Microstructure effects on the capacity, power, and energy density of metal-air batteries for large grid storage applications

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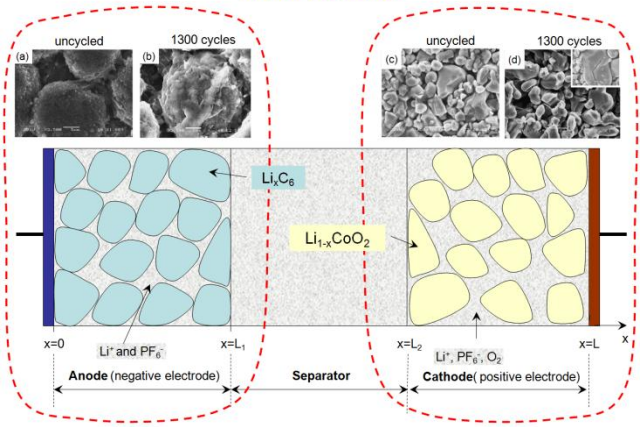
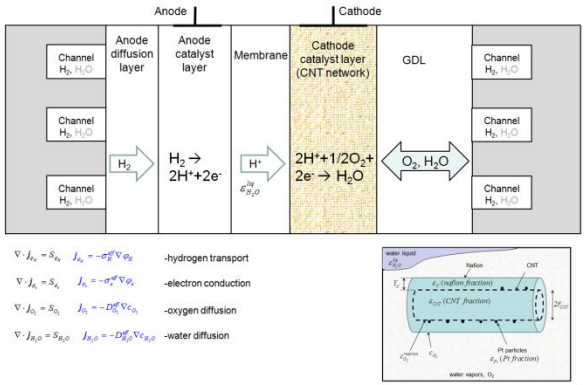
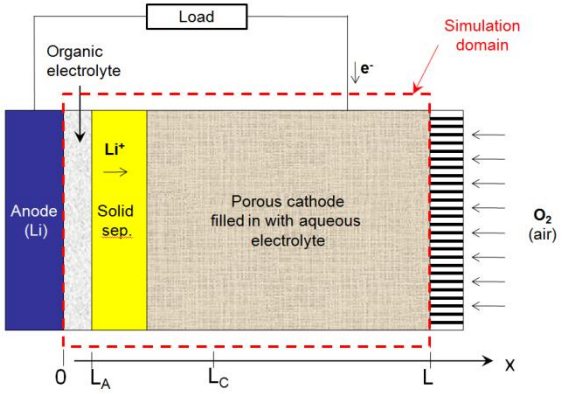
Li-ion batteries



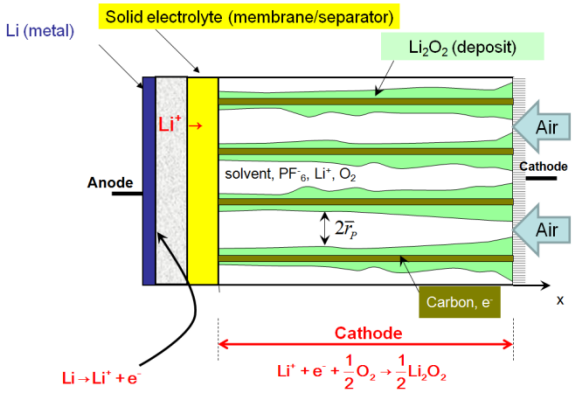
Fuel cells (proton-exchange fuel cells)



Li-air batteries with dual electrolyte



Li-air batteries with organic electrolyte



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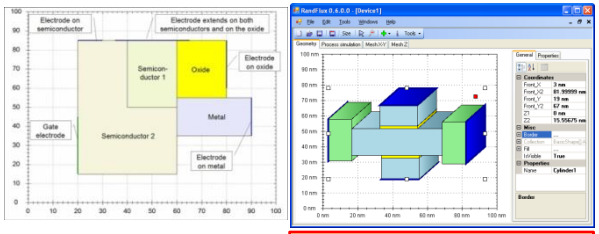
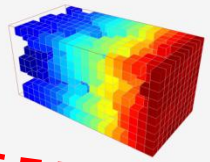
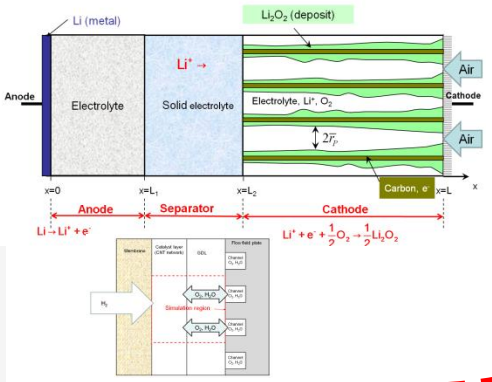
RandFlux© - device/mixed mode simulation

