



The Nobel Peace Prize 2005

"for their efforts to prevent nuclear energy from being used for military purposes and to ensure that nuclear energy for peaceful purposes is used in the safest possible way"

Índice

- Informação sobre Instituições..... 1
- Publicações oferecidas 2
- IAEA..... 3
- AEN..... 8
- Comissão Europeia10



International Atomic Energy Agency (IAEA)

1/2 of the prize
Vienna, Austria
Founded in 1957



Mohamed ElBaradei

1/2 of the prize
Egypt

Director General of IAEA
b. 1942

Nobel Prize Money to Improve Health & Food Production in Developing Countries

14 October 2005

At a meeting in Vienna today, the 35-member IAEA Board of Governors welcomed the award of the Nobel Peace Prize to the IAEA and Director General ElBaradei.

The Board decided the monetary award accompanying the Nobel Peace Prize will be used for funding the needs of developing countries in the peaceful application of nuclear energy and, in this connection, both human health and food production were specifically mentioned. The Board authorized Dr. ElBaradei to establish a special fund for the Agency's share of the 1.07 million Euro award that accompanies the Nobel Peace Prize.

In an address to the Board, Dr. ElBaradei said he was grateful that the Norwegian Nobel Committee had recognized the challenges ahead for the Agency. These included the fight against nuclear terrorism and significant expansion of the use of nuclear energy for peaceful purposes, he said.

"I compare ourselves to an orchestra. I am simply the conductor of a qualified, well-tuned and dedicated orchestra... We need to make every possible effort for the highest level of security. We owe it to humanity. The award also shows the will of humanity to address challenges and to seize the opportunity for a better life for future generations," Dr. ElBaradei said.

The Norwegian Committee awarded the 2005 Nobel Peace Prize on 7 October 2005 to the IAEA and Director General El Baradei in equal shares. The award ceremonies for the Nobel Peace Prize take place 10 December in Oslo, Norway.

Todas as publicações aqui referenciadas encontram-se disponíveis para consulta na Biblioteca.

Publicações Oferecidas ao ITN



Cota (ITN):

CM-S
MAR.1

ICANS 21 - Science and Technology I September 4-9, 2005, Lisbon – Portugal

Table of Contents

Mott lecture

The Localization of Electrons in Amorphous Semiconductors: A Twenty First Century Perspective P. Craig Taylor, University of Utah, USA

Plenary Session

Transparent oxides toward oxide electronics
H. Hosono, Tokyo Institute of Technology, Japan

Amorphous silicon memory devices
W. Jackson, HP Labs, USA

Invited Speakers

Advances on rare earth doping of wide bandgap semiconductors
E. Alves, Instituto Tecnológico e Nuclear (ITN), Portugal

Review of the latest understanding of the mechanisms of PECVD
J. Schmitt, Unaxis- Balzers, France

Digital Lithography for Large-area Electronics on Flexible Substrates
W. Wong, PARC, USA

Optical gain in Si nanocrystals
K. Luterova, Institute of Physics, Czech Academy of Sciences, Czech Republic

Progress in amorphous and nanocrystalline solar cells
S. Guha, United Solar Ovonic Corp, USA

Carbon Nanotubes for Electronic Applications?
B. Milne, Cambridge University, UK

Hole mobilities and the physics of amorphous silicon solar cells
E. Schiff, Syracuse University, USA

Review of X-ray detectors for medical imaging
M. Hoheisel, Siemens-Medical Engineering Group, Germany

Why DVDs work the way they do: nanometer scale mechanism of phase change in Ge-Sb-Te alloys A. Kolobov, National Institute of Advanced Industrial Science and Technology (AIST), Japan

Advances in the science and technology of a-Se X-Ray Image Detectors
S.O. Kasap, University of Saskatchewan, Canada

Hot Wire CVD of microcrystalline 3C-SiGeC and GeC for solar cell applications
M. Konagai, Tokyo Institute of Technology, Japan

