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(54) **METHODS AND SYSTEMS FOR DETERMINING AVERAGE OXIDATION STATE OF REDOX FLOW BATTERY SYSTEMS**

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(57) **ABSTRACT**

A method for determining an average oxidation state (AOS) of a redox flow battery system includes measuring a charge capacity for a low potential charging period starting from a discharged state of the redox flow battery system to a turning point of a charge voltage; and determining the AOS using the measured charge capacity and volumes of anolyte and catholyte of the redox flow battery system. Other methods can be used to determine the AOS for a redox flow battery system or use discharge voltage instead of charging voltage.