

July 5 - 7, 2027, Paderborn

Summer School

Polar Piezoelectric Oxides



FOR5044

The summer school focusses on preparation, characterization and application of polar piezoelectric oxide crystals with special emphasis on lithium niobate, lithium tantalate and its solid solutions. Atomistic transport processes, the behavior of domain walls and many other fundamental topics including advanced characterization methods will be introduced. Special sessions will address applications of such materials in quantum optics and photonics. The event is organized by the DFG Research Unit 5044 *Periodic low-dimensional defect structures in polar oxides*.

Workshop topics

- Fundamentals of ferroelectrics
- Crystal growth and epitaxial thin-film deposition
- Interface bonding of polar materials
- Poling and domain structures
- Atomistic transport and modeling
- Optical properties
- Acoustic properties

Timeline

- Lectures and tutorials
 - July 5: 12:00 am – 6:00 pm
 - July 6: 8:30 am – 4:30 pm
 - July 7: 9:00 am – 9:45 am
- Lab tours to the ISO5 cleanroom, photonics labs quantum computer
 - July 7: 9:45 am – 3:30 pm

Guest speaker

- Opening talk: Prof. C. Silberhorn, University Paderborn, Lithium niobate in quantum photonics - research at the intersection of material science, device fabrication and application
- Young scientist support: Dr. Christiane Richter, Deutsche Forschungsgemeinschaft

Registration and latest information

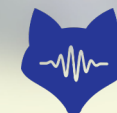
<https://www.for5044.de/summerschool-polar-oxides-2027>

Organizers

Scientific organization and program: FOR5044; On-site organization: Institute for Photonic Quantum Systems

Venue

Universität Paderborn, PhoQS,
Warburger Str. 100, 33098 Paderborn



PhoQS
INSTITUTE FOR PHOTONIC
QUANTUM SYSTEMS