

# Table of Contents

June 2011; 4 (1)




---

## Articles

- Peter Schihl and Laura Hoogterp-Decker  
 On the Ignition Behavior of JP-8 in Military Relevant Diesel Engines  
 SAE Int. J. Engines June 2011 4:1-13; doi:10.4271/2011-01-0119  
[Abstract](#) [Full Text \(PDF\)](#)
- Gary L. Hunter  
 COTS Engine Conversion  
 SAE Int. J. Engines June 2011 4:14-26; doi:10.4271/2011-01-0122  
[Abstract](#) [Full Text \(PDF\)](#)
- Peter Schihl, Laura decker-hoogterp, Kayla pence, and Karen leonard  
 On the Premixed Phase Combustion Behavior of JP-8 in a Military Relevant Single Cylinder Diesel Engine  
 SAE Int. J. Engines June 2011 4:27-37; doi:10.4271/2011-01-0123  
[Abstract](#) [Full Text \(PDF\)](#)
- David Lejsek and Andre Kulzer  
 Engine Start-Up Optimization using the Transient Burn Rate Analysis  
 SAE Int. J. Engines June 2011 4:38-49; doi:10.4271/2011-01-0125  
[Abstract](#) [Full Text \(PDF\)](#)
- Paolo Sementa, Bianca Maria Vaglietto, and Francesco Catapano  
 Non-Intrusive Investigation in a Small GDI Optical Engine Fuelled with Gasoline and Ethanol  
 SAE Int. J. Engines June 2011 4:50-68; doi:10.4271/2011-01-0140  
[Abstract](#) [Full Text \(PDF\)](#)
- Javier Vera and Jaal Ghandhi  
 Investigation of Post-Flame Oxidation of Unburned Hydrocarbons in Small Engines  
 SAE Int. J. Engines June 2011 4:67-81; doi:10.4271/2011-01-0141  
[Abstract](#) [Full Text \(PDF\)](#)
- Brian J. Duddy, James Lee, Mark Walluk, and David Hallbach  
 Conversion of a Spark-Ignited Aircraft Engine to JP-8 Heavy Fuel for Use in Unmanned Aerial Vehicles  
 SAE Int. J. Engines June 2011 4:82-93; doi:10.4271/2011-01-0145  
[Abstract](#) [Full Text \(PDF\)](#)
- Darrell Robinette, Michael Grimmer, Jeremy Horgan, Jevon Kennell, and Richard Vykydal  
 Torque Converter Clutch Optimization: Improving Fuel Economy and Reducing Noise and Vibration  
 SAE Int. J. Engines June 2011 4:94-105; doi:10.4271/2011-01-0146  
[Abstract](#) [Full Text \(PDF\)](#)
- Mark N. Subramaniam, Chris Hayes, Dean Tomazic, Markus Downey, and Claus Bruestle  
 Pre-Turbo Aftertreatment Position for Large Bore Diesel Engines - Compact & Cost-Effective Aftertreatment with a Fuel Consumption Advantage  
 SAE Int. J. Engines June 2011 4:106-116; doi:10.4271/2011-01-0299  
[Abstract](#) [Full Text \(PDF\)](#)
- Atsuo Kondo, Shoji Yokoi, Takayuki Sakurai, Satoshi Nishikawa, Takashi Egami, Masahiro Tokuda, and Takeshi Sakuma  
 New Particulate Matter Sensor for On Board Diagnosis  
 SAE Int. J. Engines June 2011 4:117-125; doi:10.4271/2011-01-0302  
[Abstract](#) [Full Text \(PDF\)](#)
- Jan Margraf, Klaus Schrewe, and Simon Steigert  
 Enhancement of Diesel Soot Combustion with Oxygen on Particulate Filters After Injection of Dicyclopentadienyl Iron (Ferrocene) in the Exhaust Pipe  
 SAE Int. J. Engines June 2011 4:126-142; doi:10.4271/2011-01-0303  
[Abstract](#) [Full Text \(PDF\)](#)
- Timothy V. Johnson  
 Diesel Emissions in Review  
 SAE Int. J. Engines June 2011 4:143-157; doi:10.4271/2011-01-0304  
[Abstract](#) [Full Text \(PDF\)](#)
- Lifeng Xu, Robert McCabe, Paul Tennison, and Hung-Wen Jen  
 Laboratory and Vehicle Demonstration of "2nd-Generation" LNT + in-situ SCR Diesel Emission Control Systems  
 SAE Int. J. Engines June 2011 4:158-174; doi:10.4271/2011-01-0308  
[Abstract](#) [Full Text \(PDF\)](#)

- Frank Will and Alberto Boretti  
A New Method to Warm Up Lubricating Oil to Improve the Fuel Efficiency During Cold Start  
SAE Int. J. Engines June 2011 4:175–187; doi:10.4271/2011-01-0318  
[Abstract](#) [Full Text \(PDF\)](#)
  
