



The 22nd International Meeting on

Lithium Batteries

16 - 21 June 2024, Hong Kong



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Meeting Program

TECHNICAL PROGRAM

DAY 1
17 JUNE 2024

MORNING SESSION



8:30 AM - 8:45 AM

GUOHUA CHEN / CITYUHK, Hong Kong

OPENING CEREMONY

SESSION CHAIR: GUOHUA CHEN



8:45 AM - 9:15 AM

JEAN MARRIE TARASCON / College de France, France

Towards Better Battery Chemistries:
Materials-Electrolyte-Sensing Innovations and
Future Perspectives



9:15 AM - 9:45 AM

AKIRA YOSHINO / Asahi Kasei Corporation, Japan

Future Society Engendered by Lithium Ion
Battery



9:45 AM - 10:15 AM

MINGGAO OUYANG / Tsinghua University, China

Current Status of Energy Storage Activities in
China



10:15 AM - 10:40 AM

KOHEI UOSAKI / Japan Science and Technology Agency, Japan

Current Status of Battery Research Projects in
Japan



10:40 AM - 11:05 AM

KARIM ZAGIB / Concordia University, Canada

Canada and Québec Battery Ecosystem:
Status and Trends



11:05 AM - 11:35 AM

COFFEE & TEA BREAK

SESSION CHAIR: HONG LI



11:35 AM - 12:05 PM

PETER BRUCE / University of Oxford, UK

The lithium/ceramic Electrolyte Interface –
Dendrite Mechanism and Mitigation



12:05 PM - 12:30 PM

LINDA NAZAR / The University of Waterloo, Canada

Soft Solid Electrolytes and their
Interfaces/Interphases in Solid State Batteries



12:30 PM - 12:55 PM

RYOJI KANNO / Tokyo Institute of Technology, Japan

All Solid-State Battery using LGPS-type
Lithium Solid Electrolytes



12:55 PM - 1:25 PM

JUN CHEN / Nankai University, China

Prospects and challenges of organic
electrode materials for lithium batteries



1:25 PM - 2:40 PM

LUNCH

AFTERNOON SESSION

SESSION CHAIR: PETER BRUCE

2:40 PM - 3:05 PM

JEFF SAKAMOTO / University of California: Santa Barbara

Mechano-Electrochemical Phenomena in Solid-
State Batteries



3:05 PM - 3:30 PM

CLAIRE VILLEVIEILLE / University Grenoble-Alpes, France

Correlating Bulk and Surface Investigation
Techniques to Understand Solid State Batteries



3:30 PM - 3:55 PM

HONG LI / Institution of PhysicS (CAS), China

Practical solid lithium batteries via in situ
solidification



3:55 PM - 4:20 PM

XUELIANG SUN / University of Western Ontario, Canada

Halide-Based Li/Na Solid State Batteries: From
Electrolytes to Electrodes



4:20 PM - 4:50 PM

COFFEE & TEA BREAK

SESSION CHAIR: WENJUAN LIU MATTIS

4:50 PM - 5:15 PM

JANEK JURGEN / University of Giessen, Germany

High Capacity Anodes in Solid-State Batteries



5:15 PM - 5:40 PM

ERIC WACHSMAN / University of Maryland, USA

Achieving Extreme High Ion-Current Densities in
Tailored Solid-State Materials, Structures, and
Interfaces



5:40 PM - 6:05 PM

ZHAOYIN WEN / Shanghai Ceramic Institute (CAS), China

Suppression of Lithium Dendrite in Ceramic based
Electrolyte Batteries by Bulk Strengthening and
Interface Modification



