

Research Projects



Reactors and Nuclear Safety Unit

Operation and Exploitation of the Reactor, Dosimetry (RPI) and Reactor Calculations

Current Projects

2011 ITN budget in €

Ion beam modification and neutron irradiation studies of wide bandgap semiconductor heteroand nanostructures, PTDC/CTM/100756/2008; (2010-2013), Total budget 180.000,00€, ITN budget 131.028,00€. Prime contractor: ITN, Coordinator: K. Lorenz. (UFA)	---
<i>Diagnosis, decontamination and conservation of cultural heritage: neutrons and ionizing radiation in artwork (RADIART)</i> , FCT, PTDC/HISHEC/101756/2008, September 2007 - August 2011; Total budget: € 140.000; Prime contractor: ITN, Co-ordinator: I. Prudêncio (UCQR)	---
<i>Perturbed Angular Correlations and Electron Channeling Experiments at ISOLDE - applied materials research with nuclear techniques, training and development</i> (ITN coordinator, J.G. Correia, U. Wahl et al.) CERN-FP-116320-2010, with budget of €120.000 ITN fraction of 59.895,60€ (from the 1 st January 2011 up to the 30 st April 2012). (UFA)	---
<i>Strategic Project - UI 275 -2011-2012</i> , FCT, PESt-OE/FIS/UI0275/2011, January 2011 - December 2012; Total budget: € 236.362; Prime contractor: ITN, Co-ordinator: L. Bento (CFNUL)	---
<i>Exploitation of the Current SIMPLE Measurement</i> , PTDC/FIS/ 115733/2009, July 2011 - June 2012; Prime contractor: CFNUL, Co-ordinator: Thomas A. Girard (CFNUL)	---
<i>MULTIFOX: Nanometric Probing and Modification of Multiferroic Oxides</i> , FCT, PTDC/FIS/105416/2008, March 2010 - February 2013; Total budget: € 180.000 Prime contractor: Univ. Aveiro, Co-ordinator: Vitor Bras de Sequeira Amaral (UA)	---
<i>Ferromagnetic nanocrystals based on doped ZnO for tunneling magneto resistance (TMR)</i> , FCT, PTDC/FIS/098943/2008, May 2010 - May 2013; Total budget: € 185.000 Prime contractor: Univ. Minho, Co-ordinator: Maria Jesus Matos Gomes (UM)	---
<i>Accurate heavy ion ERDA of oxynitride films: Improved modelling of straggling and multiple scattering and extension of the stopping data bases.</i> , IAEA, Research Contract No. 14365/R0/Regular Budget Fund., September 2007 - August 2011; Total budget: € 27.000, ITN budget € 27.000; Prime contractor: ITN, Co-ordinator: N.P. Barradas	7.000,00
<i>Free-charge carrier properties and doping mechanisms of InN-based materials</i> , FCT, PTDC/FIS/100448/2008., February 2010 - January 2013; Total budget: € 188.000 Prime contractor: ITN, Co-ordinator: Vanya Darakchieva (UFA).	---
Total budget	7.000,00

Applied Dynamics

Current Projects

2011 ITN budget in €

<i>Vibratory Identification of Flow Excitations in Nuclear Fuel Bundles (IVECO)</i> . October 2010-March 2011. Contractor CEA, France.Total budget € 18000, ITN budget € 18000 Prime contractor: ITN (Co-ordinator: J. ANTUNES) Partners: Commissariat à l’Energie Atomique – CEA/Saclay, France (T. LAPORTE)	18.000,00
<i>The Mafra carillons: Development of Advanced Methods in Music Acoustics for Tuning and Restoration</i> . April 2010-March 2013. FCT project PTDC/EAT-MMU/104255/2008.	

RESEARCH PROJECTS

Total budget € 175966, ITN budget € 94464; Prime contractor: UNL/FCSH, Lisbon (Co-ordinator: J. SOEIRO); Partners: ITN (J. ANTUNES), IPP/ESMAE (O. INÁCIO)	---
<i>Dynamical Analysis and Improvements on the Portuguese Guitar Strings and String/Body Interaction.</i> March 2010-February 2012. FCT project PTDC/FIS/103306/2008.	---
Total budget € 90000, ITN budget € 26394; Prime contractor: IST, Lisbon (Co-ordinator: P. SERRÃO); Partners: ITN (J. ANTUNES), IPP/ESMAE (O. INÁCIO)	
<i>Vibratory Analysis of Shells in Air and Water.</i> October 2011-March 2012. Contractor CEA, France. Total budget € 11500, ITN budget € 11500; Prime contractor: ITN (Co-ordinator: J. ANTUNES); Partners: Commissariat à l’Energie Atomique – CEA/Saclay, France (T. LAPORTE)	---
<i>Fault Detection in Rotating Machinery.</i> January 2011-January 2013. Contractor FCT, bilateral agreement Portugal/Tunisia. Total budget € 2300, ITN budget € 4600	1.150,00
Prime contractor: ITN (Co-ordinator: V. DEBUT); Partners: Dynamics of mechanical Systems Research Unit, National School of Engineers of Sfax, Tunisia (F. CHAARI)	
Total budget	19.150,00

