* **Introduction**

In a two-dimensional cell used for electrolysis of water films, one can electrically induce a hydrodynamic rotation. It is a project in collaboration with Condensed Matter Group (Dr. M. Reza Ejtehadi) at Physics department of Sharif University of Technology.

This research concerning a novel mechanism of Fluid film rotation.

1.By applying electeric voltage(900V) across the MBBA liquid crystal film, some vortices are produced.

Frame dimensions: 1mm\*8mm

2.The vortices pattern change with increasing and decreasing external electric field. This movie shows the vortices are controllable with external electric field in MBBA.

Frame dimensions: 3mm\*8mm

3.Evolution of liquid crystal(MBBA) film director (between two perpendicular polarizers).

Frame dimensions: Circular frame with radius of 3.5mm

4.Suspended MBBA film has been subjected between two perpendicular polarizers, and electric voltage and field are applied on the film.

Frame dimensions: Circular frame with radius of 3.5mm