

## **NANOINDENTATION TESTS USING FLAT PUNCH INDENTER – CONTACT FORMATION AND TILT CORRECTION**

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Key Words:    Nanoindentation, soft-materials, flat punch indenter, contact formation

Flat punch indenters are commonly used as probes for Nanoindentation due to the fact that contact area is easy to define. Furthermore the contact area with the sample is usually much larger compared to conical or pyramidal geometries. The larger contact area extends the field of applications to softer materials like soft polymers or gels.

The contact formation between flat punch indenter and a flat sample surface is depending on the tilt angle between both normal directions.

Above a certain depth or load the flat punch forms a “full contact” with the sample. Depending on the actual tilt and the sample thickness, this can be a limitation for the measurements.

Strategies for evaluating the tilt and for tilt compensation are presented and discussed.