Our new recycling technology for Li-ion batteries is sustainable, environmentally friendly, and cost-efficient.

Umicore developed and patented the VAL’EAS™ process dedicated to the environmentally sound recycling of rechargeable batteries. Main materials from end-of-life batteries are recycled and re-used in our battery division:

A real Closed Loop Solution for batteries!

Main advantages are:
- New dedicated technology
- No hazardous pre-processing
- No solid waste nor dioxin
- Closed loop for metals
- Full plastic valorisation
- High recycling & recovery rates
- 0% landfilled materials

For more info: Umicore Battery Recycling – Belgium –
Tel.: +32.14.24.50.10 – Fax.: +32.14.24.57.16
E-mail: BatteryRecycling@umicore.com
www.BatteryRecycling.umicore.com

9th International Congress for Battery Recycling
June 2 – 4, 2004
Como, Italy

Patronage
European Battery Recycling Association
European Portable Battery Association

Sponsored by:
Foreword of the ICBR 2004

Battery technology has constantly progressed the last few years. The production of conventional batteries, such as alkaline dry cells, lead-acid and nickel-cadmium batteries, continues to be massive with several billions of units per year. In addition many new systems are invading the market. The nickel-metal hydride batteries are acquiring a prominent role for electronic and tool applications and the lithium-ion batteries are rapidly becoming the power sources of choice for sophisticated consumer electronics, e.g., notebooks and cellular phones. Finally, the increasing concern on the air quality in large urban areas has promoted the request of a rapid introduction on the road of low-emission vehicles and accordingly, fleets of electric cars are now in demonstration in various cities and the hybrid cars are assuming a progressively important role in the automobile market. All these new sectors rely on the development of advanced types of batteries which in fact are now produced on a large scale. This market booming has not yet been accompanied by a proper concern on the appropriate methods of collection, especially for what the new types of batteries are concerned. The disposal or recycling of batteries of different chemistries, size and environment impact which are presently in circulation in all parts of the world, are still far for being satisfactory. It is then of crucial importance to face the management of the spent batteries in all their aspects and problems. Although significant progress has been obtained in the past years in terms of collection programs and of recycling schemes of exhausted batteries, a lot is still to be achieved to reach an acceptable compromise between the cost and the efficiency of recycling.

This congress, which comes as the ninth edition of a successful series, provides an unique opportunity for approaching this topic by offering a perfect forum where battery experts can meet and share their experiences, discuss and find suitable solutions to the problems that still prevent a proper treatment of spent batteries.

In addition to assuring an exciting technical program, this 2004 edition keeps the high social standard of ICBRs and the traditional choice of elegant and beautiful sites. Welcome to Como and enjoy another beautiful lake on the Italian Alps!

Prof. Bruno Scrosati
Chairman of the Steering Committee
International Congress for Battery Recycling

International Steering Committee consists of:

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

Jan Bartels
STIBAT
Managing Director
Netherlands

Manfred Beck
Recycling International
Magazine
Editor
Netherlands

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

Jürgen Fricke
Foundation GRS Batterien
Chairman of the Board
Germany

Kinya Fujimoto
Battery Association of Japan (BAJ)
General Manager
Japan

Helmut Klammer
Batrec Industrie AG
Managing Director
Switzerland

Jill Ledger
CollectNiCad, Chairman
SAFT, Communication Director
France

Prof. Oliver Lindqvist
Chalmers University of Technology
Dep. of Inorganic Chemistry
Sweden

Toshio Matsuoka
Matsuoka Technical Consul. Ltd.
Consultant
Japan

Shane Thompson
INMETCO Inc.
International Accounts Director
USA

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

Alain Vassart
European Battery Recycling Association (EBRA)
President
Belgium
The International Congress for Battery Recycling (ICBR 2004) will be held in the Teatro Sociale di Como from 2 – 4 June 2004 in Como, Italy.

Teatro Sociale di Como
Via Bellini, 3
I-22100 Como
www.teatrosocialecomo.it

Location of the congress

Travelling to Como

Como is easily reached by plane, being close to both Milano Airports of Malpensa and Linate. Como is also connected by trains to all of the major European cities.

