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# 18<sup>th</sup> International Congress for Battery Recycling ICBR 2013

September 11 – 13, 2013, Dubrovnik, Croatia





Patronage: Association of European Automotive and Industrial Battery Manufacturers (EUROBAT) Call 2 Recycle® EUCOBAT European Battery Recycling Association (EBRA) The European Association for Advanced Rechargeable Battery Technologies (RECHARGE) The Rechargeable Battery Association (PRBA) WEEE Forum





### FOREWORD

### PROFESSOR **BRUNO SCROSATI**

Chairman of the Steering Committee International Congress for Battery Recycling

Efficient and diversified recvcling is a top priority for our society. Accordinaly, consistent efforts are in progress worldwide to reach this important goal. Battery recycling in particular is one of the major tasks and many countries in Europe, America and Asia are issuing programs to promote recycling at a large market share. However, there are still differences amona leaislations and a certain confusion persists due to the constant renewal of the battery chemistries. To attend a forum where these important matters can be carefully examined, discussed and evaluated is a unique opportunity that cannot be missed by anyone involved in that field of growing importance and continuous evolution of battery recyclina. On the other hand, a forum of this kind can be useful and rewarding only if it succeeds in attracting the participation of the world leaders in the field, as undoubtedly does

the International Congress for Battery Recycling. ICBR is the event that is worldwide recognized as the top conference in battery recycling technologies and marketing, where scientists, engineers, producers and recyclers can meet to share their views and discuss their business.

This year's ICBR edition will be opened by keynote lectures delivered by leaders in the area, who will inform us on the status of the EU waste legislation as well as on the issues still to be addressed within car manufacturing and recyclina industries. The program will then include a session where the impact of the legislation on battery collection and recycling in various European countries will be further discussed and evaluated in detail. Finally, the day closes with a Panel Discussion where important aspects associated with lithium battery recycling, such as safety and waste transport, will be presented by a panel of experts and then opened to the audience for a aeneral discussion.

In the morning session of the second day we will first hear about the status of battery collection and recyclina in progress in Russia, USA and Japan. In the second session, we shall be informed about the regulation for substance restrictions, as well as on battery sustainability, with particular attention to their use for electromobility. The afternoon program will be arranged with two parallel sessions. One is devoted to updating recycling technology and the other one on certification and stewardship.

A great program that certainly will stimulate interest and living discussion among the participants. I would then like to express my gratitude to the top worldwide experts who have graciously accepted the invitation of the Steering Committee to contribute to the congress.

In addition to high guality presentations, another areat tradition of the ICBRs is the choice of beautiful locations. The location for this year is Dubrovnik on the Adriatic cost of Croatia. considered among the ten best medieval walled cities in the world. Finally, the well-known, traditional high class of the ICBR series will be augranteed, if not even surpassed, in this edition by the high level of sophistication of the social activities that include a super Network Dinner event, where the participants will enjoy excellent food and have a pleasant, relaxing site for establishing their business contacts. All this could not have been possible without the tireless dedication of the ICM staff who have worked very hard to make this congress another unforgettable experience!

Welcome to ICBR 2013, welcome to begutiful Dubrovnik.

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# **KEYNOTE SPEAKERS**



### ARTEMIS HATZI-HULL

European Commission DG Environment Policy Officer Belgium

"THE EX-POST EVALUATION OF FIVE WASTE STREAM DIRECTIVES"

"MEETING THE TARGETS OF THE BATTERY

DIRECTIVE IN FRANCE, WITH AN OUTLOOK

ON STRATEGIC METALS RECYCLING"

### DR ATSUSHI TERAZONO

National Institute for Environmental Studies Center for Material Cycles and Waste Management Research Chief Japan

"MATERIAL FLOW, HAZARDOUS SUBSTANCES CONTROL AND SAFETY ISSUES OF BATTERIES IN JAPAN"





### ALAIN LIGER

High Council for Economy, Industry, Energy and Technologies / COMES Secretary General France

