

Research Projects



Nuclear Engineering

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

	2005 ITN budget in €
<i>Neutron Tomography at the Portuguese Research Reactor</i> , FCT, POCTI/FIS/59287/2004, Oct. 2005 – Sep. 2007, Total budget € 80.000, ITN budget € 80.000 Prime contractor: ITN Co-ordinator: J.G. Marques	16 000,00
<i>Perturbed Angular Correlations experiments at the Portuguese Research Reactor</i> , FCT, POCTI/FIS/58498/2004. Nov. 2005 – Oct. 2007, Total budget € 85.000, ITN budget € 85.000 Prime contractor: ITN Co-ordinator: J.G. Marques	17 000,00
<i>Development of Superheated Droplet Detectors for Neutron Dosimetry and Spectrometry Applications</i> , FCT, POCTI/FIS/55930, Jan. 2005-Dec. 2006, Total budget € 65.000, ITN budget € 65.000 Prime contractor: ITN Co-ordinator: A. R. Ramos	13 000,00
<i>ThermoPhotoVoltaic cell based on GaSb</i> , European Commission Research Directorates, RTN2-2001-00454. Feb. 2002- Jul. 2005, Total budget: € 1.475.000 , ITN budget € 142.000 Prime contractor: EPM-MADYLAM/ENSHMG, ITN Co-ordinator: N. P. Barradas Collaboration with 8 EU institutions	46 050,00
<i>Nuclear European Platform of Training and University Organisations</i> , 6 th Framework Program Jan. 2004- Jun.. 2005, Total budget: € 800.000, ITN budget € 16.908, Prime contractor: CEA-INST Collaboration with 34 European institutes	3 393,00
<i>Continuação do projecto de matéria escura SIMPLE</i> , FCT, POCTI/FIS/57834/2004, Sep. 2005 - August 2006, Prime contractor: T. GIRARD ITN Co-ordinator: J.G. Marques Partner: CFNUL	---
<i>Desenvolvimento de um Detector SDD de CF3I para Pesquisas de Materia Escura Spin-Independent</i> , FCT, POCI/FP/63407/2005, Jul 2005 - Jun 2006 Prime contractor: TOMOKO MORLAT, ITN Co-ordinator: A.R. Ramos Partner: Fundação da Universidade de Lisboa	---
CERN/FIS/43773/2001	10 000,00
<i>Prémio Estímulo à Ciência 2005</i> N. Barradas	5 000,00
Total budget	110 443,00

Applied Dynamics

	2005 ITN budget in €
<i>Balancing of Rotating Machinery</i> , Contractor CEA, France. July 2003-June 2005 Total budget € 15000, ITN budget € 15000, Prime contractor: ITN Co-ordinator: J. Antunes Partners: Commissariat à l'Energie Atomique – CEA/Saclay, France (L. BORSOI)	15 000,00
<i>Optimization of the Noise Reduction in Tubular Heat Exchangers</i> , POCTI / 2005 - 2007 Total budget 50000 €, ITN budget 28 200 € Prime contractor: Instituto Politécnico de Setúbal, ITN Co-ordinator: J. Antunes POCTI/EME/35939/99, J. Antunes	4 124,80 21 697,71
Total budget	40 822,51

Radiological Protection and Nuclear Safety

Environmental Radioactivity

2005 ITN budget in €

Epidemiological Study of the Effects of Uranium Mining Residues. Ministry of the Health
Contract 2002-2005, Total budget € 500000

Prime contractor: INSA Co-ordinator: M. Falcão, ITN Co-ordinator: F.P. Carvalho 39 917,36

Partners: INSA, IGM, ARS Centro

Vertical Profiles of Radioactive Aerosol Constituents Over Portugal (VPRACOP) (2005-2006)

Prime contractor: ITN Co-ordinator: F.P. Carvalho ---

Free access to atmospheric research facility (instrumented aeroplane from U.K.)

Total budget 39 917,36

Radiological Risk and Safety Assessment

ITN budget in €

EUROpean Research Programme for the TRANSmutation of High Level Nuclear Waste in an
Accelerator Driven System (IP-EUROTRANS) ---

ITN Coordinator: P. Vaz

Participation of ITN in the n-TOF experiment (PS213) at CERN (third and fourth years)

ITN Coordinator: P. Vaz ---

*Novel indazolebisphosphonates for bone mineral metabolism: synthesis, molecular modelling
and pharmacological activities.* Projecto **POCTI/QUI/39368/2001**, Jan 2002-Oct.2005 ---

Total budget € 78180, ITN budget € 6600

Prime contractor: INETI, F. C. Teixeira, ITN Co-ordinator: M. Neves

Chemical studies for design and production of new radiopharmaceuticals. EU-FP6 Programme
Marie Curie Host Fellowship for Transfer of Knowledge, Institute of Nuclear Chemistry and
Technology (ICHTJ), Warsaw, Poland, (2004-2008). Contract n° **MTKD-CT-2004-509224** ---

Total budget 170000€

Prime contractor: ICHTJ ITN Coordinator: M. Neves

Partners: Chalmers Institute of Technology, Forschungszentrum Rossendorf, University of
Zurich, Paul Scherrer Institute, CNRS, University of Mainz

