

# Breath Research Interactions and Development via Guidance and Exchanges



In the framework of European BRIDGE project, the following courses are scheduled at IESL-FORTH and you are welcome to attend.

Day	Date	Time	FORTH's Room	Presenter	Course
Wednesday	21/6	09:00 – 11:00	119 KEEK	Prof Liberato Manna	Electronic Structure of Solids
Thursday	22/6	09:00 – 11:00	119 KEEK	Prof Liberato Manna	Electronic Structure of Solids
Friday	23/6	11:00 – 13:00	119 KEEK	Dr Teresa Pellegrino	Water soluble nanoparticles
Monday	26/6				No courses due to national elections
Tuesday	27/6	09:00 – 11:00	1	Prof Liberato Manna	Electronic Structure of Solids
		11:00 – 13:00	1	Dr Teresa Pellegrino	Water soluble nanoparticles
Wednesday	28/6	09:00 – 11:00	1	Prof Liberato Manna	Electronic Structure of Solids
		12:00 – 13:00	1	Dr Teresa Pellegrino	IESL Seminar
Thursday	29/6	09:00 – 11:00	1	Prof Liberato Manna	Electronic Structure of Solids
		11:00 – 13:00	1	Dr Teresa Pellegrino	Water soluble nanoparticles
Friday	30/6	09:00 – 11:00	1	Prof Liberato Manna	Electronic Structure of Solids
		11:00 – 13:00	3	Dr Teresa Pellegrino	Water soluble nanoparticles
Monday	3/7	09:00 – 11:00	119 KEEK	Prof Liberato Manna	Electronic Structure of Solids
		11:00 – 13:00	119 KEEK	Dr Teresa Pellegrino	Water soluble nanoparticles
Tuesday	4/7	09:00 – 11:00	119 KEEK	Prof Liberato Manna	Electronic Structure of Solids
Wednesday	5/7	10:00 – 12:00	1	Dr Mirko Prato	Characterization Techniques and their application to perovskite nanocrystals and 2D materials
Thursday	6/7	10:00 – 12:00	1	Dr Mirko Prato	Characterization Techniques and their application to nanocrystals and 2D materials
Friday	7/7				
Monday	10/7				



This research project has received funding from the EU's Horizon Europe framework programme for research and innovation under grant agreement BRIDGE (n. 101079421 from 01/10/2022 – 30/9/2025)

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Tuesday	11/7	10:00 – 12:00	1	Dr Mirko Prato	Characterization Techniques and their application to nanocrystals and 2D materials
Wednesday	12/7	10:00 – 12:00	1	Dr Mirko Prato	Characterization Techniques and their application to nanocrystals and 2D materials
Thursday	13/7	10:00 – 12:00	1	Dr Mirko Prato	Characterization Techniques and their application to nanocrystals and 2D materials

**Prof Liberato Manna** - Associate Director for Materials and Nanotechnologies Area, Senior Researcher Tenured - Principal Investigator at IIT, NanoChemistry Laboratory

Course: **Electronic Structure of Solids**

*Description:* Basics of quantum mechanics, crystallography, free and nearly free electron models, tight binding approaches using s, p, d, orbitals, transition metals, electron repulsion, correlation, examples on many materials classes.

**Dr Teresa Pellegrino** - Senior Researcher Tenured - Principal Investigator at IIT, Nanomaterials for Biomedical Applications Laboratory

Course: **Water soluble nanoparticles**

*Description:* Introduction to polymers, polymerization techniques, functional polymers, polymer characterization, nanomaterials and their general properties, magnetic materials, colloidal gold nanoparticles, synthesis of nanoparticles, self-assembly, iron oxide nanoparticles, nanocrystals for biomedical applications.

**Dr Mirko Prato** - Technologist - Facility Coordinator, Materials Characterization

Course: **Characterization Techniques and their application to nanocrystals and 2D materials**

*Description:* Introduction to some of the techniques relevant to the characterization of the chemical, structural and morphological properties of materials, including atomic force microscopy (AFM), X-ray diffraction (XRD), and X-ray photoelectron spectroscopy (XPS).

Please check for any updates the webpage: <https://euproject-bridge.eu> and the social media: [Twitter](#), [Instagram](#), [Facebook](#), [LinkedIn](#). Contact at [bridge@iesl.forth.gr](mailto:bridge@iesl.forth.gr)



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