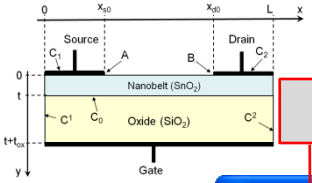


Semiconductor device

Li-air cells
Li-ion battery
Fuel cells

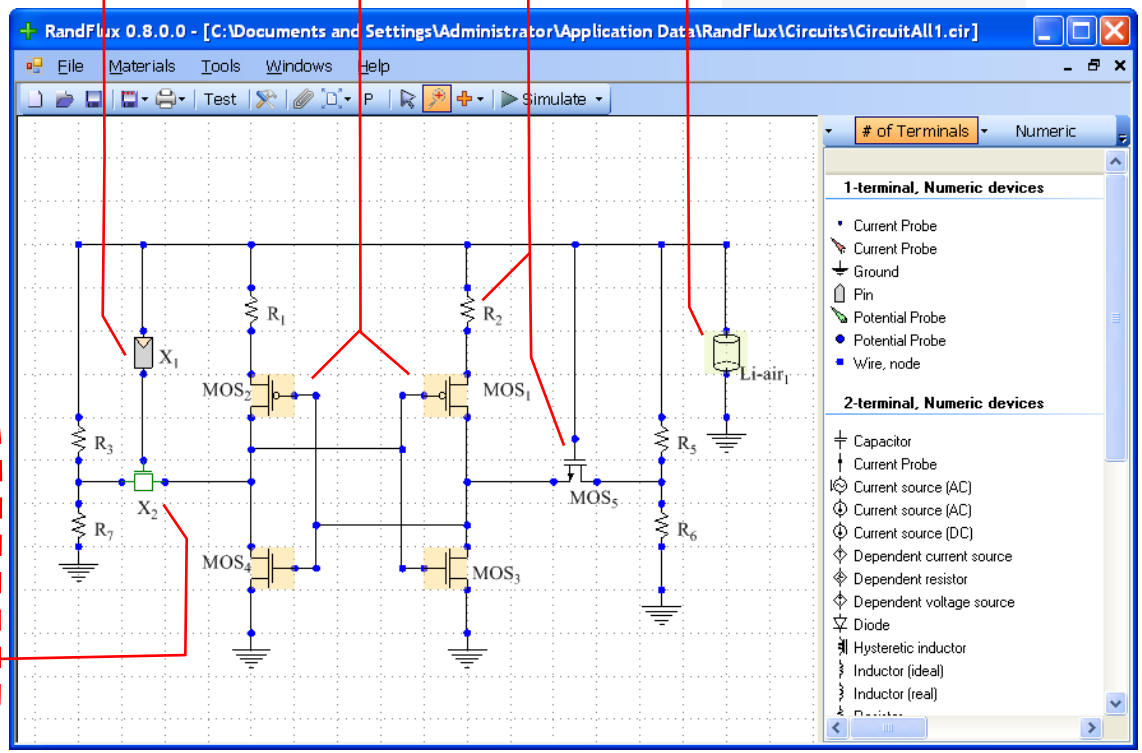




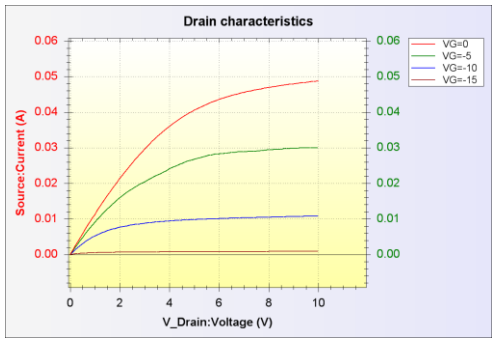


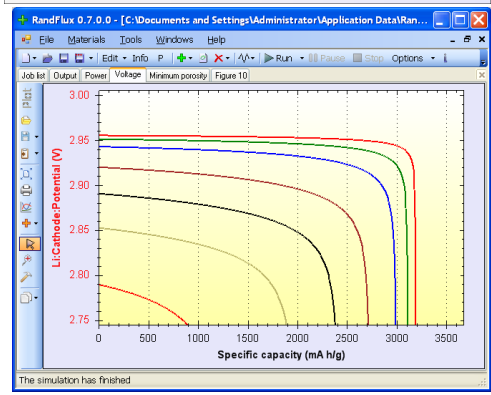
Sensor

SPICE device

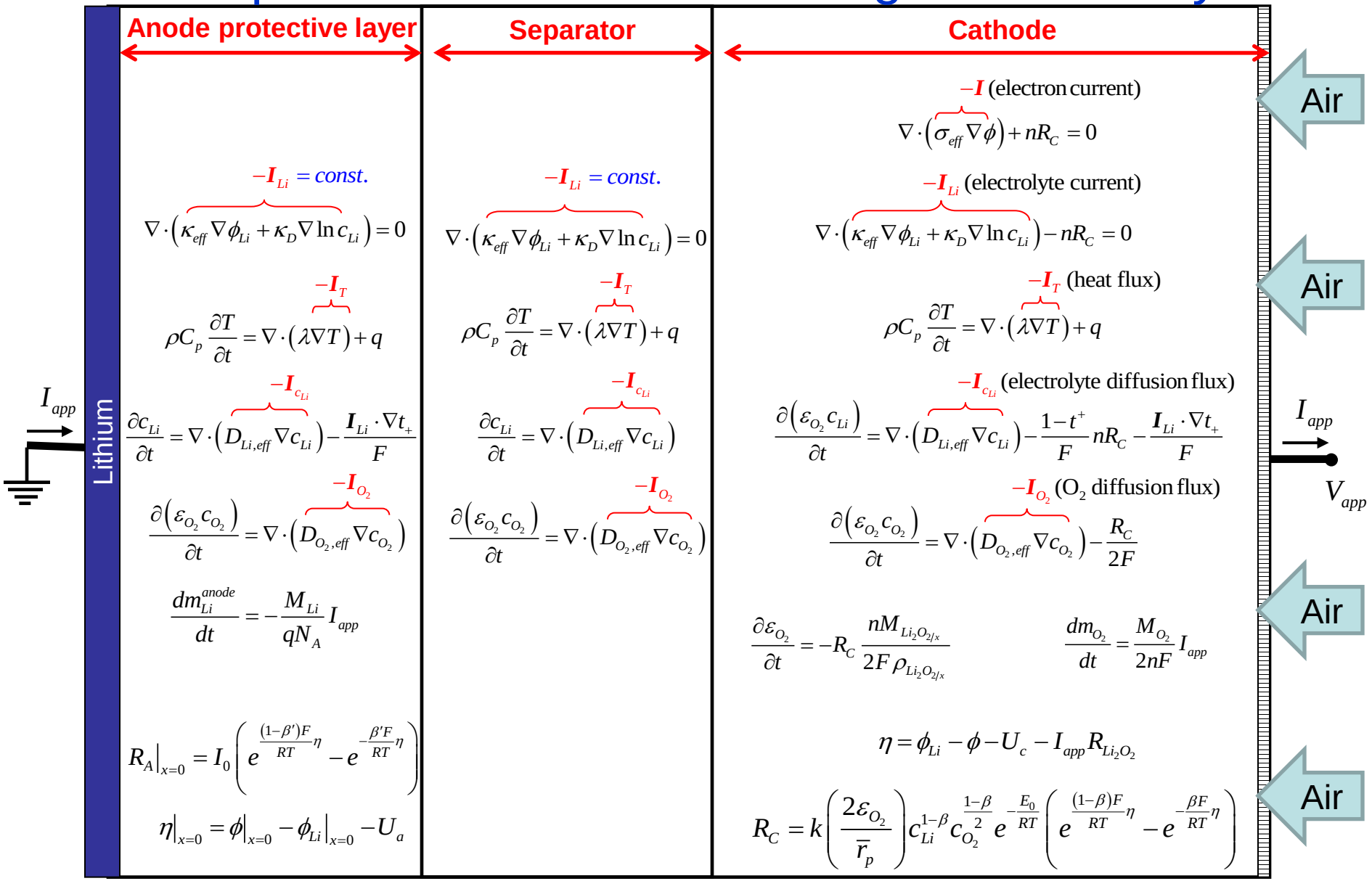