- William De Ojeda, Tytus Bulicz, Xiaoye Han, Ming Zheng, and Frederick Cornforth  
Impact of Fuel Properties on Diesel Low Temperature Combustion  
SAE Int. J. Engines June 2011 4:188–201; doi:10.4271/2011-01-0329  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Apoorv Agarwal, Hosuk Jung, Kevin Byrd, Robert A. Stein, Ahmad Kassem, Paul Whitaker, and Christian Spanner  
Blowdown Interference on a V8 Twin-Turbocharged Engine  
SAE Int. J. Engines June 2011 4:202–218; doi:10.4271/2011-01-0337  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Asim Iqbal, Ahmet Selamet, Ronald Reese, and Roger Vick  
Ignition Delay Correlation for Predicting Autoignition of a Toluene Reference Fuel Blend in Spark Ignition Engines  
SAE Int. J. Engines June 2011 4:219–234; doi:10.4271/2011-01-0338  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Manfred Amann, Terrence Alger, and Darius Mehta  
The Effect of EGR on Low-Speed Pre-Ignition in Boosted SI Engines  
SAE Int. J. Engines June 2011 4:235–245; doi:10.4271/2011-01-0339  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Akram Zahdeh, Peter Rothenberger, Wai Nguyen, Muniappan Anbarasu, Simon Schmuck-Soldan, Jörg Schaefer, and Thomas Goebel  
Fundamental Approach to Investigate Pre-Ignition in Boosted SI Engines  
SAE Int. J. Engines June 2011 4:246–273; doi:10.4271/2011-01-0340  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Manfred Amann, Darius Mehta, and Terrence Alger  
Engine Operating Condition and Gasoline Fuel Composition Effects on Low-Speed Pre-Ignition in High-Performance Spark Ignited Gasoline Engines  
SAE Int. J. Engines June 2011 4:274–285; doi:10.4271/2011-01-0342  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Gilsu Choi, Zhuxian Xu, Ming Li, Shiv Gupta, Thomas Jahns, Fred Wang, Neil A. Duffie, and Laura Marlino  
Development of Integrated Modular Motor Drive for Traction Applications  
SAE Int. J. Engines June 2011 4:286–300; doi:10.4271/2011-01-0344  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Abdenour Abdelli and Fabrice Le Berr  
Analytical Approach to Model a Saturated Interior Permanent Magnet Synchronous Motor for a Hybrid Electric Vehicle  
SAE Int. J. Engines June 2011 4:301–313; doi:10.4271/2011-01-0347  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Shin Aoki and Tadanobu Takahashi  
Development of Compact Transverse Flux Motor with a New Magnetic Circuit Configuration  
SAE Int. J. Engines June 2011 4:314–322; doi:10.4271/2011-01-0348  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Khwaja Rahman, Mohammad Anwar, Steven Schulz, Edward Kaiser, Paul Turnbull, Sean Gleason, Brandon Given, and Michael Grimmer  
The Voltec 4ET50 Electric Drive System  
SAE Int. J. Engines June 2011 4:323–337; doi:10.4271/2011-01-0355  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Adam B. Dempsey and Rolf D. Reitz  
Computational Optimization of a Heavy-Duty Compression Ignition Engine Fueled with Conventional Gasoline  
SAE Int. J. Engines June 2011 4:338–359; doi:10.4271/2011-01-0356  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Sage Kokjohn, Reed Hanson, Derek Splitter, John Kaddatz, and Rolf Reitz  
Fuel Reactivity Controlled Compression Ignition (RCCI) Combustion in Light- and Heavy-Duty Engines  
SAE Int. J. Engines June 2011 4:360–374; doi:10.4271/2011-01-0357  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Christopher Chadwell, Terrence Alger, Charles Roberts, and Steven Arnold  
Boosting Simulation of High Efficiency Alternative Combustion Mode Engines  
SAE Int. J. Engines June 2011 4:375–393; doi:10.4271/2011-01-0358  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Reed Hanson, Sage Kokjohn, Derek Splitter, and Rolf Reitz

- Fuel Effects on Reactivity Controlled Compression Ignition (RCCI) Combustion at Low Load  
SAE Int. J. Engines June 2011 4:394–411; doi:10.4271/2011-01-0361  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Damien Le Guen, Thomas Weck, Adrien Balihe, and Benoit Verbeke  
Definition of Gearshift Pattern: Innovative Optimization Procedures Using System Simulation  
SAE Int. J. Engines June 2011 4:412–431; doi:10.4271/2011-01-0395  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Michele Calabretta, Diego Cacciatore, Phil Carden, and Jonathan Plail  
Development of a Timing Chain Drive Model for a High Speed Gasoline Engine  
SAE Int. J. Engines June 2011 4:432–440; doi:10.4271/2011-01-0401  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ P. Lingeswaramurthy, J. Jayabhaskar, R. Elayaraja, and J. Suresh Kumar  
Development of Analytical Model for Design of Gerotor Oil Pump and Experimental Validation  
SAE Int. J. Engines June 2011 4:441–449; doi:10.4271/2011-01-0402  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Ford Phillips, Ian Gilbert, Jean-Pierre Pirault, and Marc Megel  
Scuderi Split Cycle Research Engine: Overview, Architecture and Operation  
SAE Int. J. Engines June 2011 4:450–466; doi:10.4271/2011-01-0403  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Riccardo Meldolesi, George Bailey, Clive Lacy, Ian Gilbert, Jean-Pierre Pirault, and Anthony Perkins  
Scuderi Split Cycle Fast Acting Valvetrain: Architecture and Development  
SAE Int. J. Engines June 2011 4:467–481; doi:10.4271/2011-01-0404  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Dario Buono, Elio Iarrobino, and Adolfo Senatore  
Optical Piston Temperature Measurement in an Internal Combustion Engine  
SAE Int. J. Engines June 2011 4:482–497; doi:10.4271/2011-01-0407  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Ajay Joshi, Sougato Chatterjee, and Andrew Walker  
An Evaluation of Particle Size Distributions and Particle Number-Based Reductions from Various PM Emission Control Technologies  
SAE Int. J. Engines June 2011 4:498–507; doi:10.4271/2011-01-0600  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Bettina Baier, Klaus Schrewe, and Bernd Maurer  
Two-Stage Electro Thermal Supported HC (Hydro Carbon) Conversion  
SAE Int. J. Engines June 2011 4:508–514; doi:10.4271/2011-01-0601  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Hiroshi Oki, Preechar Karin, and Katsunori Hanamura  
Visualization of Oxidation of Soot Nanoparticles Trapped on a Diesel Particulate Membrane Filter  
SAE Int. J. Engines June 2011 4:515–526; doi:10.4271/2011-01-0602  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Shingo Iwasaki, Takashi Mizutani, Yukio Miyairi, Kazuya Yuuki, and Mikio Makino  
New Design Concept for Diesel Particulate Filter  
SAE Int. J. Engines June 2011 4:527–536; doi:10.4271/2011-01-0603  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Dimitrios Zarvalis, Nickolas Vlachos, Ludwig Buegler, Georg Seewald, Peter Prenninger, and Athanasios Konstandopoulos  
A Metal Fibrous Filter for Diesel Hybrid Vehicles  
SAE Int. J. Engines June 2011 4:537–552; doi:10.4271/2011-01-0604  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Dimitrios Zarvalis, Alexandra Zygogianni, Souzana Lorentzou, Christopher Severin, Markus Schoenen, Raimund Vedder, Michael Fiebig, Jacques Lavy, Stephane Zinola, and  
Performance Assessment of a Multi-Functional Reactor Under Conventional and Advanced Combustion Diesel Engine Exhaust Conditions  
SAE Int. J. Engines June 2011 4:553–568; doi:10.4271/2011-01-0606  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Takahiro Sano, Takeyuki Nakasone, Takeshi Katagiri, and Yutaka Okamoto  
A Study on Wear Progress of Plain Bearing under Mixed Lubrication Condition  
SAE Int. J. Engines June 2011 4:569–580; doi:10.4271/2011-01-0609  
[Abstract](#) [Full Text \(PDF\)](#)
- ☐ Georgios Livanos  
Development of a Simplified Instantaneous Friction Model of the Piston-

Crank–Slider Mechanism of Internal Combustion Engines  
SAE Int. J. Engines June 2011 4:581–596; doi:10.4271/2011-01-0612  
[Abstract](#) [Full Text \(PDF\)](#)

M. Matti Maricq, Joseph Szente, Michael Loos, and Rainer Vogt  
Motor Vehicle PM Emissions Measurement at LEV III Levels  
SAE Int. J. Engines June 2011 4:597–609; doi:10.4271/2011-01-0623  
[Abstract](#) [Full Text \(PDF\)](#)

