22nd International Congress for Battery Recycling ICBR 2017
September 20 – 22, 2017, Lisbon, Portugal

Patronage:
Association of European Automotive and Industrial Battery Manufacturers (EUROBAT)
Call2Recycle, Inc.
EUCOBAT
European Battery Recycling Association (EBRA)
European Electronics Recyclers Association (EERA)
European Portable Battery Association (EPBA)
Federal Ministry of Environment, Portugal
Portuguese Environment Agency (APA)
The Advanced Rechargeable & Lithium Batteries Association (RECHARGE)
The Rechargeable Battery Association (PRBA)
WEEE Forum
Driven by 20 years of development of the electronic equipment market, modern battery technologies are now impacted by large demand in many new application fields: the area of robots is a typical example of such a development.

The presence of emission-free cars in cities and of autonomous mobility technology also requires more batteries on board vehicles. The air transport industry is also considering electrical energy as a reliable source of power for small airplanes.

The EU 2030 Energy Strategy supports the growing role of renewable energy that will develop together with the storage of electricity to optimize the supply and demand of electrical energy.

Progress in technology also means concerns in raw materials supply. The EU circular economy policy requires waste reduction and longer service life of equipment together with re-use and recycling as a rule for tomorrow’s society. 2017 is the year of the evaluation of both the success and difficulty encountered by the implementation of the Batteries Directive 2006/66/EC. Therefore ICBR 2017 is a unique opportunity to outline the potential improvements. Nine years after its implementation in all EU Member States (2008), many questions are raised either by the legislator or by industry and by all actors of the end of life chain of waste batteries including end-users.

- Where are the batteries that are not collected for recycling and not processed by recycling plants?
- Are we collecting efficiently waste batteries or batteries that are part of another waste stream (e.g. WEEE)?
- Are the collected batteries processed efficiently with the objective of extracting valuable materials at a competitive cost for a given quality?
- Are Member States offering an even playing field for battery producers to fulfil their obligations?
- Do the new battery chemistries and their applications require new provisions for the implementation of the producer responsibility principle?
- Do we need to improve the capture of batteries embedded in equipment?
- Is the re-use or the second life of batteries a realistic option to optimize resource management?
- Is the Waste Directive under review going to harmonize critical provisions for all daughter directives without disturbing the currently adopted good practice?
- Let’s consider the new circular economy strategy. Where is the guarantee that an EU-based industry able to deal commercially and technically with recovered materials, will be operational?
- Is the Waste Directive under review going to harmonize critical provisions for all daughter directives without disturbing the currently adopted good practice?
- Let’s consider the new circular economy strategy. Where is the guarantee that an EU-based industry able to deal commercially and technically with recovered materials, will be operational?
- Is the Waste Directive under review going to harmonize critical provisions for all daughter directives without disturbing the currently adopted good practice?
- Let’s consider the new circular economy strategy. Where is the guarantee that an EU-based industry able to deal commercially and technically with recovered materials, will be operational?

These questions will be in the minds of the participants of the International Congress for Battery Recycling and more issues will also be leading the debate, such as...

For 22 years, ICBR has been offering the best forum to professionals to meet with legislators, academics and economic actors of the battery and battery recycling industries.

The Organizers of ICBR 2017 are pleased to present a programme that will cover the many aspects of the Battery Recycling activity in Europe and from all around the world. Welcome to Lisbon, the city of great discoverers.
OPENING & KEYNOTE SPEAKERS

CARLOS MARTINS
Secretary of State of Environment
Portugal

“Welcome Message”

PROF. VERA SUSANNE ROTTER
Technical University Berlin
Professor for Circular Economy and Recycling Technology
Germany

“Materials in a Circular Economy”

NUNO LACASTA
Portuguese Environment Agency
President
Portugal

“Waste Policy in the 21st Century: Challenges and Opportunities”

CHRISTOPHE PILLOT
AVICENNE ENERGY
Director
France

“The Rechargeable Battery Market and Main Trends 2016–2026”
Please book your room at your earliest convenience as the number of rooms at the reduced rate is limited. If you wish, you may also extend your stay at the same rate.

