Electronic Supplementary Material

Scale up of reactors for carbon dioxide reduction

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Figure S1 – Electrolyte flow plate, highlighting flow path designed to avoid dead spots or gas bubble accumulation.

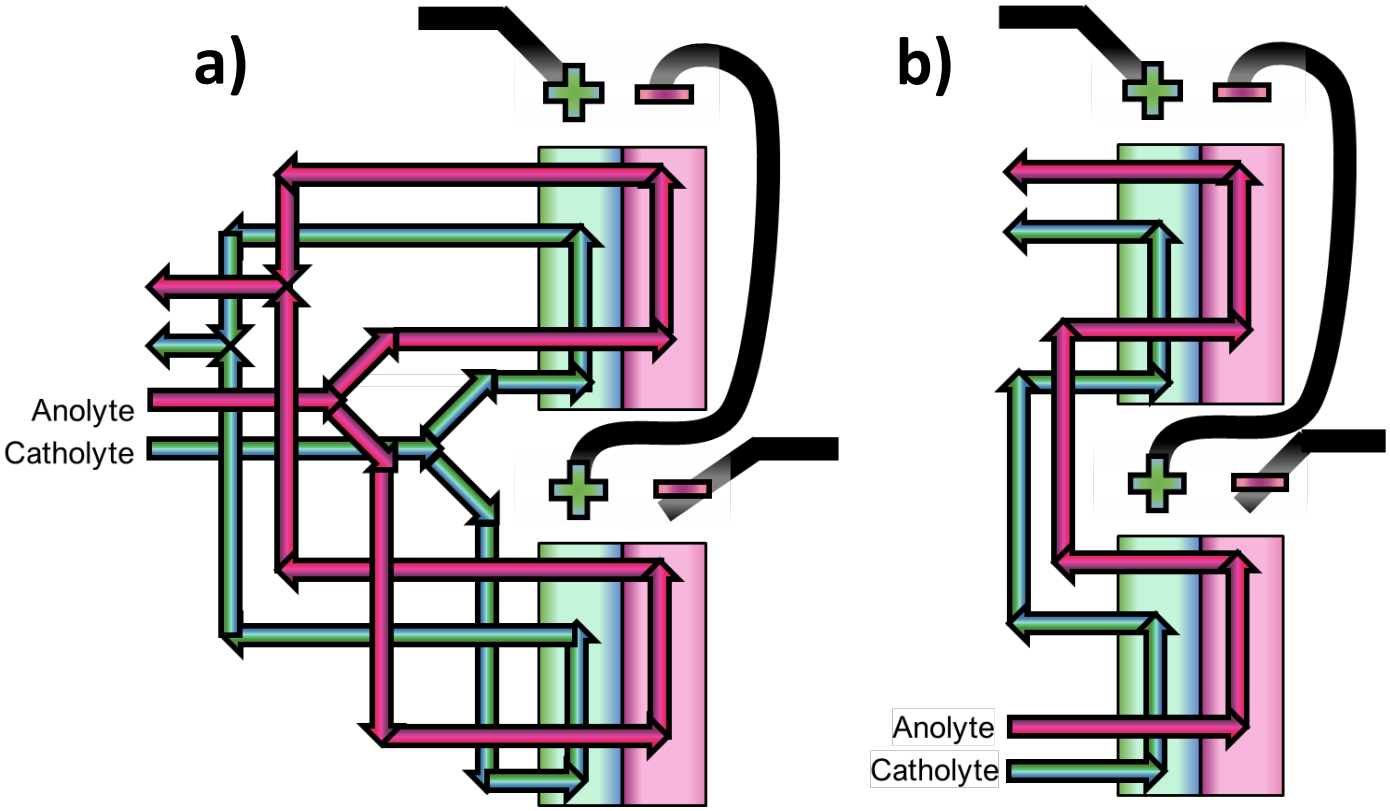
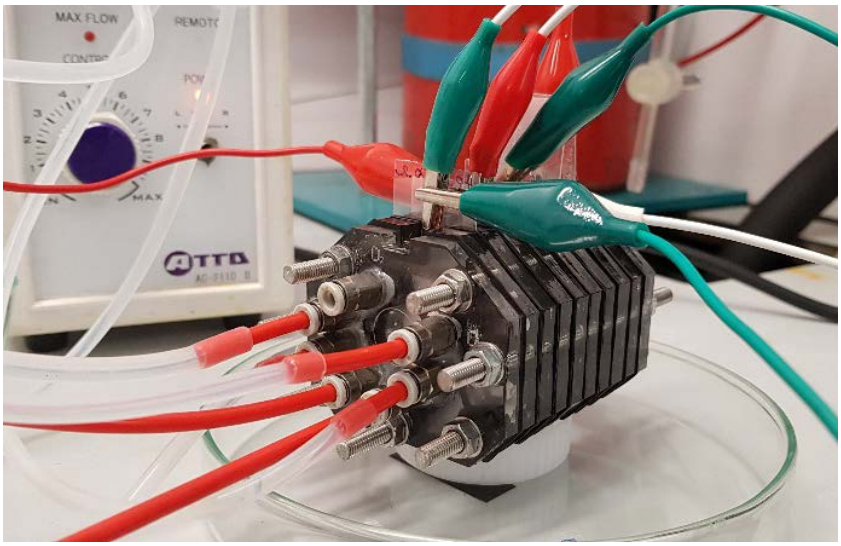


Figure S2 – a) schematic of electrolyte parallel plumbing of two cells in stack configuration shown on photo a1, b) schematic of electrolyte plumbing in series connection for two cells shown on photo b1.