Functionalisation of silicon quantum dots and nanowires
M. Brandt, Walther Schottky Institute, Technical University of Munich, Germany

Understanding the photoluminescence over 13-decade lifetime distribution in a-Si:H
T. Aoki, Tokyo Institute of Polytechnics, Japan

Nanocrystalline silicon p-layer in n-i-p type amorphous silicon based solar cells
X. Liao, Institute of Semiconductors, Chinese Academy of Sciences, China

Invited Speakers Organic Session

Interfaces and their role in organic semiconductor devices
Sir R. Friend, University of Cambridge, Dept of Physics, Cavendish Laboratory, UK

Organic TFTs
T. Jackson, Penn State University, Electrical Engineering West, University Park, USA

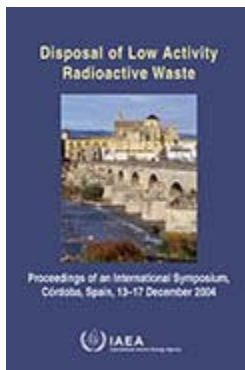
Organic semiconductor materials and device physics
S. Forrest, Dept. Electrical Engineering, Princeton University, USA

Synthesis and optical characterization of polymers for LED applications
J. Morgado, 1ST, Lisbon, Portugal

Electronic conduction in organic semiconductors
V. Arkhipov, IMEC, Leuven, Belgium

Theory of electronic states and defects in organic semiconductors
J. Northrup, Palo Alto Research Center, USA

Microscopic defect and transport processes in organic semiconductors
J. Marohn, Dept. of Chemistry and Chemical Biology, Cornell University, Ithaca, NY, USA



Cota (ITN):

EN
IAE.12

Disposal of Low Activity Radioactive Waste Proceedings of an International Symposium held in Cordoba, Spain, 13-17 December 2004

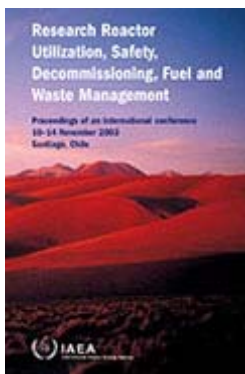
Proceedings Series

This publication contains the proceedings of an international symposium on Disposal of Low Activity Radioactive Waste held in Córdoba, Spain, 13–17 December 2004. The topical issues addressed by the symposium were: policies and strategies for low activity radioactive waste; very low activity radioactive waste; low activity radioactive waste from decommissioning; long lived low activity radioactive waste and other materials; and unique low activity radioactive waste. These proceedings include the keynote addresses, papers on topical issues, records of panel discussions, Chairs' summaries of the five topical sessions, the symposium Chair's general summary and symposium findings. A CD containing the contributed papers and a list of participants of the symposium is included.

STI/PUB/1224, 478 pp.; 66 figures; 2005, ISBN 92-0-102905-5, English. 110.00 Euro.
Date of Issue: 23 September 2005.

Subject Classification: 0611 - Radioactive waste management; 0804 - Waste management.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1224_Web.pdf



Cota (ITN):

RP-RR
IAE.16

Research Reactor Utilization, Safety, Decommissioning, Fuel and Waste Management Proceedings of an International Conference held in Santiago, Chile, 10-14 November 2003

Proceedings Series

This book contains the proceedings of a conference organized by the IAEA and hosted by the Government of Chile through the Atomic Energy Commission of Chile. The purpose of the conference was to foster the exchange of information on current research reactor concerns related to safety, operation, utilization, fuel management, and decommissioning, as well as to provide a forum for reactor operators, designers, managers, users and regulators to share experience, exchange opinions and discuss options and priorities.

STI/PUB/1212, 717 pp.; 235 figures; 2005, ISBN 92-0-113904-7, English. 120.00 Euro.
Date of Issue: 13 September 2005.