Neutron Activation in Environment, Nutrition and Epidemiology

Current Projects

	2011 ITN budget in €
<i>Impact of atmospheric indoor aerosol in human health,</i> PTDC/SAU-ESA/65597/2006. July 2008-June 2011. Total budget € 176859, ITN budget € 54878. Prime contractor: ITN Coordinator: M.C. FREITAS	53.057,70
<i>(Hyper)accumulation of arsenic and other elements in plants adapted to sites impacted by mining and smelting activities. Speciation, identification of accumulation and detoxication mechanisms and applications in bioremediation (HYPERAS).</i> PTDC/AMB/65462/2006. August 2007-July 2010. Total budget € 178969, ITN budget € 23940. Prime contractor: IMAR Coordinator: A. Bettencourt ITN Coordinator: M.C. FREITAS	7.182,00
<i>Assessment of emissions and impact of steel production processes.</i> June 2009 – December 2012. Total budget €, ITN budget € 40000. Prime contractor: TATA STEEL Coordinator: D. Anderson ITN Coordinator: S.M. ALMEIDA	32.445,55
<i>Selenium distribution in cereals and Portuguese cultivation soils. Interactions between selenium and iodine uptake by cereals – A case study.</i> PTDC/QUI/65618/2006. January 2009-December 2011. Total budget € 73440, ITN budget € 36000. Prime contractor: IST Coordinator: Adriano M.G. Pacheco ITN Coordinator: M.C. FREITAS	10.800,00
<i>Enhancing the sustainability of Research Reactors and their safe operation through regional cooperation, networking and coalition.</i> IAEA RER/4/032. January 2009-December 2011 International Atomic Energy Agency ITN Coordinator: M.C. FREITAS.	---
<i>CV-Dust – Atmospheric aerosol in Cape Verde region: seasonal evaluation of composition, sources and transport, PTD.</i> May 2010 – April 2013. Total budget € 198.891, ITN budget € 68.205. Prime contractor: UAveiro Coordinator: C.A. Pio ITN Coordinator: M.C. FREITAS	---
<i>PM_{fugitive} – Mitigation the Environment and Health Impacts of Particles from Fugitive Emissions</i> January 2010 – December 2012. Total budget € 199.091, ITN budget € 110.109. Prime contractor: ITN Coordinator: S.M. ALMEIDA	---
<i>Characterizing seasonal variations in elemental particulate matter concentrations in European urban and rural areas under different climatic conditions.</i> Technical Cooperation Project RER/2/005. January 2009-December 2011. International Atomic Energy Agency ITN Coordinator: M.C. FREITAS	---
Total budget €	103.485,25

Radiological Protection Safety Unit

Dosimetry and Radiobiology

Current Projects

	2011 ITN budget in €
<i>Digital technologies for mammography: optimization using Monte Carlo simulation techniques.</i> Project PTDC/SAU-BEB/100745/2008. Total budget € 150.000, ITN budget € 16.600, Prime contractor: Universidade Católica Portuguesa, Faculdade de Engenharia, A. Pascoal; ITN Co-ordinator J.G. Alves.	3.765,90
<i>Dose distribution mapping and Monte Carlo simulations in CT-fluoroscopy.</i> Project PTDC/SAU-ENB/115792/2009. Total budget € 143.629, ITN budget € 47.596 Prime contractor: Instituto Português de Oncologia do Porto de Francisco Gentil, J.M. Santos. ITN Co-ordinator J.G. Alves.	9.519,20
<i>Harmonization of Individual Monitoring in Europe.</i> EURADOS WG2. Chairman and ITN Co-ordinator J.G. Alves.	---
<i>Laboratory of Individual Monitoring of External Radiation.</i> Total of invoices € 153.000,00 (2 nd semester 2010 and 1 st of 2011). J.G. Alves	---
<i>CDT – Central Design Team for a Fast Spectrum Transmutation Experimental Facility,</i> European Union co-financed project in the 7 th Framework Programme EURATOM (Grant agreement n°: FP7-232527), Total budget € 3000000, ITN Budget € 70000 Euro, ITN Co-ordinator P. Vaz.	---
<i>ENETRAP-II: European Network for Education and Training in Radiation Protection (Part-II),</i> European Union co-financed project in the 7 th Framework Programme EURATOM (agreement number 232620) Total budget. € 1473000, ITN budget: € 78000, ITN Co-ordinator P. Vaz.	5.637,00
<i>FREYA (Fast Reactor Experiments for hYbrid Applications),</i> European Union co-financed Collaborative Project in the 7 th Framework Program (2011-2015) (agreement N° 269665, started in March 2011). Total budget €5.060.978.80, ITN budget: €179.200,00. Prime contractor: Studiecentrum Voor Kernenergie. ITN Co-ordinator P. Vaz.	33.740,00
<i>TRaining Schemes on Nuclear SAFETY culture (TRASNUSAFE).</i> Project in the framework of the FP7-EURATOM (2010-2013) (agreement N° 249674). Total budget € 1.926.948,40, ITN budget € 114.914,40. Prime contractor: Universite Catholique De Louvain. ITN co-ordinator P. Vaz.	24.745,38
Total budget	77.407,48

Metrology Laboratory of Ionizing radiation

Current Projects

	2011 ITN budget in €
<i>Increasing cancer treatment efficacy using 3D brachytherapy - T2.J06 Brachytherapy EMRP 2007 EURAMET e.V. (2008 a 2011).</i> Total project cost € 3 661691, EC funding, ITN budget € 19 370. Prime contractor: ENEA, ITN Coordinator C. Oliveira.	3.954,36
<i>Ionising radiation metrology for the metallurgical industry (12/ 2011 a 12/2014).</i> Total project cost €3009786 EC funding, ITN budget € 181 360. Prime contractor: CIEMAT, ITN Coordinator C. Oliveira.	---
Total budget	3.954,36

