

Open Data, Models, and Codes for Vanadium Redox Batch Cell Systems

- Experimental data for batch cell and flow battery systems-

Experimental data for batch cell and flow battery systems under different operating conditions are hosted on this website. The below Table describes specific information for each experimental data set. If you have additional questions, please feel free to contact seongl2@uw.edu.

Table 1. Experimental Data for Flow Battery and Batch Cell Systems						
File name	Operating condition	Electrolyte	Electrode	Separator	Flow rate	Flow Field
(Experimental data for flow battery systems)						
RFB_Data1	CC-charging/ discharging (0.5A)	1.7M VOSO ₄ , 3.3M H ₂ SO ₄	Carbon felt	Nafion [®] 115	5 ml/min	10cm ² , Serpentine
RFB_Data2	CC-charging/ discharging (0.25A)	1.7M VOSO ₄ , 3.3M H ₂ SO ₄	Carbon felt	Nafion [®] XL	5 ml/min	10cm ² , Serpentine
(Experimental data for batch cell systems)						
Batch_Data1	CC-CV charging/ discharging (C/10, C/20, C/30)	0.1M VOSO ₄ , 4M H ₂ SO ₄	Graphite	Nafion [®] 115	N/A	H-cell
Batch_Data2	CC-charging/ discharging (C/20, C/30)	0.1M VOSO ₄ , 4M H ₂ SO ₄	Graphite	Nafion [®] XL	N/A	H-cell

Table 2. Flow Cell Information (RFB_Data1 and RFB_Data 2)	
<p>Nafion XL System Electrode Thickness: 2.5 mm Electrode Area: 5 cm² Membrane Thickness: 27.5um Membrane Area: 5 cm² Half-cell volume: 15 mL Temperature: 25°C Vanadium Concentration: 1.7 M Proton Concentration: 3.3 M Sulfate Concentration: 5 M</p>	<p>Nafion 115 System Electrode Thickness: 2.5 mm Electrode Area: 10 cm² Membrane Thickness: 127um Membrane Area: 10 cm² Half-cell volume: 15mL Temperature: 25°C Vanadium Concentration: 1.7 M Proton Concentration: 3.3 M Sulfate Concentration: 5 M</p>