

ICBR 2011

16th International Congress for Battery Recycling ICBR 2011

September 21 – 23, 2011, Venice, Italy



Patronage:

Association of European Automotive and Industrial Battery Manufacturers (EUROBAT)

Call2Recycle®

European Battery Recycling Association (EBRA)

The European Association for Advanced Rechargeable Battery Technologies (RECHARGE)

The Rechargeable Battery Association (PRBA)





FOREWORD

PROFESSOR BRUNO SCROSATI

Chairman of
the Steering Committee
International Congress for
Battery Recycling

The International Congress for Battery Recycling is an event that cannot be missed by anyone interested in this important field and in fact, it comes punctual also this year to provide its unique forum where scientists, engineers, producers and recyclers can meet to share their views and discuss their business.

This year's edition will open with a session offering keynote speeches delivered by EU experts who will report on the legislation in force in the commission, as well as on the evolutions planned for the years to come. We will then move to a session devoted to new challenges for the battery manufacturers and recyclers. A good part of it will be devoted to the emerging systems and, in particular, to lithium batteries. Here the key question is whether these batteries, which are produced at a

rate of several billion units per year for the consumer electronics market and which soon will be scaled up to modules for electric vehicles, can be properly and profitably recycled. This quandary will be addressed in the session and further debated in the Round Table scheduled on the second day of the congress. The program will then include sessions dealing with market and collection opportunities, with the description and evaluation of recycling plants and processes in operation worldwide, all delivered by leading experts in the field.

This ICBR 2011 has an extra touch of sophistication given by the choice of its location in a city which is worldwide known for its setting and art treasures. I am sure that the participants in addition of professionally benefitting from the tech-

nical sessions of the meeting, will also enjoy strolling in the "calle", crossing the bridges and possibly, even by experiencing an exciting gondola trip on Gran Canal.

The well-known, traditional high class of the ICBR series will be kept, if not even surpassed, in this edition by the high standard of the social activities that include a super network dinner event, where the participants may enjoy excellent food and have a pleasant, relaxing site for establishing their business contacts. No doubt that ICBR 2011 will be an unforgettable event for all of us.

Welcome to ICBR 2011, welcome to romantic Venice!



KEYNOTE SPEAKERS



RUSKA KELEVSKA

European Commission
DG Environment
Unit Waste Management
Administrator
Belgium

“THE IMPORTANCE OF BATTERY RECYCLING
FOR A RESOURCE-EFFICIENT EUROPE”



IAIN JAWAD

Frost & Sullivan
Director Strategic Partnerships
United Kingdom

“THE ELECTRIC VEHICLE MEGA TREND:
REUSE AND RECYCLING TO ENSURE THE
COMPLETION OF THE ‘GREEN CAR’”



LOCATION OF THE CONGRESS



The 16th International Congress for Battery Recycling will be held from **September 21 – 23, 2011** in the beautiful Grand Hotel Excelsior in romantic Venice.

Grand Hotel Excelsior *****
Venice Lido Resort
Lungomare Marconi, 41
30126 Venezia Lido, Italy

Phone +39 041 526 02 01
Fax +39 041 526 72 76
www.hotelexcelsiorvenezia.com



The Grand Hotel Excelsior is located right on the Venice Lido Beach, 5 minutes bus drive from the water boat station "Lido".

From Marco Polo International Airport

From the Marco Polo Airport the hotel can be reached by a free hotel-shuttle-boat or by public transportation operated by "Alilaguna". At the airport, please follow the signs to the boat station of Alilaguna (ca. 7 min. walk). The boat is available on a regular basis from the airport water pier to the Santa Maria Elisabetta at Lido Stop. After about 50 minutes boat trip, please get off at the stop "Lido" and take Bus V or a taxi to the Hotel. (www.alilaguna.com)



From Santa Lucia train station

Waterbus (Vaporetto) No. 1, 51 or 82 is available on a regular basis from the waterfront outside the railway station to the Santa Maria Elisabetta stop. The hotel is just a short taxi ride from Santa Maria Elisabetta. Buses are also available.

