

# Mathematic modelling of Methane reforming

Student: Chen Orenshtein

Academic guidance: Professor Abraham Kribus

- Solid oxide fuel cells (SOFCs) generate great heat during their operation, threatening the integrity of the fuel cells.
- In professor Kribus' study, this excess heat is suggested to be removed by using endothermic wet methane reforming.
- Between adjacent fuel cells an external channel is added where wet methane reforming occurs, feeding off the heat flux from the cells and creating syngas in the process.
- The concentration of the syngas can vary by controlling the heat flux entering the channel and changing the density of the catalyst in the channel.
- My project in professor Kribus' research is to mathematically model the wet methane reforming in the channel under different heat flux and catalyst density.

