

## TG Twisted Light Overview

<b>TG Leader</b>	Andrey Surzhykov
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### TG Activities

- Frequency Metrology
- New detection of topological materials
- THZ twisted light
- Support the CRC Quantum Precision
- Initiate a new 3rd party funding proposal
- Investigations of the coupling between twisted light and cold atomic ensembles
- Experimental and theoretical studies of the atomic-clock transitions induced by twisted light
- Classical and quantum information transfer with the help of twisted light

### TG Competences/Services

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### Involved QF Members

<b>Members</b>	<b>Institution</b>	<b>Relevant Expertise</b>
Andrey Surzhykov, Leader	PTB / TUBS	Light-Matter Interfaces and Dynamics
Peter Lemmens	TUBS	Propagation of Twisted Light through Media: New Possibilities for Information Transfer
Jonas Sommerfeldt	PTB / TUBS	Light-Matter Interfaces and Dynamics
Anton Peshkov	PTB / TUBS	Light-Matter Interfaces and Dynamics
Florian Büscher	TUBS	Propagation of Twisted Light through Media: New Possibilities for Information Transfer
Ekkehard Peik	PTB	Forbidden-transition spectroscopy with twisted light, atomic clock spectroscopy measurements
Richard Lange	PTB	Forbidden-transition spectroscopy with twisted light, atomic clock spectroscopy measurements
Nils Huntemann	PTB	Forbidden-transition spectroscopy with twisted light, atomic clock spectroscopy measurements
Yuriy Bidasyuk	PTB	Interaction of twisted light with Bose-Einstein condensates
Yuxiong Duan	TUBS	Interaction of twisted light with Bose-Einstein condensates
Silvia Müllner	TUBS	Twisted light, Metrology, Weyl Semimetal