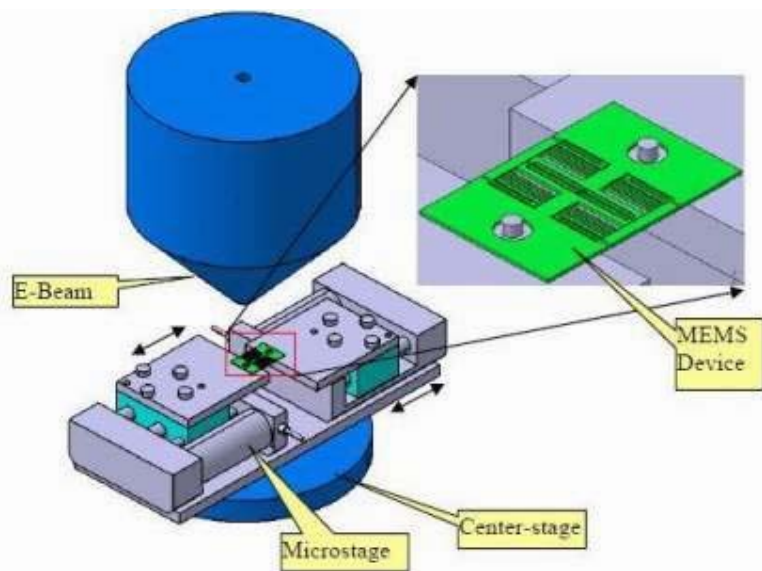
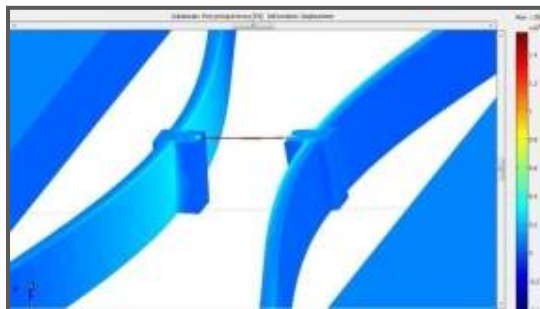


# In situ Nanomechanical Testing Device

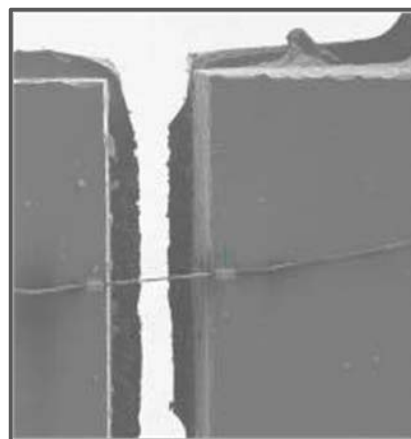
Prof. Vikas Prakash, Guodong Chen and Pankaj Kaul, *Mechanical & Aerospace Engineering Department, Case Western Reserve University, Cleveland, OH.*



*In situ* nanomechanical testing device set up inside a SEM.



COMSOL simulation



300 nm nanowire integrated onto device test-bed.

A MEMS based *in situ* nanomechanical testing device has been made to investigate the nano-mechanical behavior of individual nanostructures from polymers, metallic and semiconducting nanowires to CNT's inside an SEM.

For a typical tensile test on an individual CNT, the sensor beam designed is capable of stretching an individual CNT 30 $\mu$ m long and 30nm in diameter to 100% in strain.

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