PRAXIS/C/SAU/14036/98 M.Neves 6 484,37

POCTI/FNU/49557/2002 P.Vaz 32 000,00

CT-2001-0179-PDS-XADS P. Vaz 7 409,94

EUROTRANS P. Vaz 18 700,72

PDCT/FP/FNU/50276/2003 P. Vaz 9 800,00

POCI/FP-63433/05 P. Vaz 10 000,00

Conferência ICRS-10 P. Vaz 12 616,46

Total budget 97 011,49

New Materials and Compounds

Advanced Materials Research

2005 ITN budget in €

<i>Metallurgical characterisation of the EU ODS steel: TEM and XRD analysis</i> , EFDA (European Fusion Development Agreement), Jan 2003-Mar 2005, Total budget: 60 000€, ITN budget 12 000€ Prime contractor: ITN Coordinator: E. Alves	---
<i>Study of thermal stability of beryllides</i> , EFDA (European Fusion Development Agreement), Jan 2005 - Dec 2005, Total budget: ITN budget 13 000€ Prime contractor: ITN Coordinator: E. Alves	---
<i>Structural characterisation of the reference EUROFER-ODS steel</i> , EFDA (European Fusion Development Agreement), Jan 2004- Mar 2005 Total budget: 30 000€, ITN budget 6 000€ Prime contractor: ITN Coordinator: E. Alves	---
Participation on the European Fusion Programme	40 000,00
<i>Rare Earth doped Nitrides for high Brightness Electroluminescent emitters</i> (RENIBEL) Research and Training Networks EC, Mar 2002 - Mar 2005, Total budget: 1 498 182€, ITN budget 187 298€ Prime contractor: Univ. of Strathclyde (UK), ITN Coordinator: E. Alves	48 335,00
<i>ThermoPhotoVoltaic cell based on GaSb</i> , European Commission Research Directorates, RTN2-2001-00454, 1 Jan 2002-30 Jun 2005, Total budget: 1 475 000 €, ITN budget 142 000 €, Prime contractor: EPM MADYLAM/CNRS; ITN Coordinator: N.P. Barradas	---
<i>SiGe/Si Heterojunctions Grown on Virtual Substrates-Strain relaxation and Self-Diffusion</i> , POCTI/CTM/41918/2001, Jan 2003 - Dec 2005, Total budget 78 750€, ITN budget 62 475€ Prime contractor: ITN Coordinator: E. Alves	23 625,00
<i>Development of a new decorative MeN_xO_y and MeC_xO_y Thin Film system, with with Me = Ti, Cr, Zr and Al</i> , POCTI/CTM/38086/2001- Jun. 2003- Jun. 2006 Total budget 89473€, ITN budget 10000€ Prime contractor: Universidade do Minho; ITN Coordinator: E. Alves	---
<i>Regularity and Stability of ordered mesoporous materials containing aluminium and titanium</i> POCTI/CTM/ 45859/2002, Jan 2004 - Dec 2005, Total budget €, ITN budget 15 750€ Prime contractor: Universidade de Évora; ITN Coordinator: E. Alves	6 894,00
<i>Self-Assembled Silicon Nano-Crystals</i> , POCTI/P/35462/CTM/00, Oct 2002- Oct 2005 Total budget 122 775 €, ITN budget 16 625€ Prime contractor: IST (P. Brogueira), ITN Coordinator: E. Alves	---
<i>Superconducting Borides: Properties and Materials Processing</i> , POCTI/CTM/39340/2002, Oct 2003 - Oct 2005, Total budget 122 775 €, ITN budget 17 550€ Prime Contractor: Univ. Aveiro (V. Amaral), ITN Coordinator: E.Alves	3 300,00
<i>New biomarkers from nc II-IV semiconductors</i> , POCTI/CTM/45236/2002 Total budget 122 775 €, ITN budget 16 625€ Prime Contractor: Univ. Aveiro (T. Monteiro), ITN Coordinator: E.Alves	6 075,00
<i>Ion Implantation in Ceramic Oxides</i> , CRUP, "Acções Integradas Luso-Espanholas", AE-88/04 Total budget: 2 105€, Prime contractor: ITN, Coordinator: R.C. da Silva Partners: Univ. Carlos III, Madrid, Spain (R. González)	---

RESEARCH PROJECTS

<i>Deposition of photocatalytic and self-cleaning titania on glass surfaces</i> , OCTI/FIS/58240/2004	
Total budget 95 000€, ITN budget 11 565€	---
Prime contractor: Univ. Minho (C.Tavares), ITN Coordinator: E. Alves	
<i>Particle detectors and beam profile monitors based on a-SiC:H alloys</i> (MSIC-2),	
POCTI/FP/FNU/50352/200/2003, Total budget: 46 133 €, ITN budget 11 382 €	1 202,00
Prime contractor: IST Coordinator: R. Schwarz	
Partners: ITN, Lisbon (E. Alves)	
<i>Synthesis and characterization of diluted magnetic semiconductors for spintronics applications</i> ,	
POCTI/FIS/61462/2004, Total budget 75 000 €, ITN budget 22 000€	---
Prime Contractor: Univ. Aveiro (N. Sobolev), ITN Coordinator: E. Alves	
<i>Microstructural studies of oxygen dispersion strengthen (ODS) steels</i> , Convénio GRICES-	
CSIC: 2004-2005, Total budget ~ 700€	---
ITN Coordinator: E. Alves	
<i>Implementation of External Analytical Microbeam at a Nuclear Microprobe</i> (MICROFEX),	
POCTI/CTM/60685/2004, Total budget 76 000 €, ITN budget 76 000€	13 230,00
Prime Contractor: ITN Coordinator: R.C. da Silva	
<i>Development of transparent and conductive oxide semiconductors p-type: from synthesis to</i>	
<i>devices</i> , POCTI/CTM/55945/2004	---
Total budget 78 170 €, ITN budget 19 372€	
Prime Contractor: Univ. Nova (E. Fortunato), ITN Coordinator: E. Alves	
<i>Friction and wear mechanisms in orthopaedic prostheses: influence of the composition of the</i>	
<i>periprosthetic fluid</i> , POCI/SAU-BMA/55493/2004	3 528,00
Total budget 95 220€, ITN budget 25 200€	
Prime Contractor: IST (B. Saramago), ITN Coordinator: E. Alves	
<i>Measurement of elastic scattering cross-sections of protons by light elements – validation of a</i>	
<i>bulk sample method</i> , IAEA Research Contract N° 13273/R0/Regular Budget Fund	2 069,77
Total budget 5 000\$	
Prime Contractor: ITN, Coordinator: A.R. Ramos	
<i>Structural characterization of magnetic tunnel spin-valves</i> , POCTI/CTM/41653/2001. 1 Jan	
2003 - 31 Dec 2005, Total budget: € 95.500 ITN budget €68.680	47 750,00
Prime Contractor: ITN Co-ordinator: N. Barradas	
<i>Optical doping of AlN and GaN/AlN nanostructures by ion implantation</i> , POCI/FIS/57550/2004	
Total budget 75 000€, ITN budget 43 740€	10 356,00
Prime Contractor: ITN Coordinator: K. Lorenz	
<i>Prémio Estímulo à Ciência 2005</i>	5 000,00
E. Alves	
Closed Projects and Services E. Alves	16 526,93
Support to training fellowship-IEFP R. Silva	4 029,68
Reequipamento – CONC/REEQ/814/2001 E. Alves	154 000,00
Total budget	385 921,38