Environmental Radioactivity

Current Projects

	2011 ITN budget in €
<i>Biomass burning and emissions of atmospheric pollutants (Contribuição da combustão de biomassa para a emissão de poluentes atmosféricos-BIOEMI). Contract FCT PTDC/AMB/65706/2006 Total budget: 199,957€ (years 2007-2011) ITN budget: 74340 €. ITN Coordinator F.P. Carvalho.</i>	---
<i>Definition of new ENdpoints to assess GENtoxic effects resulting from environmental exposures to URanium, Uranium daughters and ionizing radiation in bioindicator species-GENUR. Contract FCT PTDC/AAC-AMB/114057/2009. Total buget: 172,945.00€ (years 2009-2012). ITN budget: 57,252 €. ITN Coordinator F.P. Carvalho</i>	---
<i>Participation in the education web based project CAPTAR (Web site: captar.web.ua.pt) in the field of environmental sciences. Project coordinated by the University of Aveiro, funded by the Gulbenkian Foundation. ITN Coordinator F.P. Carvalho.</i>	---
<i>Total column and surface ozone variability over the Iberian Peninsula: Dynamical and Chemical atmospheric factors – DYNZONE. Contract PTDC/CTE -ATM/105507/2008. Total budget (2010-2013): 130 k€. ITN budget: 17 k€ Prime contractor: New University of Lisbon, ITN Coordinator M. Reis.</i>	3.408,00
Total budget	3.408,00

Radioprotection and Radioactive Waste

Current Projects

	2011 ITN budget in €
<i>Study of the Adsorption Mechanisms and Kinetics in Geomaterials and Their Structural Characterisation: Implications for Processes of Natural Attenuation of Heavy Metal Contamination and Radioactive Wastes Confinement – KADRWaste; (PTDC/CTE-GEX/82678/2006. Total budget € 200 000, ITN budget € 15.528,00. Prime contractor: FFC/FC/UL; ITN Coordinator: I.Paiva.</i>	15.528,00
<i>Actinide reCycling by SEparation and Transmutation ACSEPT (7th Programme EURATOM-FP7-Fission2007); ACSEPT - FP7-Contract N° 211267. Total budget € 8999000, ITN budget € 24.500,00; Prime contractor: CEA; ITN Coordinator: I. Paiva.</i>	24.500,00
<i>PETRUS II—Towards an European training market and professional qualification in Geological Disposal. Total budget: €800000, ITN budget € 0*. Prime contractor: INPL, France; ITN Coordinator: I. Paiva.</i>	---
*Last funds are expected soon	
Total budget	40.028,00

Chemical and Radiopharmaceutical Sciences Unit

Applied Geochemistry & Luminescence on Cultural Heritage

Current Projects

	2011 ITN budget in €
<i>Death management in Recent Prehistory: funerary practices in Perdigoes enclosure (FUNPERD);</i> PTDC/CS-ANT/104333/2008; Total budget: 142.493,00 €; ITN budget: 28.920,00 € ITN coordinator: M.I. DIAS; Prime contractor: Univ. Coimbra, A. M. SILVA	---
<i>RUPSCIENCE - Analysis of the operational chains, archaeometry and chronology of Rock Art Paintings. An approach to materials technology of Portugal, Spain and Colombia's contexts.</i> PTDC/HIS-ARQ/101299/2008; Total budget: 84.000,00 €; ITN budget: 15.680,00 € ITN coordinator: M.I. DIAS; Prime contractor: I. P. Tomar, P. ROSINA	3.136,00
<i>Processos Luminescentes-Dosimetricos no Quartzzo; Convénio Portugal (FCT) / Itália (CNR) 2011-2012. italia128584682220330. Total budget (1st year): 5.000,00 € ; ITN budget: 2.500,00 €</i> ITN coordinator: C.I. BURBIDGE; CNR coordinator: CUDaM, UNIMIB, M. MARTINI,.	---
<i>Halieutical resources industry in roman times: the Casa do Governador da Torre de Belém, the Tagus estuary and the Atlantic coast.</i> PTDC/HAH/74057/2006; Total budget 95.785,00 €; ITN budget: 29.600,00 €; ITN Coordinator: M.I. DIAS; Prime contractor: U. Lisboa, C. FABIÃO	---
<i>Transition landscapes: Settlement, technology and chrono-stratigraphy o the transition to farming, in Central Portugal;</i> PTDC/HAH/71361/2006; Total budget 199.740,00 €; ITN budget: 32.400,00 €; ITN Coordinator: M.I. DIAS; Prime contractor: I.P.Tomar, L. OOSTERBECK	---
<i>Using Nuclear Techniques for the characterization and preservation of Cultural Heritage Artefacts in the European Region. Technical Cooperation Project - RER 8015</i> Portuguese nuclear scientist nominated (2009-2011): M. I. PRUDÊNCIO	---
<i>Diagnosis, decontamination and conservation of cultural heritage: neutrons and ionizing radiation in artwork (RADIART);</i> PTDC/HIS-HEC/101756/2008; Total budget 140.000,00 €; ITN budget: 103.528,00 €; Prime contractor: ITN, M. I. PRUDÊNCIO	13.192,74
Total budget	16.328.74