Driving to Como is easy, either by fast highways or by scenic mountain roads. The Milano Airports of Malpensa and Linate are roughly 30 – 45 minutes away from Como (60 – 70 km).

Como is served by two railway lines Ferrovie Nord Milano, with a station at Como Lago, and Italian State Railways, whose Como S. Giovanni station is on the international Milano – Chiasso line.

Keynote Speakers

Fernando Duranti
Leghe & Metalli International
CEO
President of BIR
Italy

Karl-Heinz Florenz
Member of the European Parliament
Coordinator of the European People’s Party for the Committee on the Environment, Public Health and Consumer Policy
Germany

John Searle
SAFT
CEO and President
France

Hotel Accommodation

For the participants of the congress a number of rooms are being held until April 30, 2004 at a special rate at the Palace Hotel and the Hotel Como. Reservation after this date will be subject to space and rate availability.

Palace Hotel****
Lungo Lario Trieste, 16
22100 Como
Italy
www.palacehotel.it
About 5 min. walk from the congress place

Hotel Como****
Via Mentana, 28
22100 Como
Italy
www.hcomo.it
About 20 min. walk from the congress place
Congress Program ICBR 2004

Wednesday, 2 June 2004

09.00 – 12.30 Registration

13.00 – 13.10 “Welcome and introduction”
Prof. Bruno Scrosati, Chairman of the Steering Committee

13.10 – 13.30 KEYNOTE SPEAKER:
Fernando DURANTI, CEO of Leghe & Metalli International, Italy
President of BIR

Session 1: The new European Battery Directive I
Session Chairman: Shane Thompson, INMETCO, USA

Alain Vassart, EBRA/ERACHEM, Belgium

Raynal Dallenbach, ENERGIZER, Switzerland

14.30 – 15.00 “Collection of portable batteries in the EU”
Khush Marolia, EPBA, Belgium

15.00 – 15.30 Coffee break

Session 2: The new European Battery Directive II
Session Chairman: Jill Ledger, SAFT, France

15.30 – 16.00 “Stimulating battery collections in legislation-free environment:
The UK experience”
Greg Clementson, G&P Batteries Ltd., United Kingdom

Emmanuel Beaurepaire, CES, France

16.30 – 17.00 “UK policy and approach to battery recycling”
Simon Aumônier, ERM, United Kingdom

17.00 – 17.30 “An update on environmental stewardship initiative in Canada”
Susan Antler, Canadian Household Battery Association, Canada

19.30 Networking dinner

Thursday, 3 June 2004

Session 3: Country reports on battery recycling
Session Chairman: Jürgen Fricke, GRS Batterien, Germany

09.00 – 09.30 “Building a battery collection and recovery system in Poland –
First effects of REBA recovery organization”
Michal Korkozowicz, Reba Recovery Organization, Poland

09.30 – 10.00 “RBRC’s activities in North America”
Norm England, RBRC, USA

10.00 – 10.30 “Battery recycling in Belgium”
Eddy Pagnin & Michel Bauduin, REVATECH, Belgium

10.30 – 11.00 Coffee break

11.00 – 11.30 “The implementation of EU-waste batteries and accumulators
Directives in Slovenia”
Dusan Marc, Ministry of the Environment, Spatial Planning and Energy,
Republic of Slovenia

11.30 – 12.00 “BatteriForeningens proposals for battery collection”
Frederik Madsen, Danish Battery Association, Denmark

12.00 – 13.30 Lunch

13.30 – 13.50 Karl-Heinz FLORENZ, Member of the European Parliament

13.50 – 14.10 John SEARLE, CEO of SAFT, France

14.10 – 14.30 Discussions

Session 4: Country reports and new recycling technologies
Session Chairman: Helmut Klammer, Batrec Industrie AG, Switzerland

14.30 – 15.00 “Li-ion battery recycling in the UK”
Dominic Kieran, AEA Technology plc, United Kingdom

15.00 – 15.30 “Battery-recycling – A perspective from a Ni and Co producer”
Patrick Henrion, Falconbridge International, Belgium

