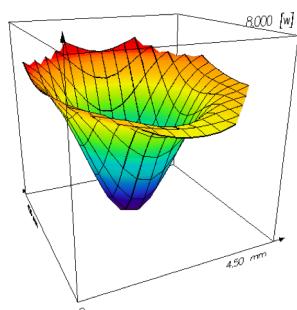


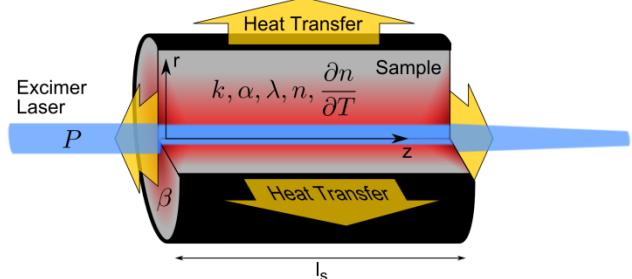
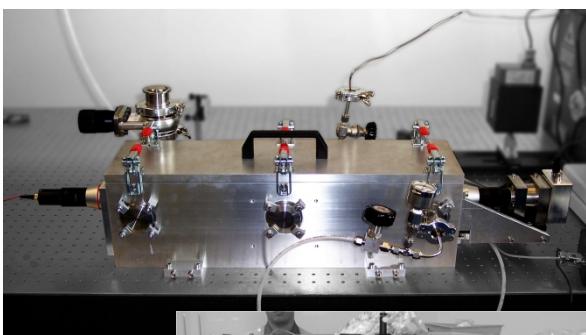
Absorption Monitor ProOpto

Photothermal measurement

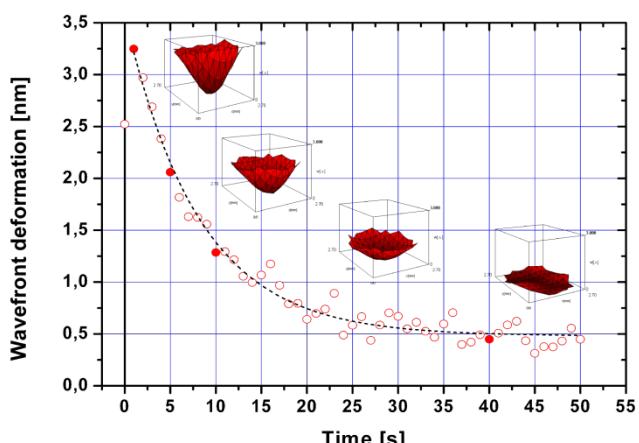
- ▶ Measurement of laser-induced wavefront distortions with Hartmann-Shack sensor
- ▶ Extremely high resolution:
 $< 10 \text{ pm} (\sim \lambda/10,000)$
- ▶ Real-time absorption measurement with ppm sensitivity



- ◀ Thermal lens in fused silica @193nm
- ▶ Relaxation of wavefront deformation after heating pulse



▲ Scheme of laser power absorption and heat transfer in bulk material



Applications

- ▶ Optical material testing
- ▶ Lens heating
- ▶ Transient image distortion of complex optics (e.g. F-Theta)
- ▶ Industrial quality assurance
- ▶ Suitable for all high power lasers (solid state, excimer, CO₂)