Come and discover Lisbon, a historical city full of stories to tell, where the sun shines 290 days a year and the temperature rarely drops below 15°C. A city where you feel safe wandering around day or night, where the cuisine is dedicated to creating over a thousand ways to cook the beloved bacalhau (salted cod), and where you’ll find hotels and restaurants to suit every taste, budget and requirement.

Discover Lisbon, a city full of authenticity where old customs and ancient history intermix with cultural entertainment and hi-tech innovation. Lisbon is ageless, but it loves company, as you’ll find out if you meet someone and ask them to explain, with lots of gestures and repetition, where the best place is to listen to Fado. After all, Lisbon is famous for its hospitality and the family-like way it welcomes visitors.

The 22nd International Congress for Battery Recycling will be held from September 20 – 22, 2017 in the Sheraton Lisboa Hotel & Spa. Meet Lisbon from its highest view at one of the most recognized hotel icons in Lisbon. Ideally located in the city center, minutes from Lisbon airport and downtown, the Sheraton Lisboa Hotel & Spa provides the perfect starting point for exploring and connecting with the city’s many business and leisure experiences.

With over 40 years of service experience, the Sheraton Lisboa Hotel offers a warm welcome with spacious guest rooms, free Wi-Fi in the public areas, 24-hour access to Sheraton Fitness, 1,500 m² of pure wellness at the Spirito Spa, outdoor pool and the acclaimed rooftop Panorama Restaurant & Bar, offering stunning panoramic views of Lisbon and the Tagus River.

IMPORTANT NOTICE:
We have been alerted that unofficial housing providers are trying to contain ICBR delegates and exhibitors by charging fees and emblazoning claims to be associated to ICM and can secure hotel rooms at the Sheraton Lisboa Hotel & Spa. These companies are not authorized to represent ICM neither ICBR. Please note that we have no affiliation with any housing coordinator.

If you have any concerns, contact us at info@icm.ch.

Sheraton Lisboa Hotel & Spa*****
Rua Latino Coelho, 1
1069 Lisboa
Portugal
Phone + 351 213 12 00 00
www.sheratonlisboa.com/en

www.visitlisboa.com
Working together towards a circular economy for batteries and accumulators

Stibat facilitates all actors in the circular economy of batteries in realizing reuse of products and materials and ensuring a safe, sound and environmentally friendly treatment of batteries and accumulators. We offer sustainable services and solutions ensuring compliance with national and European law and regulations with regard to batteries and accumulators.

- 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

Stibat | Röntgenlaan 7 | 2719 DX | Zoetermeer | The Netherlands
www.stibat.nl | Phone: +31 (0)79 - 363 20 90 | E-mail: info@stibat.nl
CONGRESS PROGRAM ICBR 2017

TUESDAY, SEPTEMBER 19, 2017
17.00 – 19.00 Pre-Registration

WEDNESDAY, SEPTEMBER 20, 2017
08.00 – 09.00 Registration and welcome coffee in the exhibition area

OPENING AND KEYNOTE SPEAKERS
09.00 – 11.00 “Welcome and Introduction”
Dr Jean-Pol Wiaux, Chairman of the Steering Committee
“Welcome Message”
Carlos Martins, Secretary of State of Environment, Portugal
“Waste Policy in the 21st Century: Challenges and Opportunities”
Nuno Lacasta, Portuguese Environment Agency, Portugal
“Materials in a Circular Economy”
Prof. Vera Susanne Rotter, Technical University Berlin, Germany
“The Rechargeable Battery Market and Main Trends 2016–2026”
Christophe Pililot, AVICENNE ENERGY, France

11.00 – 11.30 Coffee break in the exhibition area

11.30 – 13.00 Panel Discussion: Review of the Batteries Directive (Producers)
Moderator: Otmar Frey, ZVEI, Germany
Participants:
Hans Craen, EPBA, Belgium
Patrick de Metz, RECHARGE, Belgium
Stefan Gielis, EUROBAT, Belgium
José Rizo Martin, European Commission, Belgium

