



DIPARTIMENTO
DI GEOSCIENZE

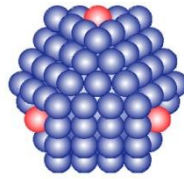


Dipartimento
di Fisica
e Astronomia
Galileo Galilei

DIPARTIMENTO DI
SCIENZE BIOMEDICHE



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



Introduction to structural crystallography and diffraction

Scuola: Metodi basati sull'uso di raggi X per analisi di molecole e materiali, con particolare enfasi sulla diffrazione di raggi X

Date: 4-8 giugno 2018

Ubicazione: Dip. Geoscienze. Via Gradenigo 6, 35131 Padova – Aula 1 C-D

Scuola per dottorandi di 5 giorni (40 ore)

Accreditamento: 3 crediti

Costo: *Studenti/Dottorandi UNIPD: gratuito*
 Esterni accademici € 200
 Esterni aziendali € 500

Per iscrizioni ed informazioni:

contattare Sig. Valeria Turozzi
segreteria CIRCe circe@unipd.it
tel 049-827 9166

Per il Pagamento inviare bonifico alla tesoreria AIC

Causale: "COGNOME NOME, ISCRIZIONE SCUOLA XRPD Padova 2018"
Intestatario c/c: Associazione Italiana di Cristallografia
Bank: UBI Banca
Address: Agenzia Cravino, via Taramelli 20, I-27100 Pavia (Italy)
IBAN: IT641031111130900000005853
SWIFT: BLOPIT22

Program

	Monday June 4th	Tuesday June 5th	Wednesday June 6th		Thursday June 7th	Friday June 8th
	Basics on X-ray-related methods	X-ray diffraction: basics and methods	Data collection/Structure refinement		Applications	Applications
			<i>powders</i>	<i>Single xl</i>		
09:00-10.30	Interaction RX-matter (P. Fornasini)	Introduction to single-crystal X-ray diffraction (G. Zanotti)	Introduction to Rietveld programs (GSAS) (M.C. Dalconi / M. Ardit)	Single crystal data collection (F. Nestola)	Quantitative analysis (G. Cruciani)	Analysis of disordered materials (M. Leoni)
10.30	Coffee break	Coffee break	Coffee break		Coffee break	Coffee break
10.50-11.35	Photoelectron emission (XPS) and fluorescence (XRF) based methods (S. Gross)	Instruments for Single crystal X-ray diffraction (F. Nestola)	Introduction to Rietveld programs (GSAS) (M.C. Dalconi / M. Ardit)	Single crystal data collection (F. Nestola)	Polymer diffraction (V. Causin)	Introduction to concepts and methods in total scattering (A. Guagliardi)
11.35-12.20	Absorption (XAS) (C. Maurizio)	Introduction to XRPD: X-ray powder diffraction and Instruments (G. Artioli)	Rietveld refinement with GSAS (M.C. Dalconi / M. Ardit)	Single crystal structure refinements (F. Nestola)		
12.20-13.00	X-ray microscopy and tomography (L. Valentini)					
13.00	Lunch	Lunch	Lunch		Lunch	Lunch
14.30-15.15	Basic principles of crystallography (G. Artioli)	The profile of the diffraction peak (P. Scardi)	Rietveld analysis with different programs (GSAS: M.C. Dalconi / M. Ardit)	Rietveld analysis with different programs (GSAS: M.C. Dalconi / M. Ardit)	Databases (M. Leoni)	General discussion
15.15-16.00		Introduction to full pattern analysis (P. Scardi)	(MAUD: L. Lutterotti / M. Bortolotti) (PM2K: M. Leoni)	(MAUD: L. Lutterotti / M. Bortolotti) (PM2K: M. Leoni)	Practical exercises (small groups)	
16:00	Coffee break	Coffee break	Coffee break		Coffee break	Coffee break
16:30-18.00	Basic principles of diffraction (G. Zanotti)	Introduction to ab-initio structure solution methods from powders (N. Masciocchi)	Rietveld analysis with different programs (GSAS: M.C. Dalconi-M. Ardit) (MAUD: L. Lutterotti / M. Bortolotti) (PM2K: M. Leoni)	Rietveld analysis with different programs (GSAS: M.C. Dalconi / M. Ardit) (MAUD: L. Lutterotti / M. Bortolotti) (PM2K: M. Leoni)	Practical exercises (small groups)	