

RUMÄNIEN

Minister of Education, Research, Sports and Youth

Ministry for Education, Research,
Sports and Youth

Daniel Petru FUNERIU

Born on 11 April 1971
Married, one child

Current Position

Minister of Education, Research, Sports and Youth of Romania
Marie Curie Excellence Team Leader at the Technische Universität
München, Germany
Principal Investigator, IGSSE
Vice-President, Romanian Presidential Commission for Policies in
Education and Research

Education and Training:

- 1995 – 1999 Ph.-D candidate, **Université Louis Pasteur**, Strasbourg.
Thesis Title: « Multiple-Subroutine Self-Assembly ». Supervisor:
Prof. J.-M. Lehn, Noble Prize Winner 1987
Jury: Prof. A. von Zelewsky (Fribourg), Prof J.-M. Lehn (Strasbourg),
Prof. J. Siegel (San-Diego), Prof. M. W. Hosseini (Strasbourg)
Honours: Très honorable avec felicitations écrites du jury
(Highest Rank).
- 1994 – 1995 **Université Louis Pasteur**, Strasbourg:
Diplôme d'Etudes Approfondies (DEA) in Organic and
Supramolecular Chemistry. Supervisor: Prof. J.-M. Lehn.
Rank: First
Research Subject: Supramolecular Catalysis and Dynamic
Combinatorial Libraries.
- 1991 – 1994 **European Higher Institute of Chemistry (EHICS)**, Strasbourg,
France
Degree: **Engineer in Chemistry**, main subject: Organic Chemistry
- 1989 – 1991 Classes Préparatoires aux Grandes Ecoles, Lycee Kleber, Strasbourg
1989 **Baccalaureat C**, Mention Assez-Bien, Lycee international des
Pontonniers, Strasbourg.

Post Graduate Positions

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| 2008 – 2009 | Elected Member from Romania of the European Parliament (EPP-ED, Committee for Culture and Media) |
| 10/2002 – 03/2006 | Researcher at a Research Center for Cell Engineering, National Institute of Advanced Industrial Science and Technology (AIST) , Amagasaki, Japan . |
| 08/1999 – 10/2002: | Research Associate at the Scripps Research Institute , La Jolla, USA |
| 1998 – 1999 | ATER, College de France |
| 10/1994 – 08/1998 | Doctoral Researcher, Université Louis Pasteur , Strasbourg, France |
| 07/1994 – 10/1994 | Research Intership with Merck&Co , Rahway, New Jersey, USA |

Academic Honors and Grants

Romanian Chemistry Olympiads: Several national distinctions.

International Chemistry Olympiads: Selected in the Romanian team, **1988**.

French Chemistry Olympiads: Second Price, 1989

MRE Fellowship: awarded to the first 3 candidates classified after the DEA examinations for any one Faculty.

Teaching Assistantship, Strasbourg awarded to the best suited candidate among those that have obtained the MRE fellowship.

Marie Curie Excellence Grant, 2005 (aprox. 2 million Euros)

Human Frontier Science Program incoming grant (for Dr. C. Pop, Burnham Institute, USA)

Marie Curie International Reintegration Grant 2006 (80.000 Euros)

Invited Speakers (selected)

- University of Lausanne
- University of Sydney
- University of Lund
- Free University of Berlin
- ETH Zurich
- IECB Bordeaux
- Technical university Munchen
- ICSN Gift sur Yvette
- University of Bucharest
- Ecole Polytechnique, Paris
- Burnham Institute, La Jolla
- Biochemistry Institute, Bucharest
- University of California San Diego
- University of Fribourg

Teaching Experience

- Implementation of **organic chemistry laboratory courses** for 2nd and 3rd year students at the Université Louis Pasteur in Strasbourg (1995 – 1997)
- **General Chemistry:** Introductory Lectures to 1st and 2nd year students, Université Louis Pasteur Strasbourg (1996 – 1998)
- **General Chemistry:** Seminars for 1st and 2nd year students, Université Louis Pasteur

- **Oral Examinations:** Classes Préparatoires aux Grandes Ecoles, Lycee Kleber, Strasbourg (1994 – 1999)
- **Annual Series of Lectures:** The Chemical Thinking in the Post-Genomic Era: Concepts, Techniques and Perspectives. Master Level Courses at the University of Bucharest (2003 – 2005)
- **Outstanding Achievements in Total Synthesis and Medicinal Chemistry:** Master Level Courses at the University of Bucharest, 2005
- **FEBS summer course 2005:** Protein and DNA Microarrays: a theoretical and practical guide

Foreign Languages:

- Trilingual in English, French and Romanian
- Knowledge of German and Japanese

List of main Publications:

