

ICBR 2021

www.icm.ch

Onsite & Virtual

26th International Congress for Battery Recycling ICBR 2021

September 22 – 24, 2021, Geneva, Switzerland



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PATRONAGE:

- Association of European Automotive and Industrial Battery Manufacturers (EUROBAT)
- Battery Stewardship Council
- Corepile
- European Battery Recycling Association (EBRA)
- European Electronics Recyclers Association (EERA)
- European Portable Battery Association (EPBA)
- STIBAT
- The Advanced Rechargeable & Lithium Batteries Association (RECHARGE)
- The Rechargeable Battery Association (PRBA)



Stiftung
GRS Batterien

GLENCORE



FOREWORD



DR JEAN-POL WIAUX

Chairman
of the Steering Committee
International Congress for
Battery Recycling

The period 2020–2021 revealed the impact that three elements can have on our global economy.

A tiny **molecule** made of two atoms of oxygen and one of carbon (CO₂) has been contributing to the global warming of our planet and influencing the political, social and industrial agenda in many countries and regions in the world.

A larger **cellular** agent (Covid 19) modified our lifestyle by turning rapidly into a pandemic, highlighting the need to transform our linear economy into a more sustainable way of life.

Finally, the **sun**, a star, our star, is recognised as the renewable source of energy that will sustain human activity on earth for the foreseeable future.

In this global environment, primary and rechargeable batteries represent a key technology for storing and delivering an on-demand and delocalized energy source.

In primary batteries, chemical energy is transformed into electricity. Rechargeable batteries have the capacity to store and deliver efficient electrical energy whilst being charged from renewable sources.

The future of batteries is closely linked to the needs of an increasingly electrified society, relying on the sustainable supply and consumption of battery raw materials and proposing solutions to environmental concerns.

New dimensions are used to qualify battery production plants: **Giga factories** are under construction or start-up conditions. This raises the question: what about **Giga Recycling** Plants? Battery recycling becomes the key to balancing the supply and demand of active battery materials.

It seems justified to build a framework around the huge development of the battery production industry and the associated end-of-life management of waste batteries.

Therefore, the proposal for a new Battery Directive recently issued by the EU Commission, is keeping the global battery industry and the recycling industry on high alert.

In its innovative proposal, the EU Commission is setting ambitious targets for battery collection and recycling at end of life, and is proposing 15 implementing acts to transform a Directive on waste batteries into a Regulation to support the sustainable development of the technology...

All of these challenges raised by the EU Commission proposal will be under discussion at ICBR 2021.

We welcome you to Geneva on September 22–24, 2021. Join the 26th International Battery Recycling Congress (ICBR 2021) dedicated to battery recycling. It's the place to be for sharing your experience and concerns with colleagues, authorities and worldwide experts from the battery recycling business world.

INTERNATIONAL STEERING COMMITTEE



DR JEAN-POL WIAUX
Chairman of ICBR
Consultant
Switzerland



JACQUES DAVID
Consultant
France



CHRISTOPHE PILLOT
AVICENNE ENERGY
Director
France



DR ALAIN VASSART
EBRA
General Secretary
Belgium



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Chairman of the Lecture Group
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GEORGE A. KERCHNER
PRBA – The Rechargeable
Battery Association
Executive Director
USA



HIROHITO TERAOKA
FDK Corporation
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Product Business
Promotion Office
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HANS CRAEN
European Portable Battery
Association (EPBA)
Secretary General
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Managing Director
Switzerland



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



JILL LEDGER-BOMPARD
ICM AG
Switzerland

CONGRESS DIRECTOR

KEYNOTE SPEAKERS



CHRISTOPHE PILLOT
AVICENNE ENERGY
Director
France

Christophe has built up considerable expertise in the area of battery market. He joined AVICENNE 30 years ago and spent 3 years in Japan analysing the Japanese electronics, mobile & battery markets. Christophe gained large experience in marketing, strategy analysis, technology and financial studies for the battery and power management fields.

He developed the battery market analysis for AVICENNE which counts more than 300 customers worldwide. Christophe published

several annual surveys like "The rechargeable battery market 2020–2030". He is also the founder & chairman of the Batteries event in France since 1999. Christophe is now Director of AVICENNE ENERGY.

WW battery & key raw materials markets

THORE SEKKENES
European Battery Alliance EBA250
Program Director, Industry



Thore is currently the EBA 250 Programme Director Industry of the European Battery Alliance. He has 30 years of experience at management positions in system business related to electric power conversion within ABB and Bombardier Transportation. He has consistently been working with technologies enabling the transformation to sustainability in the power and transport sectors. Thore joined InnoEnergy in February 2019 and leads the EBA 250 with the responsibility to develop the European battery industry.

