Fluidic Microsystem for Drosophila Embryo Manipulation

- Interdisciplinary Research Work:
  - Investigation of the genetics of the Drosophila fruit-fly
- First Prototype Realized:
  - Flow channels and pressure channels for embryo handling
  - (Embryo size: 100 µm x 400 µm)
- Future Integrated Functions:
  - DNA micro-injector (DNA marked with a fluorescent tag)
  - Optical chip for fluorescence signal read-out (injection successful ?)
  - Actuators for embryo sorting
  - Electrodes for resistivity measurements (tracking of embryo)

- Applied Basic Technologies:
  - STS DRIE etching
  - Anodic bonding of Glass-Silicon-Glass wafer stack
  - Wet etching of Glass wafer

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