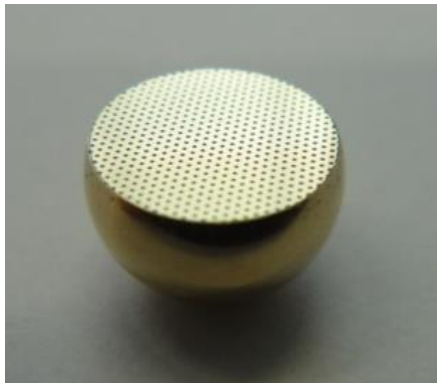
Karlsruhe Institute of Technology

IAM
Institut für Angewandte Materialien

Bachelor / Master Thesis

The effect of sliding energy density on the microstructure evolution of textured materials in reciprocating motion

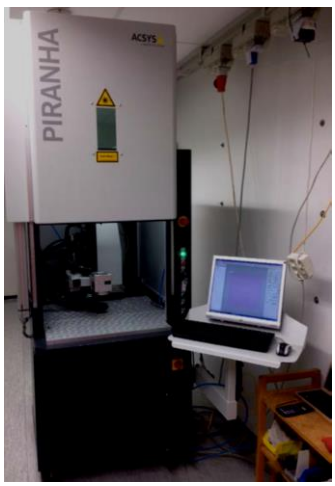
Background:



A key parameter in tribology is the energy, which is applied the material under tribological loading. An elegant way to modify the sliding energy density is to use laser surface texturing. By producing dimples with different packing densities we are able to investigate different sliding energy density. Changing the dimples density and the sliding orientation systematically, we will investigate the elementary mechanisms of friction.

Project description:

- Sample preparation and laser surface texturing of dimples.
- Alignment of dimples with different angles to the sliding direction.
- Tribological investigations of samples with different dimple densities and analysis with MatLab.



Qualification:

- Interest in advanced material science exp. methods
- Independence, reliability

We offer:

- Intensive support and supervision
- Modern processing methods

Interested?

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