

**SAE International Journal of Fuels and Lubricants**  
**Volume 7, Issue 1 (April 2014)**  
**Table of Contents**



<b>Measuring the Impact of Engine Oils and Fuels on Low-Speed Pre-Ignition in Downsized Engines</b> (2014-01-1219) .....	
Orian Welling, James Moss, John Williams, and Nick Collings	
<b>Effects of Fuel Octane Rating and Ethanol Content on Knock, Fuel Economy, and CO<sub>2</sub> for a Turbocharged DI Engine</b> (2014-01-1228) .....	<b>9</b>
Thomas G. Leone, Edward D. Olin, James E. Anderson, Hosuk H. Jung, Michael H. Shelby, and Robert A. Stein	
<b>Intermediate Alcohol-Gasoline Blends, Fuels for Enabling Increased Engine Efficiency and Powertrain Possibilities</b> (2014-01-1231) .....	<b>29</b>
Derek Splitter and James Szybist	
<b>Modeling the Ignitability of a Pilot Injection for a Diesel Primary Reference Fuel: Impact of Injection Pressure, Ambient Temperature and Injected Mass</b> (2014-01-1258) .....	<b>48</b>
Federico Perini, Dipankar Sahoo, Paul Miles, and Rolf Reitz	
<b>An Experimental Study of Diesel-Fuel Property Effects on Mixing-Controlled Combustion in a Heavy-Duty Optical CI Engine</b> (2014-01-1260) .....	<b>65</b>
Cosmin Emil Dumitrescu, Christopher Polonowski, Brian T. Fisher, A. S. (Ed) Cheng, Gregory K. Lilik, and Charles J. Mueller	
<b>Gasoline-Like Fuel Effects on High-Load, Boosted HCCI Combustion Employing Negative Valve Overlap Strategy</b> (2014-01-1271) .....	<b>82</b>
Vickey B. Kalaskar, Derek A. Splitter, and James P. Szybist	
<b>Experimental Validation and Combustion Modeling of a JP-8 Surrogate in a Single Cylinder Diesel Engine</b> (2014-01-1376) .....	<b>94</b>
Amit Shrestha, Umashankar Joshi, Ziliang Zheng, Tamer Badawy, Naeim Henein, Eric Sattler, and Peter Schihl	
<b>Low Temperature Heat Release of Palm and Soy Biodiesel in Late Injection Low Temperature Combustion</b> (2014-01-1381) .....	<b>106</b>
Brandon T. Tompkins, Hoseok Song, and Timothy J. Jacobs	
<b>Role of Volatility in the Development of JP-8 Surrogates for Diesel Engine Application</b> (2014-01-1389) .....	<b>116</b>
Ziliang Zheng, PO-I Lee, Amit Shrestha, Tamer Badawy, Ming-Chia Lai, Naeim Henein, and Eric Sattler	
<b>Octane Response in a Downsized, Highly Boosted Direct Injection Spark Ignition Engine</b> (2014-01-1397) .....	<b>131</b>
S.M. Remmert, R.F. Cracknell, R. Head, A. Schuetze, A.G.J. Lewis, S. Akehurst, J.W.G. Turner, and A. Popplewell	
<b>Spray Visualization and Characterization of a Dual-Fuel Injector using Diesel and Gasoline</b> (2014-01-1403) .....	<b>144</b>
Karthik Nithyanandan, Deyang Hou, Gregory Major, and Chia-Fon Lee	
<b>High Speed Imaging Study on the Spray Characteristics of Dieseline at Elevated Temperatures and Back Pressures</b> (2014-01-1415) .....	<b>159</b>
Xiao Ma, Liang Zheng, Yanfei Li, Zhi Wang, Hongming Xu, and Jian-Xin Wang	
<b>Effect of Off-Axis Needle Motion on Internal Nozzle and Near Exit Flow in a Multi-Hole Diesel Injector</b> (2014-01-1426).....	<b>167</b>
Michele Battistoni, Qingluan Xue, Sibendu Som, and Eric Pomraning	