13.00 – 14.30 Lunch in the exhibition area

14.30 – 15.00 “Battery Collection in Portugal”
Eurico Cordeiro, Ecopilhas, Portugal

15.00 – 15.30 “Producer Responsibility & Compliance Schemes in a Circular Economy”
Dr Carlos Nogueira, LNEG, Portugal
“Second Use of Traction Batteries”
Sílvia Bobba, European Commission, Joint Research Centre – Politecnico di Torino, Italy

16.00 – 16.30 Coffee break in the exhibition area

16.30 – 17.00 “From E-mobility to Recycling, the Virtuous Loop of Electric Vehicles”
Adrien Bouteille & Yasmine Assef, RENAULT, France

17.00 – 17.30 “LCA of New Innovative Recycling Processes”
Jürgen Sutter, Öko-Institut e.V., Germany

17.30 – 18.00 “Product Responsibility and European Wide Take Back of Industrial Li-Batteries – Legal and Logistic Challenges and Possible Solutions”
Tobias Schulze Wetendorf, Stiftung GRS Batterien, Germany

19.30 Departure by bus
20.00 Networking dinner at the romantic Palácio do Conde D’Óbidos
THURSDAY, SEPTEMBER 21, 2017

08.00 – 09.00 Welcome coffee in the exhibition area

Session 5: Recycling Processes
Session Chairman: Dr. Dieter Offenthaler, Batrec Industrie AG, Switzerland

09.00 – 09.30 “Processing of Spent Li-ion Batteries: Environmental Challenges”
Dr. Reiner Weyhe & Marek Bartosinski, ACCUREC Recycling GmbH, Germany

09.30 – 10.00 “Material Database for Li-Batteries / Study to Compare Recycling Technologies for Li-Batteries”
Holger Schnaas & Peter Straub, BERODE GmbH, Germany

10.00 – 10.30 “Status and Trends of Industrialized Li-ion Battery Recycling Processes with Qualitative Comparison of Economic and Environmental Impacts”
Prof. Bernd Friedrich, RWTH Aachen University, Germany

10.30 – 11.00 Coffee break in the exhibition area

11.00 – 12.30 Panel Discussion: Review of the Batteries Directive (End of Life)
Moderator: Dr. Alain Vassart, EBRA, Belgium

Participants:
Peter Binnemans, EUCOBAT, Belgium
Stefanie Enders, Tcc GmbH, Germany
Frédéricq Peigneux, Febelauto, Belgium
José Rizo Martin, European Commission, Belgium

12.30 – 14.00 Lunch in the exhibition area

14.00 – 14.20 “Fire Extinguisher Solutions for Lithium and Li-ion Battery Fires”
Johan van Peperzeel, Van Peperzeel B.V., Netherlands

14.20 – 14.40 “Sorting, a Profession in its Own Right”
Peter Coonen & Geert Allard, Sortbat, Belgium

14.40 – 15.00 “Sorting of Exhausted Batteries & Alkaline and Zinc-Carbon Battery Recycling”, Dr. Alexandre Comino, Hellatron Recycling Division, Italy

15.00 – 15.20 “How a Quality Management System May Help to Increase Safety during Storage, Sorting or Processing”
Eda Coskun, Redux Recycling GmbH, Germany

15.20 – 15.30 Q&A

15.30 – 16.00 Coffee break in the exhibition area

15.30 – 16.00 Session 6: Safety & Sorting
Session Chairman: Michael Green, Independent Waste Battery Consultant, United Kingdom

14.00 – 14.20 “Fire Extinguisher Solutions for Lithium and Li-ion Battery Fires”
Johan van Peperzeel, Van Peperzeel B.V., Netherlands

14.20 – 14.40 “Sorting, a Profession in its Own Right”
Peter Coonen & Geert Allard, Sortbat, Belgium

14.40 – 15.00 “Sorting of Exhausted Batteries & Alkaline and Zinc-Carbon Battery Recycling”, Dr. Alexandre Comino, Hellatron Recycling Division, Italy

