

DOCTORATE IN SCIENCES AND TECHNOLOGIES OF CHEMISTRY AND MATERIALS

EDUCATIONAL OFFER aa 2025-26

OPENING LECTURE – 2026

SPEAKER	AFFILIATION	TITLE/TOPIC	DATE	PROPOSER
C. Barbante	Ca' Foscari University of Venice and Institute of Polar Sciences - CNR	Why the Poles matter: beyond the limits of environmental analysis for climate research	13-02-2026	M. Grotti

TYPE-A COURSES – November 2025 – October 2026 *

TEACHER	AFFILIATION	TITLE/TOPIC	DATE	PROPOSER
L. Di Bari	Università di Pisa	Stereochemistry of complex systems and application of chiral molecules for organic optoelectronic devices	To be defined	R. Riva
E. Pidko	Delft University of Technology	Computational Spectroscopy and Catalysis	02-2026	P. Riani
R. Ben Hassen	Università di Tunisi El Manar	Exploring Perovskite-like Oxides: Synthesis, Structural Characterization, and Physical Behavior	To be defined	M. Giovannini
J. Schawe	ETH Zurich	Kinetics of phase transformation in metastable solids and liquids	01-26	D. Cavallo
E. Gatto	Università di Roma Tor Vergata	From Nature to Nanoscience: Peptide Building Blocks Driving Electron Transfer	01-26 or 02-26	S. Slimani
G. Varvaro	CNR ISM	Magnetic Thin Films and Heterostructures: Fundamentals and Applications	04-26 or 05-26	P. Maltoni
S. Nava	INFN Firenze	Ion Beam Analysis for environmental applications	To be defined	M. Grotti
F. Montanarella	Seaborough BV (NL)	Nanotechnology for a brighter future: LEDs, phosphors, and color engineering	11-2025	M. Canepa
F. d'Acapito	CNR-IOM c/o ESRF Grenoble	X-ray Absorption Spectroscopy: a precious tool for material science	To be defined	M. Pani

Note: * the list of these courses includes only those already approved by the Doctoral Board and it is periodically updated.

TYPE-B COURSES – 2026

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Aspects of soft matter	2	A. Relini (UniGe)	May-Jun-Jul
Atomic force microscopy, theory and practice	2	M. Salerno (UniGe)	Feb-Mar-Apr
Catalysts and adsorbents	2	E. Finocchio (UniGe), G. Garbarino (UniGe)	Jan-Feb
Design of magnetic nano-architecture	2	P. Maltoni (UniGe), D. Peddis (UniGe), S. Slimani (UniGe)	Jun-Jul
Experimental design	2	F. Ardini (UniGe), B. Benedetti (UniGe)	Jun-Jul
Fundamentals of scanning electron microscopy	2	P. Riani (UniGe)	Mar-Apr-May-Sep
Fundamentals of spectral imaging	2	P. Oliveri (UniGe)	Apr-May
Innovative pharmaceutical dosage forms: preparation and control methods	2	G. Ailuno (UniGe), S. Baldassari (UniGe), E. Russo (UniGe), G. Zuccari (UniGe)	May
Instrumental techniques for trace elements determination in pharmaceuticals, inorganic nanomaterials, food products, environmental samples, and <i>in vivo</i> biokinetics evaluation	2	G. Drava (UniGe), V. Voliani (UniGe)	Mar-Apr-May
Introduction to functional ceramic materials. Structure, properties, preparation and applications	2	V. Buscaglia (CNR)	May
Introduction to polymer physical chemistry and characterisation techniques	2	N. Tirelli (IIT)	Jan
Main plants used in phytocosmetics and their constituents	2	A. Bisio (UniGe)	Jan-Feb
New trends in organic synthesis	2	C. Lambruschini (UniGe), L. Moni (UniGe)	Jan-Feb
Optical properties of materials	2	F. Bisio (UniGe), M. Canepa (UniGe), M. Magnozzi (UniGe)	Apr
Organic materials for photonics	2	D. Comoretto (UniGe)	May-Jun-Jul-Sep
Organic photochemistry	2	A. Basso (UniGe)	Jul-Sep
Python programming tools for research in chemistry and materials science	2	G. Rossi (UniGe), A. Tagliabue (UniGe)	May-Jun
Surface science	3	L. Vattuone (UniGe)	Apr-May-Jun
Theory of crystalline solids	3	S. Artyukhin (IIT)	May-Jun

TYPE-B COURSES – 2027

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Crystalline solids: electronic correlations, instabilities and order	2	S. Artyukhin (IIT)	May-Jun
Design and synthesis of protein-kinase inhibitors as anticancer agents	2	S. Schenone (UniGe), M. Tonelli (UniGe)	Mar-Apr-May-Jun
Drug discovery: an introduction to the process leading to new small-molecule drugs	2	A. Armirotti (IIT), T. Bandiera (IIT), F. Bertozzi (IIT), S. Decherchi (IIT), S. Giroto (IIT), B. Grimaldi (IIT), D. Russo (IIT), R. Scarpelli (IIT), M. Veronesi (IIT), P. Vidossich (IIT)	May
Electronic structure of solids	3	L. Manna (IIT)	Sep
Introduction to nanophotonics and nanofabrication	3	M. C. Giordano (UniGe)	Mar-Apr-May-Jun
Molecular markers of food quality and genuineness	2	R. Boggia (UniGe), F. Turrini (UniGe)	Jun
Multivariate analysis of chemical data	3	M. Casale (UniGe)	Jan-Feb
Patent and bibliographic databases searching in medicinal chemistry	2	C. Brullo (UniGe), A. Spallarossa (UniGe)	Jun
Perspectives on bioinorganic chemistry	2	S. De Negri (UniGe)	Apr-May
Polymeric nanocomposites	2	O. Monticelli (UniGe)	Jan-Feb
Radiopharmaceuticals: in silico design, diagnostic and therapeutic applications	2	E. Cichero, F. Musumeci (UniGe)	May-Jun
Science at Large Scale Facilities: Neutron and Synchrotron Light sources	2	A. Martinelli (CNR-SPIN)	Feb-Mar-Apr-May-Jun
Single crystal diffraction at work	2	P. Solokha (UniGe)	Apr-May-Jun
The Rietveld method: fundamentals and applications	2	C. Artini (UniGe)	Jun-Jul-Sep
Water soluble nanoparticles	2	T. Pellegrino (IIT)	Sep

TYPE-C COURSES – 2026 and 2027 *

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Introduction to transmission electron microscopy for materials science	1	R. Brescia (IIT), G. Divitini (IIT)	Apr-May
Materials characterization 1	1	L. Ceseracciu (IIT), S. Dante (IIT), M. Lorenzoni (IIT), L. Pasquale (IIT)	Mar-Apr-May
Materials characterization 2	1	S. Dante (IIT), L. Goldoni (IIT), L. Pasquale (IIT), M. Prato (IIT)	Mar-Apr-May
Nanomaterials and nano heterostructures: colloidal synthesis and chemical transformations	1	L. De Trizio (IIT)	Jun

Notes: *formerly Type-F.