Analytical device





Example: Li-air batteries with organic electrolyte



P. Andrei et al., *J. Electrochemical Soc.*, 2010; P. Andrei et. all, *ICSICT*, 2010

RandFlux© - device/mixed mode simulation

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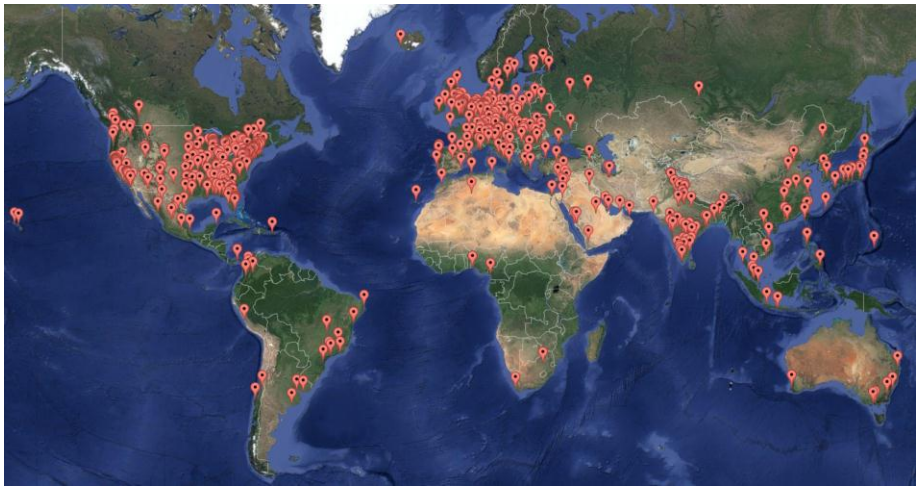