Closed projects and Services

<i>Dating, authenticity, materials, pigments. A laboratory study on Portuguese Faience and Chinese Porcelain produced for the Portuguese market (XVI to XVIII centuries).</i> PTDC/HAH/69506/2006; Total budget: 156.439,00 €; ITN budget: 87.595,00€ Prime contractor: ITN, M.I. DIAS	46.931,70
Luminescence (TL-OSL) absolute dating and Chemical and mineralogical characterization of geological and archaeological contexts/artefacts	---
Total budget	63.260.44

Environmental and Analytical Chemistry

Current Projects

	2011 ITN budget in €
<i>Early Metallurgy in the Portuguese Territory (EARLYMETAL)</i> PTDC/HIS-ARQ/110442/2008; 2010 – 2013; Total budget: 304 000 €, ITN budget: 172 608 € Prime contractor: ITN coordinator: M.F. ARAÚJO	11.388,86
<i>Recent evolution of Portuguese W coast estuaries: high resolution studies from marshes geological record (WesTLog);</i> PTDC/CTE-GIX/105370/2008; 2010-2013; Total budget: 150 000 €, ITN budget: 48 001 € Prime contractor: Fundação da Faculdade de Ciências, ITN coordinator: M.F. ARAÚJO	---

RESEARCH PROJECTS

<p><i>Environmental changes: Fluvio-marine interactions over the last 5000 yr (FMI 5000)</i> PTDC/CTE-GIX/104035/2008; Total budget: 185 000 €, ITN budget: 45 937 € Prime contractor: Fundação da Universidade de Lisboa, ITN coordinator: A.M. SOARES</p>	---
<p><i>The Ocean Reservoir Effect in the Transition Area of the West-Iberian Coastal Upwelling (Aveiro/Mouth of the Minho River; Cape Santa Maria/Mouth of the Guadiana River)</i> PTDC/MAR/68942/2006, 2008 – 2011; Total budget: 128 507 €, ITN budget: 106 068 € Prime contractor: ITN coordinator: A.M. SOARES</p>	---
<p><i>Isotopes, Noble Gases and Water-Rock Interaction of the Central Group of Azores Islands: a Contribution to the Geothermal Potential Evaluation and the Seismo-Volcanic Hazard Assessment</i> PTDC/CTE-GIN/68851/2006, 2007 – 2011; Total budget: 90 000 €, ITN budget: 13 700 € Prime contractor: Universidade dos Açores, ITN coordinator: P.M. CARREIRA</p>	---
<p><i>Groundwater Resources Assessment and Evaluation of Marine Intrusion in the Cap Bon Area, Northern Tunisia, Using Geochemical, Geophysical and Isotope Techniques. Bilateral Cooperation TUNÍSIA - GRICES, Proc. 4.1.5 Tunísia; ITN coordinator: P.M. CARREIRA.</i></p>	---
Total budget	11.388,86

Closed projects and Services

<p><i>Carbonate Dunes as Palaeoclimatic Records in the Littoral of Portugal</i> POCI/CTE-GEX/59643/2004, 2005 – 2007 Total budget: 41 000 €, ITN budget: 4 320 € Prime contractor: FUL, ITN coordinator: A.M.M. SOARES</p>	840,00
<p><i>Services/Contracts</i></p>	15.417,30
Total budget	16.257,30
Total budget	27.646,16

Inorganic and Organometallic Chemistry

Current Projects

	External funding 2011 in €
<p><i>Chiral metalla-diaminocarbene precatalysts for asymmetric catalytic reactions obtained by the metal-mediated approach; PTDC/QUI-QUI/109846/2009, Apr 2011 - Mar 2014</i> Total budget 63 000€, ITN budget 21 306 €; Prime contractor: CQE-IST; Coordinator: K. Luzyanin; Partners: ITN, L. Maria</p>	4.261,20
<p><i>Gas Phase Thermochemistry of 4d and 5d Transition Metal Oxides: A Study by FTICR-MS</i> PTDC/QUI-QUI/108977/2008, Jan 2010 – Dec 2012; Total budget 52 382€, ITN budget 8 400 € Prime contractor: CQE-IST; Coordinator: M.C. Oliveira; Partners: ITN, J. Marçalo</p>	---
<p><i>Energetics of metallic polyalkoxides; PTDC/QUI/65507/2006, Jan 2009 - Dec 2012</i> Total budget 70 944 €, ITN budget 70 944 €; Prime contractor: ITN; Coordinator: J.P. Leal</p>	21.283,20
<p><i>Mass Spectrometry Network - Instituto Tecnológico e Nuclear; REDE/1503/REM/2005, Jan 2009 - Jun 2012; Total budget 44 500€, ITN budget 44 500€</i> Prime contractor: ITN; Coordinator: J. Marçalo</p>	1.866,67
<p><i>Exploring the Chemical Differences between Trivalent Lanthanides and Actinides by Mass Spectrometry Techniques; ACTINET-I3/FP7-III-232631/JRP17, Jul 2010 - Jun 2012</i> Total budget ---, ITN budget ---; (Travel and living expenses for work at CEA-Atalante paid by ACTINET-I3); Prime contractor: ITN; Coordinator: J. Marçalo; Partners: CEA-Atalante, L. Berthon; LBNL, J.K. Gibson</p>	---
<p><i>Ti(III) and U(III) complexes with bis(phenoxide)diamine ligands - Applications in C-C bond forming by electron-transfer reactions; PTDC/QUI/66187/2006, Nov 2008 – Nov 2011</i> Total budget 72 719 €, ITN budget 34 719 €; Prime contractor: IST; Coordinator: A.M. Martins Partners: ITN, J. Marçalo</p>	26.039,25