Subject Classification: 0604 - Research reactors; 0800 - Nuclear fuel cycle and waste management.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1212_web.pdf

Technical Reports Series



Disposal Options for Disused Radioactive Sources

Technical Reports Series No. 436

This report presents a review of relevant information on the various technical factors and issues, as well as approaches and relevant technologies, leading to the identification of potential disposal options for disused radioactive sources. The report attempts to provide a logical “road map” for the disposal of disused radioactive sources, taking into consideration the high degree of variability in the radiological properties of such types of radioactive waste. The use of borehole or shaft type repositories is highlighted as a potential disposal option, particularly for those countries that have limited resources and are looking for a simple, safe and cost effective solution for the disposal of their radioactive source inventories. The information provided in the report could be adapted or adopted to identify and develop specific disposal options suitable for the type and inventory of radioactive sources kept in storage in a given Member State.

STI/DOC/010/436, 51 pp.; 14 figures; 2005, ISBN 92-0-100305-6, English. 27.00 Euro. Date of Issue: 1 September 2005.

Subject Classification: 0605 - Radiation sources and accelerators; 0804 - Waste management.

http://www-pub.iaea.org/MTCD/publications/PDF/TRS436_web.pdf

Safety Standards Series



Safety of Research Reactors Safety Requirements

Safety Standards Series No. NS-R-4

This Safety Requirements publication establishes requirements for all the important areas of the safety of research reactors, with particular emphasis on requirements for design and operation. It covers the lifetime of research reactor facilities, from site evaluation to design and construction, commissioning, operation, including utilization and modification, and decommissioning.

Contents: 1. Introduction; 2. Safety objectives, concepts and principles; 3. Regulatory supervision; 4. Management and verification of safety; 5. Site evaluation; 6. Design; 7. Operation; 8. Decommissioning; Appendix: Selected postulated initiating events for research reactors; References; Annex I: Selected safety functions for research reactors; Annex II: Operational aspects of research reactors warranting particular attention; Glossary.

STI/PUB/1220, 121 pp.; 0 figures; 2005, ISBN 92-0-115804-1, English. Date of Issue: 1 September 2005.

Subject Classification: 0604 - Research reactors.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1220_web.pdf

IAEA Safety Standards
for protecting people and the environment

Regulations for the
Safe Transport of
Radioactive Material
2005 Edition

Safety Requirements
No. TS-R-1



Regulations for the Safe Transport of Radioactive Material, 2005 Edition Safety Requirements

Safety Standards Series No. TS-R-1

The purpose of these regulations is to establish standards of safety that provide an acceptable level of control of the radiation hazards to persons, property and the environment that are associated with the transport of radioactive material. These regulations apply to the transport of radioactive material by all modes of transport, including transport that is incidental to the use of the radioactive material. Transport is deemed to comprise all operations and conditions associated with and involved in the movement of radioactive material; these include the design, fabrication and maintenance of packaging, and the preparation, consigning, handling, carriage, storage in transit and receipt at the final destination of packages. Transport includes normal and accident conditions encountered in carriage and in storage during transit. **Contents:** Section I: Introduction; Section II: Definitions; Section III: General provisions; Section IV: Activity limits and material restrictions; Section V: Requirements and controls for transport; Section VI: Requirements for radioactive materials and for packagings and packages; Section VII: Text procedures; Section VIII: Approval and administrative requirements; Annex I: Summary of approval and prior notification requirements; Annex II: Conversion factors and prefixes; List of tables.

STI/PUB/1225, 153 pp.; 7 figures; 2005, ISBN 92-0-103005-3, English. 32.00 Euro. Date of Issue: 15 September 2005.

Subject Classification: 0606 - Transport of radioactive material.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1225_web.pdf

IAEA Safety Standards
for protecting people and the environment

Categorization of
Radioactive Sources

Safety Guide
No. RS-G-1.9



Categorization of Radioactive Sources

Safety Standards Series No. RS-G-1.9

This Safety Guide provides a risk based ranking of radioactive sources and practices in five categories. The categorization system is based on a logical and transparent method that provides the flexibility for it to be applied in a wide range of circumstances. On the basis of this categorization, risk informed decisions can be made in a graded approach to the regulatory control of radioactive sources for the purposes of safety and security.

