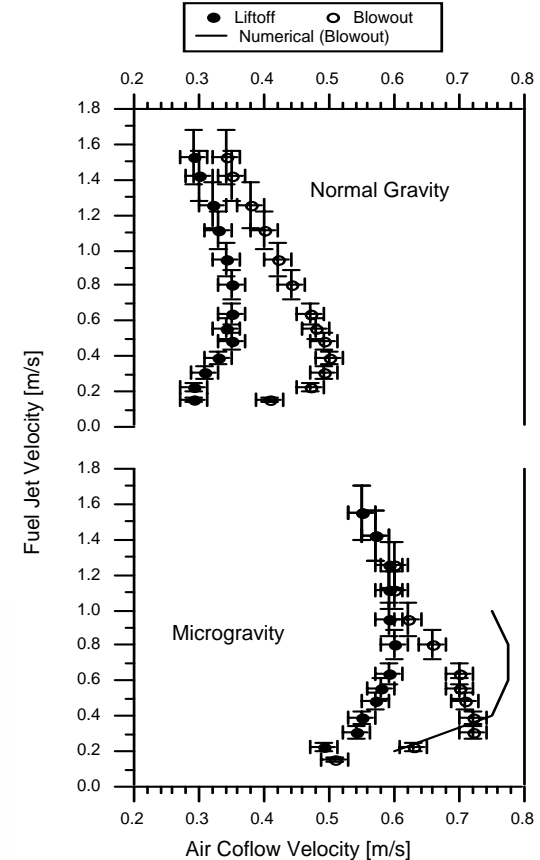
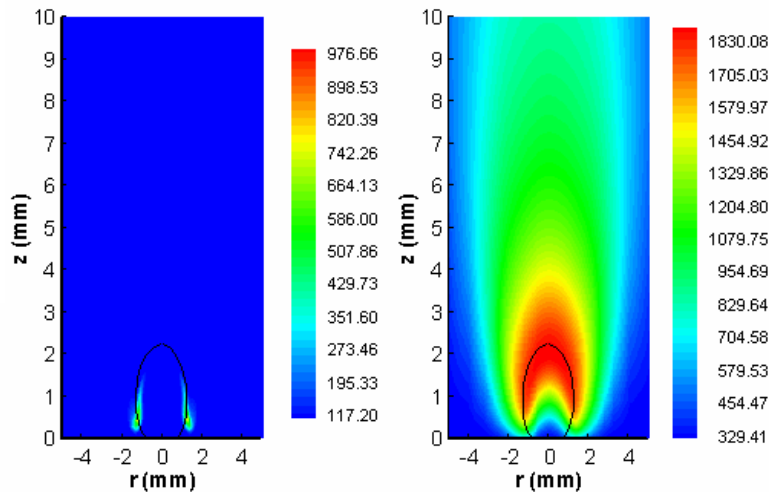


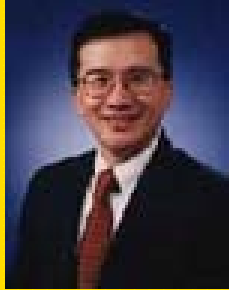
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Fuel Cell & Combustion Laboratory - I

- Numerical simulation of enclosed laminar diffusion flame
- Experimental validation of numerical calculation of flame stabilization in Microgravity

Flame Structure



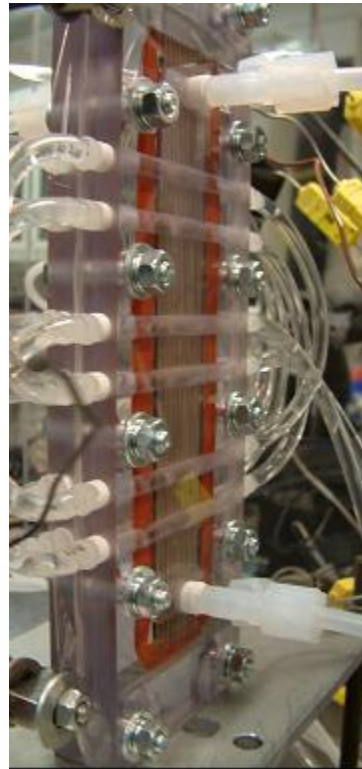


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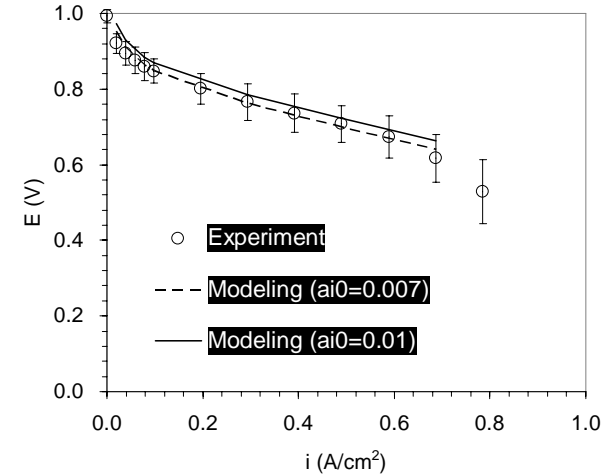
Fuel Cell & Combustion Laboratory - II