INTERNATIONAL STEERING COMMITTEE



PROFESSOR BRUNO SCROSATI
Chairman
University La Sapienza (Rome)
Department of Chemistry
Italy



JACQUES DAVID
SCRELEC
Managing Director
France



CARL E. SMITH
Call2Recycle®
operated by RBRC
CEO/President
USA



JOHAN VAN PEPERZEEL
Van Peperzeel B.V.
Managing Director
Netherlands



DR JEAN-POL WIAUX
Chairman of the Scientific Committee
RECHARGE
Manager
Belgium



ANDREAS KREBS
Batrec Industrie AG
Managing Director
Switzerland



MIKE TAKAO
Sanyo Electric Co., Ltd.
Mobile Energy Company
Senior Manager
Japan



ALAIN VASSART
EBRA
General Secretary
Belgium



JAN BARTELS
STIBAT
Managing Director
Netherlands



JILL LEDGER
SAFT
Corporate Communication
and Investor Relations
Director
France



MARK TOMASZEWSKI
Inmetco Inc.
President
USA



GEORGIOS CHRYSOS
Stiftung GRS Batterien
Managing Director
Germany



TOSHIO MATSUOKA
Matsuoka Technical
Consultant Ltd.
Consultant
Japan



GERT-JAN VAN DER HAVE
Recycling International
Magazine
Deputy Editor
Netherlands

HOTEL ACCOMMODATION

For the participants of the congress a number of rooms are held at a special rate if you register **before August 12, 2011**. If you wish, you may also extend your stay at this lovely hotel at the same special rate.



Grand Hotel Excelsior *****

Venice Lido Resort
Lungomare Marconi, 41
30126 Venezia Lido
Italy

Phone +39 041 526 02 01
Fax +39 041 526 72 76
www.hotelexcelsiorvenezia.com

(congress place)



CHARMING VENICE

The city of Venice is simply stunning and completely unique. It was founded more than 1,500 years ago. The city stretches across 117 small islands and is linked by a series of over 150 canals, 400 bridges and many ancient pavements. It has a population of 272,000 inhabitants.

The historic city centre of Venice is divided into six quarters (sestieri) – Cannaregio, Castello, Dorsoduro, San Marco, San Polo and Santa Croce.

In 1866, Venice became part of Italy. It is now one of Italy's most popular tourist's destinations, due to its romantic canal, very old churches and beautiful palazzi. Many people consider Venice – along with Paris – to be one of the most romantic cities in the world. Today there are numerous attractions

in Venice, such as St Mark's Basilica, the Grand Canal and the Piazza San Marco, to name a few. Furthermore, the Lido di Venezia (conference place) is a popular international luxury destination, attracting thousands of actors, celebrities and mainly people in the cinematic industry.

The Rialto Bridge is Venice's most famous bridge. This grand stone arch is the oldest of three bridges that span the Grand Canal and is an iconic symbol of Venice. Water is the main form of transportation to and around Venice and remember the only way you can directly reach Venice hotels is by water taxi. Venice is one of the most important tourist destinations in the world, due to the city being one of the world's greatest and most beautiful cities of arts.

www.venice.world-guides.com



CONGRESS PROGRAM ICBR 2011

WEDNESDAY, SEPTEMBER 21, 2011

08.00 – 09.45 **Registration, welcome coffee and tea**

09.45 – 10.00 "Welcome and Introduction"
Prof. Bruno Scrosati, Chairman of the Steering Committee

10.00 – 12.00 **KEYNOTE SPEAKERS**

"Welcome Address"
Opening Speaker

"The importance of battery recycling for a resource-efficient Europe"
Ruska Kelevska, European Commission, Belgium

"The electric vehicle mega trend: Reuse and recycling to ensure the completion of the 'Green Car'"
Iain Jawad, Frost & Sullivan, United Kingdom

12.00 – 13.30 **Lunch in the exhibition area**

Session 1: **Legislative, regulatory and market update**
Session Chairman: **Carl E. Smith, Call2Recycle®, USA**

13.30 – 14.00 "Progress on safety issues and certification of the battery recycling value chain"
Dr Alain Vassart, EBRA, Belgium

14.00 – 14.30 "Review of regulations affecting the transport of waste batteries"
Dr Marco Ottaviani, ANIE-CSI, Italy

14.30 – 15.00 "The contribution of advanced rechargeable batteries to a resource efficient society"
Dr Jean-Pol Wiaux, RECHARGE, Belgium

15.00 – 15.30 **Coffee break in the exhibition area**

Session 2: **Fast developing markets and collection opportunities**
Session Chairman: **Johan van Peperzeel, Van Peperzeel B.V., Netherlands**

15.30 – 16.00 "New technologies require faster feedback loop"
Alfons Westgeest and Mario Natalucci, EUROBAT, Belgium

16.00 – 16.30 "Battery recycling and the recovery of 'critical materials'"
Dr Adrian Chapman, Oakdene Hollins Ltd, United Kingdom

16.30 – 17.00 "North American battery recycling legislative update"
Carl E. Smith, Call2Recycle®, USA