15.00 – 15.20 “How a Quality Management System May Help to Increase Safety during Storage, Sorting or Processing”
Eda Coskun, Redux Recycling GmbH, Germany

15.20 – 15.30 Q&A

Session 6: Safety & Sorting
Session Chairman: Michael Green, Independent Waste Battery Consultant, United Kingdom

14.00 – 14.20 “Fire Extinguisher Solutions for Lithium and Li-ion Battery Fires”
Johan van Peperzeel, Van Peperzeel B.V., Netherlands

14.20 – 14.40 “Sorting, a Profession in its Own Right”
Peter Coonen & Geert Allard, Sortbat, Belgium

14.40 – 15.00 “Sorting of Exhausted Batteries & Alkaline and Zinc-Carbon Battery Recycling”, Dr. Alexandre Comino, Hellatron Recycling Division, Italy

15.00 – 15.20 “How a Quality Management System May Help to Increase Safety during Storage, Sorting or Processing”
Eda Coskun, Redux Recycling GmbH, Germany

15.20 – 15.30 Q&A

15.30 – 16.00 Coffee break in the exhibition area

Session 8: Safety during Storage and Transport
Session Chairman: Johan van Peperzeel, Van Peperzeel B.V., Netherlands

16.00 – 16.30 “Waste Li-Batteries – A Struggle to Safety in Waste Management Systems?”
Thomas Nigl, Montanuniversität Leoben, Austria

16.30 – 17.00 “Update of ADR and UN Transport Regulation”
Dr. Marco Ottaviani, ANIE-CSI, Italy

17.00 – 17.15 “Practical Solution to the Safe Storage and Transport of HV Damaged Li-ion Batteries”
Michael Knobloch, Genius Technologie GmbH, Germany

17.15 – 17.30 “How Remondis is Coping with the Waste Stream Li-ion Batteries”
Robert Sonnenschein, REMONDIS Industrie Service GmbH & Co. KG, Germany

from 17.30 Farewell cocktail in the exhibition area
Enjoy a typical Portuguese evening in the romantic Palácio do Conde D’Óbidos. Let yourself get inspired and join us on Wednesday, September 20, 2017 at a magnificent networking dinner.

Do not miss this perfect opportunity to socialize with your business partners and register for this evening!
EXHIBITION & POSTER PRESENTATION

EXHIBITORS

As per May 29, 2017:

- Battery Safety Solutions BV, Netherlands
- BLUBOX Trading AG, Switzerland
- BMW – Santogal L, Portugal
- DOLAV, France
- Glencore AG, Switzerland
- Hellatron Recycling Division, Italy
- Nickelhütte Aue GmbH, Germany

The exhibition area provides your company with the perfect opportunity to reach key industry decision makers. Promote your products to all congress attendees. The fees are:

- Exhibition booth (2 m x 3 m) EUR 3'650.–
- Poster presentation (wall rental) EUR 390.–
- Display board (1 m x 2 m) EUR 690.–

Space is limited, so take the chance and book today!
WHY THE CARRIAGE OF WASTE BATTERIES CAN BE DANGEROUS!

Moderator: João Cezilia
Dangerous Goods Specialist
Member of BADGP, APSEI & CNTMP

Company: Tutorial, Lda., Lisboa – Portugal
Date: Friday, September 22, 2017
Time: 09.00 – 12.00
Location: Sheraton Lisboa Hotel & Spa
Price: EUR 90.00 (incl. coffee break)

Agenda:
Why the Carriage of Waste Batteries Can Be Dangerous!

- Hazard and risk: examples in Dangerous Goods Transport
- The problem of classification of goods containing hazardous materials...
- Differences in modal regulations
- “Update” vs. “Compliance”
- Using “UN” packaging to transport waste batteries... is it a waste of time?
- The needs for labels, marks and placards
- Short Sea Shipping requirements

The presentations will make reference to ADR/RID/IMDG Code and air transport regulation.

