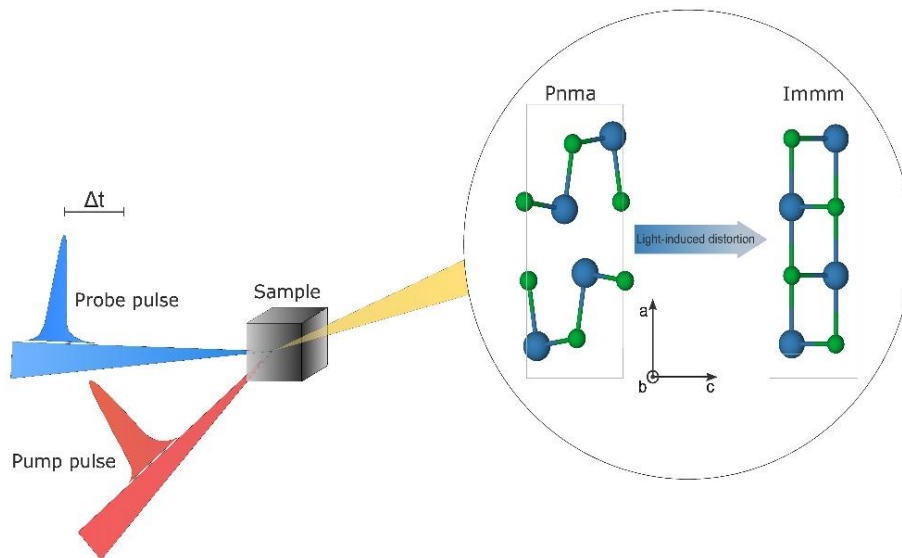


1st International Workshop on Ultrafast Spectroscopy and 2D Materials

22nd-24th January 2024

PROGRAMME



Funded by
the European Union



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 **DELIGHT**  **MATERIALS
THEORY**



UNIVERSITÀ
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Programme

Monday the 22nd of January 2024

From 9:00 onwards getting together and registration

Introductory Remarks (9:00 to 9:20)

Misfit Layer Compounds (10:00-12:40)

9:40-10:20 Tristan Cren – *Huge Doping and unconventional Superconductivity in NbSe₂ misfit Compounds*

10:20-11:00 Hugo Ledu – *Superconducting critical Temperature of the new misfit Compounds (La_xPb_{1-x}Se)_{1,14}(NbSe₂)₂*

11:00-11:30 Coffee break

11:30-12:10 Thomas Samuely – *Protection of Ising Spin-Orbit Coupling in Bulk Misfit Superconductors*

12:10-12:50 Ludovica Zullo – *Misfit Layer Compounds as ultratunable Field Effect Transistors: from Charge Transfer Control to emergent Superconductivity*

12:50-14:00 Lunch at the conference site

Ultrafast Spectroscopy (14:00-16:40)

14:00-14:40 Franck Vidal – *Origin of magneto-structural Phase Transitions in MnAs: Insights from ultrafast Time-resolved Dynamics Experiments*

14:40-15:20 Stefano Mocatti – *Light-induced nonthermal Phase Transition to the topological crystalline Insulator State in SnSe*

15:20-16:00 Matteo Furci – *First-Order rhombohedral to cubic Phase Transition in photoexcited GeTe*

16:00-16:40 Florent Margaillan – *Presentation of the SUMO Platform*

Discussion (16:40-19:00 max.)

Tuesday the 23rd of January 2024

2D Materials (9:00-12:50)

9:00-9:40 François Debontridder – *Recent Developments at INSP in scanning tunneling Microscopy and ultra fast Spectroscopy Techniques for the Investigation of 2D Materials at low Temperature.*

9:40-10:20 Giovanni Marini – *Interplay between Excitons and Lattice Vibrations in the optical Properties of Monolayer Boron Nitride*

10:20-11:00 Francesca Martini – *Optical Properties of 2D g-C₃N₄ Polytypes for Hydrogen Storage.*

11:00-11:30 Coffee break

11:30-12:10 Marie d'Angelo – *Experimental Evidence of 2D Nodal-Line Semimetals*

12:10-12:50 Martin Gmitra – *Quasiparticle Interferences for C_{3v} symmetric pairing Functions, an Example of NbSe₂*

12:50-14:00 Lunch at the conference site

2D Materials (14:00-16:40)

14:00-14:40 Marie Hervé – *Scanning Tunneling Microscopy Investigation of a 2D van der Waals magnetic Material*

14:40-15:20 Jozef Kačmarčík – *Specific Heat Measurements of misfit layered and other TMD Compounds*

15:20-16:00 Christophe Brun – *Interplay between Charge, Spin and Lattice Degrees of Freedom in 2D materials consisting of 1/3 monolayer Sn/Si(111) and Pb/Si(111)*

Discussion (16:00-19:00 max.)

Wednesday the 24th of January 2024

Ultrafast Spectroscopy and disordered Systems (9:30-12:50)

9:30-10:10 Peihao Sun – *Long-Range Anisotropy observed in a Vapor-deposited metallic Glass*

10:10-10:50 Andrea Corradini – *A Machine Learning Approach to non-thermal Melting*

10:50-11:20 *Coffee break*

11:20-12:00 Francesco Dallari – *MHz X-Ray induced Dynamics in Oxide Glasses*

12:00-12:40 Elham Goliaei – *Amorphous GeSe₂: Structural Properties and Characterization*

12:40-13:20 Giulio Monaco – *Reaching the Yield Point of a Glass during X-Ray Irradiation*

13:20-14:00 *Lunch at the conference site*

Padova – Trento discussion on ultrafast spectroscopy in disordered systems (14:00-19:00 max.)

Participants

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