

8. Education and Training (Courses)

New Materials and Compounds

- **Nuclear Solid State Physics Using Ion Beams** Participation in classes of the Applied Nuclear Techniques Course, Physics Graduation, Physics Dept. FC-UL, 1999, E. Alves, L.C. Alves, A.R.Ramos, C. Jesus.

- **Condensed Matter Physics**

Education and training of undergraduate students: lectures and demonstration experiments introductory to neutron scattering (Faculty of Sciences, Lisbon University; Physics Dept., Aveiro University; Instituto Superior Técnico, Lisbon Technical University)

Environmental Sciences:

- **Health and Environmental Studies Using Ion Beam Techniques**

Participation in classes of the Advanced Laboratory Techniques Course, Biology Graduation, Zoology and Anthropology Dept., FC-UL, T. Pinheiro.

Participation in classes of the Biophysics Course, Physics Graduation, Physics Dept., FC-UL, 1999. T. Pinheiro, L.C. Alves.

Co-supervision of PhD. Thesis (Supervisors: Prof. Ruy Pinto, Prof. Maria Cristina Santos), Chemistry and Biochemistry Dept., FC-UL, T. Pinheiro.

Co-supervision of PhD. Thesis (Supervisors: Prof. Mário Reis), Zoology and Anthropology Dept., FC-UL, T. Pinheiro.

Inorganic Chemistry, Radiochemistry and Radiopharmacy:

- **Inorganic and Organometallic Chemistry**

“New Resources for Education in Chemistry”, Master Course “Teaching Chemistry”, Faculty of Sciences, University of Lisbon, 1999.

“Chemistry of Re and Tc”, Radiopharmaceuticals in Nuclear Medicine, ITN, 21 June-9 July 1999.

- **Radiopharmaceutical Development**

Organization of Radiopharmaceuticals in Nuclear Medicine, ITN, 21st June – 9th July 1999.

Lecture on “Radiation Dosimetry” and Practical Works In: “Radiopharmaceuticals in Nuclear Medicine”, ITN, 21st June – 9th July 1999, Maria Neves.

Lecture on “Iodine Chemistry” and Practical Works In: “Radiopharmaceuticals in Nuclear Medicine”, ITN, 21st June – 9th July 1999, Cristina Melo e Silva.

Lecture on “Chemical Structure/ Biological Properties” In: “Radiopharmaceuticals in Nuclear Medicine”, ITN, 21st June – 9th July 1999, Luciana Patrício.

Lectures on “Radiopharmaceutical Formulation”, “Adverse Reactions. Factors Affecting the Biodistribution of Radiopharmaceuticals” and Practical Works In: “Radiopharmaceuticals in Nuclear Medicine”, ITN, 21st June – 9th July 1999, Lurdes Gano.

Practical Works In: “Radiopharmaceuticals in Nuclear Medicine”, ITN, 21st June – 9th July 1999, Célia Fernandes.

Quality Control of a Radiopharmaceutical: Macroaggregates of Serum Albumin, In: European Radiopharmacy Course, I.N.S.T.N., Saclay-France (Agreement signed between INSTN and ITN), 15-26th November 1999, Lurdes Gano.

Nuclear Engineering:

- ***Operation and Exploitation of the RPI***
- ***Reactor Calculations***
- ***RPI Dosimetry***
- ***Applied Dynamics***

The Atom and the Nucleus as Radiation Sources, Course for Laboratory Technicians, ITN, 1999, N.P. Barradas.

Electrons and the Oscilloscope, Course for Laboratory Technicians, ITN, 1999, N.P. Barradas.

Interaction of Radiation with Matter, Course for Laboratory Technicians, ITN, 1999, N.P. Barradas and A. Vieira.

Advanced Experimental Nuclear Physics I, MSc on Physical Engineering, Faculty of Sciences, Univ. Lisbon, 1st semester 1999/2000, J.G. Marques.

Training of New Operators for the Portuguese Research Reactor, ITN, 1999, A.J.G. Ramalho, F.M. Cardeira, J.G. Marques.

Electromagnetic Radiation, Course for Laboratory Technicians, ITN, 1999, A. Vieira.

Electricity, Magnetism and their Applications, Course for Laboratory Technicians, ITN, 1999, A. Vieira.

Signal Processing and Modal Identification, Lectures for students of Instituto Politécnico do Porto, June 1999, J. Antunes,

Industrial Technologies:

- ***Nuclear Instruments and Methods***

Radiation Physics, Dosimetry and Radiological Protection, Technological and Nuclear Institute and Faculty of Sciences – University of Lisbon, Course for Master Students in Physical Engineering - Applied Nuclear Physics, 1st Semester 1999/2000, J. Salgado.

An Introduction to the Monte Carlo N-Particle (MCNP) code, Technological and Nuclear Institute, 24-28 May 1999, I. F. Gonçalves and C. Oliveira.

Monte Carlo methods in the UTR irradiation planning, Technological and Nuclear Institute and Faculty of Sciences – University of Lisbon, Seminar for Master Students in Physical Engineering - Applied Nuclear Physics, 12 November 1999, C. Oliveira.

- ***Radiation Technologies: Processes and Products***

Course/Class on sterilisation procedures in Microbial Biotechnology, Biologia Vegetal/Faculdade de Ciências, University of Lisbon, M.L. Botelho and C. Teles.

Radiological Protection, Environmental Radioactivity and Nuclear Safety

Novos Processos de Tratamento de Efluentes Líquidos Radioactivos, Seminar given at ITN/Química, Sacavém, 11 Mar.99, I. Paiva.

Gestão de Resíduos Radioactivos: Tratamentos de Efluentes Líquidos, Seminar given at Escola B 2,3 Ferreira de Castro, Mem Martins, 22 Mar.99, under the Project “Ciência Viva” from MCT, I. Paiva.

Emergências e Acidentes Nucleares, Seminar given at Escola B 2,3 Ferreira de Castro, Mem Martins, 22 Mar.99, under the Project “Ciência Viva” from MCT, M. Reis.

Protecção Radiológica, Seminar given at Escola B 2,3 Ferreira de Castro, Mem Martins, 22 Mar.99, under the Project “Ciência Viva” from MCT, R. Trindade.

Dosimetria física das radiações ionizantes, II Curso de Protecção contra Radiações Ionizantes (para médicos e licenciados que trabalhem na área da saúde), SPPCR, Lisboa, 21/05/1999.

"Biological dosimetry on radiation protection", II Curso de Protecção Contra Radiações, New University of Lisbon, 21 May 1999.

"Riscos Nucleares", Curso de Formação “Riscos Tecnológicos”, pelo Serviço Nacional de Protecção Civil, Carnaxide, 17-18 Nov.99, R. Trindade.

Invited lecture on "Quality Assurance and Monitoring of Environmental Contaminants". First Workshop on Environ. Chemistry of North of Africa and Middle-East, Tunisia, 3-7 Feb. 1999 (UNEP), F.P. Carvalho.

Invited lecture on "Environmental Conservation and Education, 1st Iberian Workshop on Environ. & Education, Castelo Branco, 1-4 Novembro 1999, F.P. Carvalho.