The development of a new EU battery industry



LOCATION & ACCOMMODATION



The 26th International Congress for Battery Recycling ICBR 2021 will be held from September 22 – 24, 2021 at the:

Hotel InterContinental Geneva
7–9 Chemin du Petit Saconnex
1209 Geneva
Switzerland

Phone +41 22 919 39 39
www.geneva-intercontinental.com

The Hotel InterContinental Geneva is only 10 minutes by public transport from the city center and the airport. The hotel offers the city's highest point of view on Lake Geneva, Mont Blanc, the Alps and Jura mountain.

Connection from Geneva Airport:

Only 6 minutes by taxi or public bus.
Bus N°5 stops in front of the hotel InterContinental.

IMPORTANT NOTICE:

The health and well-being of our participants is our top priority. ICM guarantees that all necessary measures are in place to protect us all and enable our conferences to take place in safe and enjoyable conditions. All our partners respect and update local rules and regulations. For further information on the current situation will follow. For any other questions please contact the ICM team.



BIENVENUE À GENÈVE! WELCOME TO GENEVA!

Situated along the banks of Lake Geneva at the foot of the Alps, Geneva sparkles as one of Europe's most beautiful cities. It boasts some stunning landscapes, plus an incredibly diverse cultural scene!

Geneva is the epicenter of watchmaking expertise and the home to the European headquarters of the United Nations and the Red Cross. A cultural center featuring world class entertainment, sixty art galleries and forty museums, top rated restaurants and unlimited opportunities for recreation.

The "Jet d'Eau", Geneva's most famous monument, is the world's tallest water fountain and provides a constant landmark for exploring the city and the Old Town.

As well, be sure to check out Geneva's famous Market Street to buy a Swiss watch or just window shop. Enjoy lake "Léman", take a cruise on the lake or relax in one of Geneva's main waterfront parks.

Extend your stay and enjoy the energy of a big city but with the tranquility of a small town.

www.geneve.com/en



Check out the
updated program



CONGRESS PROGRAM ICBR 2021

TUESDAY, SEPTEMBER 21, 2021

17.00 – 19.00 Registration

WEDNESDAY, SEPTEMBER 22, 2021

08.00 – 09.00 Registration and welcome coffee in the exhibition area

09.00 – 10.30 "Welcome and Introduction"
Jean-Pol Wiaux, Chairman of the Steering Committee

KEYNOTE SPEAKERS

"WW battery & key raw materials markets"
Christophe Pillot, AVICENNE ENERGY, France

"The development of a new EU battery industry"
Thore Sekkenes, European Battery Alliance EBA250

10.30 – 11.00 Coffee break in the exhibition area

PANEL DISCUSSION

The revised Battery Directive – Does a regulation better meet industry needs?

Moderator: Willy Tomboy, Defomserve, Belgium

Participants: Alain Vassart, EBRA, Belgium
Hans Craen, EPBA, Belgium
Eric Ruyters, EUCOBAT, Belgium
Claude Chanson, RECHARGE, Belgium
José Rizo Martin, DG Environment, Belgium

12.30 – 14.00 Lunch in the exhibition area

WEDNESDAY, SEPTEMBER 22, 2021

Session 1: Battery Metals

Session Chairman: Patrick de Metz, Saft, France

14.00 – 14.30 "Raw materials for Europe's battery revolution. The role of sustainability and circularity requirements"
Kamila Slupek, Eurometaux – European Association of Metals, Belgium

14.30 – 15.00 "Fortum and the battery materials recycling business"
Tero Holländer, Fortum Waste Solutions Oy, Finland

15.00 – 15.30 "Direct recycling: Closed-loop lithium-ion battery recycling"
Zheng Li, Li Industries, USA

15.30 – 16.00 Coffee break in the exhibition area

Session 2: Compliance Scheme Reports

Session Chairman: Georgios Chryssos, Stiftung GRS Batterien, Germany

16.00 – 16.30 "Update of e-bike batteries collection and recycling – the French example"
Frédéric Hédouin, COREPILE, France

16.30 – 17.00 "Market trends shaping North American battery stewardship"
Leo Raudys, Call2Recycle, USA

17.00 – 17.30 "Electric Vehicle batteries takeback compliance scheme: stage & back-stage realities"
Catherine Lenaerts & Fredericq Peigneux, Febelauto, Belgium

19.30 Cocktail reception in the pool restaurant

20.30 Networking dinner

Check out the
updated program



CONGRESS PROGRAM ICBR 2021

THURSDAY, SEPTEMBER 23, 2021

08.00 – 09.00 Welcome coffee in the exhibition area

Session 3: Recycling Processes & Technologies (I)

Session Chairman: Johan van Peperzeel, Van Peperzeel B.V., Netherlands

09.00 – 09.30 "Battery recycling on the verge of commercialization"
Jean-Christophe Lambert, Lithion Recycling, Canada