STI/PUB/1227, 55 pp.; 0 figures; 2005, ISBN 92-0-103905-0, English. 18.00 Euro. Date of Issue: 15 September 2005.

Subject Classification: 0605 - Radiation sources and accelerators; 1400 - Physical protection of radioactive material.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web.pdf

Technical Reports Series



Technical Data on Nucleonic Gauges

IAEA TECDOC Series No. 1459

Nucleonic gauges or nucleonic control systems (NCSs) have been widely used in the industries of both developed and developing Member States to increase the recovery of oil and minerals, to improve the quality of the products derived from them and to optimize industrial processing of raw materials. It is considered that of all industrial radioisotope techniques, NCS technology is by far the most requested among other industrial radioisotope techniques. Their economic benefits have been widely demonstrated and recognized by industry. There are several hundred thousand nucleonic gauges serving industries worldwide. This nucleonic gauge manual and directory provides a reference database of nucleonic control systems available to potential users in the fields of exploration, exploitation and processing of natural resources and manufacturing industries. The basic principles of the most popular techniques are reviewed and reference data links to suppliers are provided. Information sheets on many typical commercial devices are also included. It will help end users to select the most suitable alternative to solve a particular problem or to measure a certain parameter in a specific process.

IAEA-TECDOC-1459, 2005, ISBN 92-0-107805-6, English. 15.00 Euro. Date of Issue: 23 September 2005.

Subject Classification: 0300 - Nuclear Measurements, Techniques and Instrumentation; 0500 - Industrial Applications.

http://www-pub.iaea.org/MTCD/publications/PDF/te_1459_web.pdf



Radiation Synthesis of Stimuli-responsive Membranes, Hydrogels and Adsorbents for Separation Purposes

IAEA TECDOC Series No. 1465

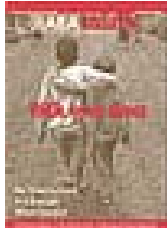
This coordinated research project coordinated research work for the development of novel materials prepared by radiation processing techniques. Fast stimuli-responsive hydrogels based on natural and synthetic polymers, temperature responsive membranes and selective adsorbents were produced and tested for different applications, in particular for drug delivery systems, health care and remediation of environmental pollution. This publication summarizes the present status and prospects of this technology.

IAEA-TECDOC-1465, 2005, ISBN 92-0-108605-9, English. 15.00 Euro. Date of Issue: 16 September 2005.

Subject Classification: 0302 - Chemistry; 0501 - Radiation processing.

http://www-pub.iaea.org/MTCD/publications/PDF/te_1465_web.pdf

Publicações Periódicas



Magazines, Journals & Newsletters

Magazine

Latest Edition

Walk in my Shoes

This year, the world celebrates Albert Einstein's legacy as it marks the international year of physics. Along the way some light is cast on the IAEA's important roles for the peaceful uses of nuclear science and technology. This edition features some of the IAEA's valued contributions to human development.

<http://www.iaea.org/Publications/Magazines/Bulletin/Bull471/index.html>

CONTENTS

- **A Closer Walk**
 - Editorial Comment
- **The World's Push for Human Security**
 - Ready for the Challenge
 - Eight is Enough
 - A Chance for Real Change in Africa
 - Goals? What Goals?
 - One Size Doesn't Fit All
 - X-Presidential Powers
- **Village Voices: Science & Technology for Life**
 - No Time to Lose
 - The Early Years: Keys to Child Nutrition & Health
 - Villages of Hope: Ricemakers of Vietnam
 - H₂O Know-How
 - Catching Up is Hard to Do
 - The World's Nuclear Knowledge Reservoir
 - Energy for Development in the Real World
 - Nuclear Reactions
 - Sensing the Danger
 - Einstein's Legacy



NUCLEAR ENERGY AGENCY



Radioactive Waste Management Engineered Barrier Systems (EBS) in the Context of the Entire Safety Case

