

17th International Lead Conference 2011

(Pb 2011)

**Lisbon, Portugal
21-23 September 2011**

ISBN: 978-1-61839-329-6

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© (2011) by the International Lead Association (ILA)
All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact the International Lead Association (ILA)
at the address below.

International Lead Association (ILA)
17A Welbeck Way
London W1G 9YJ UK

Phone: 44 207 4998422

Fax: 44 207 4931555

enq@ila-lead.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

SESSION 1 - THE EVOLVING WORLD SCENE FOR LEAD

The World Lead Market: Facts, Fundamentals and Future	1
<i>Paul White</i>	
Characteristics of China’s Lead Industry and Lead Market Analysis	27
<i>Hu Yongda, Z. Changhai</i>	
Lead Industry in India - Emerging Scenario	36
<i>L. Pugazhenthly</i>	
The South American Lead Recycling Industry - Technological and Environmental Innovations	50
<i>Almir Dos Santos Trindade</i>	

SESSION 2 - LEGISLATIVE DRIVERS AND RESPONSIBLE CARE

REACH - Past, Present and Future	70
<i>Andy Bush</i>	
Future EU Regulatory Trends and Challenges	85
<i>Annick Carpentier</i>	
The Politics and Science of Lead Risk Assessment	98
<i>Craig Boreiko</i>	
Can Regional Recycling of ULAB Provide the Developing World with a Sustainable Solution?	107
<i>Brian Wilson</i>	

SESSION 3 - SUCCESSFUL MANAGEMENT OF HEALTH AND SAFETY

Current and Emerging Techniques for the Control of Airborne Emissions from Secondary Lead Smelters	135
<i>Russell Kemp</i>	
Importance and Uses of Biotic Ligand Model in Lead Risk Assessment	146
<i>M. Jasim Chowdhury, K. De Schampelaere, P. Van Sprang, R. Santore</i>	
Magellan – 2010/11 Learnings	159
<i>Robert Scargill, John Yeates</i>	
Critical Success Factors in Reducing Workforce Blood Lead Levels	167
<i>Andrew Gilbert</i>	

SESSION 4 - NEW AND EMERGING PRODUCTION TECHNOLOGIES

Oxygen Bottom-Blowing Lead Smelting Technology (SKS)	185
<i>Dongbo Li, Xinyu Wang, Jimu Jiang, Zhaolei Deng, Weiguo Wu</i>	
A New Hydrometallurgical Technology for Primary (and Secondary!?) Lead	216
<i>Massimo Maccagni, O. Lanzani, J. Pyatt</i>	
Secondary Materials Stream from Li-Ion Batteries Recycling Technology	227
<i>Timothy Ellis, Joshua Montenegro, Jacob Hohn</i>	

SESSION 5 - ENERGY STORAGE AND TRANSMISSION – THE FUTURE FOR LEAD

Reviewing the Future for Batteries under the EU End-of-Life Vehicles Directive	235
<i>Marcel Dutrieux</i>	
Advanced Lead-Acid Batteries – Enabling a Hybrid Revolution?	242
<i>Allan Cooper, Guy Morris, Michael Neumann, Mike Kellaway</i>	
Market Prospects for Lead-Acid Batteries and the Impact of Automotive Emissions Regulations on the Industry	260
<i>Geoffrey May</i>	

The Continuing Use of Lead Within the Cable Industry - An Industry's Response	279
<i>Kenneth Gustavsson</i>	
Author Index	