INTERNATIONAL FLOW BATTERY FORUM 2024





IFBF 2024

THE PROGRAMME

25 - 27 JUNE 2024 GLASGOW, UK



THE PROGRAMME DAY ONE - TUESDAY 25 JUNE

08:30	WELCOMING COFFEE - Foyer and Exhibition Area
09:15	Welcome:
	Anthony Price, IFBF, Kees van de Kerk, President of Flow Batteries Europe, and Beata Virsumirska, Policy Officer of Flow Batteries Europe
0 9:30	Flow Batteries in Scotland
	 Sponsor's Keynote Address: Invinity Energy Systems: Larry Zulch, Invinity Energy Systems: Our view of the world of flow batteries from our home in Scotland Ed Brightman, University of Strathclyde: Flow battery activities at the University of Strathclyde Gavin Park, StorTera: The development and deployment of the lithium sulphur flow battery Ray Arrel, Regen: The role of electrical energy storage in UK's future energy system
11:00	COFFEE BREAK - Foyer and Exhibition Area
11:30	Project Reports
	 Johannes Häntzschel, Prolux Solutions: The deployment of domestic flow battery storage systems in the DACH region. Thomas Lüth, CellCube: Recent progress at CellCube, Austria Toshikazu Shibata, Sumitomo Electric Industries: The Kashiwazaki City, Japan long-duration flow battery
	 Philip Krause, Rongke Power: Construction and operation of a 100 MW / 400 MWh flow battery systems Sponsor's Keynote Address: US Vanadium: Mark Smith and Alicia Enslin, US Vanadium: Achieving growth in the supply chain Kees van de Kerk, Volterion, Flow Batteries Europe: Achieving growth in the commercialisation of flow batteries
13:00	LUNCH BREAK - Foyer and Exhibition Area
14:00	Panel Discussion on Electrolyte Supply
	 Terry Perles, US Vanadium Jana Plananska, Norge Mineraler AS Jack Bedder, Project Blue
14:25	International Markets for Flow Batteries
	 Yutong Zhu, Jena Flow Batteries: Insights into China's flow battery and energy storage market Jeehyang Huh, H2, Inc: Recent developments in vanadium flow battery systems in South Korea Gary Yang, KyRoGreen: Applications and markets of vanadium flow batteries in MENA Jill Cainey, Erne Energy: The Australian Battery Strategy
15:30	TEA BREAK - Foyer and Exhibition Area
16:00	What policies would help develop flow batteries?
	Lelde Kiela-Vilumsone, Team Leader, Energy Efficiency Policy Development, DG ENER, European Commission
	Mike Gravely, Research Program Manager, California Energy Commission
	A panel discussion with industrial representatives will follow.
19:00	CONFERENCE DINNER - Glasgow Science Centre
	IMPORTANT: <u>A separate ticket is needed for the IFBF Conference Dinner.</u> If you have any questions, please contact us at the reception desk. There is a shuttle bus between the Hilton Hotel and the Glasgow Science Centre, first departure at 18.20.

The conference dinner is sponsored by AvCarb.



