

Supporting information

Overlimiting Current through Ion Concentration Polarization Layer:

Hydrodynamic Convection Effects

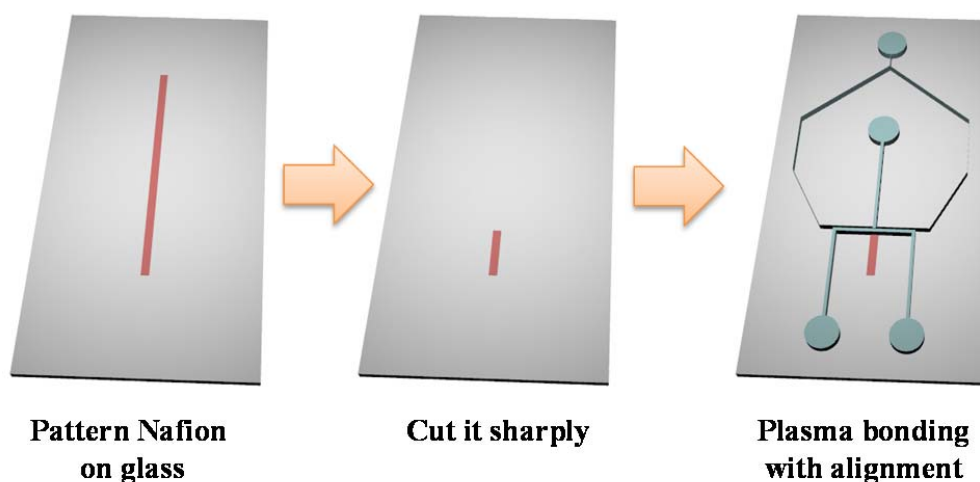
Inhee Cho¹, Gun Yong Sung² and Sung Jae Kim^{1,3*}

¹*Department of Electrical and Computer Engineering,
Seoul National University, Seoul 151-744, Republic of Korea*

²*Bio-Medical IT Convergence Research Department,
Electronics and Telecommunication Research Institute, Daejeon305-700, Republic of Korea*

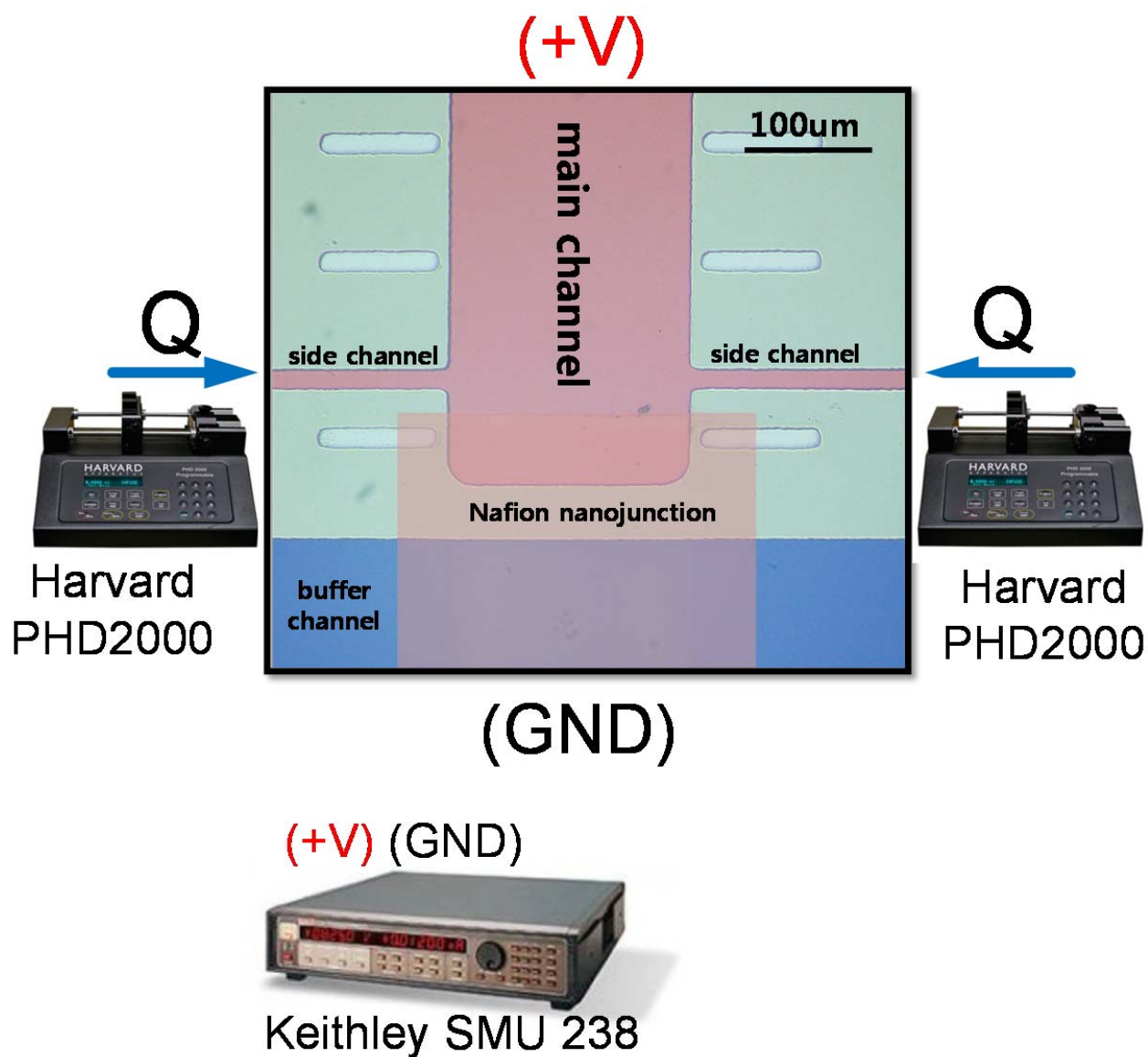
³*Inter-university Semiconductor Research Center,
Seoul National University, Seoul 151-744, Republic of Korea*

