

Training School– Preliminary Program
Materials Centre of the University of Porto, CEMUP,
University of Porto

Thursday 8 th September	
9:00-9:50	Registration
X-RAY PHOTOELECTRON SPECTROSCOPY – XPS	
10:00-11:30	Lecture by Carlos P. Moreira de Sá (CEMUP, University of Porto) - Introduction to X-ray Photoelectron Spectroscopy (XPS). Fundamentals and instrumentation. Experimental opportunities
11:30-11:45	Coffee-break
11:45-12:15	Lecture by Susana Rebelo (REQUIMTE-LAQV, University of Porto) - X-Ray Photoelectron Spectroscopy: Materials for Catalysis
12:15-13:00	Lecture by Maude Jimenez Mermillon (UMET-ISP-R2FIRE, University of Lille, France) - Microscopic and chemical analyses of flame retardant materials, coatings and textiles
13:00-14:00	Lunch
SCANNING PROBE MICROSCOPY BY ATOMIC FORCE MICROSCOPY – AFM	
14:00-15:30	Lecture by Peter Eaton (REQUIMTE-UCIBIO, University of Porto) - Atomic Force Microscopy - Principles and Practice
15:30-16:15	Lecture by Ana Silveira Viana (Centro de Química e Bioquímica, University of Lisbon) - Characterisation of polymers by atomic force microscopy
16:15-16:30	Coffee-break
16:30-18:00	Demonstration by Peter Eaton (REQUIMTE-UCIBIO, University of Porto)

Friday 9 th September	
MASS SPECTROMETRY – MS	
9:00-10:00	Lecture by André Silva (REQUIMTE-UCIBIO, University of Porto) - Mass Spectrometry Applications in Inorganic Chemistry
10:00-11:00	Lecture by M. Rosário M. Domingues (Mass Spectrometry Centre, University of Aveiro) - Mass spectrometry approaches to evaluate modifications of polysaccharides mimicking industrial processing
11:00-11:15	Coffee-break
11:15-13:00	Demonstration by André Silva (REQUIMTE-UCIBIO, University of Porto)
13:00-14:00	Lunch
ELECTRON PARAMAGNETIC RESONANCE SPECTROMETRY – EPR	
14:00-15:30	Lecture by Maria Rangel (REQUIMTE-UCIBIO, University of Porto)
15:30-15:45	Coffee-break
15:45-16:45	Demonstration by Andreia Leite (REQUIMTE-UCIBIO, University of Porto)
16:45-18:00	Lecture by Maria Rangel (REQUIMTE-UCIBIO, University of Porto) - EPR characterization of metal ions complexes

Saturday 10th September

EXPERIMENTAL DEMONSTRATIONS AND ANALYSIS- PART 1

9:00-10:50
(1h50)

Group 1 – XPS (Carlos Sá), 10 students

Filipe, Gizem, Ceren, Luljeta, Laurence, Martina, Martin, Angela, Ilay, Elif

Group 2 – AFM (Peter Eaton), 5 students

José, Justina, Beate, Miha, Leonor

Group 3 – EPR (Andreia Leite), 10 students

Aleksandra, John, Sara, Andreas, David, Axel, Bolaji, Kristýna, Yuselis, Olivia

10:50-11:10

Coffee-break

11:10-13:00
(1h50)

Group 1 - XPS (Carlos Sá), 10 students

Justina, Beate, John, Sara, Andreas, David, Axel, Bolaji, Kristýna, Yuselis

Group 2 - AFM (Peter Eaton) , 4 students

Olivia, Filipe, Aleksandra, Luljeta

Group 3 – EPR (Andreia Leite), 11 students

José, Gizem, Miha, Ceren, Laurence, Martina, Martin, Leonor, Angela, Ilay, Elif

Sunday 11th September

9:00-9:45

Lecture by Srecko Valic (Rudjer Boskovic Institute Zagreb, Croatia) - Electron spin resonance - spin probe method in studying polymer systems.

EXPERIMENTAL DEMONSTRATIONS AND ANALYSIS- PART 2

9:50-11:15
(1h25)

Group 1 - MS (André Silva), 8 students

José, Olivia, John, Gizem, Ceren, Andreas, Laurence, Martina

Group 2 - EPR Case study (Tânia Moniz), 8 students

Justina, Filipe, Aleksandra, Bolaji, Angela, Elif, Axel, Kristýna

Group 3 – XPS Case study (Carlos Sá), 9 students

Beate, Sara, Luljeta, Yuselis, Ilay, Martin, David, Miha, Leonor

11:15-11:35

Coffee-break

11:35-13:00
(1h25)

Group 1 - EPR Case study (Tânia Moniz), 9 students

José, Olivia, John, Gizem, Miha, Andreas, Laurence, Sara, Luljeta

Group 2 - MS (André Silva), 8 students

Beate, David, Martin, Axel, Leonor, Kristýna, Ilay, Yuselis

Group 3 – XPS Case study (Carlos Sá), 8 students

Justina, Filipe, Aleksandra, Angela, Elif, Bolaji, Martina, Ceren

19:30-21:30

Joint Dinner (Restaurante do Planetário)

Monday 12th September

X-RAY DIFFRACTION

9:00-10:50 Lecture by Luís Cunha-Silva (REQUIMTE/LAQV, University of Porto) - X-ray diffraction
José, Olívia, Justina, Filipe, Beate, Aleksandra, John, Gizem, Miha, Luljeta, Andreas, Laurence, Martin, Axel, Bolaji, Leonor, Kristyna, Angela, Ilay, Elif, Yuselis

EXPERIMENTAL DEMONSTRATIONS AND ANALYSIS- PART 3

9:00-10:50 (1h50) **Group 1 – AFM (Peter Eaton), 4 students**
Sara, Ceren, Martina, David

10:50-11:10 Coffee-break

11:10-13:00 (1h50) **Group 2 – AFM (Peter Eaton), 5 students**
Bolaji, Kristýna, Ilay, Elif, Yuselis

Group 3 – Powder X-Ray Diffraction, Practical Demonstration (Luís Cunha-Silva/ Gonçalo Oliveira), 20 students
Olivia, John, Gizem, Miha, Luljeta, Andreas, Laurence, Axel, Leonor, Angela, José, Justina, Filipe, Beate, Aleksandra, Ceren, Sara, Martina, David, Martin