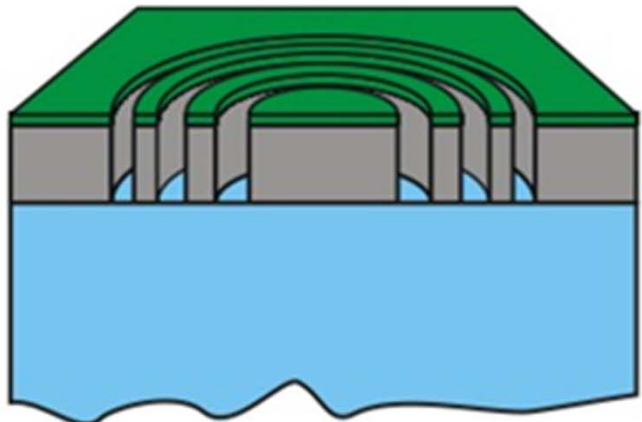


# Heat load investigations on diffractive optics

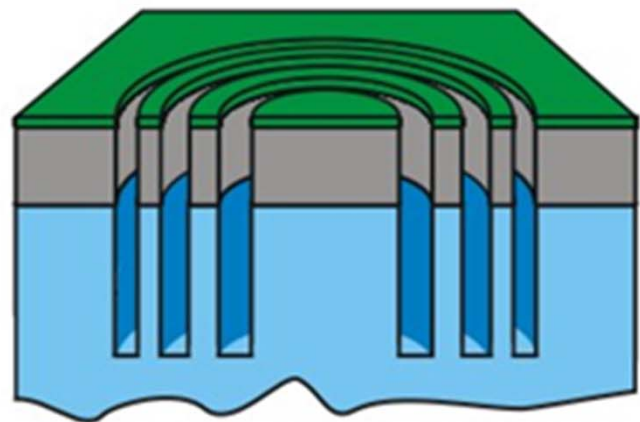
Tasks:

- Simulation of heat transport between nanostructures and diamond substrate
- Design , production and tests of cooling system
- Fabrication of nanostructures
- Experiments on deformation and durability of nanostructures
- E-beam lithography of large diameter optics for wave-front quality measurements

Concept of zone plates on diamond substrate



(a) Tungsten zone plate



(b) Tungsten - diamond zone plate

# Heat load investigations on diffractive optics

Two fabricated prototypes of zone plate optics:

- a. Tungsten
- b. Tungsten on diamond substrate

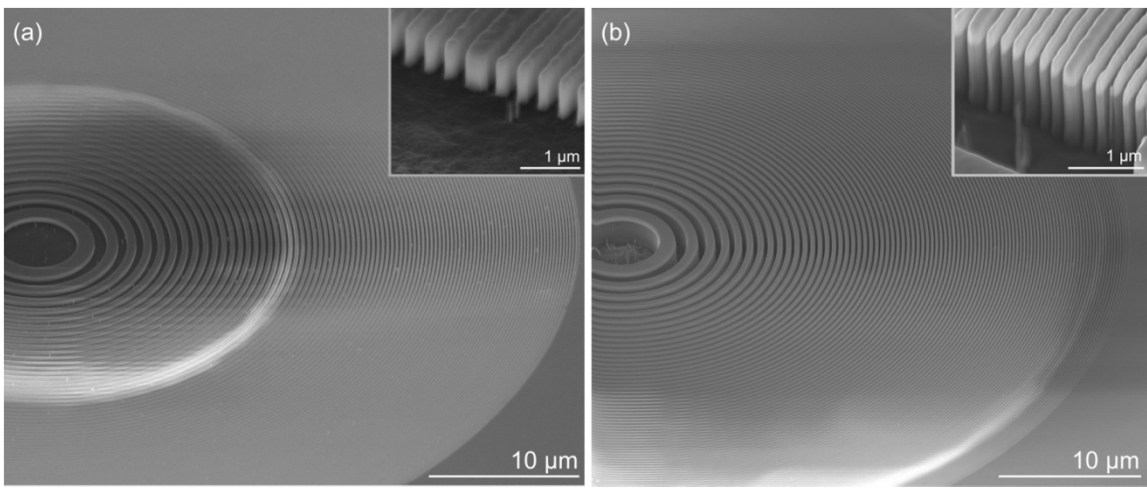
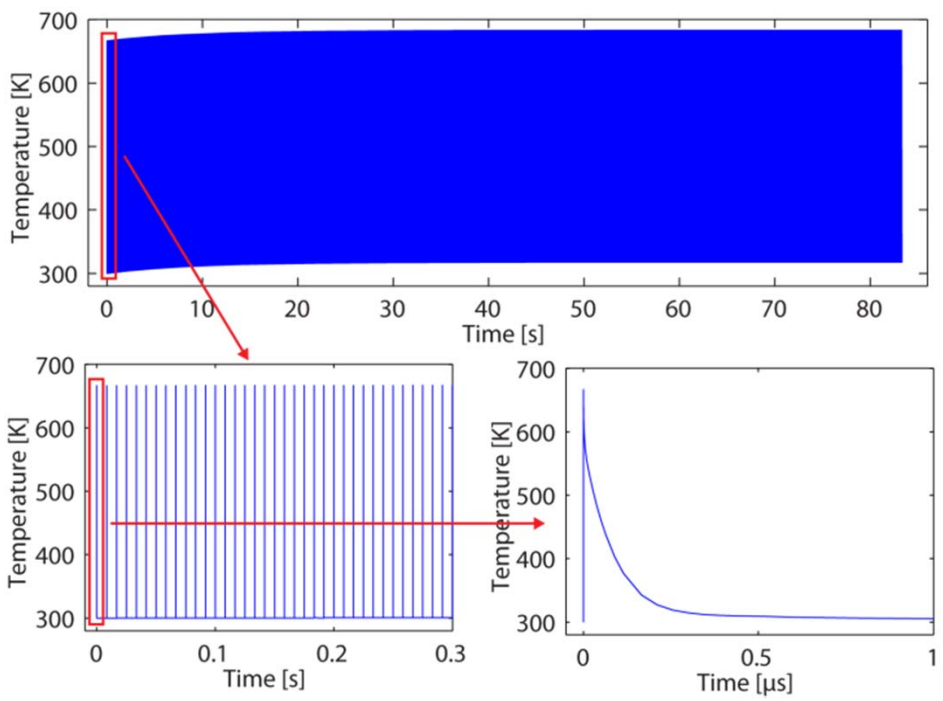


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Simulation of heat transfer in zone plates