Qiang Wei and Scott Porter  
Evaluation of Solid Particle Emissions from Hybrid and Conventional Gasoline Vehicles  
SAE Int. J. Engines June 2011 4:610–618; doi:10.4271/2011-01-0625  
[Abstract](#) [Full Text \(PDF\)](#)

Pierre Solard, Alain Maiboom, and Xavier Tauzia  
Experimental Study of Intake Conditions and Injection Strategies Influence on PM Emission and Engine Efficiency for Stoichiometric Diesel Combustion  
SAE Int. J. Engines June 2011 4:619–638; doi:10.4271/2011-01-0630  
[Abstract](#) [Full Text \(PDF\)](#)

Imad A. Khalek and Thomas Bougher  
Development of a Solid Exhaust Particle Number Measurement System Using a Catalytic Stripper Technology  
SAE Int. J. Engines June 2011 4:639–649; doi:10.4271/2011-01-0635  
[Abstract](#) [Full Text \(PDF\)](#)

Michael Hedge, Phillip Weber, Jess Gingrich, Terrence Alger, and Imad Khalek  
Effect of EGR on Particle Emissions from a GDI Engine  
SAE Int. J. Engines June 2011 4:650–666; doi:10.4271/2011-01-0636  
[Abstract](#) [Full Text \(PDF\)](#)

Jacob John Swanson, Winthrop Watts, Jr., and David Kittelson  
Diesel Exhaust Aerosol Measurements Using Air–Ejector and Porous Wall Dilution Techniques  
SAE Int. J. Engines June 2011 4:667–676; doi:10.4271/2011-01-0637  
[Abstract](#) [Full Text \(PDF\)](#)

Terrence Alger, Jess Gingrich, Barrett Mangold, and Charles Roberts  
A Continuous Discharge Ignition System for EGR Limit Extension in SI Engines  
SAE Int. J. Engines June 2011 4:677–692; doi:10.4271/2011-01-0661  
[Abstract](#) [Full Text \(PDF\)](#)

Danghe Shi, Xinran (Sharon) Xiao, Wei Wu, Xiaosong Huang, and Hamid Kia  
Stress Analysis of the Separator in a Lithium–Ion Battery  
SAE Int. J. Engines June 2011 4:693–702; doi:10.4271/2011-01-0670  
[Abstract](#) [Full Text \(PDF\)](#)

Ming–Chia Lai, Yi Zheng, Xing–Bin Xie, Seoksu Moon, Zunping Liu, Jian Gao, Xusheng Zhang, Kamel Fezzaa, Jin Wang, and Junmei Shi  
Characterization of the Near–Field Spray and Internal Flow of Single–Hole and Multi–Hole Sac Nozzles using Phase Contrast X–Ray Imaging and CFD  
SAE Int. J. Engines June 2011 4:703–719; doi:10.4271/2011-01-0681  
[Abstract](#) [Full Text \(PDF\)](#)

Lucio Postriotti, Michele Battistoni, Carmine Ungaro, and Alessandro Mariani  
Analysis of Diesel Spray Momentum Flux Spatial Distribution  
SAE Int. J. Engines June 2011 4:720–736; doi:10.4271/2011-01-0682  
[Abstract](#) [Full Text \(PDF\)](#)

Junyong Lee, Namho Kim, Hyowon Lee, and Kyoungdoug Min  
The Measurement of Penetration Length of Diesel Spray by Using Background Oriented Schlieren Technique  
SAE Int. J. Engines June 2011 4:737–746; doi:10.4271/2011-01-0684  
[Abstract](#) [Full Text \(PDF\)](#)

Alessandro Montanaro, Luigi Allocca, Daniele Ettore, Tommaso Lucchini, Federico Brusiani, and Giulio Cazzoli  
Experimental Characterization of High–Pressure Impinging Sprays for CFD Modeling of GDI Engines  
SAE Int. J. Engines June 2011 4:747–763; doi:10.4271/2011-01-0685  
[Abstract](#) [Full Text \(PDF\)](#)

Lyle M. Pickett, Julien Manin, Caroline L. Genzale, Dennis L. Siebers, Mark P. B. Musculus, and Cherian A. Idicheria  
Relationship Between Diesel Fuel Spray Vapor Penetration/Dispersion and Local Fuel Mixture Fraction  
SAE Int. J. Engines June 2011 4:764–799; doi:10.4271/2011-01-0686  
[Abstract](#) [Full Text \(PDF\)](#)

Peter Hottenbach, Thorsten Brands, and Gerd Grunefeld  
An Experimental Investigation on the Evaporation Characteristics of a

## Two-Component Fuel in Diesel-Like Sprays

SAE Int. J. Engines June 2011 4:800-812; doi:10.4271/2011-01-0688

[Abstract](#) [Full Text \(PDF\)](#) Indranil Brahma

Development of Dynamic Constraint Models for a Model Based Transient Calibration Process

SAE Int. J. Engines June 2011 4:813-827; doi:10.4271/2011-01-0691

[Abstract](#) [Full Text \(PDF\)](#) Yue-Yun Wang, Yongsheng He, and Sai RajagopalanDesign of Engine-Out Virtual NO<sub>x</sub> Sensor Using Neural Networks and Dynamic System Identification

SAE Int. J. Engines June 2011 4:828-836; doi:10.4271/2011-01-0694

[Abstract](#) [Full Text \(PDF\)](#) Darrell Robinette and Michael Powell

Optimizing 12 Volt Start - Stop for Conventional Powertrains

SAE Int. J. Engines June 2011 4:837-849; doi:10.4271/2011-01-0699

[Abstract](#) [Full Text \(PDF\)](#) Alexander Darlington, Nick Collings, and Keith Glover

Diesel Cylinder Charge Properties: Feed-Forward Control and Cycle-by-Cycle Analysis Using an In-Cylinder Gas Sampling System

SAE Int. J. Engines June 2011 4:850-860; doi:10.4271/2011-01-0709

[Abstract](#) [Full Text \(PDF\)](#) Zhijian James Wu and Bryon Wasacz

Estimation of Individual Cylinder Fuel Air Ratios from a Switching or Wide Range Oxygen Sensor for Engine Control and On-Board Diagnosis

SAE Int. J. Engines June 2011 4:861-873; doi:10.4271/2011-01-0710

[Abstract](#) [Full Text \(PDF\)](#) Norbert Mueller, Steffen Strauss, Stefan Tumback, Guo-Chang Goh, and Ansgar Christ

Next Generation Engine Start/Stop Systems: "FreeWheeling"

