



# Center for the Treatment and Recycling of Batteries and Fluorescent Lamps in Catalonia

The Catalan Waste Act, passed in 1993, declares the treatment of certain spent batteries and fluorescent lamps public services to be run by the Autonomous Government of Catalonia.

Used batteries are collected and shipped to the Center for the treatment and recycling of batteries and fluorescent lamps. The Center is owned by the Catalan Waste Agency, a public enterprise attached to the Ministry of the Environment and Housing. The Center is operated by Pilagest, SL, a private company licensed to perform the service of treatment.



## 10<sup>th</sup> International Congress for Battery Recycling June 8 – 10, 2005 Barcelona/Sitges, Spain



Patronage  
European Battery Recycling Association  
European Portable Battery Association

Sponsored by:



**Pilagest, SL**  
Pl. Ca l'Embatat, s/n  
08254 El Port de Vilanova i l'Escalator (Barcelona)  
Tel. 93 831 77 30 , Fax 93 831 77 12  
[www.pilagest.es](http://www.pilagest.es)



Dr. Pibut, 10  
08017 Barcelona  
Tel. 93 467 73 69 Fax 93 667 33 05

[www.ars-cat.net](http://www.ars-cat.net)



Vertikaler für Logistik und Müllabfuhrsysteme  
Vfw-REBAT - Das Abfallsystem für gewerbliche Betriebe



Generalitat de Catalunya  
Departament de Medi Ambient i Habitatge  
Agència de Residus de Catalunya



**EPBA**  
EUROPEAN  
PORTABLE  
BATTERY  
ASSOCIATION  
*The Authoritative Voice of  
the Portable Battery Industry*



## Foreword of ICBR 2005

The battery market is in continuous expansion with a massive production of various electrochemical systems. Only in the European countries it amounts to over 5 billions units per year, equivalent to over 150,000 tonnes. Although some of these batteries, e.g. alkaline and zinc carbon types, are now classified as not hazardous in the EU directive, there are still various others, e.g. lead-acid, nickel-cadmium, which being based on chemistries highly toxic for the human health and for the environment, require a separate collection and a proper recycling. However, there are still great differences between the collection rate of the various types of batteries; for instance, while lead acid batteries are 90% recycled, we see only a few percents for the other systems. In addition, many new systems, based on a variety of chemistries, are invading the market: nickel-metal hydride batteries are acquiring a prominent role for basic consumer electronics and the lithium-ion batteries are now the power sources of choice for popular portable devices, such as portable phones, PDAs and laptops. Also these new batteries contain materials which are partly toxic and thus, they require a proper attention when they reach their final state and have to be disposed. The need of recycling many of the batteries which are in circulation is now an almost universally recognized fact. Yet, a general agreement between members of EU for a common recycling procedure has not

been reached. Although there is a continuous improvement in the weight of collected batteries, the targets proposed by the European Parliament are far from being met by all the member states. In addition, the EU Parliament has drafted a new Battery Directive in November 2003 which raised a controversial response and a long debate.

Obviously, there is a certain confusion in the field and thus, it is essential that experts meet and discuss the present and future strategies of the collection policy. Also the technical aspects still require a general, common attention to identify the most acceptable compromise between the cost and the efficiency of recycling.

This Congress, which comes as the tenth edition of a very successful series, provides an unique opportunity in this respect. ICBR is the only internationally recognized congress in battery recycling and thus, it should not be missed by anyone involved in the field. Beside their informative and exciting technical program, ICBRs are well known for the high standard of the social activities and for the choice of elegant and beautiful sites. This tradition is maintained also for this 2005 edition and I am sure that you will not be disappointed by the beautiful Sitges. Welcome to ICBR 2005, welcome to the sunny Barcelona.

