

# **Emissions 2016**

Papers

Proceedings Volume 80

Troy, Michigan, USA  
16 - 18 May 2016

**Editors:**

**M. Nasim Uddin**

**Rafiq Uddin**

ISBN: 978-1-5108-2555-0

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2016) by Global Automotive Management Council (GAMC)  
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact Global Automotive Management Council (GAMC)  
at the address below.

Global Automotive Management Council (GAMC)  
5340 Plymouth Road, Suite 205  
Ann Arbor, Michigan, USA 48105

Phone: (734) 997-9249

Fax: (734) 786-2242

support@gamcinc.com

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: curran@proceedings.com  
Web: www.proceedings.com

# TABLE OF CONTENTS

<b>INSULATED CATALYST WITH HEAT STORAGE FOR REAL WORLD VEHICLE EMISSIONS REDUCTION</b> .....	1
<i>R. Daya, J. Hoard, M. Singh</i>	
<b>A NOVEL SAMPLE SYSTEM FOR COLLECTING SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) FROM MODERN LIGHT-DUTY VEHICLES</b> .....	24
<i>R. Fanick, S. Kroll</i>	
<b>PARTICLE MASS EMISSIONS OF A PFI D-EGR® ENGINE</b> .....	38
<i>R. Gukelberger, T. Alger, J. Gingrich, S. Almaraz</i>	
<b>SIMULATION AND ANALYSIS OF AFTER-TREATMENT SYSTEMS (ATS) FOR OPPOSED-PISTON 2 STROKE ENGINE</b> .....	55
<i>N. Nagar, A. Sharma, F. Redon, B. Sukumar, A. Walker</i>	
<b>ROLE OF CFD IN MARINE SCR SYSTEM DESIGN</b> .....	74
<i>M. Sampath, M.H. Lu, F. Lacin</i>	
<b>DEVELOPMENT OF LIGHTWEIGHT HANGER RODS FOR VEHICLE EXHAUST APPLICATIONS</b> .....	85
<i>Z. Wei, R. Barr, S. Das, D. Mellon, B. Fingland, T. Quan</i>	
<b>COST SAVING IN PRODUCT DURABILITY AND RELIABILITY VALIDATION OF VEHICLE EXHAUST PRODUCTS</b> .....	98
<i>Z. Wei, R. Voltenburg, M. Seitz, L. Luo, M. Yule, J. Hamilton, R. Rebandt, H. Sullivan</i>	
<b>WARRANTY FORECASTING AND PREDICTION BASED ON RELIABILITY MODELS</b> .....	117
<i>Z. Wei, R. Rebandt, M. Start, L. Luo, J. Hamilton, H. Sullivan</i>	
<b>MAGNETIC RESONANCE IMAGING FOR INVESTIGATING DIESEL PARTICULATE FILTERS</b> .....	132
<i>N. Ramskill, L. Gladden, A. Sederman, T.C. Watling, A.P.E. York, A. Tsolakis, J.M. Herreros, I. Lefort</i>	
<b>Author Index</b>	