1. Details for device fabrication.



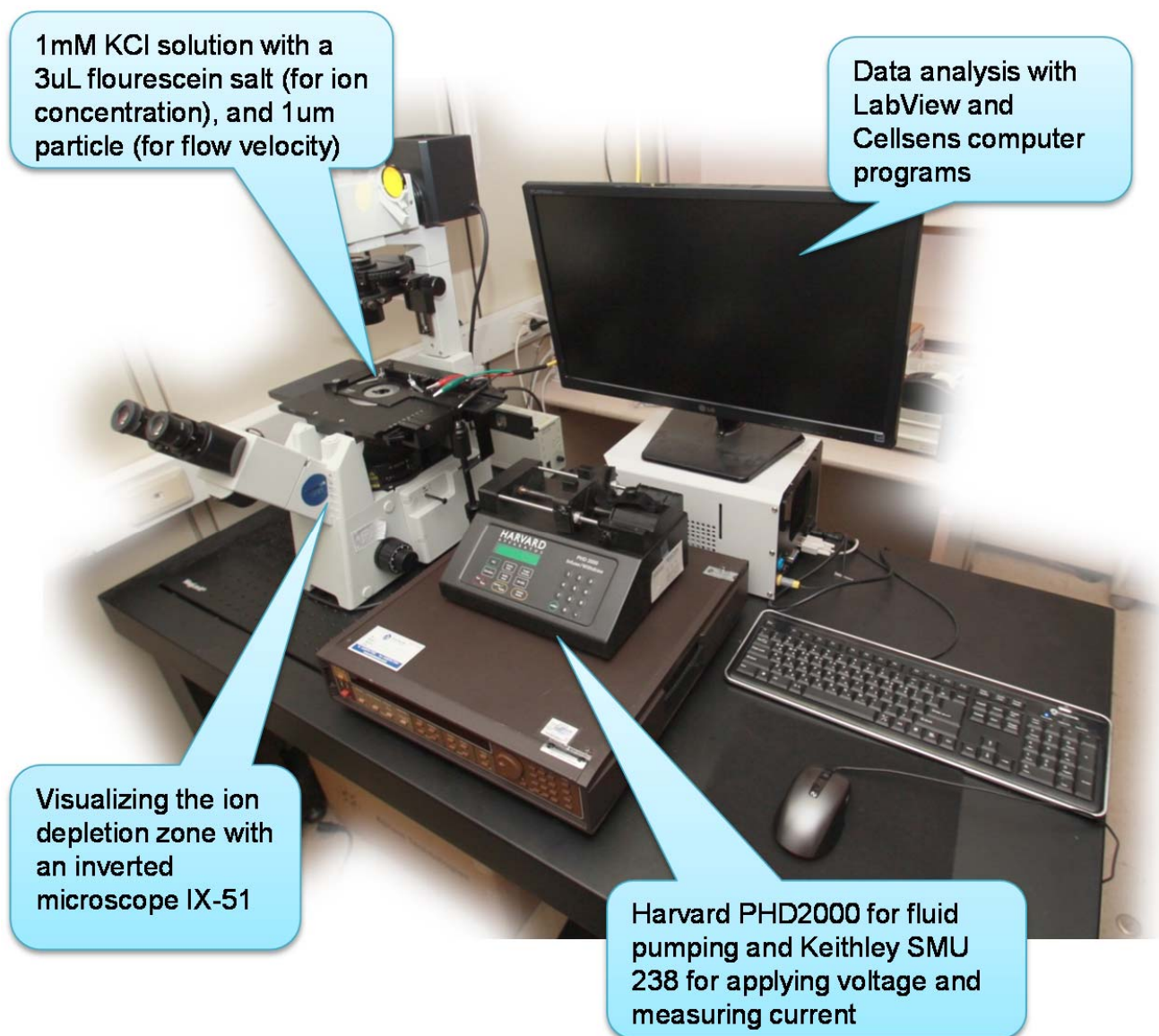
SI Figure 1. The detailed integration procedures of Nafion membrane by surface patterning method.

