, Fengyin Wang, and Cuiping Wang\*

6507 DOI: 10.1021/acs.energyfuels.7b00688  
Effects of Pyrolysis Conditions and Ash Formation on Gasification Rates of Biomass Char  
Anna Strandberg,\* Per Holmgren, David R. Wagner, Roger Molinder, Henrik Wiinikka, Kentaro Umeki, and Markus Broström

6515 DOI: 10.1021/acs.energyfuels.7b00742  
Impact of the Molecular Structure on Olefin Pyrolysis  
Kun Wang, Stephanie M. Villano, and Anthony M. Dean\*

6525 DOI: 10.1021/acs.energyfuels.7b00970  
Universal Devolatilization Process Model for Numerical Simulations of Coal Combustion  
Kun Luo, Jiangkuan Xing, Yun Bai, and Jianren Fan\*

## Fuel Cells

6541 DOI: 10.1021/acs.energyfuels.7b00242  
Nitrogen-Coordinated Iron–Carbon as Efficient Bifunctional Electrocatalysts for the Oxygen Reduction and Oxygen Evolution Reactions in Acidic Media  
Kuldeep Mamtani, Deeksha Jain, Anne C. Co, and Umit S. Ozkan\*

## Batteries and Energy Storage

6548 DOI: 10.1021/acs.energyfuels.7b00287  
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Kyriaki G. Sakellariou,\* Nikolaos I. Tsonolidis, George Karagiannakis, and Athanasios G. Konstandopoulos\*

6560 DOI: 10.1021/acs.energyfuels.7b00851  
Advanced Nanocomposite Phase Change Material Based on Calcium Chloride Hexahydrate with Aluminum Oxide Nanoparticles for Thermal Energy Storage  
Xiang Li,\* Yuan Zhou,\* Hongen Nian, Xinxing Zhang, Ouyang Dong, Xiufeng Ren, Jinbo Zeng, Chunxi Hai, and Yue Shen

## Process Engineering

6568 DOI: 10.1021/acs.energyfuels.6b02937  
Novel Ebullated Bed Residue Hydrocracking Process  
Jiankun Liu, Xiangchen Fang,\* and Tao Yang

6580 DOI: 10.1021/acs.energyfuels.6b03087  
Adsorption Performance of Nonionic Surfactant on the Lignite Particles with Different Density  
Jie Wang, Yaqun He,\* Xiangyang Ling, Juan Hao, and Weining Xie

6587 DOI: 10.1021/acs.energyfuels.7b00275  
Evaluation of Microwave and Conventional Heating for Electrostatic Treatment of a Water-in-Oil Model Emulsion in a Pilot Plant  
Troner Assenheimer, Alessandro Barros, Khalil Kashefi, José Carlos Pinto, Frederico Wanderley Tavares, and Márcio Nele\*

6598 DOI: 10.1021/acs.energyfuels.7b00563  
Selective Separation of Benzene/*n*-Hexane with Ester-Functionalized Ionic Liquids  
Zhongqi Ren, Mengyao Wang, Yong Li, Zhiyong Zhou, Fan Zhang,\* and Wei Liu\*

6607 DOI: 10.1021/acs.energyfuels.7b00585  
Thermochemistry of Sulfones Relevant to Oxidative Desulfurization  
Roman Weh and Arno de Klerk\*

6615 DOI: 10.1021/acs.energyfuels.7b00825  
Mechanistic Study of Oil/Brine/Solid Interfacial Behaviors during Low-Salinity Waterflooding Using Visual and Quantitative Methods  
Bing Wei,\* Laiming Lu, Qinzhi Li, Hao Li, and Xuewen Ning

6625 DOI: 10.1021/acs.energyfuels.7b00924  
Experimental Investigation of the Scaling-Off Location and the Slag Mass in Pulverized Coal-Fired Boiler with Water-Cooled Slag Removal  
Yonggang Zhou, Zhiliang Xue, Jiang Ping, Pei Li, and Xuecheng Wu\*

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