Workshop Proceedings, Las Vegas, USA, 14-17 September 2004

OECD Publishing

[Nuclear Energy Agency](#)

The Integration Group for the Safety Case (IGSC) of the Nuclear Energy Agency (NEA) is co-sponsoring a project with the European Commission to develop a greater understanding of how to achieve the necessary integration for successful design, construction, testing, modelling and performance assessment of engineered barrier systems (EBS). These proceedings include the main findings and presented papers from the second workshop of the EC-NEA EBS project, which covered inter alia research and development work on pre- and post-closure processes; thermal management; thermal, hydraulic, mechanical and chemical process models; and repository design. The workshop was hosted by the US Department of Energy in Las Vegas, USA, on 14-17 September 2004.

Table of contents:

Executive Summary

1. Introduction

2. Workshop Objectives and Structure

3. Process Issues: EBS Examples

4. Working Group Findings

-Working Group A. Pre-Closure Processes

-Working Group B. Thermal Management and Analysis

-Working Group C. Alteration of Non-Metallic Barriers and Evolution of Solution Chemistry

-Working Group D. Radionuclide Release and Transport

5. Workshop Conclusions

6. References

Appendix A. Workshop Agenda

Appendix B. Papers Presented to the Workshop

- Overview of Projects and Activities Related to the EBS Processes, Carried Out as Part of the 5th and 6th Euratom Framework Programmes (1998-2006) by C. Davies

- An Approach to Analysing Potential Effects of Pre-Closure Processes on the Long-Term Safety of a Geological Repository by H. Umeki, H. Ueda, M. Naito, H. Takeuchi, and K. Yamada

- The Swedish Safety Report SR-CAN: Near-Field Processes and Concepts During Repository Operation by I. Puigdomenech and P. Sellin

- Thermal Management and Analysis for a Potential Yucca Mountain Repository by A. Van Luik

- Development of Thermal Criteria for a SF/HLW Repository in Opalinus Clay by L. Johnson, P. Blumling, A. Gauschi, and P. Wersin

- Alteration of Non-Metallic Barriers and Evolution of Solution Chemistry in Salt Formations in Germany by H.-J. Herbert, D. Becker, S. Hagemann, Th. Meyer, U. Noseck, A. Rubel, R. Mauke and J. Wollrath

- Characterising the Evolution of the In-Drift Environment in a Proposed Yucca Mountain Repository by A. Van Luik

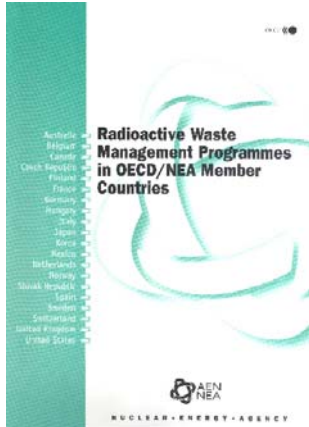
- Transport of Radionuclides in Spanish Performance Assessments by J. Alonso

Appendix C. Membership of Working Groups

Appendix D. List of Participants

List of Figures

List of Tables



Radioactive Waste Management Programmes in OECD/NEA Member Countries

- Australia
- Belgium
- Canada
- Czech Republic
- Finland
- France
- Germany
- Hungary
- Italy
- Japan
- Korea
- Mexico
- Netherlands
- Norway
- Slovak Republic
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States




2005

Euratom Research Projects and Training Activities (Volume I)

The first projects funded under the specific Euratom programme for 'Research and Training on Nuclear Energy (2002-2006)' and selected under the European Commission's Sixth Framework Programme for Research and Technological Development (FP6) are now under way.

The projects described in this publication are all involved with research activities on management of radioactive waste, radiation protection or other activities in the field of nuclear technologies and safety, such as innovative concepts, education and training and the safety of existing nuclear installations.