09.30 – 10.00 "The criticality for a circular economy – Reuse/repurposing and recycling of lithium-ion-phosphate batteries"
Christian Winkler, TES-AMM Central Europe GmbH, Germany

10.00 – 10.30 "Thermomechanical processing of lithium-ion batteries from e-mobility and WEEE appliances"
Peter Hessler, URT Umwelt- und Recyclingtechnik GmbH, Germany

10.30 – 11.00 Coffee break in the exhibition area

Session 4: Battery Repurposing & 2nd life

Session Chairman: Arie de Jong, STIBAT Services, Netherlands

11.00 – 11.30 "Research and regulatory obstacles for stationary second use battery energy storage systems"
Terese Birkeland & Bernhard Fässler, University of Agder, Norway

11.30 – 12.00 "Maximizing battery repurposing and raw material supply through efficient, accurate, and localized battery diagnostics"
Shawn Murphy, TITAN Advanced Energy Solutions, USA

12.00 – 12.30 "2nd life of EV batteries: Field testing results"
Stefan Bahamonde, Libattion AG, Switzerland

12.30 – 14.00 Lunch in the exhibition area

THURSDAY, SEPTEMBER 23, 2021

Session 5: Safety

Session Chairman: Claude Chanson, RECHARGE, Belgium

14.00 – 14.30 "Fire prevention and sensibilization of actors in the WEEE chain"
Soline Van Wymeersch, Eco-Systèmes, France & Emmanuel Katrakis, EuRIC, Belgium & Benny Van Den Steen, Bebat vzw-asbl, Belgium

14.30 – 15.00 "Recent achievements and on-going standardization efforts in support on battery recycling, reuse or repurposing"
Guy Marlair, INERIS, France & Laurie Florence, Underwriters Laboratories, Inc., USA

15.00 – 15.30 "HV battery thermal runaway - New challenges for rescuers"
Michel Gentileau, Service départemental d'incendie et de secours, France

15.30 – 16.00 Coffee break in the exhibition area

Session 6: Recycling Processes & Technologies (II)

Session Chairman: Alain Vassart, EBRA, Belgium

16.00 – 16.30 "Traceability technology in the battery recycling value chain"
Fearghal Kearney, Circular, United Kingdom

16.30 – 17.00 "Flexible industry scale disassembly of battery"
Max Weeber, Fraunhofer IPA, Germany

17.00 – 17.30 "ReLieVe project by ERAMET lithium-ion battery recycling"
Thierry Guelton, ERAMET, France

17.30 – 17.45 **Closing Remarks**

from 17.45 Farewell reception in the exhibition area

VIRTUAL SESSIONS

(only available online)

VIRTUAL SESSION

- Automated mineralogy as a novel method to assess the efficiency of lithium-ion batteries recycling
Anna Vanderbruggen, Helmholtz Institute Freiberg of Resource Technology, Germany
- New era in battery sorting technologies
Anthony Joseph, LINEV ADANI, Belarus
- Project for recovery of valuable metals such as Co, Ni, Mn, Li etc. from spent LIBs
Yasuhiro Tsugita, Consultant, Japan
- Creating a secondary source for critical battery materials
Kunal Phalpher, Li-Cycle, Canada
- Characterization of lithium-ion battery recycling intermediates
Mark Bedford, Johnson Matthey PLC, United Kingdom
- Insulation and fire protection: supporting a safe and sustainable battery market
Luis Sierra, Promat, Spain
- Presentation title TBC
Andreas Krebs, FIREBOX Swiss AG, Switzerland
- Recovery of valuable metals from black matter of lithium-ion batteries in a novel pyrometallurgical reactor
Alexandra Holzer, Montanuniversität Leoben, Austria

SPONSOR OF VIRTUAL PLATFORM



SPONSORS:



TROPICAL NIGHT

Let's get back into the holiday mood again and celebrate the last days of summer.



Get ready for delicious food, great summer music and plenty of joy, laughter and great moments with your colleagues and business partners.

Join us for the Tropical Networking Dinner on Wednesday, September 22, in the hotel InterContinental.

Wear your favourite summer outfit and get ready to be transported back to tropical islands!



WORKSHOP

HOW TO INTEGRATE BLACK MASS INTO A CIRCULAR ECONOMY OF LITHIUM-ION BATTERIES

CASE STUDIES and RECOMMENDATIONS

Date	Friday, September 24, 2021
Time	08.45 – 12.30
Location	Hotel Intercontinental, Geneva

1. Workshop Objective

Lithium-ion battery processing at end of life produces a black mass, a source of critical raw materials. According to the EU Waste Legislation this black mass could be qualified as waste or non-waste. The workshop will cover the description of various types of black mass, their composition and properties, as well as the potential treatment processes. The classification criteria will be reviewed in order to evaluate how they fit into the new Batteries Regulation objectives of recycling efficiency, recovery rates and recycled content.