RESEARCH PROJECTS

<i>Coupling catalysts and nonthermal plasma for low temperature decomposition of organic volatile compounds</i> ; PTDC/EQU-EQU/65126/2006, Jan 2008 - Mar 2011	---
Total budget 127 200 €, ITN budget 115 200 €; Prime contractor: ITN; Coordinator: J. Branco; ITN Partners: N. Pinhão (UFA), A.P. Gonçalves (UCQR); ISEL Partner: L. Redondo	
<i>Potassium - lanthanide molten salt catalysts</i> ; PTDC/QUI/72290/2006, Jan 2009 – Feb 2011	---
Total budget 24 615 €, ITN budget 24 615 €; Prime contractor: ITN; Coordinator: J. Branco	
Total budget	53.450,32

Closed projects and Services

<i>Ansa-bridged organorhenium(VII) oxides and their applications as homogeneous and heterogeneous catalysts</i> PTDC/QUI/71198/2006	5.198,40
Total budget	5.198,40
Grand total budget	58. 648,72

Radiopharmaceutical Sciences

Current Projects

	2011 ITN budget in €
<i>Synthesis and Pre-clinical Evaluation of Novel Estradiol-Based Indium Complexes for Targeted Radiotherapy of Tumors</i> . PTDC/QUI-QUI/111891/2009, 2011- 2014. Total budget € 140,000€. ITN budget € 109,400€. Prime contractor: ITN, Coordinator L.Gano. Partners: IBILI, FMUC.	28.000,00
<i>Radiolabeled Benzazole Derivatives for In Vivo Imaging of Amyloid Aggregation</i> , PTDC/QUI-QUI/102049/2008, 2010-2013. Total budget € 197.596,00; ITN budget € 111.146,00; Prime contractor: ITN, Co-ordinator A. Paulo. Partners: Centro de Neurociências e Biologia Celular (Coimbra), ICNAS (Coimbra), IMM (Lisboa).	---
<i>Evaluation of Acute Pulmonary Oedema – Development of a New Technique Using Giant Unilamellar Liposomes</i> , PTDC/SAU-BEB/76455/2006, 2007- 2010, Total budget € 77460,00 €. Prime contractor FMUC, ITN budget € 2160,00 €, Co-ordinator, L. Gano	648,00
<i>Synthesis, Characterization and Biological Assessment of Multi-Functional Bone-Seeking Agents</i> , PTDC/QUI-QUI/115712/2009, 2011- 2014. Total Budget € 147.000,00, ITN budget € 96. 936,00, Prime contractor: ITN, Co-ordinator I. Santos, Partners: IMM.	29.400,00
<i>Chemical, Radiochemical and Biological Studies of Pyrazolyl- alkylamine Pt(II) Complexes: Applications on the Development of Novel Anti-Cancer Drugs</i> , PTDC/QUI/66813/2006, 2009-2012. Total budget € 127.789,00, ITN budget € 101.789,00. Prime contractor: ITN, Co-ordinator, A. Paulo. Partners: FCM-UNLisboa.	38.336, 70
<i>Albumin binding-domain fusions to improve protein pharmacokinetics</i> - PTDC/SAU-FAR/115846/2009, 2011-2014. Total budget € 147.900,00 Prime contractor:-FFUL, ITN budget 22.500,00, ITN Co-ordinator, J.D.G. Correia.	5.500,00
<i>Novel Drugs to Target Bio-Receptors Aimed at Pharmacological Applications</i> . POCI/QUI/56985/2004, 2006 - 2009. Total budget 59000€, ITN budget 4800 € Prime contractor: IST, ITN Co-ordinator: L. Gano	---
<i>Radioligandos para o receptor estrogénico-potencial clínico em imagem e terapia de tumores da mama</i> . Fundação Calouste Gulbenkian. Proc N° 96476. 2009 - 2012. Total budget 47,500€. Partners: IBILI, CIMAGO. ITN budget 30,000€. Co-ordinator: M. C. Oliveira.	---

RESEARCH PROJECTS

<i>Targeting telomerase inhibition with new anti-tumoral Cu(II) complexes</i> , PTDC/QUI-QUI/114139/2009, 2011-2014. Total Budget 115.000,00. Prime contractor ITN, Co-ordinator, S. Gama.	23.000,00
<i>Complexos de Ruténio para aplicação anti-tumoral</i> - PTDC/QUI-QUI/101187/2008, 2011-2013. Total budget € Prime contractor:-FCUL, ITN budget € 9,600€. ITN Co-ordinator: F. Marques.	---
<i>Radiosynthesis and biological evaluation of novel receptor tyrosine kinase inhibitors for in vivo targeting of EGFR and VEGFR</i> . Bilateral Project Portugal/Germany (FCT/DAAD). Project number: 0811983 (441.00), 2009-2010. Total budget 5,000€. ITN Co-ordinator: I. Santos Serviços	2.536,88
Total budget Euros 127.421,58	