**Professor Bruno Scrosati**  
Chairman of the Steering Committee

## International Steering Committee



**Prof. Bruno Scrosati,**  
**Chairman**  
University of Rome  
Department of Chemistry  
Italy



**Rachel Barlow**  
European Portable Battery  
Association (EPBA)  
Secretary General  
Belgium



**Jan Bartels**  
STIBAT  
Managing Director  
Netherlands



**Manfred Beck**  
Recycling International  
Magazine  
Editor  
Netherlands



**Jacques David**  
European Battery Recyclers  
Association (EBRA)  
President  
France



**Norm England**  
Rechargeable Battery  
Recycling Corp. (RBRC)  
President  
USA



**Dr. Jürgen Fricke**  
Foundation GRS Batterien  
Chairman of the Board  
Germany



**Andreas Krebs**  
Batrec Industrie AG  
Managing Director  
Switzerland



**Jill Ledger**  
SAFT  
Communication Director  
France



**Ernst Locher**  
Fernwärme Wien  
Manager  
Austria



**Toshio Matsuoka**  
Matsuoka Technical Consul. Ltd.  
Consultant  
Japan



**Johan van Peperzeel**  
W.A. van Peperzeel B.V.  
President  
Netherlands



**Dr. Jean-Pol Wiaux**  
RECHARGE  
Manager  
Belgium





## Keynote Speakers



**Timo MÄKELÄ**  
European Commission  
DG Environment  
Director Sustainable  
Development and  
Integration  
Belgium



**Mike TAKAO**  
Sanyo Electric Co., Ltd  
Mobile Energy Company  
Section Manager  
Japan

## Location of the congress

The International Congress for Battery Recycling (ICBR) will be held in the **Hotel Meliá Sitges** from **8 – 10 June 2005** in **Barcelona/Sitges, Spain**.

### Meliá Sitges\*\*\*\*

C. Joan Salvat Papassect, 38  
08870 Sitges – Barcelona  
Spain

Phone +34 93 811 08 11  
Fax +34 93 894 90 34  
[www.meliasitges.solmelia.com](http://www.meliasitges.solmelia.com)



## Hotel Accommodation

For the participants of the congress a number of rooms are held **until April 15, 2005 at a special rate** at the Hotel Meliá Sitges and the Port Sitges Resort. Reservation after this date will be subject to space and rate availability. If you wish, you may also extend your stay at the same rate.



### Hotel Meliá Sitges\*\*\*\*

C. Joan Salvat Papassect, 38  
08870 Sitges – Barcelona, Spain  
Phone +34 93 811 08 11  
Fax +34 93 894 90 34  
[meliasitges@solmelia.com](mailto:meliasitges@solmelia.com)  
[www.meliasitges.solmelia.com](http://www.meliasitges.solmelia.com)



### Hotel Port Sitges Resort\*\*\*\*

Passeig Port d'Aiguadolç, 1–20  
08870 Sitges – Barcelona, Spain  
Phone +34 93 811 31 77  
Fax +34 93 810 23 40  
[info@portsitges.com](mailto:info@portsitges.com)  
[www.portsitges.com](http://www.portsitges.com)

## Travelling to Sitges

You can easily reach Sitges (Barcelona) by plane, train and car. Barcelona Airport «El Prat» is only 38 km away. Sitges is also connected to Barcelona by the intercity train C2.

[www.spain.info](http://www.spain.info)