Materials Characterization with Radioactive Nuclear Techniques

2005 ITN budget in €

<i>Perturbed Angular Correlations and Emission Channelling Experiments at ISOLDE-CERN</i>	3 999,60
POCTI-FP-FNU-50145-2003 (running during 2005) & POCTI-FP-63435-2005 (newly approved)., Total budget 45 000€	
Prime Contractor: ITN, Coordinator: J.G. Correia et al.	
<i>Ion implantation doping of perovskites and related oxides, IAEA Research Agreement N° 13325, Total budget 1 000€, ITN budget 1 000€</i>	---
Prime Contractor: ITN, Coordinator: U. Wahl	
POCTI/FNU/495031/01 J.G. Correia	26 000,00
CERN/P/FIS/40125/01 J.G. Correia	8 479,56
POCTI-FP/63435/05 J.G. Correia	9 000,00
CERN/P/FIS/43725/01 J.G. Correia	37 500,00
Total budget	84 979,16

Nuclear Reactions

2005 ITN budget in €

<i>Nuclear reactions at astrophysical energies, POCTI/FNU/41097/2001, Oct 2002 - Jun 2006</i>	
Total Budget 80 000€	---
Prime contractor: Fundação da Universidade de Lisboa, CFNUL, Coordinator: A.P. Jesus	
<i>Transfer Reactions in Li-a Key to the Primordial Universe, POCTI/FNU/45092/2002, Apr 2004 - Apr 2007, Total Budget 54 000€</i>	---
Prime contractor: Fundação da Universidade de Lisboa, CFNUL, Coordinator: A.P. Jesus	
Total budget	

Condensed Matter Physics

2005 ITN budget in €

<i>Hybrid Materials Prepared by Irradiation, POCTI/CTM/44150/02, Jan. 2004-Dec. 2006, Total budget 87 000€, ITN budget 78 125€</i>	26 100,00
Prime contractor: ITN, Coordinator: F.M. Margaça	
Partners: Univ. Aveiro (I.M. Miranda Salvado)	
<i>Installation of the Two-Axis Diffractometer DIDE, ITN funds</i>	
Prime contractor: ITN, Coordinator: A.N. Falcão	---
<i>Installation of the Small Angle Neutron Scattering Instrument EPA, ITN funds</i>	254,00
Prime contractor: ITN, Coordinator: F.M.A. Margaça	
<i>Development of New Instruments: IAEA 11361/RO/R1/R2, Set. 2000- Dec. 2003</i>	463,00
Total budget 20910€, ITN share 20910€	
Prime contractor: ITN Co-ordinator: F.G. Carvalho	
Partner: Research Institute for Solid State Physics and Optics, Budapest, Hungary, L. CSÉR	
<i>Design and supply of in-pile beam extraction assemblies for the Greek Research Reactor, NRC Demokritos, Athens, IAEA Purchase order GRE1040-80877J</i>	32 497,00
Total budget 49 500€, ITN budget 49 500€	
Prime contractor: ITN Coordinator: A.N. Falcão	

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<i>Design, supply and installation of aluminium irradiation tubes and stainless steel shielding structures for the GRR-I, NRC for Scientific Research Demokritos, Athens,</i> Contract No 015/7/B125/5.2, Total budget 23 205€, ITN budget 23 205€ Prime contractor: ITN Coordinator: A.N. Falcão	23 205,00
Total budget	82 519,00

Solid State

2005 ITN budget in €

<i>Prémio Estímulo à Ciência 2005</i> M. ALMEIDA	5 000,00
<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 da Fac. Ciências da Univ. Lisboa, ITN Coordinator J.C.Waerenborgh	1 920,00
<i>Study of the Dy-Fe-Sn phase diagram,</i> POCTI/CTM/38320/2001. May 2003 – May 2006. Total budget € 41 188, ITN budget € 41 188. Prime contractor: ITN Coordinator: L.C.J.Pereira.	20 594,00
<i>Structural and Magnetic Study of Low-dimensional Coordination Compounds,</i> POCI/FIS/57876/2004. Mar.2005 – Feb.2007, Total budget € 80 000, ITN budget € 12 500. Prime contractor: Associação para o desenvolvimento do Dept. Física da Univ. de Coimbra. Partners: ITN Coordinator L.C.J. Pereira (team member J.C.Waerenborgh)	---
<i>Metallurgy and Society in Central Portugal Late Bronze Age,</i> POCI/HAR/58678/2004. 1 Jan. 2005 – 31 Dec.2007, Total budget € 52 150, ITN budget € 27 527 Prime contractor: Faculdade de Letras da Univ. Lisboa. ITN Coordinator M.F. Araújo, (team member J.C. Waerenborgh)	---
<i>Molecule magnets based on decamethylmetallocenes and DCNQI derivative planar acceptors,</i> POCTI/39601/QUI/2001. April 2002-March 2005, Total budget € 71 400, ITN budget € 60 300 Prime contractor: ITN Co-ordinator: V. Gama Partners: Univ. Técnica de Lisboa, IST (M.T. Duarte)	14 280,00
<i>Synthesis, crystal growth and characterization of new f-element borides and borocarbides with Ni, Pd, or Pt,</i> POCTI/QUI/46066/2002. Jun 2003-Jun 2006 Total budget € 28 440, ITN budget € 28 440 Prime contractor: ITN Co-ordinator: A.P. Gonçalves	8 532,00
<i>Thiophenic Dithiolates as building blocks in molecular materials: Physical properties – Crystal structure correlation,</i> POCTI/QUI/45108/2002. Sept 2003-Sept 2006 Total budget € 88 045, ITN budget € 88 045 Prime contractor: ITN Co-ordinator: I. C. Santos	26 413,50
<i>Materials for organic electronics NEOFETS,</i> POCTI/CTM/41117/2001. Nov 2002-Jul 2006 Total budget € 120 000, ITN budget € 60 000 Prime contractor: IT Partners: ITN (M. Almeida), Univ. Algarve, Univ. Técnica de Lisboa - IST.	---
<i>2CHIMAG Two chain compounds under high magnetic field,</i> POCTI/FAT/39115/2001. Sept 2002-Aug 2005, Total budget € 90 000, ITN budget € 60 000 Prime contractor: ITN Co-ordinator: R.T. Henriques Partners: ISEL (M. Matos)	27 000,00
<i>Molecular approach to nanomagnets and multifunctional materials – MAGMANET</i> NOE 500341-2 Priority3-NMP, in collaboration with 15 other Institutions, lead by D. Gatteschi, Florence, May 2005-April 2009, Total budget € 10 000 000 ITN Co-ordinator: M. Almeida	138 100,50