### ALAIN VASSART

EBRA General Secretary Belgium

"KEY ISSUES FOR THE EU BATTERY RECYCLING INDUSTRY"



# 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® CEO/President USA



ALAIN VASSART EBRA General Secretary Belgium

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Chairman of the Scientific Committee RECHARGE Director General Belgium

DR JEAN-POL WIAUX

ANDREAS KREBS Batrec Industrie AG Managing Director Switzerland



MIKE TAKAO Energy Company, Panasonic Corporation Environmental Affairs Group Senior Manager Japan



JAN BARTELS STIBAT Managing Director Netherlands



JILL LEDGER SAFT Corporate Communication and Investor Relations Director France



**GEORGIOS CHRYSSOS** Stiftung GRS Batterien Managing Director Germany



**TOSHIO MATSUOKA** Matsuoka Technical Consultant Ltd. Consultant Japan



MARK R. TOMASZEWSKI INMETCO President USA



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



the 15<sup>th</sup> and 16<sup>th</sup> centuries.

Dubrovnik today is a town

that blends old and new

in its own unique way

Although hundreds of thou-

sands of visitors come to

Dubrovnik each vear, it re-

mains essentially a quiet

small town whose residents

know each other well. On

etable gardens as much

ago. On the other hand,

Dubrovnik is also part of

the modern world, with

number of international im-

Dubrovnik their permanent

# LOCATION OF THE CONGRESS

## HISTORICAL DUBROVNIK



The 18<sup>th</sup> International Congress for Battery Recycling will be held from September 11-13, 2013 in the Hotel Dubrovnik Palace in beautiful Dubrovnik, Croatia.

Hotel Dubrovnik Palace is nestled between the sea and pine forest on the beautiful Lapad peninsula and it is blessed with a unique view of the Elaphite islands. This beautiful hotel is only a few minutes located from the UNESCO-protected Dubrovnik Old Town by car, bus or taxi.



For the participants of the congress a number of rooms are held at a special rate if you register before July 31, 2013. If you wish, you may also extend your stay at this lovely hotel at the same special rate.

#### Hotel Dubrovnik Palace\*\*\*\*\*

Masarykov put 20 20000 Dubrovnik Croatia Phone +385 20 430 000 Fax +385 20 430 100 www.adriaticluxuryhotels.com/en/hotel-dubrovnik-palace/

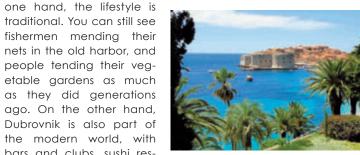
Dubrovnik, a walled city with renaissance architecture and charmina narrow streets, is located on the coast at the most southern tip of Croatia. The terracotta roofs of the old City framed by the turquoise Adriatic Sea is one of the most recognizable and photographed sights in the world.

Dubrovnik is one of the most famous tourist destinations in the whole of the Adriatic, helped by its status as an UNESCO World Heritage Site. In the middle Ages, as the Republic of Raausa, it became the only eastern Adriatic city-state to rival Venice. Supported by its wealth and skilled diplomacy, the city achieved a remarkable level of development, particularly during

# www.tzdubrovnik.hr

homes.







# 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

### Getting to Dubrovnik by plane

Dubrovnik International Airport has regular flights to many European countries, including major hubs such as London, Paris, Frankfurt and Rome. International airlines such as British Airways, Austrian Airlines, Lufthansa, Aer Lingus, Easy Jet, German Wings, Norwegian Air Shuttle and Iberia all have scheduled flights through out the summer months. Croatian Airlines are the biggest carrier from Dubrovnik airport and operate regular flights to European destinations.

# TRAVELLING TO DUBROVNIK

### **Climate/weather**

Dubrovnik has a typical Mediterranean climate with hot, dry summers and mild, wet winters. September is one of the best months to visit Dubrovnik, since it is still warm enough (around 25°C) to enjoy the incredible coastline and even go for a swim in the sea. Also, the old town is not that crowded anymore.