SAE Int. J. Engines June 2011 4:874-887; doi:10.4271/2011-01-0712

[Abstract](#) [Full Text \(PDF\)](#) Hai Xu, Avinash Singh, Don Maddock, Ahmet Kahraman, and Joshua Hurley

Thermal Mapping of an Automotive Rear Drive Axle

SAE Int. J. Engines June 2011 4:888-901; doi:10.4271/2011-01-0718

[Abstract](#) [Full Text \(PDF\)](#) Thorsten Boger, Suhao He, Thomas Collins, Achim Heibel, Douglas Beall, and Christophe Remy

A Next Generation Cordierite Diesel Particle Filter with Significantly Reduced Pressure Drop

SAE Int. J. Engines June 2011 4:902-912; doi:10.4271/2011-01-0813

[Abstract](#) [Full Text \(PDF\)](#) Nicholas Rakovec, Sandeep Viswanathan, and David Foster

Micro-scale Study of DPF Permeability as a Function of PM Loading

SAE Int. J. Engines June 2011 4:913-921; doi:10.4271/2011-01-0815

[Abstract](#) [Full Text \(PDF\)](#) Pouria Mehrani and Harry Watson

Geometric Effect of 3D Turbulent Field on Cyclic Variability

SAE Int. J. Engines June 2011 4:922-930; doi:10.4271/2011-01-0824

[Abstract](#) [Full Text \(PDF\)](#) Jessica L. Brakora, Youngchul Ra, and Rolf D. Reitz

Combustion Model for Biodiesel-Fueled Engine Simulations using Realistic Chemistry and Physical Properties

SAE Int. J. Engines June 2011 4:931-947; doi:10.4271/2011-01-0831

[Abstract](#) [Full Text \(PDF\)](#) Cecile Pera and Christian Angelberger

Large Eddy Simulation of a Motored Single-Cylinder Engine Using System Simulation to Define Boundary Conditions: Methodology and Validation

SAE Int. J. Engines June 2011 4:948-963; doi:10.4271/2011-01-0834

[Abstract](#) [Full Text \(PDF\)](#) Jaesung Kwon, Jaeyeob Seo, Dongkyu Lee, and Kang Y. Huh

Zero-Dimensional Simulation of Diesel Engine Combustion and Emissions Based on CMC Model and Skeletal Reaction Mechanism

SAE Int. J. Engines June 2011 4:964-975; doi:10.4271/2011-01-0845

[Abstract](#) [Full Text \(PDF\)](#) Marlan Perumal and Gareth Floweday

An Investigation of Cascading Autoignition and Octane Number using a Multi-zone Model of the CFR Engine

SAE Int. J. Engines June 2011 4:976-997; doi:10.4271/2011-01-0850

[Abstract](#) [Full Text \(PDF\)](#)

- Alexander T. Zaremba and Mark Jennings  
Purge Modeling for New Propulsion System Technology Applications  
SAE Int. J. Engines June 2011 4:998–1006; doi:10.4271/2011-01-0858  
[Abstract](#) [Full Text \(PDF\)](#)
- Neeraj Shidore, Eric Rask, Ram Vijayagopal, Forrest Jehlik, Jason Kwon, and Mehrdad Ehsani  
PHEV Energy Management Strategies at Cold Temperatures with Battery Temperature Rise and Engine Efficiency Improvement Considerations  
SAE Int. J. Engines June 2011 4:1007–1019; doi:10.4271/2011-01-0872  
[Abstract](#) [Full Text \(PDF\)](#)
- Jerome Meisel  
Kinematic Study of the GM Front–Wheel Drive Two–Mode Transmission and the Toyota Hybrid System THS–II Transmission  
SAE Int. J. Engines June 2011 4:1020–1034; doi:10.4271/2011-01-0876  
[Abstract](#) [Full Text \(PDF\)](#)
- Qiuming Gong, Shawn Midlam–Mohler, Vincenzo Marano, and Giorgio Rizzoni  
An Iterative Markov Chain Approach for Generating Vehicle Driving Cycles  
SAE Int. J. Engines June 2011 4:1035–1045; doi:10.4271/2011-01-0880  
[Abstract](#) [Full Text \(PDF\)](#)
- Yan Meng, Mark Jennings, Poyu Tsou, David Brigham, Douglas Bell, and Ciro Soto  
Test Correlation Framework for Hybrid Electric Vehicle System Model  
SAE Int. J. Engines June 2011 4:1046–1057; doi:10.4271/2011-01-0881  
[Abstract](#) [Full Text \(PDF\)](#)
- Hong Yang, Anthony Smith, Shawn Swales, and Joel Maguire  
Development of Two–Mode Hybrid Powertrain with Enhanced EV Capability  
SAE Int. J. Engines June 2011 4:1058–1070; doi:10.4271/2011-01-0883  
[Abstract](#) [Full Text \(PDF\)](#)
- Koichi Hayasaki, Tatsuo Abe, Kaori Tanishima, and Keisuke Chujo  
Development of a Parallel Hybrid System for RWD Vehicles  
SAE Int. J. Engines June 2011 4:1071–1087; doi:10.4271/2011-01-0884  
[Abstract](#) [Full Text \(PDF\)](#)
- Tae–Kyung Lee, Zevi Baraket, Timothy Gordon, and Zoran Filipi  
Characterizing One–day Missions of PHEVs Based on Representative Synthetic Driving Cycles  
SAE Int. J. Engines June 2011 4:1088–1101; doi:10.4271/2011-01-0885  
[Abstract](#) [Full Text \(PDF\)](#)
- Michael A. Miller, Alan G. Holmes, Brendan M. Conlon, and Peter J. Savagian  
The GM “Voltec” 4ET50 Multi–Mode Electric Transaxle  
SAE Int. J. Engines June 2011 4:1102–1114; doi:10.4271/2011-01-0887  
[Abstract](#) [Full Text \(PDF\)](#)
- Benjamin Lawler, Elliott Ortiz–Soto, Rohit Gupta, Huei Peng, and Zoran S. Filipi  
Hybrid Electric Vehicle Powertrain and Control Strategy Optimization to Maximize the Synergy with a Gasoline HCCI Engine  
SAE Int. J. Engines June 2011 4:1115–1126; doi:10.4271/2011-01-0888  
[Abstract](#) [Full Text \(PDF\)](#)
- Karthik V. Puduppakkam, Long Liang, Chitralkumar V. Naik, Ellen Meeks, Sage L. Kokjohn, and Rolf D. Reitz  
Use of Detailed Kinetics and Advanced Chemistry–Solution Techniques in CFD to Investigate Dual–Fuel Engine Concepts  
SAE Int. J. Engines June 2011 4:1127–1149; doi:10.4271/2011-01-0895  
[Abstract](#) [Full Text \(PDF\)](#)
- Tatsuya Kuboyama, Yasuo Moriyoshi, Koichi Hatamura, Junichi Takanashi, Yasuhiro Urata, and Toshio Yamada  
Extension of Operating Range of a Multi–Cylinder Gasoline HCCI Engine using the Blowdown Supercharging System  
SAE Int. J. Engines June 2011 4:1150–1168; doi:10.4271/2011-01-0896  
[Abstract](#) [Full Text \(PDF\)](#)
- John E. Dec, Yi Yang, and Nicolas Dronniou  
Boosted HCCI – Controlling Pressure–Rise Rates for Performance Improvements using Partial Fuel Stratification with Conventional Gasoline  
SAE Int. J. Engines June 2011 4:1169–1189; doi:10.4271/2011-01-0897  
[Abstract](#) [Full Text \(PDF\)](#)
- Hanho Yun, Nicole Wermuth, and Paul Najt  
High Load HCCI Operation Using Different Valving Strategies in a Naturally–Aspirated Gasoline HCCI Engine  
SAE Int. J. Engines June 2011 4:1190–1201; doi:10.4271/2011-01-0899  
[Abstract](#) [Full Text \(PDF\)](#)