15.30 – 16.00 Coffee break

16.00 – 16.30 “Multi batteries non sorted recycling technology through
hydrometallurgy”
Alk Rosenberg, Metal-Tech Ltd., Israel

16.30 – 17.00 “R&D of recycling technology and regeneration of MH/Ni batteries”
Prof. Feng Wu, Beijing Institute of Technology, China

17.00 – 17.30 “Quality recycling for less...”
Bertrand Schutz, CITRON, France
Friday, 4 June 2004

Session 5: Electric vehicle battery and fuel cell recycling
Session Chairman: Johan van Peperzeel, Peperzeel BV, Netherlands

08.30 – 09.00 “Project of recycling of electric vehicle battery”
   Yasuhiro Tsugita, Metal Mining Agency of Japan, Japan
09.00 – 09.30 “State of the art application and end-of-life of fuel cell systems”
   Stefan Freiberger, Bayreuth University, Germany
09.30 – 10.00 “Recycling of electric vehicle and hybrid electric vehicle batteries in USA”
   Shane Thompson, INMETCO, USA
10.00 – 10.30 “Car batteries: Different types and the upcoming Battery Directive”
   Julien van Damme, Honda Europe, Belgium
10.30 – 11.00 Coffee break

Session 6: Update of Li-batteries collection and recycling
Session Chairman: Prof. Bruno Scrosati, University of Rome, Italy

11.00 – 11.30 “Umicore recycling service: Unique closed loop solution for Li-ion batteries”
   Daniel Cheret, Umicore Recycling Solutions, Belgium
11.30 – 12.00 “Risk and safety aspects of waste Li-batteries”
   Herbert van Deutekom, Bureau van Deutekom, Netherlands
12.00 – 12.30 “Producing of high quality chemicals and materials from the products of recycling of Li-batteries”
   Dr. Andriy Plakhotnyk, National Ecological Center of Ukraine, Ukraine
12.30 – 13.30 Lunch buffet

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
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Internet: www.icm.ch

Jeanette Duttlinger
Congress Organizer

Petra Fiorentin
Congress Assistant

Erika Noé
Congress Assistant

Virginia Keller
Congress Assistant
Registration Fees

Registration for the congress should be made by means of the registration form. Participants registering and paying before April 30, 2004 will benefit from a reduced registration fee.

<table>
<thead>
<tr>
<th>Congress Fee</th>
<th>before April 30, 2004</th>
<th>after April 30, 2004</th>
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<tbody>
<tr>
<td>Participants</td>
<td>€ 1'150.–</td>
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<tr>
<td>Speakers</td>
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<td>Students</td>
<td>€ 390.–</td>
<td>€ 450.–</td>
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<tr>
<td>Networking dinner</td>
<td>€ 90.–</td>
<td>€ 100.–</td>
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<tr>
<td>Networking dinner for accompanying person</td>
<td>€ 100.–</td>
<td>€ 110.–</td>
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</tbody>
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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.

Bank: Neue Aargauer Bank, 5300 Turgi, Switzerland
Beneficiary: ICM AG
Account no.: 447941-72, Swift code: CRESCHZZ 80A in favour of: AHHBCH 22
Clearing: 5885
IBAN no.: CH73 0588 5044 7941 7200 0

Exhibition

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

The fee for a typical exhibition stand (1.5 m x 3 m) is EUR 3’000.– for the full time of the conference.

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

Networking Dinner

On June 2, 2004 we will organize for the participants an unforgettable evening on the beautiful island Comacina, the unique island on the Lake Como.

Don’t miss this perfect possibility to meet your business partners and friends. You may register to this evening by means of the registration form.

Beautiful Como

Why not extend your stay in Como?

Along the banks of the Como basin lie countless 18th century villas surrounded by luxurious gardens whose splendour are evidence of the charm the Como area has exerted over the years.

Picturesque villages of stone houses set on the shores of the lake characterize these enchanting banks where time seems to have stood still.

The city of Como is important for its silks, unique in their refinement and novelty. Another widespread craft in the surrounding area, or more precisely around the town of Cantù “city of furniture”, is that of wood manufacturing.

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