# Congress Program ICBR 2005

## Wednesday, 8<sup>th</sup> June 2005

- 10.00 – 10.15 “Welcome and Introduction”  
**Prof. Bruno Scrosati, Chairman of the Steering Committee**
- OPENING SPEAKER:**  
10.15 – 10.30 **Ministry of the Environment and Housing, Government of Catalonia, Spain**
- KEYNOTE SPEAKER:**  
10.30 – 11.00 **Timo MÄKELÄ, European Commission, Belgium**
- Session 1: Legislation**  
**Session Chairman: Prof. Bruno Scrosati, University of Rome, Italy**
- 11.00 – 11.30 “Impacts of the new Battery Directive for the European recyclers”  
**Jacques David, EBRA, France**
- 11.30 – 12.00 “Implications of the new Battery Directive for the European portable battery industry”  
**Dr. Raynald Dallenbach, EPBA, Belgium**
- 12.00 – 13.30 Lunch**
- Session 2: Legislation & Markets**  
**Session Chairman: Dr. Jürgen Fricke, Foundation GRS Batterien, Germany**
- 13.30 – 14.00 “Safe transport of batteries: International mechanisms”  
**Olivier Kervella, United Nations Economic Commission for Europe (UNECE), Switzerland**
- 14.00 – 14.30 “Experience and actual situation about battery recycling in Austria and the Eastern European countries”  
**Dr. Leopold Zahrer, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria**
- 14.30 – 15.00 “Recent regulatory developments on spent consumer batteries and accumulators in Greece: Convergence with the existing and emerging EU legislation”  
**Fotini Chalkiopolou, Institute of Geology and Mineral Exploration, Greece**
- 15.00 – 15.30 Coffee break**
- Session 3: OEMs & Markets**  
**Session Chairman: Jill Ledger, SAFT, France**
- 15.30 – 16.00 “The impact of the WEEE Directive on a private collection program for power tools and spent batteries”  
**Udo Cerowski, Robert Bosch GmbH, Germany**
- 16.00 – 16.30 “Recycling opportunities for fuel cells”  
**Julien Van Damme, Honda Motor Europe, Belgium**  
**Thomas Brachmann, Honda R & D Europe (Germany) GmbH, Germany**
- 16.30 – 17.00 “Progress in the development of portable battery collection and recycling infrastructure in Europe”  
**Khush Marolia, Duracell Batteries, The Gillette Company, United Kingdom**
- 19.00 Networking dinner**

## Thursday, 9<sup>th</sup> June 2005

- Session 4: Battery collection & recycling I**  
**Session Chairman: Johan van Peperzeel, W.A. van Peperzeel B.V., Netherlands**
- 09.00 – 09.30 “Battery sorting by element characterization: Results from a demonstration plant”  
**Jesper Cramer, Force Technology, Denmark**
- 09.30 – 10.00 “Phasing-out metals in batteries... the wrong solution to the wrong problem at the wrong time”  
**Dr. Jean-Pol Wiaux, RECHARGE, Belgium**
- KEYNOTE SPEAKER:**  
10.00 – 10.30 **Mike TAKAO, Sanyo Electric Co., Ltd, Mobile Energy Company, Japan**
- 10.30 – 11.00 Coffee break**
- Session 5: Battery collection & recycling II**  
**Session Chairman: Norm England, RBRC, USA**
- 11.00 – 11.30 “Tragamovil: Demonstration project for the collection and recycling of mobile telephone waste”  
**José Pérez García, ASIMELEC, Spain**
- 11.30 – 12.00 “Cobat and the lead acid batteries – for a sustainable future”  
**Dr. Giancarlo Morandi & Dr. Paolo Sormani, COBAT, Italy**
- 12.00 – 12.30 “Influence of the WEEE Directive on the collection of rechargeable batteries”  
**Robert Eloy, RGE Consulting Environment, France**
- 12.30 – 14.00 Lunch**
- 14.00 – 14.30 “Guidelines for the setting up of a collection and recycling organisation for portable batteries”  
**Emmanuel Beaurepaire, CES, France**
- 14.30 – 15.00 “Economic instruments – a threat or an advantage for a battery CRO”  
**Michal Korcozowicz, REBA recovery organisation, Poland**
- 15.00 – 15.30 Coffee break**
- Session 6: Battery recycling plants & processes**  
**Session Chairman: Dr. Jean-Pol Wiaux, RECHARGE, Belgium**
- 15.30 – 16.00 “About lithium batteries”  
**Andreas Krebs, BATREC Industrie AG, Switzerland**
- 16.00 – 16.30 “Method of recovering lithium ion batteries from LG cellphone”  
**Maria do Rosário Fabeni Hurtado, CPqD Telecom & IT Solution, Brazil**
- 16.30 – 17.00 “Recupyl process for recycling lithium ion battery”  
**Farouk Tedjar, Recupyl SA, France**
- 17.00 – 17.30 “The management of spent batteries in Catalonia”  
**Eduard Márquez, Catalan Waste Agency, Spain**  
**Jordi Falgueras, Pilagest SL, Spain**