RESEARCH PROJECTS

<i>EXTADITOL Novel highly extended transition metal bisdithiolene complexes</i> POCTI/QUI/57528/2004, June 2005-May 2007, Total budget € 63 500 ITN Co-ordinator: M. Almeida	11 020,00
<i>REEQUIPAMENTO Unidade de Caracterização Magnética</i> REEQ/322/QUI//2005 Total budget € 350 000 ITN Co-ordinator: M. Almeida	120 000,00
<i>Films and multilayers with U and Fe: preparation and magnetism</i>, POCTI/CTM/12068/2001. March 2001- March 2004, Total budget € 26 900, ITN budget € 4 800 Prime contractor: ITN Co-ordinator: A.P. Gonçalves Partners: Fundação da Faculdade de Ciências da Universidade de Lisboa (M. Godinho)	5 380,00
<i>Molecular Magnetic Materials based on the conjugated Polynitriles RR'-DCNQI</i>, PRAXIS/P/QUI/12063/1998. April 1999-March 2001, Total budget € 126914.14, ITN budget €: 114942.99 Prime contractor: ITN Co-ordinator: V. Gama Partners: Univ. Técnica de Lisboa, IST (M. Teresa Duarte)	12 691,40
<i>Charge transfer Solids: From the metal to synthetic metals</i>, PRAXIS/2/2.1/QUI/203/1994. Oct 1996-Jan 2000, Total budget € 149639.39, ITN budget €: 74819.71 Prime contractor: ITN Co-ordinator: R.T. Henriques Partners: Univ. Técnica de Lisboa, IST (M. Teresa Duarte)	14 963,90
<i>Preparation and study of new intermetallic compounds with U, Fe and Al, Si or B</i>, ICCTI/Embaixada de França, 2005-2006, Total budget € 850, ITN budget € 850 Prime contractor: ITN Co-ordinator: A.P. Gonçalves	---
<i>New rare earth intermetallic compounds with thermoelectric application</i>, Projecto de acções integradas de cooperação científica e técnica Luso-Francesa, programa Pessoa 2005/2006. Total budget € 1 700, ITN budget € 1 700 Prime contractor: ITN Co-ordinator: A.P. Gonçalves	---
<i>Physical properties of strong correlated systems</i>, ICCTI/ASCR (Academia das Ciências da Republica Checa) 2005, Total budget € 1 900, ITN budget € 1 900 Prime contractor: ITN Co-ordinator: A.P. Gonçalves	---
<i>Materiais moleculares com propriedades magnéticas e eléctricas especiais</i>, ICCTI/CSIC (Barcelona) 2005, Total budget € 1 900, ITN budget € 1 900 Prime contractor: ITN Co-ordinator: M. Almeida	---
<i>New transition metal bisdithiolene complexes for conducting and magnetic materials</i>, Projecto de acções integradas de cooperação científica e técnica Luso-Francesa, programa Pessoa 2005/2006, Total budget € 1 700, ITN budget € 1 700 Prime contractor: ITN Co-ordinator: M. Almeida	---
Total budget	405 895,30

Environmental Sciences

Atmospheric Elemental Dispersion

2005 ITN budget in €

<i>BIOCAL – Calibration of in situ biomonitors for quantification of the atmospheric dispersion of heavy metals</i> , POCTI/CTA/38411/2001. Feb 2002-Feb 2005, Total budget € 80000, ITN budget € 30954, Prime contractor: ITN Co-ordinator: M.C. Freitas Partners: CIIMAR, LAQUIPAI, CVRM	16 000,00
<i>Impactos do aerossol atmosférico na saúde humana</i> , POCI/AMB/55878/2004. Nov 2005-Nov 2008, Total budget € 78205, ITN budget € 51313 Prime contractor: ITN Co-ordinator: S. M. Almeida Partners: DAO/Aveiro University	3 072,00
<i>Implementation of Compton suppression spectrometry for air pollution monitoring</i> , IAEA TC POR/6/004. Jan 2005-Dec 2006, Total budget € 29806, ITN budget € 29806 Prime contractor: ITN Co-ordinator: M.C. Freitas	5 194,63
<i>Optimization of neutron activation technique in the Portuguese Research Reactor. Application to studies on environment, nutrition and health</i> , REEQ/1075/FIS/2001, Jan 2005-Dec 2006, Total budget € 200000, ITN budget € 200000, Prime contractor: ITN Co-ordinator: M.C. Freitas	80 000,00
<i>Mecenato com a ValorSul</i> . 2006-2008, Total budget € 12000, ITN budget € 12000 Prime contractor: ITN Co-ordinator: M.A. Reis	4 000,00
Total budget	108 266,63

Elemental Characterization and Speciation

2005 ITN budget in €

<i>Laboratório de Caracterização e Especificação de Aerossóis - LCEA</i> Programa Nacional de Reequipamento Científico, ref: REEQ/377/FIS/2005, Abr. 2005- Dec. 2006, Total budget 700 000 €, ITN budget 700 000€ Prime contractor: ITN, Co-ordinator: M. A. Reis	280 000,00
<i>Laboratório de Caracterização e Especificação de Aerossóis - LCEA</i> Jan. 2003 - Dec. 2006, Total budget 36 784.19 €, ITN budget 36 784.19 € Prime contractor: ITN, ITN Co-ordinator: M. A. Reis	---
<i>Support to training fellowship-IEFP M. Reis</i>	8 682,59
Total budget	288 682,59