<b>Regulated Emissions, Air Toxics, and Particle Emissions from SI-DI Light-Duty Vehicles Operating on Different Iso-Butanol and Ethanol Blends (2014-01-1451)</b> .....	<b>183</b>
George Karavalakis, Daniel Short, Diep Vu, Mark Villela, Robert Russell, Heejung Jung, Akua Asa-Awuku, and Thomas Durbin	
<b>A Comparative Study of Emission Characteristics of Propanol Isomers/Gasoline Blends Combined with EGR (2014-01-1454)</b> .....	<b>200</b>
Jing Gong, Jian Cai, and Chenglong Tang	
<b>A Computational Study of the Effects of EGR and Intake-Pressure Boost on DME Autoignition Characteristics over Wide Ranges of Engine Speed (2014-01-1461)</b> .....	<b>207</b>
Narankhuu Jamsran, Ocktaeck Lim, and Norimasa Iida	
<b>The Impact of Fuel Ethanol Content on Particulate Emissions from Light-Duty Vehicles Featuring Spark Ignition Engines (2014-01-1463)</b> .....	<b>224</b>
Piotr Bielaczyc, Andrzej Szczotka, and Joseph Woodburn	
<b>A Surrogate Fuel Formulation Approach for Real Transportation Fuels with Application to Multi-Dimensional Engine Simulations (2014-01-1464)</b> .....	<b>236</b>
Xingyuan Su, Youngchul Ra, and Rolf Reitz	
<b>Characterization of Hydroprocessed Used Cooking Oils in Blend with Low Quality Gasoil Samples (2014-01-1468)</b> .....	<b>250</b>
Dimitrios Karonis, Despina Chilari, and Constantina Manou	
<b>Combustion Modeling of Landfill Gas Fueled Spark Ignition Engine Performance (2014-01-1471)</b> .....	<b>263</b>
Daniel Swain and S O Bade Shrestha	
<b>Direct Sugar to Hydrocarbon (DSH) Fuel Performance Evaluation in Multiple Diesel Engines (2014-01-1472)</b> .....	<b>270</b>
Len Hamilton, Dianne Luning-Prak, Jim Cowart, Andrew McDaniel, Sherry Williams, and Richard Leung	
<b>Design and Analysis of a Modified CFR Engine for the Octane Rating of Liquefied Petroleum Gases (LPG) (2014-01-1474)</b> .....	<b>283</b>
Kai Morganti, Tien Mun Foong, Michael Brear, Gabriel Da Silva, Yi Yang, and Frederick Dryer	
<b>A Novel Diagnostics Tool for Measuring Soot Agglomerates Size Distribution in Used Automotive Lubricant Oils (2014-01-1479)</b> .....	<b>301</b>
Antonino La Rocca, Gianluca Di Liberto, Paul Shayler, Christopher Parmenter, and Mike Fay	
<b>Direct Measurements of Soot/Ash Affinity in the Diesel Particulate Filter by Atomic Force Microscopy and Implications for Ash Accumulation and DPF Degradation (2014-01-1486)</b> .....	<b>307</b>
Carl Justin Kamp, Alexander Sappok, Yujun Wang, William Bryk, Avery Rubin, and Victor Wong	
<b>Synthesis of Linseed oil Biodiesel using a Non-Catalytic Supercritical Transesterification Process (2014-01-1955)</b> .....	<b>317</b>
Dileep Kumar Gupta, Abhishek Sharma, Varun Pathak, and Naveen Kumar	
<b>Particulate Morphology and Toxicity of an Alcohol Fuelled HCCI Engine (2014-01-9076)</b> .....	<b>323</b>
Rakesh Kumar Maurya and Avinash Kumar Agarwal	
<b>Development of JP-8 Surrogates and their Validation using Ignition Quality Tester (2014-01-9077)</b> .....	<b>337</b>
Amit Shrestha, Ziliang Zheng, Tamer Badawy, Naeim Henein, and Peter Schihl	