

Training Online

Dates.

16 September 2026

Venue.

Online

Zoom link will be provided to
selected participants



Audience.

University students (MSc and PhD students) and early
stage researchers.

Registration.



Register at
www.carlahub.eu

before 4 September
2026

www.carlahub.eu

Follow us for more information



#carlahub

Funded by



PHOTONICS²¹

PHOTONICS PUBLIC PRIVATE PARTNERSHIP

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Organised by



INSTITUTE OF PHYSICS

National academy of Sciences of Ukraine



KYIV ACADEMIC UNIVERSITY
learning by doing research internationally



In collaboration with



GU... QuMat
German-Ukrainian Research Center
for Quantum Materials

Partners



Training Online



Description.

Quantum Materials — from ARPES to trARPES

Aims:

- Equip MSc students, PhD students and early-career researchers with a solid understanding of photoemission spectroscopy of quantum materials, from ARPES to its time-resolved extension (trARPES).
- Connect fundamental training with real research opportunities via the Lasers4EU Transnational Access (TNA) scheme.
- Support researchers from institutions with limited access to advanced laser and photoemission facilities.
- Foster collaboration between quantum materials researchers and Europe's laser infrastructures and networks.

What will you learn?

- Introduction to quantum materials and their key phenomena
- Fundamentals of ARPES: mapping the electronic band structure of solids
- Ultrafast lasers and XUV sources: taking ARPES into the time domain
- From ARPES to trARPES: probing ultrafast electron dynamics
- How to gain fully funded access to trARPES facilities (e.g. at LACUS) via the Lasers4EU TNA programme, and how to connect with experts and future collaborators across European laser labs

Provisional Program

16 September 2026

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|--------------------|---|
| 10:00–10:45 | Introduction to quantum materials and their key phenomena
Prof. Dr. Alexander Kordyuk (GU–QuMat & KAU) |
| 10:45–11:30 | Fundamentals of ARPES: mapping the electronic band structure of solids
Prof. Dr. Alexander Kordyuk (GU–QuMat & KAU) |
| 11:30–12:00 | Coffee Break |
| 12:00–12:45 | Ultrafast lasers and XUV sources: taking ARPES into the time domain
Dr. Oleg Kornilov, Max-Born-Institut (MBI) |
| 12:45–14:00 | Lunch Break |
| 14:00–14:45 | From ARPES to trARPES: probing ultrafast electron dynamics
Dr. Michele Puppin, Lausanne Centre for Ultrafast Science (LACUS) |
| 15:00–15:30 | How to gain fully funded access to RI through Lasers4EU TNA
Dr. Alina Khodko & Dr. Nataliia Kachalova (IOP of NAS of Ukraine) |