2. Methodology

During the workshop, practical cases will be illustrated where operators have difficulties implementing the Transport Regulation for certain categories of waste batteries and battery materials and selecting the required packaging and shipping instructions, mainly taking into consideration the composition of waste batteries and their physical status prior to shipment.

3. Participants and Case Studies

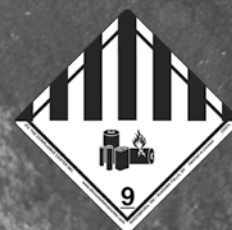
Participants who register for the workshop are invited to prepare their own case study in advance and to communicate it to the organizer in order to share knowledge among the audience and increase the level of practical recommendations.

4. Moderators and Experts

The Workshop will be moderated by Dr Claude Chanson (RE-CHARGE) with the participation of Dr Alain Vassart (EBRA) and Dr Reiner Sojka (ACCUREC Recycling GmbH) as experts. Contributions from other Companies will be announced.

The workshop will be held with a minimum of 10 participants and will be limited to 40 participants. A certificate of attendance will be delivered after the workshop.

To register or contribute, please contact ICM AG at info@icm.ch



PLANT TOUR ICBR 2021

FRIDAY, SEPTEMBER 24, 2021

MTB RECYCLING AND MANUFACTURING TREPT, FRANCE



08.00	Departure by bus to MTB Recycling and Manufacturing, Trept, France
10.00	Arrival at MTB Recycling, Trept, France
10.00 – 13.00	Visit of the MTB recycling plant and manufacturing workshop
15.15*	Arrival at the airport Geneva
15.30*	Arrival at the Hotel InterContinental Geneva

Lunch will be offered during the tour.

MTB is a unique model in the world of recycling. As a French operator / manufacturer, we know customers' issues, we master technologies, we offer best solutions. Pioneer and innovative, we develop the future recycling processes: coming wastes and containerized, turnkey chopping solution. MTB is a committed company and claims its position as eco-responsible recycler. The development of our company is based on an ambitious plan and 3 key commitments: Zero waste, The Wow effect and Our children's future. MTB, More Than Business.

This is a cross-boundary tour. Passport is required.
Covid requirements to travel to France: negative RT-PCR test conducted a maximum of 72 hours prior, negative antigen test conducted a maximum of 48 hours prior to arrival, or proof of full vaccination.

www.mtb-recycling.fr

* No guarantee on arrival time due to traffic conditions.
The plant tour will only take place with a minimum of 8 participants.



EXHIBITION & ADVERTISING



Reach key industry decision makers and promote your products to all attendees.

The fees are:

Booth 6 m² (2 m x 3 m)	EUR 3'690
Booth 12 m² (3 m x 4 m)	EUR 4'990
Display board	EUR 690
Virtual presentation	EUR 990

Space is limited, book today!



EXHIBITORS



BHS-Sonthofen GmbH, Germany



Circular, United Kingdom



FIREBOX Swiss AG / BLUBOX Trading AG, Switzerland



Glencore, Switzerland



Li-Cycle, Canada



LINEV ADANI, Belarus



MTB Recycling, France



Nickelhütte Aue GmbH, Germany



Promat Iberica, S.A., Spain



STEINERT GmbH, Germany



TES Europe



Titan Advanced Energy Solutions, USA



URT Umwelt- und Recyclingtechnik GmbH, Germany

WHO SHOULD ATTEND?



- Battery manufacturers
- Battery recycling companies
- Waste management companies
- Electric & hybrid car manufacturers
- Electric car dismantling & recycling companies
- Battery collection schemes
- Battery collection & 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
- Experts in the field of safe transportation & storage



The registration fee includes entrance to the congress and exhibition, virtual event package, proceedings and lunches.

REGISTRATION FEES

Congress registration fee, incl. virtual event package

Fee for participants	EUR	1'890
Fee for speakers	EUR	1'190
Fee for students*	EUR	790

*only with valid student card and age below 30

Networking dinner (Sept. 22, 2021)	EUR	140
Networking dinner guest (Sept. 22, 2021)	EUR	150

Plant tour (Sept. 24, 2021) MTB Recycling & Machinery, Trept, France	EUR	70
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Workshop (Sept. 24, 2021) How to integrate black mass into a circular economy of lithium-ion batterie	EUR	190
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Virtual event package	EUR	590
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All prices excl. 7,7% Swiss VAT.

Registration on site EUR 100 surcharge.

Online registration

You may register online at: www.icm.ch/icbr-2021

Payment

Payment should be made in EUR by credit card.



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 ICM AG

 ICMRECYCLING

 INTERNATIONAL_CONGRESS_ICM

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IERC 2022



SAVE THE DATE



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**YING
LIU REICHENBACH**
Congress Manager



20th International Electronics Recycling Congress IERC 2022

January 19 – 21, 2022
Salzburg, Austria



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