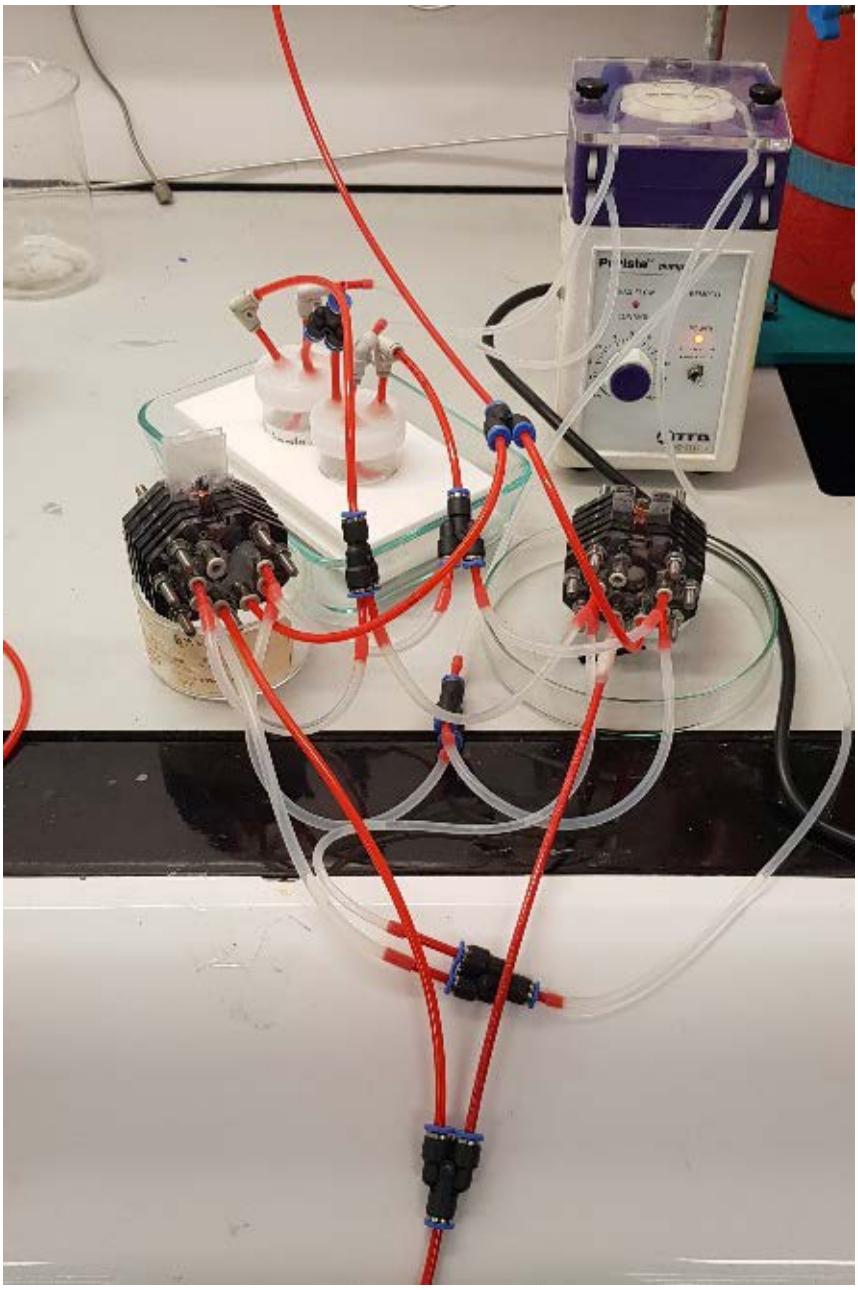


Figure S3 – a) Stacked configuration with de facto parallel electrolyte flow

b) Externally connected parallel electrolyte flow

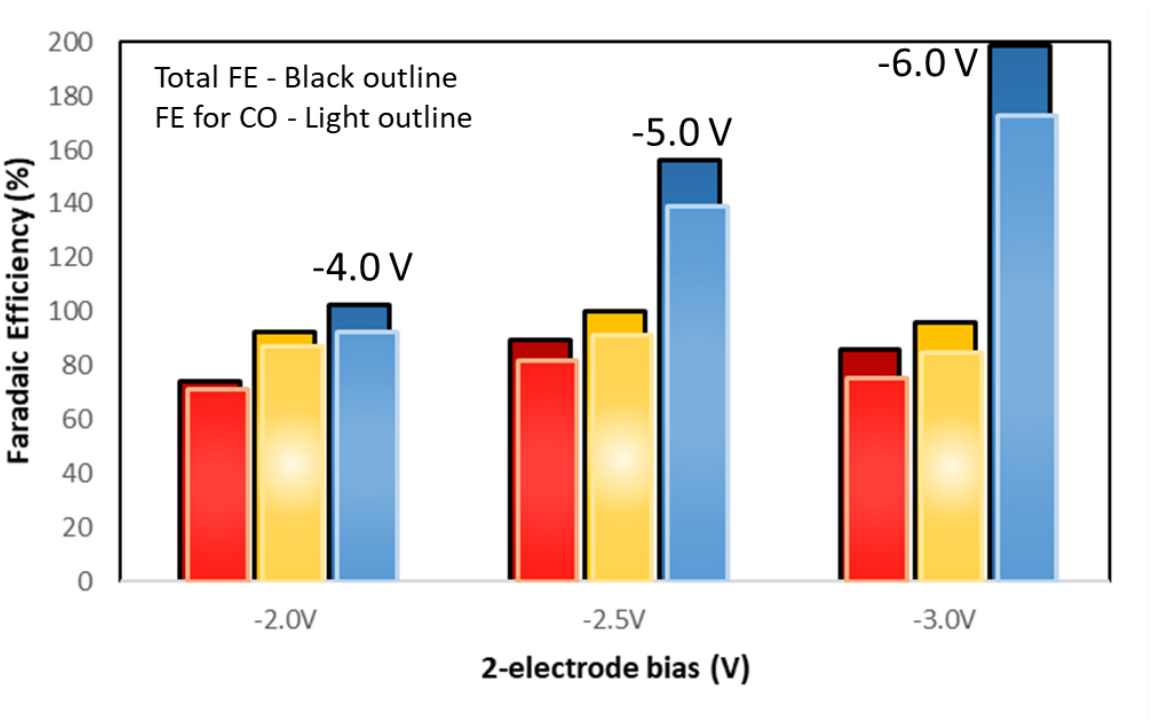


Figure S4 – Faradaic Efficiencies of cell configurations (single cell in red, parallel in yellow and series in blue) with different applied biases. Note that the values greater than 