6:05 PM - 6:30 PM

ZHONGWEI CHEN / Dalian Institute of Chemical Physics (CAS), China

Dry Electrode Technology for Solid State
Battery



6:30 PM - 6:55 PM

YOON SEOK JUNG / Yonsei University, South Korea

Sulfide and Halide Solid Electrolytes for All-
Solid-State Batteries



7:00 PM - 9:00 PM

EXHIBIT & POSTERS

VIP DINNER SPONSORED BY CAPCHEM



TECHNICAL PROGRAM

DAY 2
18 JUNE 2024

MORNING SESSION

SESSION CHAIR: KANG XU

8:30 AM - 8:55 AM



STACEY BENT / Stanford University, USA

Controlling Lithium Morphology by Interfacial Engineering

8:55 AM - 9:20 AM



BETAR GALLANT / MIT, USA

Hidden Factors Governing Coulombic Efficiency of Li Metal Anodes

9:20 AM - 9:45 AM



YUKI YAMADA / Osaka University, Japan

Rational Design of Liquid Electrolytes for Advanced Lithium Batteries

9:45 AM - 10:10 AM



MICHAEL METZGER / Dalhousie University, Canada

Long-Lifetime LMFP/Graphite Cells Enabled by Advanced Electrolytes

10:10 AM - 10:40 AM



COFFEE & TEA BREAK

SESSION CHAIR: QUAN LI

10:40 AM - 11:10 AM



YUNHUI HUANG / Huazhong University of Science and Technology, China

The Strategies of High Safety for Rechargeable Batteries

11:10 AM - 11:35 AM



STEFANO PASSERINI / Sapienza University of Rome, Italy

Locally Concentrated Ionic Liquid Electrolytes for High-Energy Batteries

11:35 AM - 12:00 PM



DOMINIC BRESSER / Helmholtz-Institut Ulm, Germany

Single-ion conducting polymer electrolytes for lithium-metal batteries – Latest insights and remaining challenges

12:00 PM - 12:25 AM



YONGHONG DENG / Shenzhen CAPCHEM Technology Co. Ltd / SUSTech, China

Electrolyte/electrode interface in lithium-based batteries

12:25 PM - 12:50 PM



SEUNG-WAN SONG / Chungnam National University, South Korea

Tolerant Battery Liquid Electrolytes to Extreme Conditions

12:50 PM - 2:05 PM



LUNCH

AFTERNOON SESSION

SESSION CHAIR: TRACY LIU

2:05 PM - 2:35 PM



MARTIN WINTER / University of Münster (MEET), Germany

Insights on Interfaces and Interphases in Li Metal Batteries Through Transnational R&D Between USA and Germany: The DE-US Program

2:35 PM - 3:00 PM



YONG YANG / Xiamen University, China

Interfacial modification and characterization in all solid state Li battery

3:00 PM - 3:25 PM



JONGWOO LIM / Seoul National University, South Korea

Multiscale Battery Dynamics: From Cell to Particle and The Effects of Electrolytes.

3:25 PM - 3:50 PM



YOSHITAKA TATEYAMA / NIMS, JAPAN

Microscopic Elucidation of Ion Transport in Cathodes, Solid Electrolytes and Their Interfaces Via Atomistic Simulations

3:50 PM - 4:15 PM



FENG PAN / Peking University, China

Exploration of material genes and structural chemistry in Li-ion batteries

4:15 PM - 4:45 PM



COFFEE & TEA BREAK

SESSION CHAIR: YOSHIHARU UTCHIMOTO

4:45 PM - 5:15 PM



SHI-GANG SUN / Xiamen University, China

Studies of Lithium Battery by Developing In-situ/Operando Spectroscopy/Microimaging Techniques

5:15 PM - 5:40 PM



LAUREN MARBELLA / Columbia University, USA

Understanding Surface Degradation Mechanisms in Li Batteries with Operando Spectroscopy

5:40 PM - 6:05 PM



YAN YU / University of Science and Technology of China, China

Interface Regulation of Alkali Metal Anodes for Advanced Alkali Metal Batteries

6:05 PM - 6:30 PM



VANESSA WOOD / ETH, Switzerland

Microstructure-Performance Relationships: Methods, Insights, and Manufacturing

6:30 PM - 6:55 PM



ANJA HENESS / University of Giessen, Germany

In-situ Insights: Characterization of Interfaces/Interphases in Polymer Based Batteries

7:00 PM - 9:00 PM



EXHIBIT & POSTERS

TECHNICAL PROGRAM

DAY 3
19 JUNE 2024

MORNING SESSION

SESSION CHAIR: ZIFENG MA

8:30 AM - 9:00 AM



YI CUI / Stanford University, USA

Stationary Energy Storage Based on Metal-Hydrogen Batteries

9:00 AM - 9:25 AM



NAE-LIH WU / National Taiwan University, ROC

Enabling safe eXtreme fast charging by alleviating intrinsic kinetic limit of graphite anode

9:25 AM - 9:50 AM



FEIYU KANG / Tsinghua University, China

Design, Preparation and Application of Carbon Materials for Energy Storage

9:50 AM - 10:15 AM



ADAM BEST / CSIRO, Australia

Natural Graphite to Lithium Metal: The Trials and Tribulations of Anodes for Li (ion) Batteries