### Transfer from the Airport to Dubrovnik

The journey by taxi from Dubrovnik Airport to the Hotel Dubrovnik Palace (conference place) takes about 25 minutes (22 km).







# CONGRESS PROGRAM ICBR 2013

TUESDAY, SE 17.00 - 19.00	PTEMBER 10, 2013 Registration
WEDNESDAY, 08.00 – 09.45	SEPTEMBER 11, 2013 Registration and welcome coffee in the exhibition area
09.45 – 10.00	"Welcome and Introduction" Prof. Bruno Scrosati, Chairman of the Steering Committee
10.00 - 12.00	KEYNOTE SPEAKERS
	"The ex-post evaluation of five waste stream Directives" Artemis Hatzi-Hull, European Commission, DG Environment, Belgium
	"Meeting the targets of the Battery Directive in France, with an outlook on strategic metals recycling" Alain Liger, High Council for Economy, Industry, Energy and Technologies/ COMES, France
	"Material flow, hazardous substances control and safety issues of batteries in Japan" Dr Atsushi Terazono, National Institute for Environmental Studies, Japan
	"Key issues for the EU battery recycling industry" Alain Vassart, EBRA, Belgium
12.00 – 13.30	Lunch

Session 1: Session Chairman:	Battery collection Jill Ledger, SAFT, France
13.30 - 14.00	"Portable battery recycling in the UK – What's next?" David Reynolds, BatteryBack Plc, United Kingdom
14.00 - 14.30	"French battery CRO's: Implementation of an eco-modulated 2013 price list" Frédéric Hédouin, COREPILE, France
14.30 – 15.00	"Battery collection in Poland – Results of 2012, upcoming legal changes and forecast for 2016" Michal Korkozowicz, REBA Compliance Organization S.A., Poland
15.00 – 15.30	Coffee break in the exhibition area
15.30 – 17.00	Panel Discussion: "Lithium battery safety: A global issue" Moderator: Jean-Pol Wiaux, RECHARGE, Belgium Participants: Imke May, Stiftung GRS Batterien, Germany Dr Thomas Forchert, CELONO, Germany Johan Van Peperzeel, Van Peperzeel B.V., Netherlands Representative of EUCOBAT

# CONGRESS PROGRAM ICBR 2013

### THURSDAY, SEPTEMBER 12, 2013

08.00 - 09.00	Welcome coffee in the exhibition area
Session 2: Session Chairman:	International Carl E. Smith, Call2Recycle®, USA
09.00 - 09.30	"Saint Petersburg experience in the making of battery collection system for the first time in Russia" Dmitry Krutoy, Committee for Nature Use, Environmental Protection and Ecological Safety (Government of Saint Petersburg), Russia
09.30 – 10.00	"Battery recycling for the automotive industry: An American OEM's perspective" Renata Arsenault, Ford – Energy Storage & Materials Research, USA
10.00 - 10.30	"Update of rechargeable batteries collection & recycling activity and the latest survey for average age of batteries returned in Japan" <b>Mike Takao, Panasonic Corporation &amp; Battery Association of Japan, Japan</b>
10.30 - 11.00	Coffee break in the exhibition area
Session 3: Session Chairman:	<u>Sustainability</u> Alain Vassart, EBRA, Belgium
Session Chairman:	Alain Vassart, EBRA, Belgium   "Substance restrictions – A jungle of regulations"
Session Chairman: 11.00 – 11.30	Alain Vassart, EBRA, Belgium   "Substance restrictions – A jungle of regulations"   Dr Beate Kummer, Kummer: Umweltkommunikation GmbH, Germany   "LCA results on the recycling of Li-ion batteries from the e-mobility sector"