100% arise from series connected devices where charges of sufficiently high potential are able to participate in CO_2 reduction in each of two component cells.

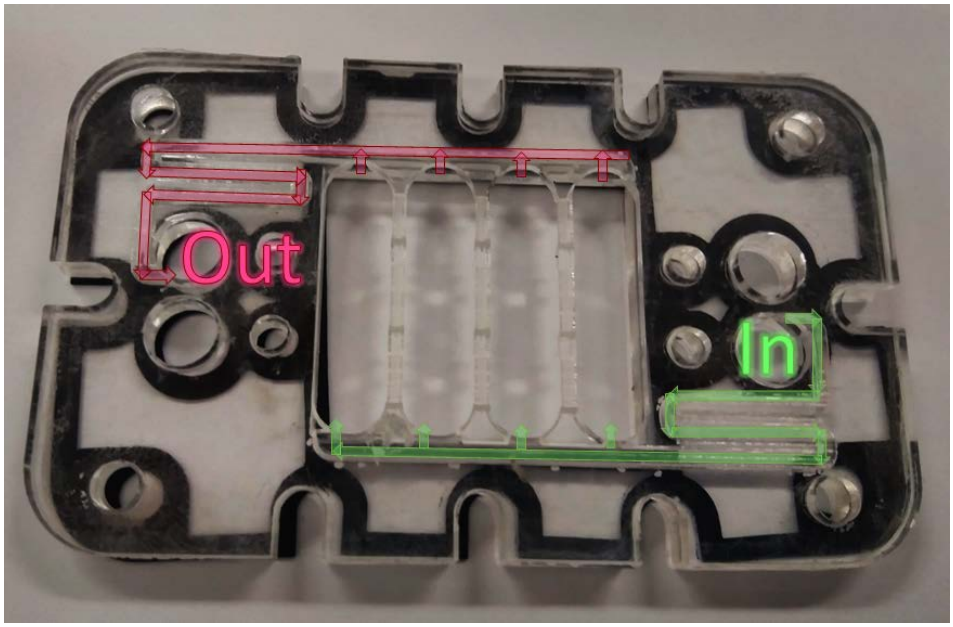


Figure S5 – Electrolyte flow plate for 10 cm^2 reactor, highlighting extended, serpentine, flow path

Figure S6 – Current collectors and their impact on current density for 1 and 10 cm^2 electrode area