Solid State

Current Projects

	2011 ITN budget in €
<i>Novel layered ferrite materials with mixed ionic-electronic conductivity for applications in alternative energy sources</i> , PTDC/CTM/64357/2006, 1st January 2008 – 31st August 2011 Total budget 146.000 €, ITN budget 69.240€, Prime contractor: ITN, J.C. Waerenborgh Partners: Univ. Aveiro, V.V. Kharton	43.800,00
<i>METALTRAVEL: Time evolution of mine tailings and their environmental impact: rates and mechanisms of concentration, liberation and migration of (low-grade) metals during weathering</i> POCI/CTE-GEX/61700/2004, 1st January 2006 – 31st July 2008, Total budget 53 400 €, ITN budget 10 111 €, Prime contractor: Fundação FCUL, Coordinator: J. Figueiras Partners: ITN, J.C. Waerenborgh	4.531,34
<i>Novel lithiated phosphates $Li_3Fe_{3(1-x)}M_{3x}(PO_4)_3$ (M= Co, Ni, Mn) for rechargeable batteries</i> (Proc. 441.00 CNRST) Cooperação Científica e Técnica ao abrigo do acordo FCT-CNRST (Marrocos), Jan 2010-Dec 2011. Total budget € 3700, ITN budget € 3700 Prime contractor: ITN; Coordinator: J.C. Waerenborgh	1.850,00
<i>IONIC TRANSPORT</i> -.Novel methodological approaches to analyze ion transport mechanism in complex crystal lattices and to forecast performance-determining parameters of the oxide materials, PTDC/CTM-CER/114561/2009, 1st January 2011 – 31 st December 2013 Total budget € 156.235,00 ITN budget € 57.403,00, Prime contractor: E. Naumovich, Univ. Aveiro, CICECO. Partners: ITN Coordinator: J.C.Waerenborgh	11.480,60
<i>Magnetic properties of metalloproteins: an integrated approach</i> . POCTI / 35324 / FIS / 2000. Prime contractor: Fundação da Fac. Ciências da Universidade de Lisboa. Coordinator: L. Ferreira; Partners: ITN (J.C.Waerenborgh)	15,34
<i>Brownmillerite compounds containing Iron (IV): new materials for SOFCs</i> POCI/QUI/58915/2004, 1st September 2005 – 31st August 2007, Total budget 58 000 €, ITN budget 9 600 €, Prime contractor: Fundação FCUL, Coordinator: M. Deus Carvalho, Partners: ITN, J.C. Waerenborgh	2.272,92
<i>EXTADITIOL</i> -Novel highly extended transition metal bisdithiolene complexes POCTI/QUI/57528/2004, June 2005-May 2007. Total budget € 63 500. Prime contractor: ITN; Coordinator: M. Almeida	840,00
<i>PRESSMAG</i> - Pressure and magnetic field effects in 2 chain (conducting and magnetic) systems; α -(Per) ₂ [M(mnt) ₂], PTDCI/FIS/113500/2009, Feb 2010-Aug2013. Total budget € 141.926, Prime contractor: ITN; Coordinator: M. Almeida	28.385,20
<i>PICS</i> . Total budget € 18.500, Prime contractor: ITN; Coordinator: M. Almeida	4.500,00
<i>New Thermoelectric Systems</i> , PTDC/CTM/102766/2008. Feb 2010-Jan 2013 ITN budget 118.194€, Prime contractor: ITN Coordinator: E.B. Lopes	---
97.675,40	