17.00 – 17.30 "European platform for registration, reporting and CRO services"
Jan Bartels, STIBAT, Netherlands

19.30 **Cocktail reception sponsored by  RECHARGE**

20.00 **Networking dinner**

CONGRESS PROGRAM ICBR 2011

THURSDAY, SEPTEMBER 22, 2011

Session 3: Reports on member states collection programs **Session Chairman: Gerf-Jan van der Have, Recycling International Magazine, Netherlands**

- 09.00 – 09.30 "Compliance and collection system in operation in Ireland since 2008"
Sandra Hopkins, WEEE Ireland, Ireland
- 09.30 – 10.00 "2010 first year of implementation of polish battery act and what's ahead"
Michal Korzowicz, REBA Organizacja Odzysku S.A., Poland
- 10.00 – 10.30 "Country report of collection scheme for portable batteries and nationwide take back system for industrial battery"
Dr Imke Schneider and Imke May, Stiftung GRS Batterien, Germany
- 10.30 – 11.00 Coffee break in the exhibition area**

Session 4: Consumer behaviour **Session Chairman: Dr Jean-Pol Wiaux, RECHARGE, Belgium**

- 11.00 – 11.30 "Results of the study performed in Belgium on the quantity of batteries at home (in use and in storage) and on consumer behaviour regarding collection and recycling of spent batteries"
Peter Coonen, Bebat, Belgium
- 11.30 – 12.00 "Method and equipment for evaluation on reusability of Lithium-Ion based cells taken from defective battery"
Astrid Arnberger, University of Leoben, Austria
- 12.00 – 12.30 "Mining waste for critical information – What wasted batteries tell us about consumer behaviour, product adoption and the future of recycling"
Hans Eric Melin, Optisort AB, Sweden
- 12.30 – 14.00 Lunch in the exhibition area**

Session 5: Recycling of rechargeable batteries **Session Chairman: Andreas Krebs, Batrec Industrie AG, Switzerland**

- 14.00 – 14.30 "Processing of Li-based electric vehicle batteries for maximized recycling efficiency"
Prof. Bernd Friedrich, RWTH Aachen University, Germany
- 14.30 – 15.00 "Resource savings by advanced battery recycling"
Dr Geert Van der Vorst, Ghent University, Belgium
- 15.00 – 15.30 "NiMH and Li-ion batteries recycling by PlasmaEnvi® technology"
Stanislav Micanik, SAFINA, a.s., Czech Republic

15.30 – 16.00 Coffee break in the exhibition area

16.00 – 17.00 ROUND TABLE DISCUSSION: **"Is the industry ready for the electric vehicle boom?"** **Moderator: Willy Tomboy, Toyota Motor Europe, Belgium** **Participants:** **Stephane Gillet, Renault, France** **Iain Jawad, Frost & Sullivan, United Kingdom** **Alain Vassart, EBRA, Belgium**

17.00 Cocktail reception and poster presentations in the exhibition area

Session 6: Recycling of primary batteries **Session Chairman: Dr Alain Vassart, EBRA, Belgium**

- "Recycling of spent anodes of alkaline batteries for elaboration of corrosion resistant aluminum alloys by aluminothermic reduction of ZnO"
Dr Jesus Torres Torres, CINVESTAV-IPN, Salfillo, Mexico
- "Method of effectively recycling spent lithium primary batteries at low cost"
Wook Hwan Huh, Extol Co. Ltd., Korea
- "Analysis and development of a process for depleting and recycling of lithium primary batteries"
Angelo Forestan, Fortom Chimica Srl, Italy

PLANT TOUR ICBR 2011

FRIDAY, SEPTEMBER 23, 2011



FIAMM S.P.A., VERONELLA

| | |
|----------------------|--|
| 08.00 | Departure by boat and bus to FIAMM S.p.A., Veronella |
| 11.00 | Arrival at FIAMM S.p.A., Veronella |
| 11.00 – 13.30 | Visit of the automotive batteries manufacturing plant |
| 16.30* | Arrival at Marco Polo International Airport, Venice |
| 17.30 | Arrival at the Grand Hotel Excelsior |

The FIAMM Group is an Italian multinational, specialized in consolidated sectors such as the supply of solutions for the mobility world (starter lead acid batteries for standard and micro-hybrid cars, horns, antennas and wiring) and lead-acid batteries for power backup systems and uninterruptible power supplies (UPS).

Over 3,000 employees, 11 production plants all over the world, seventy percent of its sales overseas, 60 years of experience producing and selling his products always inspired by deep knowledge of the product, proximity and ability to fulfil customer requirements, excellence and continuous improvement: a solid and competitive industrial base with a global distribution and commercial network led FIAMM to be the world leader in the market of acoustic devices, with significant position in all other sectors.

