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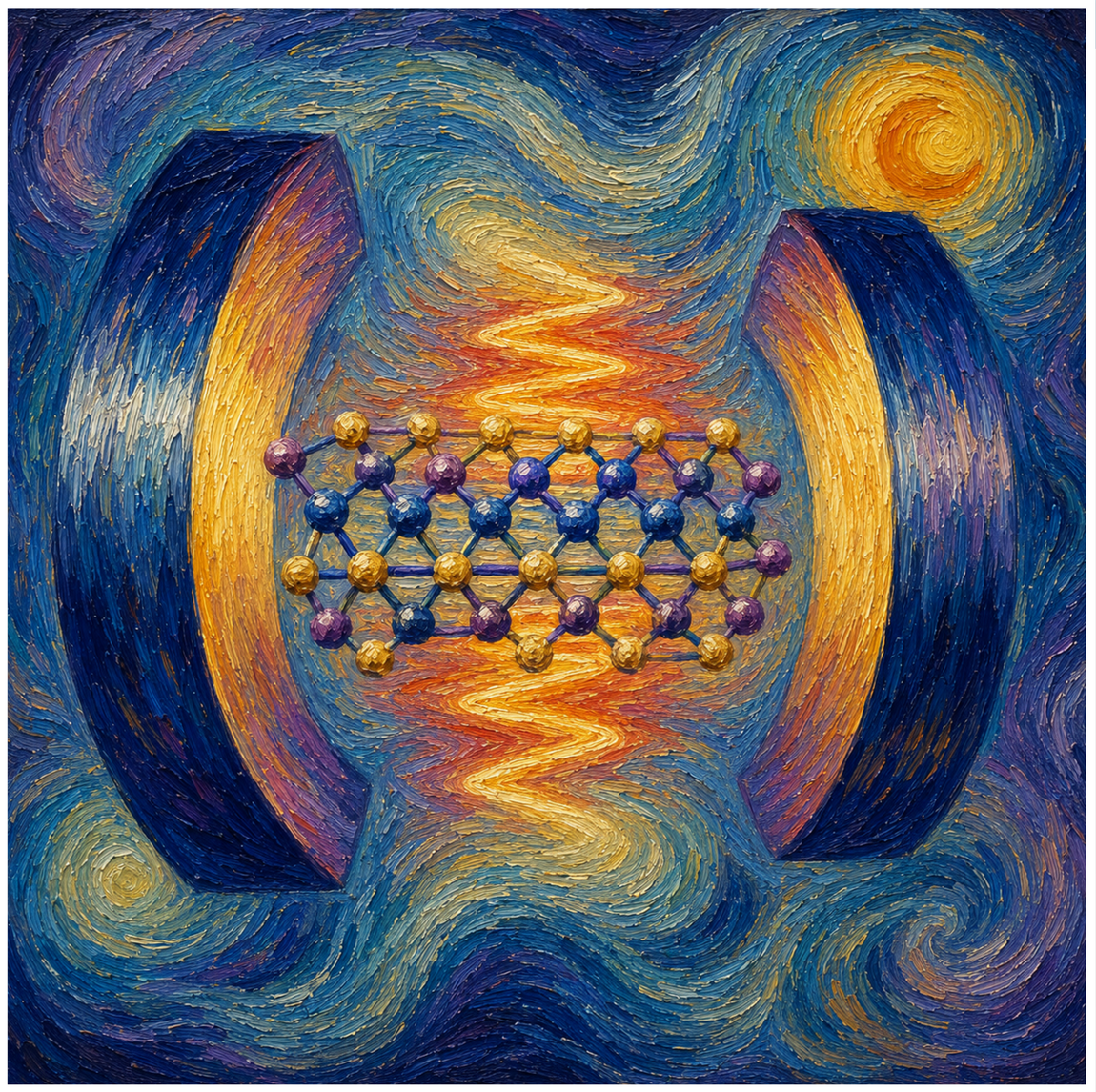
# QMMAT27

# Quantum Materials in and out of Equilibrium – Computational and Experimental Advances

## International Workshop

### Bremen, 23 - 26 February, 2027

QMMAT27 brings together leading researchers from theory and experiment to explore the rapidly evolving frontiers of quantum materials in and out of equilibrium. The workshop will focus on ultrafast and light-driven phenomena, cavity and polaritonic quantum materials, quantum optics, topology, strong correlations, and microscopic many-body dynamics. By connecting advances in computational methods with cutting-edge spectroscopy and experiments, QMMAT27 aims to identify common challenges, stimulate new collaborations, and develop new perspectives on how quantum states of matter can be understood, engineered, and controlled.



## Topics

**Quantum materials: theory and computation**
- Correlations, topology, and collective phenomena
- Ab initio and microscopic modeling
- Quantum many-body methods

**Quantum materials out of equilibrium**
- Ultrafast dynamics and spectroscopy
- Floquet engineering and light-induced phases
- Dissipation, relaxation, and coherence

**Light–matter and experimental frontiers**
- Cavity and polaritonic quantum materials
- Quantum light and fluctuation engineering
- Advanced spectroscopies and quantum probes

## Speakers

Alexander Balatsky
Denitsa Baykusheva
Monica Benito
Hope Bretscher
Ankit Disa
Ignacio Franco
Jacopo Fiore
Jun Kono
Stefan Kaiser
Qingdong Jiang
Gregor Jotzu
Nicolò Maccaferri
Marios Michael
Tobia Nova
Francesco Piazza
Ana Predojevic
Kai Rossnagel
Christian Schäfer
Kai Schmidt
Christian Schneider
Niels Schröter
Zhiyuan Sun
Nanlin Wang
Luyi Yang
Shuolong Yang
Yu He
Shuyun Zhou

**Conference venue:** Haus der Wissenschaft, Bremen
**Registration fee:** EUR 400
**Registration deadline:** January 17, 2027
**Website:** https://tinyurl.com/qmmat27-bremen
**Contact:** qmmat27@uni-bremen.de

### Organisation:

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Christopher Gies (Oldenburg)
Dante Kennes (Aachen)

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DFG