- Jonas Ulfvik, Matthias Achilles, Martin Tuner, Bengt Johansson, Jesper Ahrenfeldt, Franz Xaver Schauer, and Ulrik Henriksen  
SI Gas Engine: Evaluation of Engine Performance, Efficiency and Emissions Comparing Producer Gas and Natural Gas  
SAE Int. J. Engines June 2011 4:1202-1209; doi:10.4271/2011-01-0916  
[Abstract](#) [Full Text \(PDF\)](#)
- Mark A. Gehringer and Eric J. Defenderfer  
Road Load Simulation Testing for Improved Assessment of Powertrain Noise and Vibration  
SAE Int. J. Engines June 2011 4:1210-1216; doi:10.4271/2011-01-0924  
[Abstract](#) [Full Text \(PDF\)](#)
- Heather Konet, Manabu Sato, Todd Schiller, Andy Christensen, Toshiyuki Tabata, and Tsuyoshi Kanuma  
Development of Approaching Vehicle Sound for Pedestrians (VSP) for Quiet Electric Vehicles  
SAE Int. J. Engines June 2011 4:1217-1224; doi:10.4271/2011-01-0928  
[Abstract](#) [Full Text \(PDF\)](#)
- Ryo Kitabatake, Akihiko Minato, Naoki Inukai, and Naoki Shimazaki  
Simultaneous Improvement of Fuel Consumption and Exhaust Emissions on a Multi-Cylinder Camless Engine  
SAE Int. J. Engines June 2011 4:1225-1234; doi:10.4271/2011-01-0937  
[Abstract](#) [Full Text \(PDF\)](#)
- David Toth, Terry Shaw, Marek Wlodarczyk, and Christopher Cummings  
Cylinder Head Gasket with Integrated Combustion Pressure Sensors for Advanced Engine Controls  
SAE Int. J. Engines June 2011 4:1235-1246; doi:10.4271/2011-01-0938  
[Abstract](#) [Full Text \(PDF\)](#)
- Mohammad Pournazeri, Amir Khajepour, and Amir Fazeli  
An Efficient Lift Control Technique in Electro-hydraulic Camless Valvetrain Using Variable Speed Hydraulic Pump  
SAE Int. J. Engines June 2011 4:1247-1259; doi:10.4271/2011-01-0940  
[Abstract](#) [Full Text \(PDF\)](#)
- Jun Motosugi, Kazutaka Adachi, Hiroyuki Ashizawa, Satoru Fujimoto, and Yoshimasa Ochi  
Development of a Slip Control System for RWD Hybrid Vehicles using Integrated Motor-Clutch Control  
SAE Int. J. Engines June 2011 4:1260-1266; doi:10.4271/2011-01-0945  
[Abstract](#) [Full Text \(PDF\)](#)
- Aldo Sornioti, Saviyen Subramanian, Andy Turner, Carlo Cavallino, Fabio Viotto, and Stefano Bertolotto  
Selection of the Optimal Gearbox Layout for an Electric Vehicle  
SAE Int. J. Engines June 2011 4:1267-1280; doi:10.4271/2011-01-0946  
[Abstract](#) [Full Text \(PDF\)](#)
- John Arata, Michael J. Leamy, Jerome Meisel, Kenneth Cunefare, and David Taylor  
Backward-Looking Simulation of the Toyota Prius and General Motors Two-Mode Power-Split HEV Powertrains  
SAE Int. J. Engines June 2011 4:1281-1297; doi:10.4271/2011-01-0948  
[Abstract](#) [Full Text \(PDF\)](#)
- Xuxian Hou, William S. Epling, Steven J. Schmiege, and Wei Li  
Cu-Zeolite SCR Catalyst Thermal Deactivation Studied with FTIR Spatial Resolution  
SAE Int. J. Engines June 2011 4:1298-1318; doi:10.4271/2011-01-1138  
[Abstract](#) [Full Text \(PDF\)](#)
- Federico Millo, Marco Gianoglio Bernardi, and Diego Delneri  
Computational Analysis of Internal and External EGR Strategies Combined with Miller Cycle Concept for a Two Stage Turbocharged Medium Speed Marine Diesel Engine  
SAE Int. J. Engines June 2011 4:1319-1330; doi:10.4271/2011-01-1142  
[Abstract](#) [Full Text \(PDF\)](#)
- Ludek Pohorelsky, Zdenek Zak, Jan Macek, and Oldrich Vitek  
Study of Pressure Wave Supercharger Potential using a 1-D and a 0-D Approach  
SAE Int. J. Engines June 2011 4:1331-1353; doi:10.4271/2011-01-1143  
[Abstract](#) [Full Text \(PDF\)](#)
- Ian George Mervyn Thompson, Stephen Spence, Charles McCartan, Jonathan Talbot-Weiss, and David Thornhill  
One Dimensional Modeling of a Turbogenerating Spark Ignition Engine Operating on Biogas  
SAE Int. J. Engines June 2011 4:1354-1364; doi:10.4271/2011-01-1144  
[Abstract](#) [Full Text \(PDF\)](#)
- Fabio Bozza, Vincenzo De Bellis, Silvia Marelli, and Massimo Capobianco  
1D Simulation and Experimental Analysis of a Turbocharger Compressor for Automotive Engines under Unsteady Flow Conditions  
SAE Int. J. Engines June 2011 4:1365-1384; doi:10.4271/2011-01-1147

[Abstract](#) [Full Text \(PDF\)](#)

