

Topic for Master thesis

Parasitic effects in nano actuators

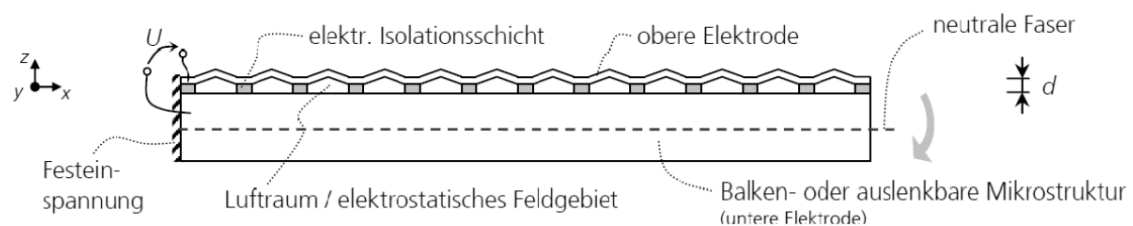
(course of study: Physics / Electrical Engineering / Electronics)

If you have any questions about this topic, please do not hesitate to contact us:

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Content of Master thesis

A novel class of micromechanical actuators uses electrostatic forces as the drive principle. These actuators are being developed in the project group MESYS at BTU Cottbus-Senftenberg in cooperation with Fraunhofer Institute for Photonic Microsystems. Basically, such an actuator is a capacitor with very small electrode spacing in the upper nanometer range. In this structural dimension, among others, quantum mechanical effects may also be noticeable, such as for example tunnel currents, field emission, Casimir effect, leakage currents. The advertised master thesis will deal with the characterization of optical and electrical methods of these parasitic effects on fabricated test structures.



Requirements

Completed main course in Physics, Electrical Engineering / Electronics; knowledge and experience in metrology