2. Details for apparatus connections.



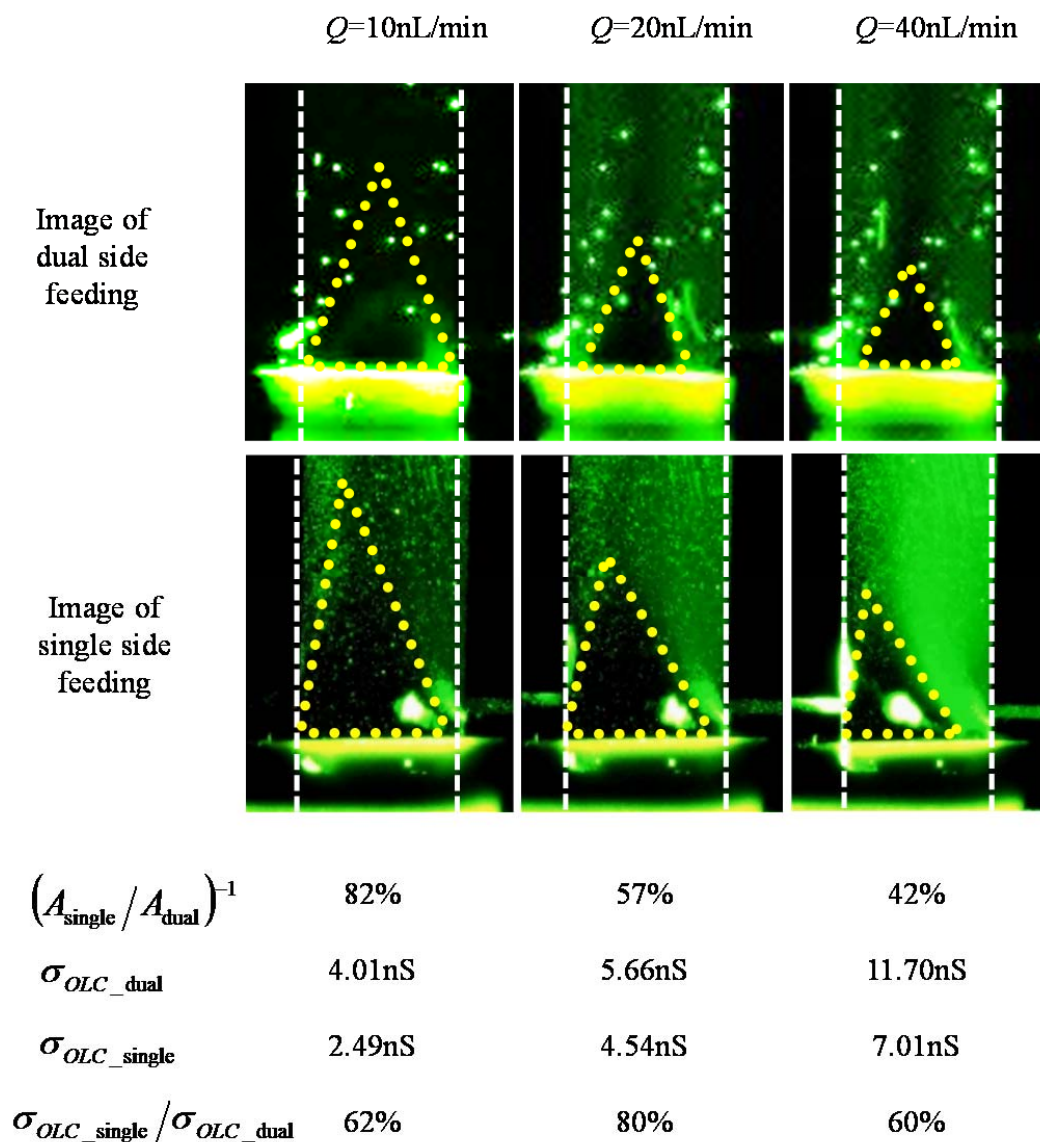
SI Figure 2. The detailed configuration of apparatus connections including a pressure source and a voltage source.

3. Details for experimental setup.



SI Figure 3. The detailed experimental setup.

4. Comparison of dual and single side feeding.



SI Figure 4. The comparison of dual and single side feeding. The overlimiting conductance was lower in case of single side feeding which can be predicted by larger triangular area of ICP layer. This is because single side feeding pulled the ICP layer into the center less than dual side feeding.