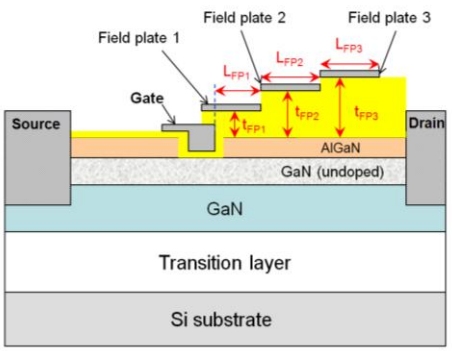

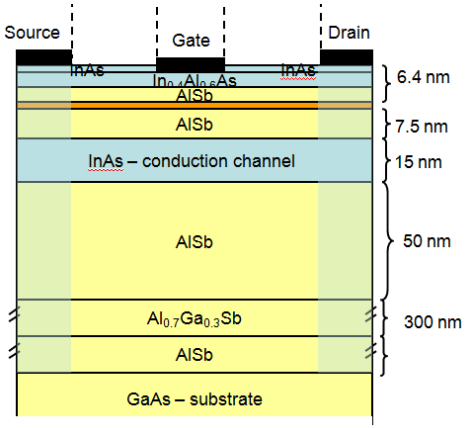

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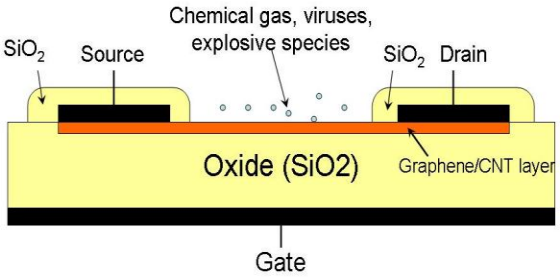
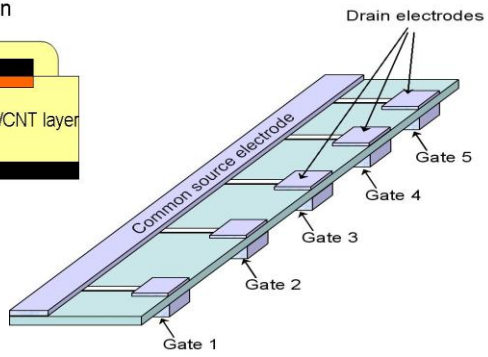
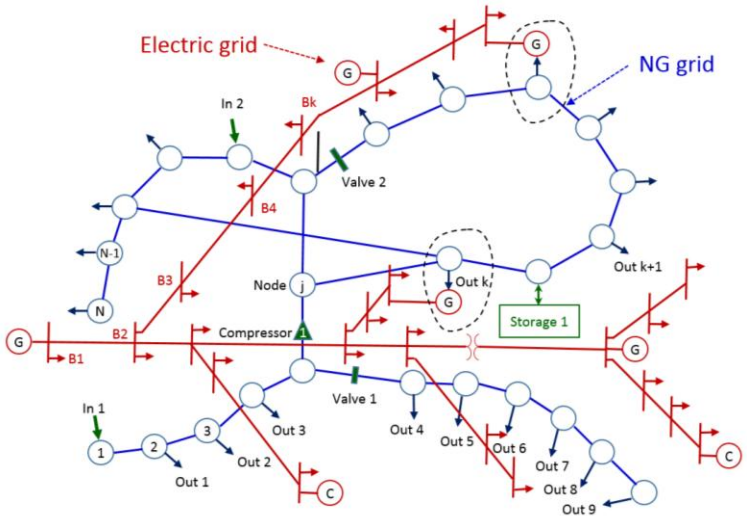
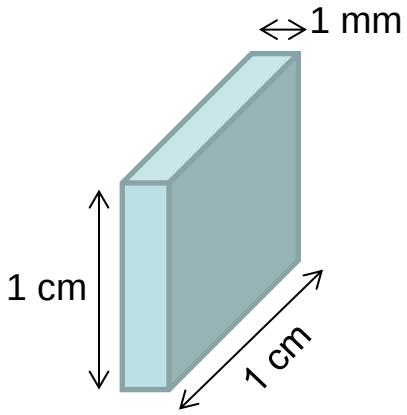


