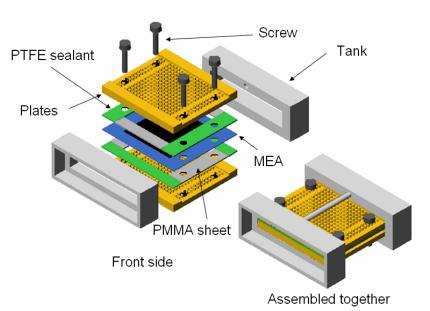
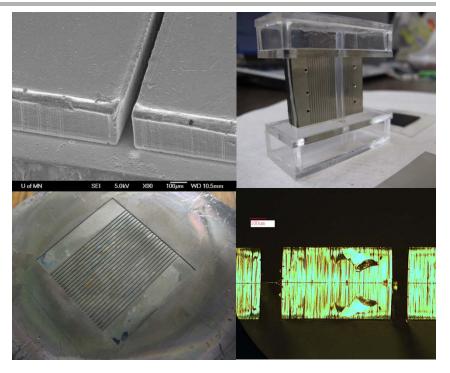
Self-Pumping and Self-Breathing Polymer Micro Methanol Fuel Cell (µDMFC)

Tianhong Cui (PI) and Lingjun Sun Mechanical Engineering, University of Minnesota

Fabrication of polymer polar plates for µDMFC by hot embossing

- Reserved exposure of SU8
- Mold: Ni electroplating on glass
- Hot embossing ABS polar plates
- Ultra thick Ni layer deposit on ABS polar plates





Features: self-pumping and self-breathing

- Anode: capillary force and two phase flow to make the methanol solution convective
- Cathode: air is transferred through the hydrophilic porous carbon electrode