Session 4:	<u>Recycling technologies update I</u> Session Chairman: Andreas Krebs, Batrec Industrie AG, Switzerland	Parallel Session 4: <u>Certification and</u> <u>stewardship I,</u> Session Chairman: Georgios Chryssos, Stiftung GRS Batterien, Germany
14.00 – 14.30	"Alkaline battery recycling and RMC's patented process" <b>Wayne Elliott, Raw Materials</b> <b>Company Inc., Canada</b>	"Process orientated audit of the battery recycling efficiency – The Nickel- based battery facility of Accurec" <b>Prof. Bernd Friedrich, RWTH Aachen</b> <b>University, Germany</b>
14.30 - 15.00	"A new way in the recycling of alkalimanganese batteries" Ingo Götz, Redux Recycling GmbH, Germany	"Certification of the end-of-life value chain: The example of WEEELABEX" Lucia Herreras, WEEE Forum, Belgium
15.00 – 15.30	"Battery safety evaluation during recycling operations" Delphine Tigreat, INERIS, France	"Battery stewardship in Australia: Paving the way for growth" Dr Helen Lewis, Australian Battery Recycling Initiative, Australia
15.30 – 16.00	Coffee break in the exhibition area	
Session 5:	<u>Recycling technologies update II</u> Session Chairman: Andreas Krebs, Batrec Industrie AG, Switzerland	Parallel Session 5: <u>Certification and</u> <u>stewardship II</u> , Session Chairman: Georgios Chryssos, Stiftung GRS Batterien, Germany
16.00 – 16.30	"A new process for global recy- cling of advanced Lithium Ion EV" <b>Prof. Farouk Tedjar and Guillaume</b> <b>Charpy, RECUPYL SAS, France</b>	"Damaged, defective or- waste batter- ies. New provisions for lithium batteries transport in the UN model regulation" <b>Dr Marco Ottaviani, ANIE-CSI, Italy</b>
16.30 – 17.00	"Efficient and sustainable pyro metal- lurgical recycling of spent batteries" <b>Thierry Claisse, VALDI, France</b>	"Battery take back, established legisla- tion but new complexity" Johanna Brucker, 1WEEE Services GmbH, Germany
17.00		area

HONDA TEST DRIVE

LINE



# TRAINING COURSE





### EXCLUSIVELY FOR THE PARTICIPANTS OF ICBR 2013



The workshop is directed by:



Kristel Vermeersch Dangerous Goods Consultir

All attendants will get a certificate for attending the training course !

Directed by:	Kristel Vermeersch, KVS & Partners bvba., Dangerous Goods Consulting, Belgium	
When:	Friday, September 13, 2013	
Time:	09.00 h – 15.00 h	
Location:	Hotel Dubrovnik Palace, Dubrovnik, Croatia	
Price:	<b>250 EUR</b> per person (incl. documents & certificate) Lunch and coffee breaks included Minimum number of participants: 15	
Sponsor:	RECHARGE	

### O SHOULD ATTEND THE TRAINING COURSE?

- Battery recycling companies
- Representatives of authorities
- Battery manufacturers
- Lawyers and consultants of the battery and recycling industry
- Transportation companies in the battery recycling industry
- Anyone shipping Lithium batteries

### COURSE DESCRIPTION

The course will give you an overview of International Transport Regulations (UN/Road/Air/Sea) and the decision process. The classification and identification of Lithium batteries will be reviewed including the UN test criteria for Lithium batteries. The participants will learn how to use and interpret the information and special provisions provided in the lists of dangerous goods in the different transport regulations.

The course will also cover the packing requirements for Lithium batteries including the differences amongst the different transport modes.

A description of transport documents required for shipments of Lithium batteries will be supplied.

# HONDA HYBRID CARS

Exclusive test drive possibility for participants.



To attend this training course, please register at info@icm.ch

Model shown is the CR-Z Sport grade. Fuel consumption figures in l/100km: Urban 6.0, Extra Urban 4 Combined 5.0. Co2 116 g/km. For more information visit **www.honda.hr** 

# SIGHTSEEING TOUR ICBR 2013

FRIDAY, SEPTEMBER 13, 2013

### OLD TOWN OF DUBROVNIK & CRUISE TO CAVTAT

10.00	Departure by bus to the Old Town of Dubrovnik
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- 11.15 Boat cruise along the Dubrovnik Riviera to Cavtat
- 12.00 Arrival in Cavtat and lunch in the popular restaurant Leut
- 13.45\* Arrival at Dubrovnik Airport
- 14.15\* Arrival at Hotel Dubrovnik Palace

Dubrovnik is on UNESCO's list of cultural heritages and is regarded as one of the most beautiful cities in the Mediterranean. Surrounded by ramparts and fortresses, it is a treasure of architectural and cultural masterpieces, well preserved over the centuries.

