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(54) Title: METHODS AND SYSTEMS FOR AUTOMATED OPTIMIZATION OF CO_x ELECTROLYSIS REACTOR

(57) Abstract: Methods and systems related to the field of carbon capture and utilization are disclosed. A disclosed method for controlling an electrolysis system with a plurality of electrolysis cells includes several steps. The electrolysis system converts a fluidic flow containing CO_x into at least one chemical. The method includes monitoring, using at least one sensor, a plurality of electrolysis cells. The method also includes identifying, via the monitoring, a degrading cell in the plurality of electrolysis cells. The method also includes modifying, upon the identifying of the degrading cell and while continuing to operate at least one other cell in the plurality of electrolysis cells, an operational state of the plurality of electrolysis cells.



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