- Experiments of H₂ fueled polymer electrolyte fuel cell
- In-house developed CFD code for fuel cell calculation

Transparent Fuel Cell

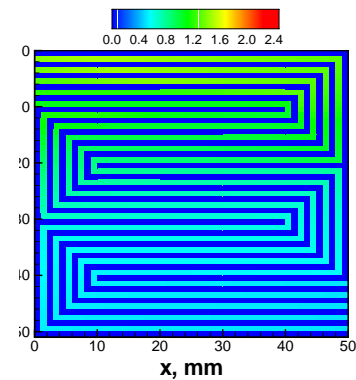
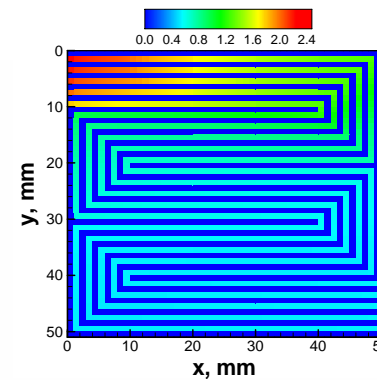


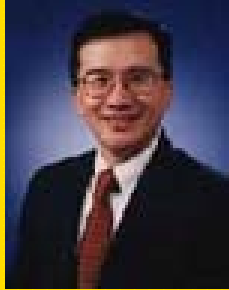
Validation



(a) Cathode RH = 10%

(b) Cathode RH = 100%



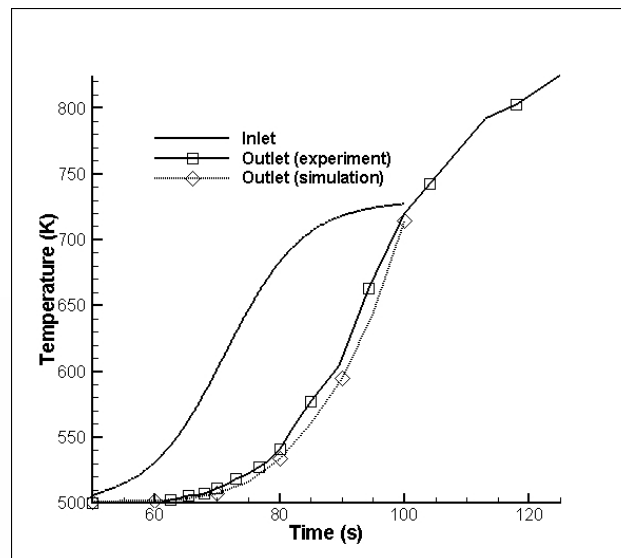


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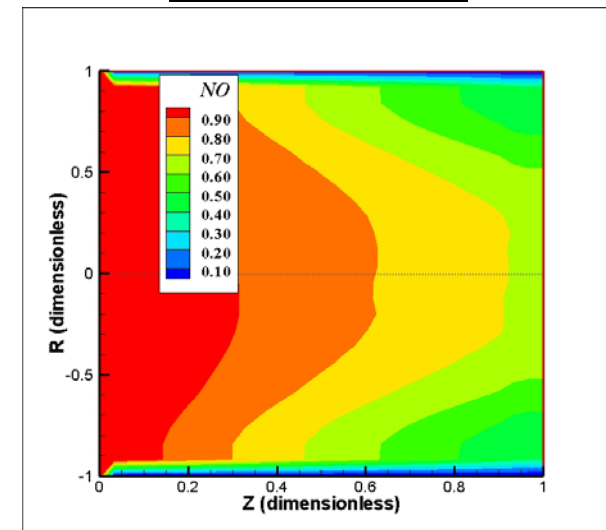
Fuel Cell & Combustion Laboratory - III

- 3-D CFD calculation of three-way catalytic converter
 - Light-off
 - Nitrogen storage

Validation



Kinetics Limited



Transport Limited

