

## TG Structured Illumination at the Nanoscale Overview

<b>TG Leader</b>	Jana Hartmann
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### TG Activities

- Development of structured light illumination platforms using nano- and  $\mu$ LEDs and lasers
- Integration of these platforms into systems like a super-resolution microscope: separately switchable nanoLEDs in an array allow to control the light at the nanoscale with a spatial precision below the wavelength of light and possibly even below the diffraction limit
- Support EU projects SMILE/SmartFire

### TG Competences/Services

- Epitaxy of III-nitride based LEDs
- Processing to nano- and  $\mu$ LEDs and arrays
- Characterisation of nano light sources
- Hybrid integration of LED chip with CMOS microelectronics
- System integration (guiding of light on the chip, housing and software)

### Involved QF Members

Members	Institution	Relevant Expertise
Jana Hartmann, Leader	TUBS	Structured Illumination at the Nanoscale
Andreas Waag	TUBS	Coherent Light Field Control; Nanophotonics for Atom and Ion Manipulation; Hybrid integration of GaN LEDs with conductive substrates
Vladislav Agluschewitsch	TUBS	Coherent Light Field Control
Stefanie Kroker	PTB / TUBS	Complex Coupled High Index Waveguide Arrays ; Photonic Nanomaterials in the Strong Optomechanical Coupling Regime
Markus Etzkorn	TUBS	Advancing TEM Characterization
Boris Chichkov	LUH	Nanoscale Materials Processing
Prashant Tyagi	TUBS	
Stefan Wolter	TUBS	
Georg Jakob Schöttler	TUBS	
Liam Shelling Neto	TUBS	
Mayra Garcés-Schröder	TUBS	
Ernst Rasel	LUH	Quantum Gravimeters; Atom-Chip Based Gravimeters and Inertial Sensors



Anastasiia Sorokina	TUBS	Optical simulations, waveguides, light-outcoupling systems, optics for ion traps quantum computers
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