It is projected towards the future with the production of sodium batteries as well as with the study and industrialization of OLED (organic light-emitting diode) technology, now at an advanced stage. FIAMM produces and supplies sodium batteries under the Sonick brand for the telecommunications, utilities and electric mobility sectors. The specificity of these batteries guarantees optimum functionality at high temperatures and this, combined with the regular power output and excellent battery cycle capability that distinguish them even in the absence of continuous production, makes them particularly suitable for use in the renewable energy sources context (wind, solar). Empowered by this synergic and composite structure, today FIAMM has an internal structure dedicated to the supply of solutions for little energy islands and for large-scale storage, capable of following both turnkey projects and consultancy in this framework in a complete and professional manner. More information at: www.fiamm.com

* No guarantee on arrival time due to traffic conditions.

FIAMM. New lymph for mobility.



FIAMM. Innovative ideas and products for sustainable transport and renewable energy.

FIAMM studies innovative products and solutions for an eco-sustainable transport like AGM batteries, used for Stop&Start systems; Zebra Sonick batteries that power electric vehicles; FIAMM Sonick batteries for industrial utilities, smart grid and renewable energy industrial both using 100% recyc-

le sodium-nickel; and innovative acoustic devices to indicate the presence of electric vehicles. For FIAMM innovation means planning and creating solutions which do not harm the environment but which accumulate always new energy.



Group

Italian Passion
Global Energy

www.fiamm.com

Offering the best energy technology for industrial batteries, starter batteries, horns and antennas.

SIGHTSEEING TOUR ICBR 2011

FRIDAY, SEPTEMBER 23, 2011

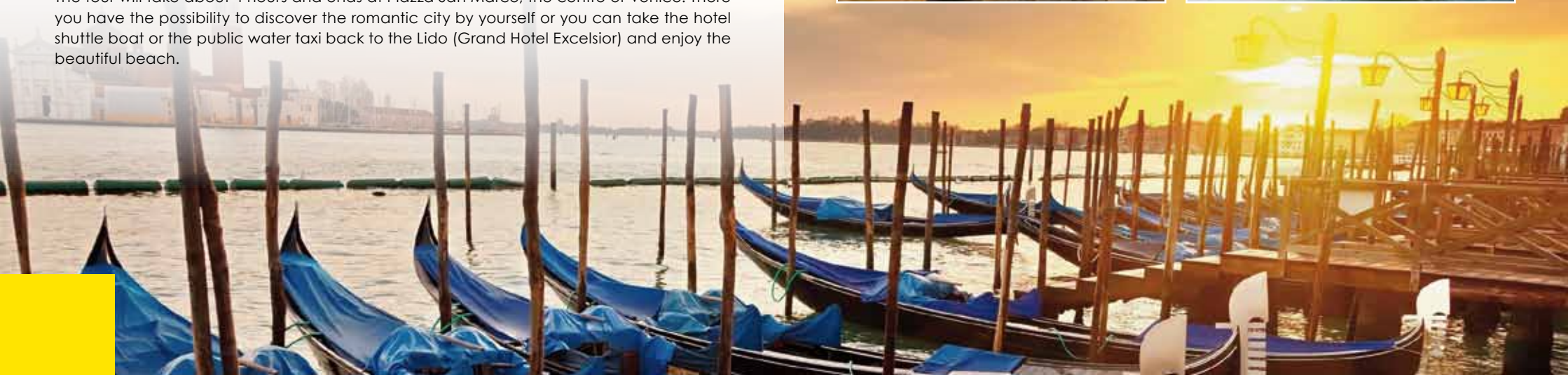
HALF-DAY LAGOON TOUR

Enjoy an interesting sightseeing boat tour around Venice and explore the little islands of the lagoon.

- 08.00** Departure from Grand Hotel Excelsior by boat
- 08.45 Arrival on the island Murano
- 09.45 Departure from Murano
- 10.20 Arrival on the island Burano
- 11.10 Departure from Burano
- 12.00** Arrival and final stop at Piazza San Marco

The main attractions of the tour are the two popular islands Murano and Burano. Murano is the island of the famous "Murano Glass". Here will be visited a private collection of glass-ware, where you have the unique opportunity to see glass masters at work. The fisherman's island Burano is renowned for lace making and the pretty colourful painted houses.