Environmental Analytical Chemistry

2005 ITN budget in €

<i>Centre for Isotopes and Trace Elements Research – CISTER</i> , Jan 2005 – Dec 2007 Total ITN budget: 183 700 €, Prime contractor: ITN, Co-ordinator: M.F. Araújo Partners: Centro de Química Estrutural, Centro de Ciências Moleculares e Materiais, Centro de Química e Bioquímica, Instituto Hidrográfico (IH)	73 600,00
<i>Consequences of River Discharge Modifications on Coastal Zone and Continental Shelf – CRIDA</i> , PLE/8/00. Oct 2001 - Dec 2005, Total budget: 623 497 €, ITN budget: 242 133 € Prime contractor: ITN, Co-ordinator: M.F. Araújo Partners: IH, Univ. Algarve, Univ. Aveiro, Inst. Meteorologia, ICAT, Fundação da FCUL	44 000,00

RESEARCH PROJECTS

<i>Dissolved Gases in Subsurface Hydrology – CO₂-rich Thermomineral Waters (N-Portugal) – DISGAS.</i> Jan2005 - Dec 2006, Total budget: 50 000 €, ITN budget: 35 800 € Prime contractor: ITN, Co-ordinator: P.M. Carreira Partners: Instituto Superior Técnico (IST)	20 000,00
<i>Role of High Mountain Areas in Catchments Water Resources – Northern/Central Portugal – HIMOCATCH.</i> Jan 2005 - Dec 2007, Total budget: 100 000 €, ITN budget: 15 540 € Prime contractor: Instituto Superior Técnico, ITN co-ordinator: P.M. Carreira	5 040,00
<i>Evaluation of the Hydrogeological Potential and Sea Water Intrusion Monitoring in Semi-Arid Zones using a Multitechnique Approach: Application to the Santiago and Maio Islands (Cabo Verde), HYDROARID.</i> Jan 2005-Dec 2007, Total budget: 100 000 €, ITN budget: 15 000 € Prime contractor: ITN, Co-ordinator: P.M. Carreira Partners: Fundação da FCUL, Instituto Politécnico de Tomar, Centro de Geofísica (FCUL)	2 134,00
<i>Analytical Services</i>	10 769,00
<i>Scholarship (Centro Emprego e Formação Profissional)</i>	4 866,00
<i>Assessing the Impacts of Agriculture on Groundwater Quality using Nitrogen Isotopes,</i> POCTI/AGG/47223/2002. Jan 2004-Dec 2006, Total budget: 105 000 €, ITN budget: 28 000 € Prime contractor: Instituto Superior Técnico, ITN co-ordinator: P.M. Carreira	---
<i>Groundwater Resources as Indicators and Archives of Palaeoclimatic Changes (NW-Portugal),</i> POCTI/CTA/39435/2001. May 2002 - May 2005 Total budget: 30 000 €, ITN budget: 20 060€ Prime contractor: ITN, Co-ordinator: P.M. Carreira Partners: Instituto Superior Técnico, Instituto de Ciências da Terra e do Espaço	---
<i>Identification of Interaction Processes between Surface Waters and Shallow Groundwaters within Sado Hydrographical Basin – SW Portugal, RA12957/RO.</i> Jan 2004-Dec 2006 Total budget: 775 € Prime contractor: ITN, Co-ordinator: P.M. Carreira (IAEA Research Agreement)	---
<i>Metallurgy and Society in Central Portugal Late Bronze Age, METABRONZE,</i> POCTI/HAR/58678/2004. Dec 2005-Dec 2008, Total budget: 52 150 €, ITN budget: 27 535 € Prime contractor: Faculdade de Letras, ITN co-ordinator: M.F. Araújo Partners: Faculdade de Ciências e Tecnologia (UNL), Museu Nacional de Arqueologia	---
<i>Microecology and Littoral Dynamics: Definition of Multi-proxies Applicable to Quaternary Paleogeographical and Paleoclimatic Reconstruction.</i> Jan 2005-Dec 2007 Total budget: 90 000 € Prime contractor: FCUL, ITN co-ordinator: M.F. Araújo	---
<i>Aquifers as Archives of Palaeoclimate and Indicators of Future Climatic Scenarios – Sado/Sines System and Bairrada Carsic Aquifer, PCTI/CTA/36258/9</i> Jan 2005-Dec 2007, Total budget: 100 000 €, ITN budget: 18 106 € Prime contractor: FCUL, ITN co-ordinator: P.M. Carreira	---
<i>Urban Groundwater and Environmental Management in the Northwest Portugal</i> Jan 2005-Dec 2007, Total budget: 100 000 €, ITN budget: 7 100 € Prime contractor: Universidade de Aveiro, ITN co-ordinator: P.M. Carreira	---
<i>Contribution of the Isotopic Hydrology to improve the Conceptual Model of Thermal Water Circulation in Caldas da Rainha – HIDROCALDAS.</i> Nov 2005-Nov 2006 Total budget: 100 000 € Prime contractor: Instituto Superior Técnico, ITN co-ordinator: P.M. Carreira	---
AIEA-POR 11368-R3 P. Carreira	1 874,13
Total budget	162 283,13