The workshop will be held with a minimum of 10 participants. Participants will receive a certificate of attendance.

To register, please contact ICM AG.

REGISTRATION FEES

<table>
<thead>
<tr>
<th></th>
<th>before July 31, 2017</th>
<th>after July 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congress fee</td>
<td>EUR 1'490.–</td>
<td>EUR 1'590.–</td>
</tr>
<tr>
<td>Fee for speakers</td>
<td>EUR 890.–</td>
<td>EUR 990.–</td>
</tr>
<tr>
<td>Fee for students*</td>
<td>EUR 590.–</td>
<td>EUR 690.–</td>
</tr>
<tr>
<td>Networking dinner (Sept. 20, 2017)</td>
<td>EUR 100.–</td>
<td>EUR 120.–</td>
</tr>
<tr>
<td>Networking dinner spouse (Sept. 20, 2017)</td>
<td>EUR 120.–</td>
<td>EUR 150.–</td>
</tr>
<tr>
<td>Plant tour (Sept. 22, 2017)</td>
<td>EUR 50.–</td>
<td>EUR 70.–</td>
</tr>
<tr>
<td>Workshop (Sept. 22, 2017)</td>
<td>EUR 90.–</td>
<td>EUR 150.–</td>
</tr>
</tbody>
</table>

*only with valid student card and age below 30

All Prices excl. 23% Portuguese VAT
Congress registration on site EUR 100.– surcharge

Online registration
You may also register online at: www.icm.ch/icbr-2017

Proceedings
If you cannot attend the congress, you may purchase the complete proceedings at EUR 350.–. Participants will get the proceedings free of charge.

Payment
Payment should be made in EUR by bank transfer or by credit card.
AMBIGROUP RECICLAGEM SA, SEIXAL, PORTUGAL

08.30  Departure by bus to Ambigroup Reciclagem SA, Seixal
09.00  Arrival at Ambigroup Reciclagem SA, Seixal
09.00 – 13.00  Visit of the recycling plant
14.00*  Arrival at Lisbon International Airport
14.30*  Arrival at the Sheraton Lisboa Hotel & Spa

Seixal Recycling Park is located 20 km South of Lisbon. The Ambigroup Reciclagem SA is the main recycling operation. The park covers an area of 140,000 m². The visit will focus on several recycling operations:

**WEEE recycling plant**, with large and small electric, electronic appliance and refrigerator recycling. **Metal recycling operation**, ELV ferrous scrap shredder, Non-Fe shredders and the different metal recovery operations, such as the dense media plant, sensor sorting and fine metal recovery line. **Polymer recycling**, Ambigroup post-consumer polymer recycling operation.

AMBIGROUP – THE GROUP
www.ambigroup.com

* No guarantee on arrival due to traffic conditions. The tour will only take place with a minimum of 10 participants.

Ambigroup is the holding of environmental service companies, active in processing and recycling of different waste streams.

**AMBIGROUP RESÍDUOS**

- Waste Management
- 8 parks covering main Portugal industrial areas
- Industrial waste sorting
- Fe and Non-Fe metals sourcing
- Alternative/substitution fuels

**AMBIGROUP DEMOLIÇÕES**

- Large scale industrial dismantling and demolitions
- Metal recovery: Copper, aluminium, stainless steel, ferrous metals

**AMBIGROUP RECICLAGEM**

- Metals Recycling
- Ferrous: Steel, stainless steel
- Non-Ferrous: Aluminium and its alloys
- Copper and its alloys

- Polymers
- PP, PS, PE, LDPE, ABS, PVC

- WEEE – LDA/SDA
- Refrigerator Recycling
You and us:
Collection and recycling for portable and industrial batteries

GRS Batterien guarantees you professional collecting, sorting and recycling of spent batteries. Many years of experience in the handling of portable batteries has made it possible to implement the first nationwide collection system for industrial batteries, in particular industrial lithium accumulators from e-bikes.

We offer individual solutions for eco-friendly recycling to all producers and distributors in Germany.

www.grs-batterien.de