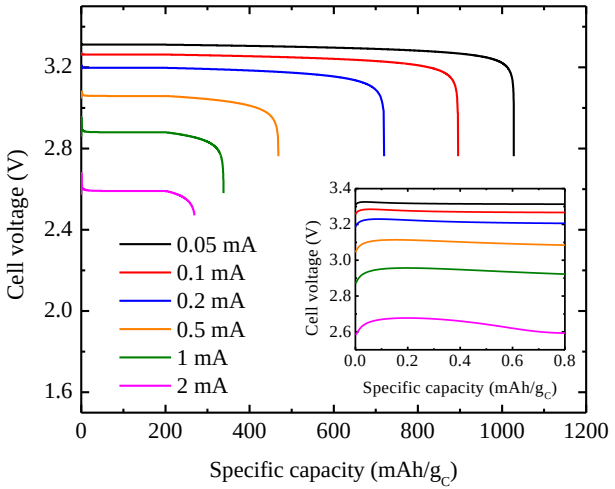


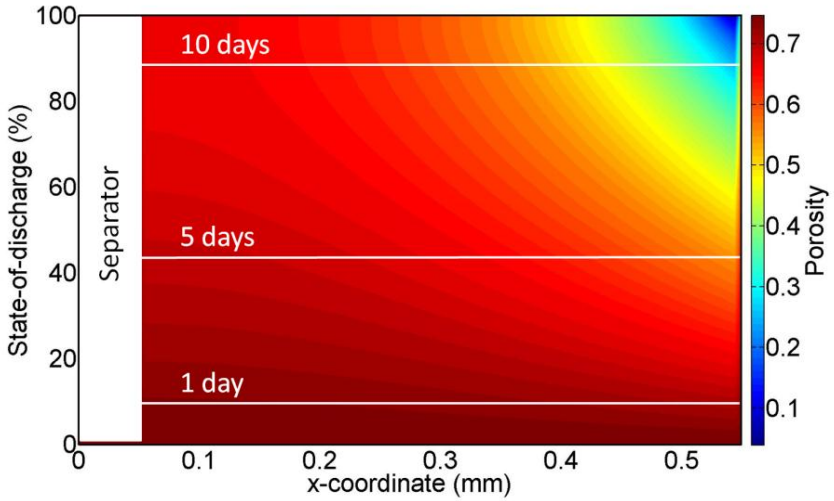


Li-air batteries with organic electrolyte

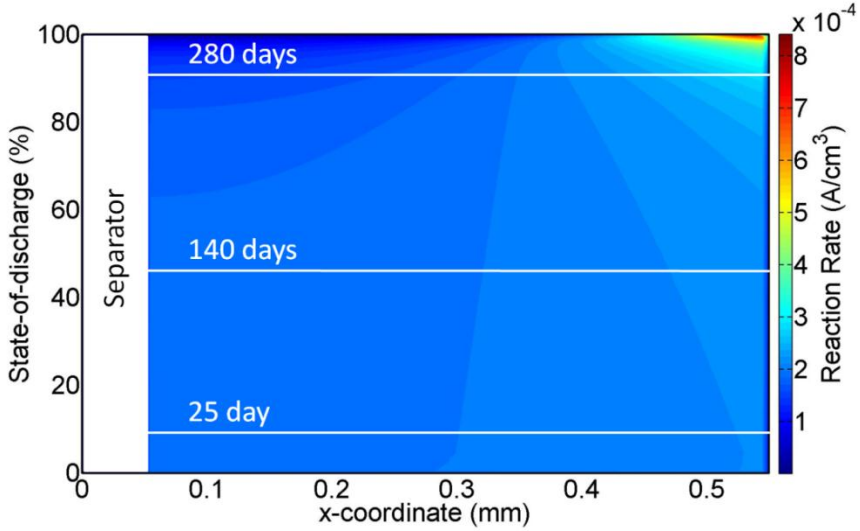
Simulation results







I = 1 mA



I = 0.1 mA