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*Flow Battery Program, Lockheed Martin, USA*

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<sup>1</sup> *Invinity Energy Systems, UK*

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*Membrane Materials and Processes, Department of Chemical Engineering and Chemistry,  
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Dr Martha Schreiber<sup>1</sup>, Martin Harrer<sup>1</sup>, Herbert Bucsich<sup>1</sup>, Matthias Dragschitz<sup>1</sup>, Ernst Steifert<sup>1</sup>, Peter Tymciw<sup>1</sup>, Adam Whitehead<sup>2</sup>

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### **Research effort on flow batteries at Pacific Northwest National Laboratory**

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### **Novel design and non-conventional applications for vanadium redox technology**

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*Celennium (Thailand) Co. Ltd., Thailand*

### **The development of redox couples for non-aqueous redox flow batteries**

Doo-Yeon Lee, Hee-Young Sun, Seung-Sik Hwang, Joung-Won Park, Seok-Gwang Doo  
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### **Vanadium/air redox flow batteries**

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### **Zinc bromine flow batteries**

Bjorn Jonshagen and Touma B. Issa

*ZBB Energy Corporation, Australia*

### **Electric vehicle applications of flow batteries: rapid recharging of EV's by electrolyte exchange**

Sir John Samuel

*Re-Fuel Technology Ltd., UK*

### **Non-aqueous vanadium redox flow batteries**

Christian Doetsch<sup>2</sup>, Charles Monroe<sup>1</sup>, Levi Thompson<sup>1</sup>, Aaron Shinkle<sup>1</sup>, Alice Sleightholme<sup>1</sup>, Jens Tubke<sup>3</sup>

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### **Standards for flow battery operation**

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### **Techno-economic modelling of a utility scale redox flow battery system**

E. P. L. Roberts, D. P. Scamman

*School of Chemical Engineering and Analytical Science, University of Manchester, UK*

### **Economic aspects of grid connected VRB-PV systems in domestic applications**

G. Rimpler<sup>1</sup>, D. Greger<sup>2</sup>, C. Kimla<sup>2</sup>, M. Stifter<sup>3</sup>

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### **The design and application of a flow cell system**

Eric A. Lewis

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### **Modelling, simulation and validation of PV-VRB systems**

M. Stifter<sup>1</sup>, J. Kathan<sup>1</sup>, F Andren<sup>1</sup>, M. Clarke<sup>2</sup>, D. Greger<sup>3</sup>, G. Rimpler<sup>4</sup>

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### **Redox flow batteries for next generation grid design and operation paradigms**

Raquel Ferret<sup>1</sup>, Anita Gurbani<sup>2</sup>, Ana Aranzabe<sup>2</sup>, Arrate Marcaide<sup>2</sup>

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### **Legislation and the commercialisation of flow battery systems in Europe**

Anthony Price

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