- Ho Teng  
 A Thermodynamic Model for a Single Cylinder Engine with Its Intake/Exhaust Systems Simulating a Turbo-Charged V8 Diesel Engine  
 SAE Int. J. Engines June 2011 4:1385-1392; doi:10.4271/2011-01-1149  
[Abstract](#) [Full Text \(PDF\)](#)
- James C. Peyton Jones and Mert Geveci  
 Smart Sensing and Decomposition of NO<sub>x</sub> and NH<sub>3</sub> Components from Production NO<sub>x</sub> Sensor Signals  
 SAE Int. J. Engines June 2011 4:1393-1401; doi:10.4271/2011-01-1157  
[Abstract](#) [Full Text \(PDF\)](#)
- Z. Gerald Liu, Nathan A. Ottinger, John C. Wall, and Patrick Barge  
 Measurement of Dioxin and Furan Emissions during Transient and Multi-Mode Engine Operation  
 SAE Int. J. Engines June 2011 4:1402-1411; doi:10.4271/2011-01-1158  
[Abstract](#) [Full Text \(PDF\)](#)
- Youngchul Ra, Paul Loeper, Rolf Reitz, Michael Andrie, Roger Krieger, David Foster, Russ Durrett, Venkatesh Gopalakrishnan, Alejandro Plazas, Richard Peterson, and Pa  
 Study of High Speed Gasoline Direct Injection Compression Ignition (GDICI) Engine Operation in the LTC Regime  
 SAE Int. J. Engines June 2011 4:1412-1430; doi:10.4271/2011-01-1182  
[Abstract](#) [Full Text \(PDF\)](#)
- William F. Northrop, Dennis Assanis, and Stani Bohac  
 Evaluation of Diesel Oxidation Catalyst Conversion of Hydrocarbons and Particulate Matter from Premixed Low Temperature Combustion of Biodiesel  
 SAE Int. J. Engines June 2011 4:1431-1444; doi:10.4271/2011-01-1186  
[Abstract](#) [Full Text \(PDF\)](#)
- Cai Shen, Way Lee Cheng, and Chia-Fon Lee  
 Micro-Explosion Modeling of Biofuel-Diesel Blended Droplets  
 SAE Int. J. Engines June 2011 4:1445-1454; doi:10.4271/2011-01-1189  
[Abstract](#) [Full Text \(PDF\)](#)
- Walter Piock, Guy Hoffmann, Axel Berndorfer, Patrick Salemi, and Bernd Fusshoeller  
 Strategies Towards Meeting Future Particulate Matter Emission Requirements in Homogeneous Gasoline Direct Injection Engines  
 SAE Int. J. Engines June 2011 4:1455-1468; doi:10.4271/2011-01-1212  
[Abstract](#) [Full Text \(PDF\)](#)
- Mayank Mittal, David L.S. Hung, Guoming Zhu, and Harold Schock  
 High-Speed Flow and Combustion Visualization to Study the Effects of Charge Motion Control on Fuel Spray Development and Combustion Inside a Direct-Injection Spark-Ignition Engine  
 SAE Int. J. Engines June 2011 4:1469-1480; doi:10.4271/2011-01-1213  
[Abstract](#) [Full Text \(PDF\)](#)
- James Smith, Gerald Szekely, Jr, Arun Solomon, and Scott Parrish  
 A Comparison of Spray-Guided Stratified-Charge Combustion Performance with Outwardly-Opening Piezo and Multi-Hole Solenoid Injectors  
 SAE Int. J. Engines June 2011 4:1481-1497; doi:10.4271/2011-01-1217  
[Abstract](#) [Full Text \(PDF\)](#)
- Paul Whitaker, Paul Kapus, Martin Ogris, and Peter Hollerer  
 Measures to Reduce Particulate Emissions from Gasoline DI engines  
 SAE Int. J. Engines June 2011 4:1498-1512; doi:10.4271/2011-01-1219  
[Abstract](#) [Full Text \(PDF\)](#)
- Mark S. Peckham, Alex Finch, and Bruce Campbell  
 Analysis of Transient HC, CO, NO<sub>x</sub> and CO<sub>2</sub> Emissions from a GDI Engine using Fast Response Gas Analyzers  
 SAE Int. J. Engines June 2011 4:1513-1522; doi:10.4271/2011-01-1227  
[Abstract](#) [Full Text \(PDF\)](#)
- Gang Chen, Kevin Baldwin, and Edward Czarnecki  
 Real Time Virtual Temperature Sensor for Transmission Clutches  
 SAE Int. J. Engines June 2011 4:1523-1535; doi:10.4271/2011-01-1230  
[Abstract](#) [Full Text \(PDF\)](#)
- Anand K. Jammulamadaka and Prajal Gaokar  
 Spin Loss Computation for Open Clutch Using CFD  
 SAE Int. J. Engines June 2011 4:1536-1544; doi:10.4271/2011-01-1238  
[Abstract](#) [Full Text \(PDF\)](#)
- Achuth Munnannur, Christopher M. Cremeens, and Z. Gerald Liu  
 Development of Flow Uniformity Indices for Performance Evaluation of Aftertreatment Systems



SAE Int. J. Engines June 2011 4:1545–1555; doi:10.4271/2011-01-1239  
[Abstract](#) [Full Text \(PDF\)](#)