Euratom activities on research and development for nuclear fusion are not covered here.

http://europa.eu.int/comm/research/energy/pdf/nuclear_fission_en.pdf

Disponível em CD



http://europa.eu.int/comm/research/rtdinfo/46/index_en.html

FEATURES



Mobile phones and health - Waves and research

An ever-present feature of contemporary life, could mobile telephones be damaging our health? And what about the other new technologies and the growing infrastructure they demand? RTD *info* takes a close look at the work of the researchers and the many unanswered questions.

The Baltic republics - New beginnings for research

With advanced economies and a scientific life organised on the Soviet model of the time of the USSR, the three Baltic republics had to dismantle their existing research system to build a new one.



SEVENTH FRAMEWORK PROGRAMME

Facts, figures and future prospects

To support its proposals for the Seventh Framework Programme, the Commission has published a very detailed study on European research funding, the budget for which it has ambitious plans to double. This document draws attention to Europe's weaknesses compared with its principal global competitors, takes stock of EU research policy over the past decade or more, and makes an *ex ante* evaluation of the impact of its new programme for action. RTD *info* highlights a number of key points.

Table 1: Principal indicators of comparison between the EU, USA and Japan

Indicators	EU-25	USA	Japan
Intensity of R&D (% of GDP)	1.77	2.64	3.12
Share of R&D financed by industry (%)	53.9	43.7	71.8
Number of researchers per 1,000 persons employed	5.5	18.8	8.7
Scientific articles published as percentage of those published worldwide	38.3	31.3	9.6
Number of scientific articles per million inhabitants	439	809	549
Share of worldwide patents registered in the country	11.3	26.3	29.9
Patents in the field per million inhabitants	30.3	51.1	52.4
High-tech products as percentage of total industrial exports	19.7	26.5	26.3
Share of global high-tech industrial exports	16.7	20.0	18.4

© 2004 - 22-2004 - 23-2004 - 24 The text refers to the three main EU, USA and Japan

EUROPEAN RESEARCH POLICY

[Revisiting strategic thinking](#)



Published in February 2005, the Ormala report – named after the chair of the group which drafted it – provides the five-yearly assessment (covering 1999-2003) of the implementation of the EU's R&D Framework Programmes, or the FYA for short. In less than 40 pages, this examination of the current performance and outcomes of the Union's science and technology policy has resulted in an independent and original view of its strengths and weaknesses. RTD *info* talks to Erkki Ormala, Vice-President of technology policy at Finland's Nokia Group, to get the inside track on this landmark report.

CONTROL TECHNOLOGIES

[The boundaries of surveillance](#)



How can security for all be reconciled with the freedom of the individual? And how should new control technologies be used while respecting the fundamental demands of privacy? Partners with different sensitivities and interests – researchers, industrialists, and NGOs – have come together on the BITE project to look at developments in biometric technologies and the issues they raise.

INFORMATION AND COMMUNICATION TECHNOLOGIES

[Biometrics and justice](#)



In an increasingly permeable and mobile world, in which information must be transmitted as quickly as possible, the need for secure communication is not limited to financial transactions. In the field of justice in the widest sense – thus including magistrates, judicial authorities, police, etc. – there is also keen interest in the design, development and testing of innovative identification and authentication systems that guarantee maximum security against attempts at “deception” or “human error”. The European eJustice project is currently proposing operational technologies for secure co-operation between various European and national organisations and administrations – and not only in Europe.

SOCIAL SCIENCES

[School and equality](#)



European education has changed radically over recent decades. While governments are continuing to dictate the essential rules of play, the trend is to delegate their application to other players. Yet they too have their principles, with the result that it is often entrepreneurial spirit and management tools that are reshaping school systems. The partners in the Reguleduc project looked at the situation in five countries (Belgium, France, Hungary, United Kingdom, Portugal) in an attempt to evaluate the degree of social equality in education.

YOUNG SCIENTISTS

[A week with the stars](#)



Barbara Burtscher, a 20-year-old Swiss student of physics at Zurich University, won the Special Donated Prize at the 16th European Young Scientists Contest in 2004 for her work on the 153P/Ikeya-Zhang comet. Her reward was a trip to the European Southern Observatory in Paranal, Chile. Read on...