

The International Flow Battery Forum

PROGRAMME

Wednesday 26 June 2013

0830	Anthony Price	IFBF Secretary	Welcome Address
Session 1: Operating experiences of flow batteries			
0840	Chris Winter	Redflow	Flow battery operating experience: Residential scale
0900	Stefan Hasslinger	GILDEMEISTER energy solutions	Operating Experiences: Scalable and Modular VRFB Energy Storage Systems under real conditions (P 22)
0920	Yoshiyuki Nagaoka	Sumitomo Electric Industries	Field Tests of the 1MWx5hours Vanadium Flow Battery System with the Photovoltaic Power System (P 30)
0940	Larry Thaller	Consultant	Redox Flow Batteries – Design by the Numbers (P 50)
1000	Adam Weber	Lawrence Berkeley National Laboratory	Insights into Hydrogen/Bromine Flow Batteries (P 10)
1020	REFRESHMENTS		
Session 2: New flow battery developments			
1050	Maria Skyllas-Kazacos	University of New South Wales	Flow battery research to flow battery commercialisation - Keynote Address (P 42)
1130	Craig Horne	EnerVault Corporation	Introducing EnerVault's Engineered Cascade™ System: Results from A Novel Redox Flow Battery Architecture and Use of Mixed-Species Iron Chromium Electrolytes (P 24)
1150	Qizhao Huang	National University of Singapore	Redox Flow Lithium-ion Battery (P 23)
1210	Adam Whitehead	GILDEMEISTER energy solutions	Charge Imbalance in the Vanadium Redox Flow Battery (P 56)
1230	PANEL DISCUSSION	Maria Skyllas-Kazacos, Chris Winter, Adam Weber, Craig Horne	<ul style="list-style-type: none"> • How do flow batteries compare with other emerging energy storage solutions? • What is limiting the development and commercialisation of flow batteries? • How can we work together to increase acceptance and develop the market?
1300	LUNCH		
Session 3: Technical developments and safety issues			
1400	Mark Johnson	ARPA-E Programme	From ideas to designing and developing flow batteries (Not Available)
1420	Peter Fischer	Fraunhofer Institute for Chemical Technology	Testing and analysis of vanadium redox flow battery – learning from fuel cell research (P 18)
1440	Andrea Bourke	University of Limerick	Spectroscopic study of VO ²⁺ /VO ₂ ⁺ electrolytes (P 20)
1500	Matthew Mensch	University of Tennessee	Advanced Diagnostics for Redox Flow Batteries (P 28)
1520	Werner Varro	TÜV SÜD Product Service	Large Scale Batteries – Safety Requirements for European Union and North America (P 52)
Session 4: Poster Papers			
1540	Poster commercials	Selected poster authors present their work	
1600	REFRESHMENTS & Poster Session		Ascot Suite
1730	End of Day 1		
1830	Reception & Dinner		Old Library and Dining Hall, Trinity College

THURSDAY 27 JUNE

Session 5: Manufacturing design and scale up			
0850	Rick Winter	UniEnergy Technologies	Chemistry and engineering to make a good vanadium battery better (P 60)
0910	Martin Dennenmoser	Fraunhofer Institute of Solar Energy System	What a redox flow battery really has to cost? (P 14)
0930	Baoguo Wang	Tsinghua University	Development of Manufacture Processes of Key Materials and VRFB Stack for Energy Storage (P 54)
0950	Thorsten Seipp	Fraunhofer Institute for Environmental, Safety, and Energy Technology	Scale-up of Vanadium-Redox-Flow-Stacks (P 40)
1010	Wolfgang Winkler	Hamburg University of Applied Sciences	The vanadium air redox flow battery project "Tubulair±" (P 45)
1030	REFRESHMENTS		
Session 6: Manufacturing design and scale up			
1100	Jonathan O'Sullivan	Eirgrid	A power system operators requirements for electrical energy storage (P 34)
1120	Veronique Amstutz	Ecole Polytechnique Fédérale de Lausanne	A dual-circuit cerium-vanadium redox flow battery for water electrolysis (P 8)
1140	Huamin Zhang	Dalian Institute of Chemical Physics	Progress on the Technology and Utility-scale Demonstration of Vanadium Flow Battery (P 62)
1200	Vincent Sprenkle	Pacific Northwest National Laboratory	Redox Flow Battery Development for Stationary Energy Storage Applications (P 48)
1220	Thomas Zawodzinski	University of Tennessee	Improving Performance through Advanced Materials for Redox Flow Batteries (P 64)
1240	PANEL DISCUSSION	Rick Winter, Dirk Schneider, Thomas Zawodzinski, Mark Johnson	<ul style="list-style-type: none"> • What can the flow battery industry learn from other industries? • Is there room for consolidation of expertise between companies and developers? • How should a user choose a flow battery?
1300	LUNCH		
Session 7: Supply of flow battery raw materials & components			
1430	Dirk Schneider	SGL Carbon	Carbon components in Redox Flow Batteries – the past and the future from an industrial perspective (P 38)
1450	Paula Cojocar	Solvay Specialty Polymers	The importance of material selection and exploitation for improving Flow Battery cost and performances (P 12)
1510	Francisco Fernández-Carretero	Tecnalia	Plasma activated modification of ion exchange membrane for vanadium crossover removal (P 16)
1530	Carolina Nunes Kirchner	Next Energy	Corrosion of a Carbon Based Bipolar Plates for Vanadium Redox Flow Batteries in Presence of Chloride (P 26)
1550	REFRESHMENTS		
Session 7: Supply of flow battery raw materials & components			
1610	Derek Pletcher	University Southampton	Oxygen Electrodes for Alkaline Metal–Air Flow Batteries (P 36)
1630	Kyle Smith	Massachusetts Institute of Technology	Semi-Solid Flow Cells (P 46)
1650	Jens Noack	Fraunhofer Institute for Chemical Technology	Development of Redox Flow Batteries for Mobile Applications (P 32)
1710	Anthony Price	IFBF Secretary	Closing Remarks