Environmental and Health Sciences

Biomedical Studies

2005 ITN budget in €

<i>Quality of skin as a barrier to ultra-fine particles (NANODERM), EC/QLK4-CT-2002-02678, 2003-2006, Total budget 1 097 994€, ITN budget 86 997€</i> Prime contractor: Univ. Leipzig, ITN Coordinator: T. Pinheiro Partners: INP, Poland, Univ. Debrecen, Univ. Bordeaux I, Univ. Bordeaux I/CNRS	21 067,89
<i>Bioavailability of lead in small mammals at a mine contaminated area in Alentejo (Central Portugal), POCTI/BFE/3991/2001, Oct 2002-Oct 2005</i> Total budget 120 000€, ITN budget 10 250€ Prime contractor: CBA-FFC/UL, ITN Coordinator: T. Pinheiro Partners: CQB-FFC/UL, CEA-Univ. Évora, CHPEBD-Univ. Coimbra	5 475,00
<i>Markers of the pro-oxidant/antioxidant balance and characterisation of the allelic profile of apoE in inhabitants of Lisbon and Ponta Delgada, POCTI/ESP/41008/2001, 2002 - 2005</i> Total budget 49 880€, ITN budget 10 250€ Prime contractor: CBA-FFC/UL ITN Coordinator: T. Pinheiro Partners: CQB-FFC/UL, Univ. Açores, INSA	---
<i>Contribution to the study of inflammation biomarkers in the Chronic Obstructive Pulmonary Disease (COPD), FCG-Calouste Gulbenkian Foundation SDH.IC.I.01.22, Dec 2001 - Jun 2005</i> Total budget € 44 889*, ITN budget € 3 500 (controlled by FCG through prime contractor) Prime contractor: AIDFM-FM/UL, ITN Coordinator: T. Pinheiro Partners: CQB-FFC/UL, CBA-FFC/UL	---
<i>A pele como órgão de monitorização da acumulação de Ferro na hemocromatose</i> SPDV - Sociedade Portuguesa de Dermatologia e Venereologia, 2004 - 2006 Total budget 12 000€ plus contribution of IEFP of 5191,40€ Prime contractor: Dermatology Clinic, Sta. Maria Hospital, ITN Coordinator: T. Pinheiro Partners: Immunohemoterapy Clinic, St. Maria Hospital	---
<i>Nuclear Microprobe Analysis of Human Skin Applied to the Study of Haemochromatosis</i> IAEA RC 302-F1.20.19-POR-13262, Total budget (1 year) 5 000\$ Prime contractor: ITN Coordinator: T. Pinheiro Partners: Immunohemoterapy and Dermatology Clinics, St. Maria Hospital, LAACQ – INETI	2 069,76
Support to training fellowship-IEFP T. Pinheiro	5 191,40
Support to training fellowship – Soc. Portuguesa de Dermatologia	2 225,72
Total budget	36 029,77

Inorganic Chemistry, Radiochemistry and Radiopharmacy

Inorganic and Organometallic Chemistry

Current Projects

2005 ITN budget in €

Uranium(III) Complexes Supported by Scorpionate and Heteroscorpionate Ligands: Steric and Electronic Control of Metal Centre Reactivity, POCTI/QUI/46179/2002, Dec 2003 - Dec 2005 ---
 Total budget 37 240 €, ITN budget 37 240 €
 Prime contractor: ITN, Co-ordinator: N. Marques

Mono- and Dianionic Triazacyclononane Based Ligands as Ancillaries in Lanthanide and Transition Metal Chemistry, POCTI/QUI/46206/2002, Dec 2003 - Dec 2006
 Total budget 46 080 €, ITN budget 23 040 €
 Prime contractor: ITN, Co-ordinator: N. Marques
 13 824,00

Mass Spectrometry Network for Molecular and Biomolecular Analysis, REEQ/1503/REM/2005, Sept 2005 - Dec 2006
 Total budget 3 300 000 € (3 607 000 €), ITN budget 163 285.50 € (175 615.00 €)
 Prime contractor: Rede de Espectrometria de Massa
 ITN Co-ordinator: J. Marçalo
 8 164,27

Thermochemistry Studies of Actinide Species in the Gas Phase by FTICR/MS, POCI/QUI/58222/2004, Jul 2005 - Jun 2007, Total budget 58 000 €, ITN budget 58 000 € ---
 Prime contractor: ITN, Co-ordinator: J. Marçalo

Immobilised Surface Rare Earth and Actinide Aryloxides Activation of Small Molecules (CO₂, CH₄, C₂H₆), FCT/POCTI/QUI/42919/2001, April 2002 - April 2005 ---
 Total budget 41 000 €, ITN budget: 38 048 €
 Prime contractor: ITN, Co-ordinator: T. A. Gasche

Thermal Properties of Fluoroapatites with Different Stoichiometries and/or Crystallinities, GRICES-DAAD/ 2005, Prime contractor: CQB/FCUL ---
 Co-ordinator ITN: J.P. Leal

Impact of ε beam and γ radiation on the wastewater treatment: comparative studies, IAEA, 302-F2-POR-12017 B5-POOR- 30739, 2002 – Nov 2006. ---
 Total budget 10 500 USD, ITN budget 10 500 USD
 Prime contractor: ITN Co-ordinator: M.L.Botelho, Partner QIO: J. Branco

Implementation of wastewater treatment by radiation in Portugal, IAEA POR/8/010, 2003-2006. ---
 Total budget 152 088 €, ITN budget 152 088 €
 Prime contractor: ITN Co-ordinator: M.L. Botelho, Partner QIO: J. Branco

Glass in Art: Light and Colour; POCI/EAT/60496/2004 ---
 Prime contractor: FFCT/UNL, Total budget: 60 604 €, ITN budget: 4 800 €
 Co-ordinator: A. Pires de Matos

Provenance Studies of Portuguese Glasses, POCI/EAT/60496/2004 ---
 Prime contractor: FFCT/UNL
 Total budget: 45 240 €, ITN budget: 13 488 €
 Co-ordinator: A. Pires de Matos