DAY TWO - WEDNESDAY 26 JUNE

08:30	WELCOMING COFFEE - Foyer and Exhibition Area
09:00	Vanadium Systems
	 Adam Whitehead, <i>CellCube</i>: Vanadium flow battery - a field performance study proving a success story and technological advances Pablo A. Prieto-Diaz, <i>University Carlos III Madrid</i>: Capacity decay due to imperfect electrolyte mixing inside VFB tanks Alasdair Robertson, <i>Invinity Energy Systems</i>: The low-temperature stability of vanadium electrolyte Monja Schilling, <i>Helmholtz Institute Ulm - KIT</i>: Fiber shapes of electrodes for VFBs Christian Stolze, <i>Friedrich Schiller University Jena</i>: Chronoamperometric State-of-Charge Measurements in Flow Battery Electrolytes Jiří Charvát, <i>Pinflow</i>: Detailed investigation of VFB stack with a focus on single cell David Reber, <i>Empa</i>: On the role of energy density for grid-scale batteries
10:45	COFFEE BREAK - Foyer and Exhibition Area
11:15	Other Inorganic Systems
	 Ewan Fraser, University of Southampton: The development and characterisation of a kW scale soluble lead flow battery Fengjing Jiang, CIC energiGUNE: The advantages and challenges of the iron-lead single-flow battery for large-scale energy storage. David Gráf, UCT Prague: Flow batteries with zinc electrode – deposition and battery operation in various pH Eleonora Natale, Politecnico di Milano: Demonstration of an aqueous Zn Mn flow battery Zakaria El Koura, Green Energy Storage: Empowering LDES: GES Disruptive Hydrogen Flow Battery John Alper, VoltStorage: Iron salt battery: challenges and advances Liyu Li, Cougar Creek Technologies: Commercialization of a Fe-Cr complex long-duration flow battery
13:00	LUNCH BREAK (SPONSORED BY QUINO ENERGY) - Foyer and Exhibition Area
14:00	Hybrid and Organic Systems
	 Sponsor's Keynote Address: QUINO ENERGY: Eugene Beh, <i>Quino Energy</i>: Ton-scale electrosynthesis of quinone negolytes and their cycling performance in commercial flow battery hardware Tobias Janoschka, <i>Jena Flow Batteries</i>: From lab to megawatts: The evolution of TEMPO-based organic flow batteries Norbert Bartetzko, <i>CMBlu Energy</i>: Organic solid flow technology - combining flow and solid state battery systems Xinjie Guan, <i>University of New South Wales</i>: A coupled hydraulic and electrochemical stack and system model for aqueous organic flow battery: the MV/TEMPTMA system Kathryn Toghill, <i>Lancaster University</i>: The dual flow hybrid flow battery system Alberto Quintero, <i>B5tec</i>: Membraneless micro flow battery operating with inorganic and organic redox species Cristina Flox, <i>Iberian Center for Research in Energy Storage</i>: Pathways to high energy / power density flow battery
16:00	Poster Speed Pitch "Just a minute!" As a prelude to the IFBF Poster session, invited poster presenters will talk for "just a minute" about their work. Listen to their pitches as you hear about the latest research and new ideas in the industry before the poster and exhibition networking session.
16:30	IFBF POSTER SESSION AND NETWORKING RECEPTION
	Our popular IFBF poster session is back! We will be featuring 50 posters on the latest R&D in the world of flow batteries. Pick up your refreshments and talk to the poster presenters, visit our exhibition stands and discuss the latest developments with experts, colleagues and friends! The Poster Session and Networking Reception is sponsored by Pinflow.

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DAY THREE - THURSDAY 27 JUNE

09:00 Manufacturing, Performance and Reliability 10:30 Takashi Kamo, Sumitomo Electric Industries: Reliability testing of redox flow battery cell stacks 11:00 Elisha Martin, Invinity Energy Systems: Accelerating the development of non-PFAS options for VFB membranes opportunities in mass-production 10:30 Martin Bayer, Voluerion: Testing and evaluation of membranes for flow battery stack components fibiolar plate, electrode) in the GW scaled LDES market 11:00 Maximilian Fischer, Centroplast: Continuously produced bipolar plates via extrusion - challenges & opportunities in mass-production 11:00 Rusiness Opportunities for Flow Batteries 11:00 Business Opportunities for Flow Batteries • Maxim Battari, VFONVE-Ch: A new toole for fuel oit tanks • Zamien Sumich, VSUN Energy: Case study of a remote Western Australian utility VFB installation 12:30 Conference Closing Summary and Presentation of Awards 13:00 IUNCH BREAK - Foyer and Exhibition Area 14:00 IFBF Site visit - Invinity Manufacturing Tour (Please bring your ticket with you). Battaget, Unit 1, 10 Easter Inch Rd, Battaget EH48 2FG, UK 14:00 IFBF Site visit - Invinity Manufacturing Tour (Please bring your ticket with you). Battaget, Unit 1, 10 Easter Inch Rd, Battaget EH48 2FG, UK 14:00 Invinity has been building vanadium flow batteries in the UK, previously as redT Energy, since 2013 and today ships energy storage systems to a global custome	08:30	WELCOMING COFFEE - Foyer and Exhibition Area
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