1 Roughness sensor horos.
2 Measurement samples.
3 Scatter distribution of diamond turned Al-surface.
4 Roughness measurements using horos and WLI (1 - MoSi-mirror, 2 - Ti-coating, 3 - diamond turned Al-surface).

### horos

**COMPACT OPTICAL ROUGHNESS SENSOR**

**Motivation**

Stringent demand for surface characterization techniques that are non-contact, fast, compact, and applicable to a wide range of surface qualities – from machined components to optical surfaces.

**Features**

- Roughness parameters, PSD, 3D-scattering distribution, isotropy etc.
- Sensitivity: $R_q < 0.5$ nm
- Measurement time: $< 1$ s
- Direct link to profilometric techniques

**The Sensor**

*horos* (high sensitive optical roughness sensor) is a mobile, light scattering based tool for measuring surface roughness from the micrometer to subnanometer scales.

**Applications**

Quality control for
- Plane and complex (freeform) surfaces
- Optical fabrication (surface-finishing, coating, molding etc.)
- Mechanical engineering
- Automotive industry