10:15 AM - 10:45 AM



COFFEE & TEA BREAK

SESSION CHAIR: KISUK KANG

10:45 AM - 11:10 AM



HUIMING CHENG / CAS-SZ, China

Repairing And Upcycling of Electrode Materials from Spent Lithium-Ion Batteries

11:10 AM - 11:35 AM



JANG WOOK CHOI / Seoul National University, South Korea

Advanced Materials and Electrode Designs for Silicon Anodes

11:35 AM - 12:00 PM



WON-SUB YOON / Sungkyunkwan University, South Korea

Decoupling The Capacity Fading in High-Nickel Cathodes

12:00 PM - 12:25 PM



YANG-KOOK SUN / Hanyang University, South Korea

A Surface-Modification Strategy for High-Energy-Density and Durable Nickel-Rich Layered Cathodes

12:25 PM - 12:50 PM



XUEJIE HUANG / Chinese Academy of Sciences, China

Advanced Cathode Materials Toward The 3rd Generation EV Batteries

12:50 PM - 2:05 PM



LUNCH

AFTERNOON SESSION

SESSION CHAIR: ZIJIAN ZHENG

2:05 PM - 2:35 PM



KISUK KANG / Seoul National University, South Korea

New Anionic-Redox Li-Excess Layered Transition Metal Oxides with High Energy Density And No Voltage Fades

2:35 PM - 3:00 PM



ATSUO YAMADA / University of Tokyo, Japan

Cobalt D-Spin as A Trigger of Huge Voltage Hysteresis

3:00 PM - 3:25 PM



NAOAKI YABUUCHI / Yokohama National University, Japan

Nanostructured Lithium Insertion Materials for Practical Battery Application

3:25 PM - 3:50 PM



YONGYAO XIA / Fudan University, China

Single Crystal Spherical LiMn2O4 for Prolonged Battery Life

3:50 PM - 4:20 PM



COFFEE & TEA BREAK

SESSION CHAIR: YANG REN

4:20 PM - 4:45 PM



LINSEN LI / Shanghai Jiao Tong University, China

Stabilizing Lattice Oxygen in "Slightly Li-rich" Nickel Oxide Cathodes (Li 1+xNi 1-xO 2) Toward All-Solid-State Batteries

4:45 PM - 5:10 PM



HONG GAN / SES AI, USA

SEI Evolution and Li Metal Battery Cycling Performance

5:10 PM - 5:35 PM



WILLIAM CHUEH / Stanford University, USA

What limits the rate of intercalation: diffusion or reaction kinetics?

5:35 PM - 6:00 PM



QUINN HORN / Exponent, USA

Compare and contrast sodium-ion versus lithium-ion from a safety perspective

6:15 PM - 9:00 PM



EXHIBIT & POSTERS

7:00 PM - 11:00 PM



GALA DINNER - TICKETED EVENT

TECHNICAL PROGRAM

DAY 4
20 JUNE 2024

MORNING SESSION

SESSION CHAIR: WILLIAM CHUEH

8:30 AM - 8:55 AM



YOUNG-MIN CHOI / LG Chem, South Korea
LG Chem's Technology Innovation of Battery Materials for Li-Ion Batteries

8:55 AM - 9:20 AM



SHAOFEI WANG / CATL, China
Advanced Batteries from CATL for Energy Storage Systems

9:20 AM - 9:45 AM



QIAN CHENG / Gotion, China
Introduction of Gotion 230wh / kg LMFP Battery Cell and CTP Battery Pack

9:45 AM - 10:10 AM



QICHAO HU / SES AI, USA
Li-Metal batteries for EV and UAM, developed by human and AI super-scientists

10:10 AM - 10:40 AM



COFFEE & TEA BREAK

SESSION CHAIR: DORON AURBACH

10:40 AM - 11:05 AM



TSUYOSHI SASAKI / Toyota Central R&D Labs., Inc, Japan
In situ Neutron imaging of lithium-ion batteries during heating to thermal runaway

11:05 AM - 11:30 AM



KURT VANEPUTTE / BMW Group, Germany
Future Technologies for Automotive Batteries: Selected Electrode Phenomena

11:30 AM - 11:55 AM



ATSUSHI OHMA / Nissan Motor Co. Ltd., Japan
Challenges of Battery Research for Future EVs toward Carbon Neutrality at Nissan

11:55 AM - 12:20 PM



KENT SNYDER / Ford Motor, USA
Displacing Lithium-ion Technology In Automotive Electrification: Challenges

12:20 PM - 12:45 PM



ANSGAR FENDEL / Remondis, Germany
Closing the loop by recycling lithium batteries: There is still a lot to do!