Friday, 10<sup>th</sup> June 2005

**Visit to Pilagest**

09.00	Departure by bus to Pilagest
10.00	Arrival at Pilagest
10.00 – 12.00	Visit of the recycling plant
13.00	Arrival at the airport Barcelona
13.45	Arrival at the Hotel Meliá Sitges

The Centre for the treatment of batteries and fluorescent lamps is located in El Pont de Vilomara I Rocafort, a village in the geographical center of Catalonia. The treatment operations began in 1998 but previously, in 1992, a collection program was implemented. Currently there are more than 22.000 containers placed in shops, commercial centers, offices, public buildings and industries all over the country. Municipalities collect the batteries and store them in collection points from where are shipped to the treatment facility.

The plant has a maximum treatment capacity of 2.000 t of standard batteries and 15 t of button batteries. After sorting and shredding, the standard lamps are treated by a hydrometallurgical process. The button batteries are treated by distillation.

Catalan Waste Agency: [www.arc-cat.net](http://www.arc-cat.net), PILAGEST SL: [www.pilagest.es](http://www.pilagest.es)

**Beautiful Sitges/Barcelona**

**Why not extend your stay ?**

Barcelona, the capital of Catalonia, is a cosmopolitan Mediterranean city that incorporates in its urban street pattern Roman remains, medieval districts and the most beautiful examples of Modernism and 20<sup>th</sup> century avant-garde art.

Barcelona's long cultural agenda will lead the visitor through museums, exhibitions, outdoor sculptures and an extensive calendar of music, theatre, and dance.

[www.barcelonaturisme.com](http://www.barcelonaturisme.com)



**Who should attend?**

- Battery producers
- Recycling companies
- Waste management companies
- Battery collection companies
- 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 the ICBR**

ICM AG  
International Congress & Marketing  
Schwaderhof 524  
5708 Birrwil, Switzerland

Phone: +41 62 785 10 00  
Fax: +41 62 785 10 05  
info@icm.ch  
www.icm.ch



Jeanette Duttlinger  
Congress Organizer



Sandra Ammann  
Congress Assistant



Veronica Ying Liu  
Congress Assistant



Susann Schmid  
Congress Assistant



Yvonne Steiner  
Congress Assistant



Petra Fiorentin  
Congress Assistant



## “Meet your clients” Networking Dinner

On Wednesday, June 8, a special networking dinner will be organized in beautiful Sitges.

Do not miss this perfect possibility to meet your business partners and register to this evening by means of the registration form.



## Exhibition

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

The fee for an exhibition stand (2 mx 3 m) is EUR 2'500.- for the full time of the conference.

Space is limited, so take your chance and book your exhibition stand today!

## Registration Fees

Registration for the congress should be made by means of the registration form. Participants registering and paying **before April 30, 2005** will benefit from a reduced registration fee.

	<b>before April 30, 2005</b>	<b>after April 30, 2005</b>
<b>Congress Fee</b>		
Fee for participants	€ 1'150.-	€ 1'300.-
Fee for speakers	€ 690.-	€ 790.-
Fee for students	€ 450.-	€ 490.-
Visit to PILAGEST (June 10, 2005)	€ 30.-	€ 50.-
Networking dinner	€ 90.-	€ 100.-
Networking dinner for accompanying persons (June 8, 2005)	€ 100.-	€ 110.-

## Additional Proceedings

If it is not possible for you to attend the congress, you can purchase the complete proceedings at EUR 340.-. 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:

Bank:	Neue Aargauer Bank, 5300 Turgi, Switzerland
Beneficiary:	ICM AG
Account number:	447941-72
IBAN:	CH73 0588 5044 7941 7200 0
Clearing number:	5885
Swift code:	CRESCHZZ 80A in favour of AHHBCH22XXX