Physics and Accelerators Unit

Advanced Materials Research

Current Projects

	2011 ITN budget in €
<i>Post-mortem analysis and simulation of JET plasma facing components</i> , EFDA JET Technology Workprogramme 2010, JW10-FT-3.59: Coordinator: E. Alves.	22.000,00
<i>Analysis of carbon-13 deposition near gas injection region from C27</i> , EFDA JET Technology Workprogramme 2011, JW11-FT-3.65, (2011-2012). Coordinator: E.Alves.	---
<i>Designing ultra-fine textured microstructures by laser floating zone – LaFlorZone</i> , PTDC/CTM/66195/2006 ((01/01/2008-30/06/2011), Total budget 167.000,00€, ITN budget 30.000,00€. Prime Contractor: Univ. Aveiro (Florinda Costa), ITN Coordinator: E.Alves.	4.732,50
<i>DiFusion - Diamond dispersions in nanostructured metals: Novel materials design for fusion reactors</i> , PTDC/CTM/100163/2008, Total budget 161.620,00€, ITN budget 6.600,00€. Prime Contractor: IST (Patrícia Carvalho), ITN Coordinator: E.Alves.	---
<i>Ferromagnetic nanocrystals based on doped ZnO for tunneling magneto resistance (TMR) devices</i> , PTDC/FIS/098943/2008 (04/05/2010 a 03/05/2013). Prime Contractor: Univ. Minho (Maria de Jesus), ITN Coordinator: E.Alves.	2.360,00
<i>Fusion Energy Material Science (FEMaS)</i> , Euraton Seventh Framework Programme for Nuclear Research and Training, Grant agreement No 224752-CA. Leading Institution: Max-Planck Institut für Plasmaphysik, Garching, Germany. ITN Coordinator: E.Alves.	---
<i>Fusion for Energy Programme contract</i> , F4E-2009-GRT-030 (PNS-TBM), ACTION3: Post Irradiation Examination of Be materials irradiated in HIDOBE-01campaign.	---
<i>Fusion for Energy Programme contract</i> , F4E-2009-GRT-030 (PNS-TBM), ACTION3: Screening of an alternative production route/capacity for Be pebbles.	---
<i>InN Free-charge carrier properties and doping mechanisms of InN-based materials</i> , PTDC/FIS/100448/2008. Prime Contractor: ITN, ITN Coordinator: Vanya Darakchieva.	---
<i>Ion beam modification and neutron irradiation studies of wide bandgap semiconductor heteroand nanostructures</i> , PTDC/CTM/100756/2008; (2010-2013), Total budget 180.000,00€, ITN budget 131.028,00€. Prime contractor: ITN, Coordinator: K. Lorenz.	---
<i>Ion beam modification of novel III-nitride hetero- and nano-structures</i> , bilateral collaboration DAAD (Germany) / FCT (Portugal); (2011-2012), Total budget 5.000,00€, ITN budget 5.000,00€. Prime contractor: ITN, Coordinator: K. Lorenz.	2.500,00
<i>Material transport and erosion/deposition in the JET torus</i> , EFDA JET Technology Workprogramme 2011, JW11-FT-3.68, (2011-2012). Coordinator: E.Alves.	-
<i>Multifox: Nanometric Probing and Modification of Multiferroic Oxides</i> , PTDC/FIS/105416/2008, Total budget 199.752,00€, ITN budget 14.400,00€. Prime Contractor: U. Aveiro (Vitor Amaral), ITN Coordinator: E.Alves.	---
<i>Physics and Technology of ultra-fast memories based on Si1-xGex nanocrystals with dielectric tunneling layers</i> , PTDC/FIS/70194/06, (01/09/2007 a 31/08/2011). Total budget 153.182,00€, ITN budget 25.560,00€. Prime Contractor: U. do Minho (M de Jesus), ITN Coordinator: E.Alves.	---

RESEARCH PROJECTS

<i>Structure of low dimension diluted magnetic oxides</i> , PTDC/FIS/72843/06 (01/01/2008-30/06/2011), Total budget -€, ITN budget 34.300,00€. Prime Contractor: Univ. Aveiro (Nikolai Sobolev), ITN Coordinator: E.Alves.	---
<i>Support of Public and Industrial Research Using Ion Beam Technology (SPIRIT)</i> , Seventh Framework Programme: Capacities Specific Programme Research Infrastructures, Grant agreement No 227012-CP-CSA-Intra (2009/03/01), Leading Institution: Forschungszentrum, Dresden-Rossendorf, Germany. ITN Coordinator: E.Alves.	70.748,63
<i>The role of In in III-nitride ternary semiconductors</i> , CERN-INTC-2008-038/P-251; (2009-2011), Total budget 0,00€, ITN budget 0€. Prime contractor: ITN; Coordinator: K. Lorenz.	---
<i>Nanostructured magnetic nitrides</i> , PTDC/FIS/102270/2008. ITN budget: 41.875,00€; ITN Coordinator: R.C. da Silva, Partners: FC-UL.	8.375,00
<i>Fault tolerant anticorrosion coatings for magnesium alloys</i> , PTDC/CTM-MET/112831/2009. ITN budget: 19.930,00€; ITN Coordinator: R.C. da Silva. Partners: ICEMS-IST, CICECO-Univ. Aveiro, EADS.	3.986,00
<i>Tomografia com microsonda nuclear com discriminação em profundidade, Tomo-3D</i> , PTDC/FIS/115089/2009. Budget: 92.322,00€; Coordinator: A.C. Marques.	18.464,40
<i>Dino-Eggs, Ovos e embriões de dinossauro de Portugal: implicações paleobiológicas e enquadramento paleoambiental</i> , PTDC/BIA-EVS/113222/2009, ITN budget 4,5 k€: ITN coordinator Rui Martins.	804,00
Diversos	11.118,15

Submitted

<i>Bandgap engineering in III-nitride quantum wells for efficient solid state lighting (GreenLight)</i> , ERC starting grant, Total budget 1.495.250,00€, ITN budget 1.495.250,00€, Prime contractor: ITN (K. Lorenz).	---
<i>Band Gap Modification of advanced nanostructures for solid-state lighting through ion Beam Intermixing Technology (GAMBIT)</i> , Marie Curie Action (FP7-PEOPLE-2011-IEF). Prime contractor: ITN (A. Redondo-Cubero).	---

Total budget 145.088,68

Condensed Matter Physics

Current Projects

2011 ITN budget in €

<i>Hybrid materials for biomedical applications</i> , Contract PTDC/CTM/101115/2008 (2010-2013), Total budget: 125.000 €, ITN budget: 51.072 € Prime Contractor: Univ. de Aveiro (I.M.M. Salvado), ITN Coordinator: F.M.A. Margaça	---
<i>Preparation of polymeric materials catalytically actives on biodiesel production by vegetable oils methanolysis</i> , Contract PTDC/CTM-POL/114579/2009, Total budget: 146.524,00 € , ITN budget: 8.160,00 €, Prime Contractor: Fundação da FCT da UNL (J. Marques Vital), ITN Coordinator: L.M. Ferreira	1.632,00