- Christopher Turner, David Thornhill, Geoffrey McCullough, and Samir Patel  
 Comparison of Experimental PIV Data and CFD Simulations for Flow in a Diesel Particulate Filter Inlet Diffuser  
 SAE Int. J. Engines June 2011 4:1556–1570; doi:10.4271/2011-01-1241  
[Abstract](#) [Full Text \(PDF\)](#)
- Grigorios C. Koltsakis, Zissis Samaras, Apostolos Karvountzis–Kontakiotis, Theodora Zacharopoulou, and Onoufriou Haralampous  
 Implications of Engine Start–Stop on After–Treatment Operation  
 SAE Int. J. Engines June 2011 4:1571–1585; doi:10.4271/2011-01-1243  
[Abstract](#) [Full Text \(PDF\)](#)
- Francois Lafossas, Yoshifumi Matsuda, Ali Mohammadi, Akinori Morishima, Mikio Inoue, Maria Kalogirou, Grigorios Koltsakis, and Zissis Samaras  
 Calibration and Validation of a Diesel Oxidation Catalyst Model: from Synthetic Gas Testing to Driving Cycle Applications  
 SAE Int. J. Engines June 2011 4:1586–1606; doi:10.4271/2011-01-1244  
[Abstract](#) [Full Text \(PDF\)](#)
- Johan Sjöholm, Rikard Wellander, Henrik Bladh, Mattias Richter, Per–Erik Bengtsson, Marcus Alden, Ulf Aronsson, Clement Chartier, Oivind Andersson, and Bengt Johans  
 Challenges for In–Cylinder High–Speed Two–Dimensional Laser–Induced Incandescence Measurements of Soot  
 SAE Int. J. Engines June 2011 4:1607–1622; doi:10.4271/2011-01-1280  
[Abstract](#) [Full Text \(PDF\)](#)
- Benjamin Petersen and Paul Miles  
 PIV Measurements in the Swirl–Plane of a Motored Light–Duty Diesel Engine  
 SAE Int. J. Engines June 2011 4:1623–1641; doi:10.4271/2011-01-1285  
[Abstract](#) [Full Text \(PDF\)](#)
- Douglas Heim and Jaal Ghandhi  
 A Detailed Study of In–Cylinder Flow and Turbulence using PIV  
 SAE Int. J. Engines June 2011 4:1642–1668; doi:10.4271/2011-01-1287  
[Abstract](#) [Full Text \(PDF\)](#)
- Jordan Snyder, Nicolas Dronniou, John Dec, and Ronald Hanson  
 PLIF Measurements of Thermal Stratification in an HCCI Engine under Fired Operation  
 SAE Int. J. Engines June 2011 4:1669–1688; doi:10.4271/2011-01-1291  
[Abstract](#) [Full Text \(PDF\)](#)
- Christoph Knappe, Peter Andersson, Martin Algotsson, Mattias Richter, Johannes Linden, Marcus Alden, Martin Tuner, and Bengt Johansson  
 Laser–Induced Phosphorescence and the Impact of Phosphor Coating Thickness on Crank–Angle Resolved Cylinder Wall Temperatures  
 SAE Int. J. Engines June 2011 4:1689–1698; doi:10.4271/2011-01-1292  
[Abstract](#) [Full Text \(PDF\)](#)
- Robert Cooley, Davide Vezza, Shawn Midlam–Mohler, and Giorgio Rizzoni  
 Model Based Engine Control Development and Hardware–in–the–Loop Testing for the EcoCAR Advanced Vehicle Competition  
 SAE Int. J. Engines June 2011 4:1699–1707; doi:10.4271/2011-01-1297  
[Abstract](#) [Full Text \(PDF\)](#)
- Akihiko Minato and Naoki Shimazaki  
 Development of the Total Engine Simulation System (TESS) and Its Application for System Investigation of Future Diesel Engine  
 SAE Int. J. Engines June 2011 4:1708–1723; doi:10.4271/2011-01-1298  
[Abstract](#) [Full Text \(PDF\)](#)
- Jiamei Deng, Bastian Maass, Richard Stobart, Edward Winward, and Zhijia Yang  
 Accurate and Continuous Fuel Flow Rate Measurement Prediction for Real Time Application  
 SAE Int. J. Engines June 2011 4:1724–1737; doi:10.4271/2011-01-1303  
[Abstract](#) [Full Text \(PDF\)](#)
- Iason Dimou, Kenneth Kar, and Wai Cheng  
 Particulate Matter Emissions from a Direct Injection Spark Ignition Engine under Cold Fast Idle Conditions for Ethanol–Gasoline Blends  
 SAE Int. J. Engines June 2011 4:1738–1746; doi:10.4271/2011-01-1305  
[Abstract](#) [Full Text \(PDF\)](#)
- Karin Fröjd and Fabian Mauss  
 A Three–Parameter Transient 1D Catalyst Model  
 SAE Int. J. Engines June 2011 4:1747–1763; doi:10.4271/2011-01-1306  
[Abstract](#) [Full Text \(PDF\)](#)
- David Marie–Luce, Damiano Di–penta, Pierre–Alexandre Bliman, and Michel Sorine  
 Control–Oriented Modeling of a LNT–SCR Diesel After–Treatment Architecture  
 SAE Int. J. Engines June 2011 4:1764–1775; doi:10.4271/2011-01-1307

[Abstract](#) [Full Text \(PDF\)](#)

- Ryan Schultz and Peter Meckl  
Degradation of Nonmethane Hydrocarbon Oxidation Efficiency of a Catalyzed Diesel Particulate Filter during Aging  
SAE Int. J. Engines June 2011 4:1776–1783; doi:10.4271/2011-01-1308  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Robert Cloudt and Frank Willems  
Integrated Emission Management strategy for cost-optimal engine-aftertreatment operation  
SAE Int. J. Engines June 2011 4:1784–1797; doi:10.4271/2011-01-1310  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Mojghan Naseri, Sougato Chatterjee, Mario Castagnola, Hai-Ying Chen, Joseph Fedeyko, Howard Hess, and Jianquan Li  
Development of SCR on Diesel Particulate Filter System for Heavy Duty Applications  
SAE Int. J. Engines June 2011 4:1798–1809; doi:10.4271/2011-01-1312  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Krishna Kamasamudram, Aleksey Yezerets, Xu chen, Neal Currier, Mario Castagnola, and Hai-Ying Chen  
New Insights into Reaction Mechanism of Selective Catalytic Ammonia Oxidation Technology for Diesel Aftertreatment Applications  
SAE Int. J. Engines June 2011 4:1810–1821; doi:10.4271/2011-01-1314  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Isabella Nova, Massimo Colombo, Enrico Tronconi, Volker Schmeisser, and Michel Weibel  
The NH<sub>3</sub> Inhibition Effect in the Standard SCR Reaction over a Commercial Fe-zeolite Catalyst for Diesel Exhaust Aftertreatment: An Experimental and Modeling Study  
SAE Int. J. Engines June 2011 4:1822–1838; doi:10.4271/2011-01-1319  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Amod Sagar, Alessandro Trovarelli, Marzia Casanova, and Karl Schermanz  
A New Class of Environmental Friendly Vanadate Based NH<sub>3</sub> SCR Catalysts Exhibiting Good Low Temperature Activity and High Temperature Stability  
SAE Int. J. Engines June 2011 4:1839–1849; doi:10.4271/2011-01-1331  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Rainer Immel and André Mack-Gardner  
Development and Validation of a Numerical Thermal Simulation Model for Compressed Hydrogen Gas Storage Tanks  
SAE Int. J. Engines June 2011 4:1850–1861; doi:10.4271/2011-01-1342  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Michael J. Veenstra and Bert Hobein  
On-Board Physical Based 70 MPa Hydrogen Storage Systems  
SAE Int. J. Engines June 2011 4:1862–1871; doi:10.4271/2011-01-1343  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Mitsutaka Abe, Takanori Oku, Yasuhiro Numao, Satoshi Takaichi, and Masanari Yanagisawa  
Low-Cost FC Stack Concept with Increased Power Density and Simplified Configuration Utilizing an Advanced MEA  
SAE Int. J. Engines June 2011 4:1872–1878; doi:10.4271/2011-01-1344  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Hiroyuki Imanishi, Kota Manabe, Tomoya Ogawa, and Yasuhiro Nonobe  
Development of Electric Power Control using the Capacitance Characteristics of the Fuel Cell  
SAE Int. J. Engines June 2011 4:1879–1887; doi:10.4271/2011-01-1346  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Francisco Payri, Jesús Benajes, Ricardo Novella, and Christopher Kolodziej  
Effect of Intake Oxygen Concentration on Particle Size Distribution Measurements from Diesel Low Temperature Combustion  
SAE Int. J. Engines June 2011 4:1888–1902; doi:10.4271/2011-01-1355  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Yi Yang, John Dec, Nicolas Dronniou, Magnus Sjöberg, and William Cannella  
Partial Fuel Stratification to Control HCCI Heat Release Rates: Fuel Composition and Other Factors Affecting Pre-Ignition Reactions of Two-Stage Ignition Fuels  
SAE Int. J. Engines June 2011 4:1903–1920; doi:10.4271/2011-01-1359  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Galen Ressler  
Application of System Safety Engineering Processes to Advanced Battery Safety  
SAE Int. J. Engines June 2011 4:1921–1927; doi:10.4271/2011-01-1369  
[Abstract](#) [Full Text \(PDF\)](#)

