

Bulk Micromachined Piezoelectric Actuators

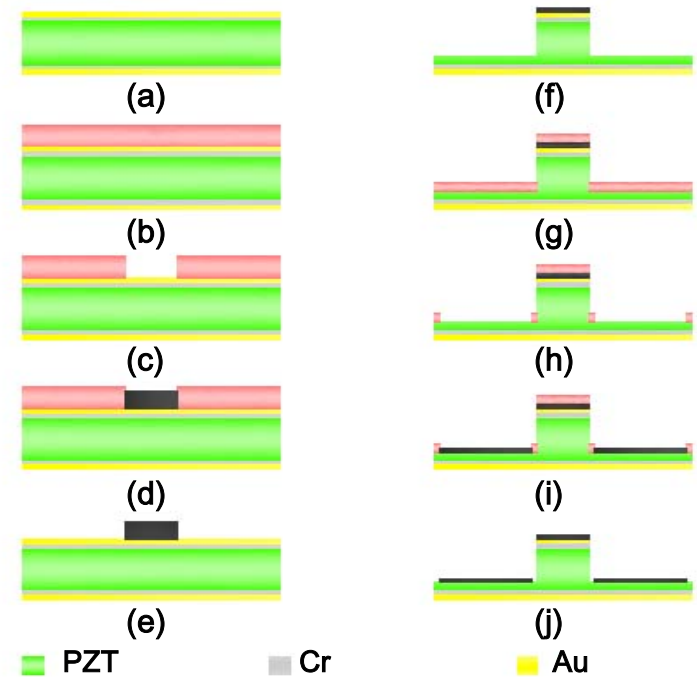
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Motivation

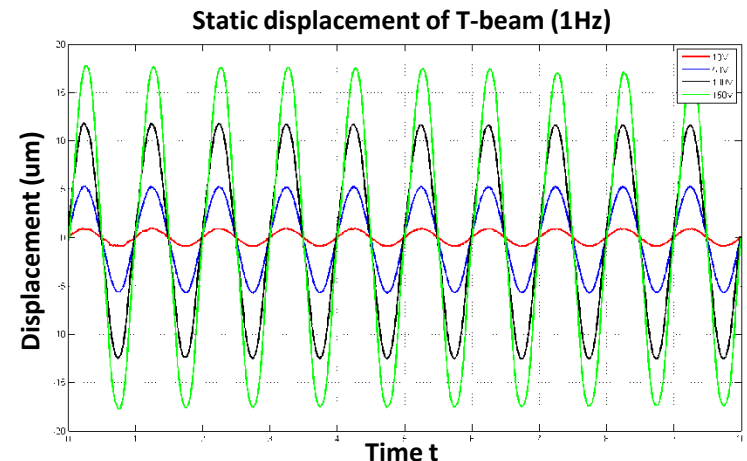
- Bulk piezoelectric material Lead Zirconate Titanate (PZT) can be applied into sensors and actuators. A novel T-shape cross section is being used for a better performance.

Project Status and Results

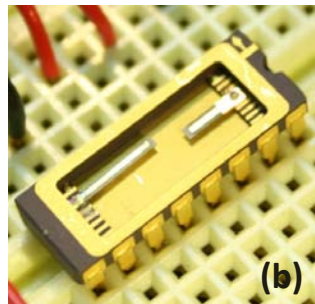
- The first crucial prototypes have been fabricated and tested.
- Fabrication process improvement is achieved and micro scale T-beams with Ni web electrodes have been made.
- Flange electrode will be put on and a thorough test will be done.



Fabrication process of micro T-beam



Static response of end tip displacement under different voltages



T-beams before releasing (a) and after packaging (b)