

TG TrapFab Overview

TG Leader	Christian Ospelkaus
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TG Activities

- Establish Regional TrapFab Facility which achieves improves
 - a. Coating Technology,
 - b. Fine Placement,
 - c. Chip integrated detectors
 - d. Chip integrated light sources
- Long-term goal to achieve UHV, hand-held portable device;
- Establish spin-offs e.g. ion traps, quantum computing
- Support EU project

TG Competences/Services

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Involved QF Members

Members	Institution	Relevant Expertise
Christian Ospelkaus, Leader	LUH / PTB	Scalable Surface-Electrode Ion Traps; Integrated Microwave and RF Control Elements
Amado Bautista-Salvador	LUH / PTB	Scalable Surface-Electrode Ion Traps
Andreas Waag	TUBS	Coherent Light Field Control; Nanophotonics for Atom and Ion Manipulation; Hybrid integration of GaN LEDs with conductive substrates
Mayre Garces-Schroeder	TUBS	Nanophotonics for Atom and Ion Manipulation
Klaas Strempel	TUBS	Nanophotonics for Atom and Ion Manipulation
Stefanie Kroker	PTB / TUBS	Complex Coupled High Index Waveguide Arrays ; Photonic Nanomaterials in the Strong Optomechanical Coupling Regime
Liam Shelling Neto	PTB / TUBS	Complex Coupled High Index Waveguide Arrays
Tanja Mehlstäubler	PTB / LUH	Dynamics of ion Coulomb Crystals; Integrated Chip Traps and Optical Components
Daniel Bennett	PTB	Integrated Chip Traps and Optical Components
Dietmar Kracht	LZH	Advanced Light Sources; Precision Additive Manufacturing of Quantum Sensors; High power solid-state single frequency amplifiers
Christian Zander / Christian Hoff	LZH	Precision Additive Manufacturing of Quantum Sensors
Boris Chichkov	LUH	Nanoscale Materials Processing
Ulf Hinze	LUH	Nanoscale Materials Processing



New W1	TUBS	Photonic Electronic Hybrid Integration
Marc Christoph Wurz	LUH	Development of compact vacuum pumps, pressure measurement devices and miniaturized Rb sources; Atom-Chip Based Gravimeters and Inertial Sensors
Alexander Kassner	LUH	Atom-Chip Based Gravimeters and Inertial Sensors
Ernst Rasel	LUH	Quantum Gravimeters; Atom-Chip Based Gravimeters and Inertial Sensors
Milutin Kovacev	LUH	Enhanced Optical Nonlinearities and High-Harmonic Generation
Philip Mosel	LUH	Enhanced Optical Nonlinearities and High-Harmonic Generation