During a sightseeing tour with a professional guide, the guests will get to see some of the most attractive sights in the Old Town.

After this impressive cultural experience we invite the guests on a boat cruise from the Old Town port along the Dubrovnik Riviera to the little picturesque town Cavtat which is situated at the south slopes of the peninsula of Rat. Also known as the ancient Epidaurum, it is a popular get-away and fascinates its visitors with its very attractive mixture of old and new architecture.

After lunch in the restaurant Leut, where the family Bobic have spoilt their guests for over 30 years with excellent seafood in a beautiful setting right by the sea, we return to the hotel via a short stop at the airport.

Minimum number of participants: 20

\* No guarantee on arrival time due to traffic conditions.

















# **EXHIBITION AND POSTER PRESENTATIONS**

# **EXHIBITION**







A professional exhibition area is available for all companies wishing to display their products or advertising materials.

The fee for an exhibition booth (2 m x 3 m) is  $\in$  3'500.– and for a poster presentation  $\in$  350.– for the full time of the conference.

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



Ecotest, Netherlands
Greenoffice, France
Ruting d.o.o., Croatia
Metal Depot Zurich AG, Switzerland
Optisort AB, Sweden
Raw Materials Company Inc., Canada
Redux Recycling GmbH, Germany
Umicore Battery Recycling, Belgium
UNTHA shredding technology GmbH, Austria
Xstrata Nickel International S.A., Belgium



# **SPONSORS**



On **Wednesday**, **September 11**, **2013**, an unforgettable sunset networking dinner will be organized on the beautiful Vala Beach of the Hotel Dubrovnik Palace.

Do not miss this perfect possibility to meet your business partners and friends in a nice atmosphere and register to this event now.

Meet friends and business partners in a nice atmosphere!

































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SUSANN

SCHMID

SIBYLLE

ZIMMERLI

Congress Assistant

Congress Assistant

**ORGANIZER OF ICBR 2013** 



JEANETTE DUTTLINGER Congress Organizer



MIRJAM WAGNER Congress Assistant





SABRINA BOLLIGER Congress Assistant



YING LIU REICHENBACH Congress Assistant



CLAUDIA GERSTENDÖRFER Congress Assistant



NADINE MÜLLER Congress Assistant



MANNHART Congress Assistant Registration for the congress should be made by means of the registration form or online. Participants registering and paying before July 31, 2013 will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, proceedings and luncheons.

# **REGISTRATION FEES**

Congress Fee		efore Iy 31, 2013		ter ly 31, 2013
Fee for participants Fee for speakers Fee for students	€ €	1'390 790 590	€ €	1'490 890 690
Networking dinner (Sept. 11, 2013) Networking dinner for spouse (Sept. 11, 2013)	€ €	100 120	€ €	120 140
September 13, 2013 (you may choose one)- Training course€ 250€ 290Transport of dangerous goods (Li-batteries)				
– Sightseeing tour	€	75	€	90

Old town of Dubrovnik & cruise to Cavtat

Registration on site € 100.– surcharge

## Online registration **NEW!**

You may also register online at: www.icm.ch/icbr-2013

### 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
Currency:	EUR





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## Electronics Recycling Asia WRF 2013



### 13<sup>th</sup> International Electronics Recycling Congress IERC 2014



## 14<sup>th</sup> International Automobile Recycling Congress IARC 2014



March 19 – 21, 2014 Brussels, Belgium







We buy, store and sell physical metals and master alloys in your name. Metal Depot warehouses are solely located in Switzerland.

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# 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.