- Oliver Gross and Steven Clark  
Optimizing Electric Vehicle Battery Life through Battery Thermal Management  
SAE Int. J. Engines June 2011 4:1928–1943; doi:10.4271/2011-01-1370  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Roland Matthe, Lance Turner, and Horst Mettlach  
VOLTEC Battery System for Electric Vehicle with Extended Range  
SAE Int. J. Engines June 2011 4:1944–1962; doi:10.4271/2011-01-1373  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Ezio Mancaruso, Luigi Sequino, Bianca Maria Vaglieco, Claudio Ciaravino, andAlberto Vassallo  
Spray Formation and Combustion Analysis in an Optical Single Cylinder Engine Operating with Fresh and Aged Biodiesel  
SAE Int. J. Engines June 2011 4:1963–1977; doi:10.4271/2011-01-1381  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Clément Chartier, Oivind Andersson, Bengt Johansson, Mark Musculus, andMohan Bobba  
Effects of Post-Injection Strategies on Near-Injector Over-Lean Mixtures and Unburned Hydrocarbon Emission in a Heavy-Duty Optical Diesel Engine  
SAE Int. J. Engines June 2011 4:1978–1992; doi:10.4271/2011-01-1383  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Michael J. Tess, Chang-Wook Lee, and Rolf D. Reitz  
Diesel Engine Size Scaling at Medium Load without EGR  
SAE Int. J. Engines June 2011 4:1993–2009; doi:10.4271/2011-01-1384  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Mark Sellnau, James Sinnamon, Kevin Hoyer, and Harry Husted  
Gasoline Direct Injection Compression Ignition (GDICI) – Diesel-like Efficiency with Low CO<sub>2</sub> Emissions  
SAE Int. J. Engines June 2011 4:2010–2022; doi:10.4271/2011-01-1386  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Antonio Pires da Cruz, Jean-Pierre Dumas, and Gilles Bruneaux  
Two-Dimensional In-Cylinder Soot Volume Fractions in Diesel Low Temperature Combustion Mode  
SAE Int. J. Engines June 2011 4:2023–2047; doi:10.4271/2011-01-1390  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Marcis Jansons, Radu Florea, Kan Zha, and Elena Florea  
The Combined Effect of HCHO and C<sub>2</sub>H<sub>4</sub> Addition on Combustion in an Optically Accessible Diesel Engine Fueled with JP-8  
SAE Int. J. Engines June 2011 4:2048–2064; doi:10.4271/2011-01-1392  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Kazuhisa Inagaki, Jyunichi Mizuta, Takayuki Fuyuto, Takeshi Hashizume, Hirokazu Ito, Hiroshi Kuzuyama, Tsutomu Kawae, and Masaaki Kono  
Low Emissions and High-Efficiency Diesel Combustion Using Highly Dispersed Spray with Restricted In-Cylinder Swirl and Squish Flows  
SAE Int. J. Engines June 2011 4:2065–2079; doi:10.4271/2011-01-1393  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Yoolkoo Kim, Hyundal Park, Jeong Uk An, Tae-Suek Kan, and Joonsung Park  
Development of Nano Diamond Polymer Coating on Piston Skirt for Fuel Efficiency  
SAE Int. J. Engines June 2011 4:2080–2086; doi:10.4271/2011-01-1401  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Tao Xu, Sheng-Jaw Hwang, Chung-Yao Tang, Mikhail Ejakov, andMichael King  
An Advanced and Comprehensive CAE Approach of Piston Dynamics Studies for Piston Optimal and Robust Design  
SAE Int. J. Engines June 2011 4:2087–2099; doi:10.4271/2011-01-1404  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Fanghui Shi  
An Analysis of Floating Piston Pin  
SAE Int. J. Engines June 2011 4:2100–2105; doi:10.4271/2011-01-1407  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Andrea Catania, Roberto Finesso, Ezio Spessa, Alessandro Catanese, andGerhard Landsmann  
Combustion Prediction by a Low-Throughput Model in Modern Diesel Engines  
SAE Int. J. Engines June 2011 4:2106–2123; doi:10.4271/2011-01-1410  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Fan Zhang, Hongming Xu, Jun Zhang, Guohong Tian, and Gautam Kalghatgi  
Investigation into Light Duty Dieseline Fuelled Partially-Premixed Compression Ignition Engine  
SAE Int. J. Engines June 2011 4:2124–2134; doi:10.4271/2011-01-1411  
[Abstract](#) [Full Text \(PDF\)](#)

- Adrian P. Lee  
Full-Toroidal Traction Drive Variator Material and Fluid Durability  
SAE Int. J. Engines June 2011 4:2135-2141; doi:10.4271/2011-01-1424  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Satoshi Kamijo, Hideo Tomomatsu, Makoto Sawada, and Takuro Shimazu  
Development of iQ with CVT for USA  
SAE Int. J. Engines June 2011 4:2142-2147; doi:10.4271/2011-01-1425  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Cleber Augusto Celli  
The Fuel Efficiency Improvement through a Six Speed Manual  
Transmission Application in Passengers Vehicles with Low Displacement  
Engines  
SAE Int. J. Engines June 2011 4:2148-2156; doi:10.4271/2011-01-1430  
[Abstract](#) [Full Text \(PDF\)](#)
  
- Junya Watanabe, Dai Arai, Masataka Tanaka, Takeru Abe, Atsushi Ogasawara, Masahiko Tsuchiya, and Ryushi Tsubota  
Development of Dual Clutch Transmission for Large Motorcycles  
SAE Int. J. Engines June 2011 4:2157-2165; doi:10.4271/2010-32-0057  
[Abstract](#) [Full Text \(PDF\)](#)