12:45 PM - 2:00 PM



LUNCH

AFTERNOON SESSION

SESSION CHAIR: LINDA NAZAR

2:00 PM - 2:25 PM



SHINICHI KOMABA / Tokyo University of Science, Japan
Toward high-energy Na-ion battery

2:25 PM - 2:50 PM



NEERAJ SHARMA / UNSW, Australia
Metal Dicarboxylates as Anode Materials

2:50 PM - 3:15 PM



CHRISTIAN MASQUELIER / UPJV, France
NASICON Cathodes and Solid Electrolytes for Na Batteries

3:15 PM - 3:40 PM



SATHYA MARIYAPPAN / The College de France, France
The Na-ion battery technology: Challenges in moving from Na₃V₂(PO₄)₂F₃ to sodium layered oxides and what can be the added value

3:40 PM - 4:10 PM



COFFEE & TEA BREAK

SESSION CHAIR: SHINICHI KOMABA

4:10 PM - 4:40 PM



DORON AURBACH / Bar-Ilan University, Israel
Challenges in Developing Practical Secondary Mg Batteries, Update

4:40 PM - 5:05 PM



TOSHIHIKO MANDAI / NIMS, JAPAN
Development of Electrolyte and Interface for Mg Battery

5:05 PM - 5:30 PM



YU-GUO GUO / Institute of Chemistry (CAS), China
Solid-State Lithium Batteries: Li-S and Beyond Systems

5:30 PM - 5:55 PM



GUOXIU WANG / University of Technology Sydney, Australia
Sodium-sulfur Batteries for Sustainable Energy Storage

5:55 PM - 6:25 PM



QIANG ZHANG / Tsinghua University, China
The Promotion of Emerging Energy Materials for Lithium-Sulfur Batteries through Lithium Bond Chemistry

6:30 PM - 9:00 PM



EXHIBIT & POSTERS

TECHNICAL PROGRAM

DAY 5
21 JUNE 2024

MORNING SESSION

SESSION CHAIR: QI LIU



8:30 AM - 8:55 AM

YA YOU / Wuhan University of Technology, China
Electrolyte design for battery working under extreme conditions



8:55 AM - 9:20 AM

XIAOBO JI / Central South University, China
Carbon Dots for Solid Lithium Metal Batteries



9:20 AM - 9:45 AM

YI-CHUN LU / The Chinese University of Hong Kong, China
Electrolyte and Membrane Designs for Aqueous Redox Flow Batteries



9:45 AM - 10:10 AM

CHUNYI ZHI / City University of Hong Kong, China
Conversion Reactions-Based Cathode of Zinc Batteries



10:10 AM - 10:40 AM

COFFEE & TEA BREAK

SESSION CHAIR: MINHUA SHAO



10:40 AM - 11:05 AM

HONG JIN FAN / Nanyang Technological University, Singapore
Hydrogel Enabled Stable Zinc Metal Batteries



11:05 AM - 11:30 AM

HIKARI SAKAEBE / AIST, Japan
Development of Fluoride-Shuttle Batteries – Potential of Iron Materials



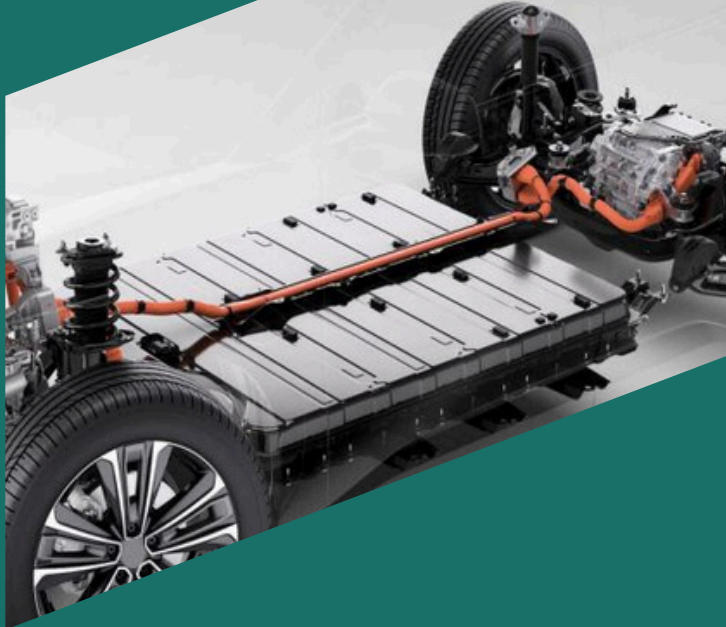
11:30 AM - 11:55 AM

JIULIN WANG / Shanghai Jiao Tong University/Xibjiang University, China
Sulfurized Polyacrylonitrile (SPAN) Cathode Materials for Next Generation of Batteries



11:55 AM - 12:20 PM

MINHUA SHAO (CO-CHAIR)
BEST POSTER AWARDS & CLOSING CEREMONY



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