Total budget 21 988,27

Inorganic and Radiopharmaceutical Chemistry

2005 ITN budget in €

<i>Re Complexes with Nitrogen Donor Ligands: PRAXIS/P/QUI/10047/1998 (ITQB/ITN)</i> Total budget 92 395 €, ITN 43 500 €, Prime contractor: ITQB, ITN Co-ordinator: I. Santos	4 373,19
<i>Radiopharmaceuticals for Treatment of Bone Cancer Pain and/or Therapy Based on Macrocyclic Lanthanide Complexes: POCTI/35859/SAU/99, March 2002- July 2005</i> Total budget 86 616 €, ITN budget 49 880 €, Prime contractor: ITN. Co-ordinator: I. Santos	17 323,25
<i>Organometallic Rhenium and Technetium Complexes: Design of Radiopharmaceuticals for Brain Receptor Imaging. POCTI/QUI/42939/2001, Feb. 2002 - Feb. 2005</i> Total budget € 42 697, ITN budget € 42 697, Prime contractor: ITN Co-ordinator: A. Paulo	8 540,00
<i>Evaluation of the Genotoxic and Antiestrogenic Potential of Triphenylethylene Derivatives and their Metabolites: POCTI/33544/QUI/99, Oct 2001–Feb 2005, Total budget 104 748 €, ITN budget 36 786 €, ITN Co-ordinator: M.C. Melo e Silva, Prime contractor: IST, M.M. Marques</i>	5 637,78
<i>Specific Organometallic Complexes, Research Contract MALLINKRODT/TYCO /HEALTHCARE, June 2003-June 2006, Total budget 219 914 €, ITN budget 219 914 €</i> Prime contractor: ITN Co-ordinator: I. Santos	80 688,60
<i>Virtual Radiopharmacy: A mindful Learning Environment: V Framework Programme, EC Shared COST RTD ACTION: IST-2001-32291, Jan 2002- Feb 2005, Total budget 2 992 787 €, ITN budget 80 167 €, Prime contractor: St. Bartholomew's Hospit., ITN Co-ordinator: L. Gano</i>	4 107,66
<i>Co-Ordination Action on Education and Training in Radiation Protection and Radioactive Waste Management, VI Framework Programme: FP6/508835, Mar. 2004 - Jun. 2005</i> Total budget 297 600 €, ITN budget 10 000 €, Prime contractor: GRC, UK, ITN Co-ordinator: I. Santos	---
<i>Novel Metal Fragments Potentially Useful for Labelling Biologically Relevant Molecules with Tc and /or Re, Jan 2005-Dec 2007, Total budget 73 000 €, ITN budget 73 000 €</i> Prime contractor: ITN Co-ordinator: I. Santos	9 328,00
<i>Multicomponent Technetium and Gallium Metallointercalators for Targeted Radiotherapy</i> POCI/QUI/57632/2004, Oct. 2005 - Oct. 2005, Total budget € 47 500, ITN budget € 42 200 Prime contractor: ITN Co-ordinator: A. Paulo, Partners: C. Inv. Genética Molecular e Humana	5 300,00
<i>Novel Radioactive Probes for Molecular Imaging of Sigma Receptors, POCI/QUI/59588/2004, Oct. 2005 - Oct. 2008, Total budget 45 000 €, ITN budget 45 000 €</i> Prime contractor: ITN Co-ordinator: A. Paulo	6 200,00
<i>Novel Estrogen Receptor Ligands as Potential Probes for Targeted Tumour Imaging and Therapy, CIMAGO and FLAD, PI 0905, Jul 2005-Dec 2007, Total budget 31000 €, ITN budget 25 000 €, ITN Co-ordinator: M. C. Melo e Silva</i> Partners: FMUC, IBILI, Graduate School of Engin. Science, Kyushu Univ, Fukuoka, Japan	---
<i>Radiolabelling of L-Arginine Analogues with the fac-[^{99m}Tc(CO)₃]⁺ for Probing Nitric Oxide Synthase (NOS) in vivo: Synthesis, Characterization and Biological Evaluation</i> Jan 2005-Dec 2007, Total budget 80 000 €, ITN budget 79 000 € Prime contractor : ITN Co-ordinator: J. D. G. Correia, Partners: FCUL	8 309,00
<i>Novel Approaches to Anti- Cancer Drug Development, Financial Support: Breast Cancer Campaign, Prime contractor: Open University, London, UK, ITN Co-ordinator: I. Santos</i> Partners: Queen's Medical Center, Univ. Nottingham, UK	---
<i>Services</i>	2 448,00
Total budget	152 255,48

Cultural Heritage and Sciences

Cultural Heritage and Sciences

2005 ITN budget in €

COLASU – Sustainability of Mediterranean coastal lagoon ecosystems under semi-arid climate, 23 917,00
ICA3-CT-2002-10012. Jul 2002 – Jul 2005, Total budget: 795 000 €, ITN budget 124 404 €
Prime contractor: CNRS, Univ. Louis Pasteur, Strasbourg, ITN Coordinator: M.I. Prudêncio.
Partners: France, Spain, Malta, Morocco and Tunisia

The Archaeological Occupation of Castro Marim from the Iron Age to the Roman Epoche, ---
POCTI/HAR/38334/2001. Jan 2002 – Jan 2005, Total budget € 30 000, ITN budget € 12 000
Prime contractor: Centro de Arqueologia da FLUL, ITN Coordinator: M.I. Prudêncio.

Effects of Different Pollution Sources in the Decay of Igneous Stone Monuments, ---
POCTI/CTA/35600/99, Mar 2001 – Mar 2005, Total budget 175 x 10³ €, ITN budget 19837 €
Prime contractor: Univ. Minho, Braga, C.A. Alves, ITN Coordinator: M.I. Prudêncio
Partner: Univ. Açores, J. V. Cruz

Paleoenvironmental reconstruction using Chemical Analysis and Single-Grain Luminescence Dating. A non-biostratigraphical approach, COC-REEQ/590/2001 129 400,00
Total budget: 323 500 €; ITN budget: 323 500€, Prime contractor: ITN, M.I. Prudêncio

ITN-IPA Protocol 35 000,00
Jan 2004–Dec 2004,
ITN budget: 28000 € (35000€-20%)

Archaeometry – “CONCURSO A” - Characterisation of Archaeological Ceramics

Ânforas da ilha Berlenga.
ITN Coordinator: M.I. Dias, Archaeologist: Jacinta Bugalhão & Sandra Lourenço

A ocupação muçulmana de Sintra: implantação e definição do povoamento do território.
ITN Coordinator: M.I. Dias, Archaeologist: Jacinta Bugalhão

Produção oleira no arrabalde ocidental da Lisboa islâmica.
ITN Coordinator: M.I. Dias, Archaeologist: Jacinta Bugalhão

Projecto de estudo e valorização da estação arqueológica de Frielas II.
ITN Coordinator: M.I. Dias, Archaeologist: Jacinta Bugalhão

A Alcáçova de Santarém durante a Idade do Ferro
ITN Coordinator: M.I. Dias, Archaeologist: Ana Arruda

Caracterização de cerâmicas arqueológicas da Villa romana da Quinta das Longas, Elvas.
ITN Coordinator: M.I. Dias, Archaeologist: António Carvalho.