Total budget 1.632,00

Biomedical Studies

Current Projects

2011 ITN budget in €

The relationship of circulating biomarkers of apoptosis and endothelial function with the plaque composition using VH IVUS (2009-2012), PIC/IC/82734/2007, Total budget: 155.000,00€. Co-ordination: ITN (Teresa Pinheiro), Partners: Hospital de Santa Marta (Rui Cruz Ferreira); Cooperativa de Ensino Superior Politécnico e Universitário, (Maria do Céu Monteiro); FFC-UL Fundação da Faculdade de Ciências da Universidade de Lisboa – CESAM (Ana Maria Viegas-Crespo) & CEAUL (Antónia Turkman). 20.511,36

Inflammation markers in acute coronary syndrome (2011), Total budget: 25.000,00€*. Prime Contractor: Dept. Cardiology Sta. Marta Hospital, Co-ordinator: R. Cruz Ferreira, Partners: ITN (T. Pinheiro). 10.000,00*

*FACSCalibur Flow Cytometer Leasing - administrated by Liga dos Amigos do Hospital de Santa Marta.

Study of NPs interaction with cells, using methodologies based on IBA (Ion Beam Analysis) techniques (2010-2013), Total budget: €*. Prime contractor: CMAM, Universidad Autónoma Madrid, Co-ordinator: M. Dolores Ynsa, Partners: ITN (T. Pinheiro), CIBA, University Singapore (Frank Watt). ---*

*Budget administrated by Universidad Autónoma Madrid. In 2011 budget covered travelling and daily allowances for the mobility of researchers.

Exhaled breath condensate: A tool for non-invasive evaluation of pollutant exposition?(2007-2011), FCT - PTDC/AMB/65828/2007, Total budget: 199.366,00€. Prime Contractor: Instituto de Soldadura e Qualidade Co-ordinator: S. M. Almeida, Partners: ITN (T. Pinheiro); Hospital de Santa Maria (A. Bugalho De Almeida) 61.258,20*

* Project closed in 2011.

PM_{fugitive}: Mitigating the Environmental and Health Impacts of Particles from Fugitive Emissions (approved–waiting contract), FCT - PTDC/AAC-AMB/098825/2008, Total budget: 126.000,00€. Prime contractor: ITN, Co-ordinator: Susana M.L. Almeida, Partners: Instituto de Soldadura e Qualidade; SAPEC. ---*

*See URSN section.

Total budget 91.769,56

Materials Characterization with Radioactive Nuclear Techniques

Current Projects

2011 ITN budget in €

Perturbed Angular Correlations and Electron Channeling Experiments at ISOLDE - applied materials research with nuclear techniques, training and development (ITN coordinator, J.G. Correia, U. Wahl et al.) CERN-FP-116320-2010, with budget of €120.000 ITN fraction of 59.895,60€ (from the 1st January 2011 up to the 30st April 2012). 18.000,00

Total budget 18.000,00

Radiation Technologies: Processes and Products

Current Projects

	2011 ITN budget in €
<i>Application of Ionizing Radiation on the Cork Wastewater Treatment;</i> IAEA, Coordinated Research Project, 2011-2012. Total budget 4000,00€, ITN budget 4000,00€ Prime contractor: ITN Co-ordinator: M. Luisa Botelho, Portugal	2.000,00
<i>CHESTNUTSRAD - Tratamento Alternativo para a Conservação da Castanha</i> QREN/EUREKA 13198/2010, 2010-2013. Total Budget 389.584,55 €, ITN budget: 4.687,17 € and 5000€ in a equipment; Prime contractor: AgroAguiar - Comércio de Produtos Alimentares, Lda Co-ordinator: IPB Instituto Politécnico de Bragança, Portugal UM - Universidade do Minhoto Expert services: M. Luisa Botelho ITN, Portugal	2.183,11
<i>Kinetic study of biorecalcitrant compounds degradation by pulse radiolysis</i> PTDC/QUI- QUI/104229/2008, 2010-2012. Total Budget 199.959,00€, ITN budget: 186.639,00€ Prime contractor: ITN Co-ordinator: M. Luisa Botelho, Portugal	13.300,00
<i>Characterization and conservation of cultural heritage: neutrons and ionizing radiation in artwork</i> (RADIART) - PTDC/HIS-HEC/101756/2008, 2010-2012. Total budget 199.728,00€, ITN budget 151.008,00€ ; RTPP Group budget: 34 820 € Prime contractor: ITN Co-ordinator: M. Isabel Prudêncio, Portugal	---
<i>IAEA Coordinate Research Project D6-RC-1163.2 Ionization radiation treatment of fruits and</i> <i>vegetables for immuno-compromised patients: feasibility study.</i> 2011-2013. Total budget 7000,00€, ITN budget 7000,00€,00€ Prime contractor: ITN Co-ordinator: Sandra Cabo Verde, Portugal,	3.500,00
Total budget	20.983,11

Nuclear Instruments and Methods

Current Projects

	2011 ITN budget in €
<i>Participação do ITN na experiência n_ToF-Ph2 no CERN, 5º ano,</i> CERN/FP/116348/2010, Total budget: 30.000,00 €, Prime contractor: ITN; Coordinator: I. Gonçalves, ITN/UFA.	4.500,00
<i>ANDES, Accurate Nuclear Data for Nuclear Energy Sustainability, 7th Framework Programme,</i> Grant Agreement No 249671, Total Budget 20.000,00 €, Prime contractor: CIEMAT.	---
Total budget	4.500,00