The tour will take about 4 hours and ends at Piazza San Marco, the centre of Venice. There you have the possibility to discover the romantic city by yourself or you can take the hotel shuttle boat or the public water taxi back to the Lido (Grand Hotel Excelsior) and enjoy the beautiful beach.



REGISTER BY
JULY 31, 2011
TO RECEIVE
DISCOUNT RATE

NETWORKING DINNER



Registration for the congress should be made by means of the registration form.

Participants registering and paying **before July 31, 2011** will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, proceedings and luncheons.

REGISTRATION FEES



Networking at a "traditional Venetian ball night"

All guests will enjoy a "traditional Venetian night". Come, enjoy and be surprised!

The dance, the secrets, the unknown between women and men – you won't believe!

Casanova is real on San Clemente Island on **Wednesday September 21, 2011.**



Meet friends and
business partners in a
relaxed atmosphere!



| | before July 31, 2011 | after July 31, 2011 |
|--|-------------------------|------------------------|
| Congress Fee | | |
| Fee for participants | € 1'390.– | € 1'490.– |
| Fee for speakers | € 790.– | € 890.– |
| Fee for students | € 590.– | € 690.– |
| Networking dinner (Sept. 21, 2011) | € 100.– | € 110.– |
| Plant and sightseeing tours (Sept. 23, 2011): | | |
| – FIAMM S.p.A., Veronella | € 40.– | € 50.– |
| – Sightseeing in Venice | € 40.– | € 50.– |
| Accompanying Person (spouse) | | |
| Networking dinner (Sept. 21, 2011) | € 110.– | € 120.– |

Registration on site € 100.– surcharge

Additional Proceedings

If it is not possible for you to attend the congress, you may purchase the complete proceedings at € 350.–. Participants will get the proceedings free of charge.

Payment

Payment should be made in EUR by bank transfer or by credit card. Wire payment to:

Beneficiary: ICM AG
 Bank: Neue Aargauer Bank, 5400 Baden, Switzerland
 IBAN: CH41 0588 1044 7941 7200 0
 Swift code: AHHBCH22XXX

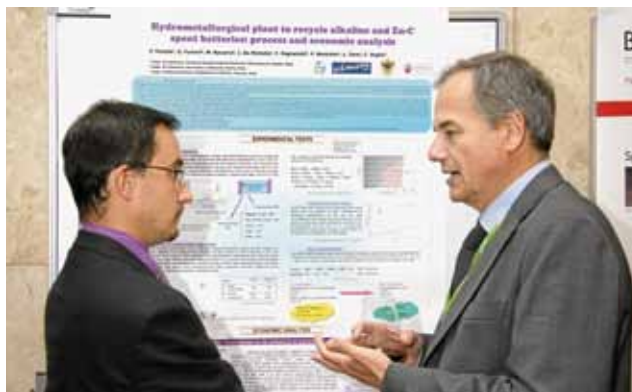
EXHIBITION AND POSTER PRESENTATIONS



A special exhibition will be organized for companies wishing to display their products or advertising materials.

The fee for an exhibition stand (2 m x 3 m) is € 2'500.- and for a poster presentation € 290.- for the full time of the conference.

Space is limited, so take the chance and book your exhibition stand or your poster presentation today!



EXHIBITION



As per May 26, 2011:

| | |
|--|--|
|  | ECO-PIL, Spain |
|  Gestion des déchets spéciaux Euro Dieuze Industrie | Euro Dieuze Industrie / Veolia Propreté, France |
|  ground floor project | LAB23, Italy |
|  | Metal Depot Zurich AG, Switzerland |
|  | Optisort AB, Sweden |
|  | Umicore Battery Recycling, Belgium |
|  | UNTHA shredding technology, Austria |
|  | Valdi, France |
|  | Xstrata Nickel International S.A., Belgium |

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WHO SHOULD ATTEND?

- Battery producers
- Recycling companies
- Waste management companies
- Battery collection schemes
- Battery collection and transportation companies
- Non ferrous metal traders
- Non ferrous metal industry
- Associations in the field of battery waste management
- Financing organization for battery recycling
- Environmental authorities
- Laboratories for material science
- Universities and research institutes
- Consultants

ORGANIZER OF ICBR 2011



JEANETTE DUTTLINGER
Congress Organizer



SIBYLLE ZIMMERLI
Congress Assistant



MIRJAM WAGNER
Congress Assistant



SUSANN SCHMID
Congress Assistant



CLAUDIA GERSTENDÖRFER
Congress Assistant



CORINNE KONRAD
Congress Assistant



SANDRA MANNHART
Congress Assistant

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„I already do have enough real estate investments.“

„I am looking for alternatives to ensure my portfolio.“



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