



PRE IMRP19 TRAINING COURSE

RADIATION PROCESSING FOR ADVANCED MATERIALS

University of Reims Champagne-Ardenne, Reims, France
March 27-29, 2019



UNIVERSITE DE REIMS
CHAMPAGNE-ARDENNE

*Presented together with the 19th International Meeting on Radiation Processing
held at Strasbourg Convention and Exhibition Centre, April 1-5, 2019.*

Are you a graduate student (MSc, PhD) or young professional with a background in physics, chemistry, biology or engineering with strong interest and motivation to acquire additional skills in the field of radiation processing?

Then this training is for you!

The 3-day long training course will offer you a condensed overview of radiation processing applied to material enhancement. It will emphasize the physical phenomena, the chemical mechanisms and the technological aspects of radiation processing. You will thus have the keys for apprehending the sessions on advanced radiation chemistry that will be presented the following week at IMRP19. The course will enhance your capability to carry out your academic or professional activities with a strengthened background.



The programme is composed of tutorials lectures and practical demonstrations. The lectures will be given by international experts from academia and industry among which University Professors (X. Coqueret, S. Gangloff, O. Güven, M. Molinari...), senior scientists from public research organizations (M. Ferry, R. Musat, ...) and renowned experts from industry (B. Lambert, Y. Hénon...).

Scientific Committee

Andrzej Chmielewski, ICHTJ, Warsaw, Poland
Xavier Coqueret, URCA, Reims, France
Michaël Molinari, URCA, Reims, France
Alain Strasser, Aerial, Illkirch, France

Organising Committee

Christine Bouteiller, URCA, Reims, France
Xavier Coqueret, URCA, Reims, France
Yves Hénon, iia

Accommodation and Travel

Information will be provided about the selection and booking of affordable accommodation for students in Reims. There are frequent trains and buses between Paris and Reims (140 km) and Reims and Strasbourg (350 km).

Registration

Students may register via the IMRP 2019 website: imrp-iia.com as part of a 'Students All-inclusive Package'. Attendees from industry, professionals and post-docs may also register for the training course via the same website.

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Inspired by the recent Erasmus + TL-IRMP Project funded by the European Union, tl-irmp.eu/en, the Pre-IMRP19 training course will be given by internationally recognized experts.

PROGRAMME OVERVIEW

Tuesday March 26, 2019

Arrival - Registration

Wednesday March 27

Official welcome - opening

- Lecture 1** Overview of industrial radiation processing
- Lecture 2** Basics of radiation-matter interactions
- Lecture 3** Radiation-induced ageing of polymer materials
- Lecture 4** Radiation-initiated polymerization (coatings, composites)
- Tutorial 1** Low energy EB, spectroscopic and physical monitoring of radiation-induced processes

Thursday March 28

- Lecture 5** Radiation cross-linking of thermoplastics and elastomers
- Lecture 6** Monitoring of radiation-induced reactions
- Lecture 7** Radiation grafting
- Lecture 8** Determination of G(X) and G(S), theoretical models and analytics
- Lecture 9** Microorganisms: sanitary risks and control of bioburden in biomaterials
- Lecture 10** Biomaterials / Biocompatibility
- Tutorial 2** Demos at the Radiation chemistry laboratory

Friday March 29

- Lecture 11** Radiation-induced formation of hydrogels & nanoparticles
- Lecture 12** Kinetics of pulsed radiation-induced reactions
- Lecture 13** Radiation processing of healthcare products - part 1
- Lecture 14** Radiation processing of healthcare products - part 2
- Tutorial 3** Demos at the Nanoscience laboratory
- Conclusion** Closing of the course

Note: Dosimetry will be covered by a dedicated workshop organised at IMRP19 Strasbourg.



Co-organized by University of Reims Champagne-Ardenne (URCA) and the International Irradiation Association (iia)

Reserve your spot

Go to imrp-iia.com and take advantage of the 'Students All-inclusive Package'

