

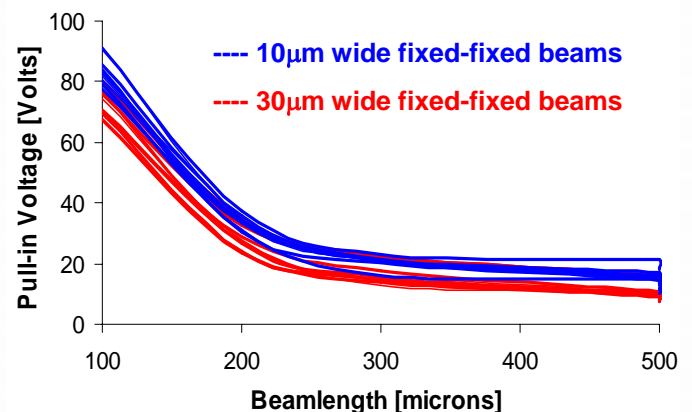
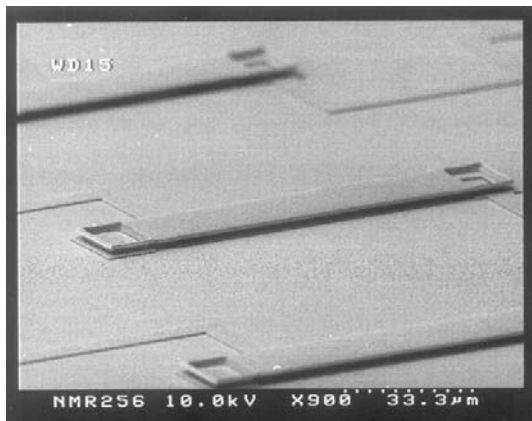
Measurement, Modelling and Simulation of Mechanical Properties of MEMS

Objectives

- Development of behavioural models for electrostatically actuated MEMS
- Fabrication of test structures using Tyndall's surface micromachining process
- Extraction of material properties of thin films using electrostatic and optical characterisation at Tyndall, nanoindentation tests at WUT, and thermal tests at BUTE; data will be used to validate the behavioural models
- Delivery of characterised test structures for further use within PATENT

Partners involved and roles

- Tyndall National Institute, Ireland (manufacture, modelling, and electrostatic/optical characterisation of surface micromachined MEMS)
- WUT, Poland (mechanical characterisation using nanoindentation techniques)
- BUTE, Hungary (thermal characterisation and modelling)



Offer to industry:

- Behavioural models
- Test and characterisation methodologies

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Project status:

Kicked off March 2005, fabrication of test structures complete, characterisation and modelling currently underway