- **D.-P. Funeriu**, J. Eppinger, L. Denizot, M. Miyake, J. Miyake. On-Chip Determination of Inhibition Constants Based on Affinity-Label Detection on Enzymatic Activity. *Nature Biotechnology* 2005, 23, pg 622.
- E. Uchimura, S. Yamada, L. Uebersax, K. Matsumoto, M. Kishi, T. Yoshikawa, **D.-P. Funeriu**, M. Miyake, J. Miyake. Chip-based cell array for neuronal cell lines: influence of ECM proteins in non-viral transfection for PC12 cells. *Neuroscience Letters*, 2004, 378, pg. 40
- J. Eppinger, **D.-P. Funeriu**, L. Denizot, M. Miyake, J. Miyake. On-Chip Determination of Inhibition Constants Based on Affinity-Label Detection of Enzymatic Activity *Angew. Chem.* 2004, 43, pg 3806
- T. Yoshikawa, E. Uchimura, M. Kishi, **D.-P. Funeriu**, M. Miyake, J. Miyake, Transfection Microarray of Human Mesenchymal Stem Cells (hMSCs) and on-chip siRNA Gene Knockdown. *Journal of Controlled Release*, 2004, 96/2, pg 227
- K. Kato, K. Umezawa, **D.-P. Funeriu**, M. Miyake, J. Miyake, T. Nagamune. Immobilized Culture of Non-Adherent Cells on an Oleyl poly(ethylene glycol) ether modified surface. *BioTechniques*, 2003, 35(5), pg 1014
- **D.-P. Funeriu**, K. Rissanen, J.-M. Lehn. Dominant/Recessive Behavior in the Expression of Molecular Information – Self-assembly of Inorganic Macrocyclic Architectures Containing Coordinatively Unsaturated Ligands. *Proc. Natl. Acad. Sci. USA*, 2001, 98, pg. 10546.
- **D.-P. Funeriu**, K. M. Fromm, J.-M. Lehn, D. Fenske. Multiple Expression of Molecular Information: Enforced Generation of Different Supramolecular Inorganic Coordination Algorithms. *Chem. Eur. J.*, 2000, 6(12), pg.2103 (**front cover**)
- I. Huc, M. J. Krische, **D.-P. Funeriu**, Jean-Marie Lehn. Dynamic Combinatorial Chemistry. Substrate H-bonding Directed Assembly of Receptors Based on Bipyridine-Metal Complexes. *Eur. J. Inorg. Chem.*, 1999, 9, pg 1415
- **D.-P. Funeriu**, J.-M. Lehn, G. Baum, D. Fenske. Double Subroutine Self-Assembly; Spontaneous Generation of a Nanocyclic Dodecanuclear Cu(I) Inorganic Architecture, *Chem. Eur. J.*, 1997, 3(1), pg. 99 (**front-cover**)
- H. Fenniri, C. Dallaire, **D.-P. Funeriu**, J.-M. Lehn. Supramolecular Catalysis of H/D Exchange in Pyruvate by Macrocyclic Polyamines Involving a Reactive Iminium Intermediate. *J. Chem. Soc., Perkin Trans.*, 1997, 2, pg. 2073
- **D.-P. Funeriu**, Y.-B. He, H.-J. Bister, J.-M. Lehn. Synthesis and Cu(I) Binding Properties of Two tris-bipyridine Ligands. Self-Assembly of Homostrand and

Heterostrand Trinuclear Double Helical Complexes. Bull. Chem. Soc. Fr., 1996, 133, pg 673.

Patents:

- On-Chip Enzyme Activity Measurement and Applications Thereof (in process)
- On-Chip Measurements of Enzyme Ubiquitination and Applications Thereof (in process)

Areas of Scientific Expertise

- Synthetic organic chemistry
- Microarray technology and micro-engineering
- Supramolecular chemistry
- Peptide structure engineering
- Peptide synthesis
- Ubiquitination system
- Surface chemistry
- Solid phase supported chemistry
- Protein expression and purification
- Protein printing technology
- Protein crystallization
- Metal-ion chemistry
- Combinatorial chemistry
- Dynamic Combinatorial Chemistry
- Bioconjugate chemistry
- Mammalian cell transfection (including primary cells), siRNA
- Drug design

Various:

- 2005 – 2006 Director's Board of Ad Astra (top Romanian ONG on science policy www.ad-astra.ro)
- Founder and President (1994 – 1998) of the Romanian Students Association in Strasbourg
- Member in the leading team of the Association France Japon de la region du Kansai (www.afjkansai.org)
- Passionate Chess Player
- Regional-League Soccer player