“A Ocupação humana do Alto Paiva durante o I milénio AC”.
ITN Coordinator: M.I. Dias, Archaeologist: Alexandre Tiago Dos Santos Valinho

“Do Neolítico à Idade do Bronze no Penedo do Lexim (Mafra)”.
ITN Coordinator: M.I. Dias, Archaeologist: Ana Catarina Sousa
“Castelo de São Jorge”.
ITN Coordinator: M.I. Dias, Archaeologist: Ana Gomes

“ARQUEHOLFREN – Estudo e valorização de sítios arqueológicos das áreas de Freixo Numão e Horta do Douro – Vila Nova de Foz Côa”.

ITN Coordinator: M.I. Dias, Archaeologist: Vitor Oliveira Jorge

Arqueometria sobre cerâmicas vidradas arqueológicas de sítios medievais e pós medievais em Tomar”.

ITN Coordinator: M.I. Prudêncio, Archaeologist: Salette Da Ponte

PAIVAR – Entre Paiva e Arda / Projecto arqueológico para o estudo da ocupação humana de um vale interior do Entre Douro e Vouga da Proto-História aos começos da nacionalidade.

ITN Coordinator: M.I. Dias, Archaeologist: António Manuel Silva

“Povoado fortificado do Bronze final de Serra de Alvaizere”.

ITN Coordinator: M.I. Dias, Archaeologist: Paulo Félix

“TEMPOAR II – Territórios, povoamento e mobilidade na Pré-História do Alto Ribatejo (Monumento 5 da Jogada; Vale da Laje)”.

ITN Coordinator: M.I. DIAS, Archaeologist: Ana Rosa Pinto Da Cruz

Archaeometry: “Concurso C” - Absolute Dating –Luminescence

“Paleoalmonda”. TL-OSL

ITN Coordinator: M.I. Prudêncio, Archaeologist: João Zilhão

“TEMPOAR II – Territórios, povoamento e mobilidade na Pré-História do Alto Ribatejo (Monumento 5 da Jogada)”. TL-OSL

ITN Coordinator: M.I. Dias, Archaeologist: Ana Rosa Pinto Da Cruz

“TEMPOAR II – Territórios, povoamento e mobilidade na Pré-História do Alto Ribatejo (Anta I do Vale da Laje)”. TL-OSL

ITN Coordinator: M.I. Prudêncio, Archaeologist: Luís Oosterbeek & Ana Rosa Pinto Da Cruz

“TEMPOAR II-Ribeira da Ponte da Pedra)”. TL-OSL

ITN Coordinator: M.I. Prudêncio, Archaeologist: Luís Oosterbeek

Ocupação Pré-Histórica da área do Bairro Alto”. TL-OSL

ITN Coordinator: M.I. Dias, Archaeologist: António Valera

ERA research Projects – Alqueva Dam impact

3 000

January 2002 – January 2003, Total budget: 12 500 € , ITN budget: 12 500 €

Archaeometric study of ceramics from the proto-historic occupation from the left side of the Guadiana basin (Moura) – Block 9.

ITN Coordinator: M.I.Dias, Archaeologist João Albergaria

Archaeometric study of ceramics from recent pre-history of the left side of the Guadiana basin (M. Tosco, M. Valadares, Mercado) – Block 5.

ITN Coordinator: M.I. Dias, Archaeologist A. C. Valera

Archaeometric study of ceramics from the roman occupation of the right side of the Guadiana basin (Xerez de Baixo) – Block 10.

ITN Coordinator: M.I. Dias, Archaeologist Sofia Gomes and Sandra Brazuna

Fluvial Terraces, references to evaluate the fluvial incision and crustal uplift in central Portugal (western Iberia). POCTI/CTE-GEX/58120/2004, Dec. 2005-Dec. 2008

Total budget 100000 €, ITN Coordinator: M.I. Prudêncio

Prime contractor: UE, A. Martins

Closed Projects and Services:

PRAXIS/CSH/0254/95 I. Prudêncio

8 978,36

Services

10 754,00

Total budget 211 049,36

Industrial Technologies

Radiation Technologies: Processes and Products

2005 ITN budget in €

Impact of e-beam and γ radiation on the wastewater treatment: comparative studies

IAEA, 302-F2-POR-12017 B5-POOR- 30739, 2002 - 2005

3 048,36

Total budget 10 500€, ITN budget 10 500€

Prime contractor: ITN, Coordinator: M.L. Botelho

Control environment in surgical rooms at the army hospitals and its impact on incidence of cross infections

LPM/MDN PIDDAC, 2003 - 2007

Prime contractor: H. Militar, Coordinator: Pet Mazarello

Partners: ITN, M.L. Botelho

Implementation of wastewater treatment by radiation in Portugal

IAEA POR/8/010, 2003 – 2006, Total budget 152 088€, ITN budget €

Prime contractor: ITN Coordinator: M.L. Botelho

Improving Quality and Safety of Minimally Processed Fruits and Vegetables by Gamma Irradiation

IAEA POR/11682/RBF, 2002 – 2004, Total budget 0€, ITN budget 0€

Prime contractor: INIA, Coordinator: M.J. Trigo

Partners: ITN, M.L. Botelho

Estratégias Biotecnológicas para o Tratamento de Doenças Infecciosas: Direcionamento

Intracelular de antibióticos e Oligonucleotídeos via Lipossomas

10 400,00

AdI Consortium, 2005 – 2006, ITN budget 52 000€

Prime contractor: BLUEPHARMA, ITN Coordinator: M.L. Botelho

Upgrading of Radiation Technology unit

FCT CONC-REQ/996/2001, 2005 – 2007, Total budget 1 430 000€

580 580,00

Prime contractor: ITN, Coordinator: M.L. Botelho

Support to training fellowship-IEFP L. Botelho

10 867,36

Services

466,87

Total budget 605 362,59