

# Berger Daniela Cristina

## Associated Professor



University "POLITEHNICA" Bucharest  
Faculty of Applied Chemistry and Materials Science  
Department Inorganic Chemistry, Physical Chemistry and Electrochemistry

### Contact information

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### Education and training

Dates	1991/2001
Title of qualification awarded	engineer/doctor
Principal subjects/occupational skills covered	inorganic chemistry/synthesis and characterization of inorganic materials
Name and type of organisation providing education and training	University "Politehnica" of Bucharest
Level in national or international classification	ISCED 2011-8 /23 UNESCO

### Professional experience

Dates	1991 / 1992/1995-1999-2005-present
Occupation or position held	research assistant / assistant – lecturer – associated professor
Main activities and responsibilities	process supervisor / teaching and research
Name and address of employer	Chiminform Data/ Institute of Physical Chemistry, Romanian Academy / University "Politehnica" of Bucharest
Type of business or sector	Research / University

### Academic and research interests

Inorganic Chemistry  
Nanostructured inorganic materials with different applications  
Synthesis of inorganic nanomaterials by soft chemistry routes: coprecipitation, solution combustion, sol-gel, hydrothermal, reverse microemulsions,  
Surface functionalisation of different inorganic oxide  
Synthesis and characterization of drug delivery systems based on inorganic mesoporous matrix  
Defects Chemistry  
Heterogeneous catalysis  
Hybrid materials with applications in nanomedicine

### Teaching activity

Cycle of high education	Specialization	Curricula code	Course title	Activity
1st cycle - bachelor	Chemical engineering	UPB.11F01.O.003	Inorganic chemistry I	course
1st cycle - bachelor	Chemical engineering	UPB.11F02.O.003	Inorganic Chemistry II	course
2nd cycle - master	SCIVEC	MC7S3C1	Nanostructures and biomimetism	course
2nd cycle - master	SCIVEC	MC7S2C6	Catalysts and catalytic processes involved in depollution and pollution preventing	course

## Publication (selective):

### Articles

- D. Berger, G. A. Traistaru, C. Matei, Influence of different templates on the morphology of mesoporous aluminas, Central European Journal of Chemistry, 10(5), 1688-1695, 2012.
- G. Maria, D. Berger, S. Nastase, I. Luta, Kinetic studies on the irinotecan release based on structural properties of functionalized mesoporous-silica supports, Microporous and Mesoporous Materials, 149(1), pp. 25-35, 2012.
- D. Berger, C. Matei, G. Voicu, A. Bobaru, Synthesis of  $\text{La}_{1-x}\text{Sr}_x\text{MO}_3$  (M = Mn, Fe, Co, Ni) nanopowders by alanine-combustion technique, J. Eur. Ceram. Soc., 30, 617-622, 2010.
- C. Jinga, D. Berger, C. Matei, S. Jinga, E. Andronescu, Characterization of  $\text{BaMg}_{1/3}(\text{Ta}_{1-x}\text{Nb}_x)_2/3\text{O}_3$  ceramics obtained by a modified Pechini method, J. Alloys Comp. 497 (1-2), 239-243, 2010.
- A. Ianculescu, D. Berger, C. Matei, P. Budrugaec, L. Mitoseriu, E. Vasile, Synthesis of  $\text{BaTiO}_3$  by soft chemistry routes, J Electroceram, 24, pp 46-50, 2010.
- M. Bosomoiu, G. Bozga, D. Berger, C. Matei, Studies on combustion catalytic activity of some pure and doped lanthanum cobaltites, Applied Catalysis B: Environmental 84, pp. 758-765, 2008.
- D. Berger, C. Matei, F. Papa, G. Voicu, V. Fruth, Pure and doped lanthanum cobaltites obtained by combustion method, Progress in Solid State Chemistry 35, pp.183-191, 2007.
- D. Berger, C. Matei, F. Papa, D. Macovei, V. Fruth and J.P. Deloume, Pure and doped lanthanum manganites obtained by combustion method, J. Europ. Ceram. Soc., 27, pp. 4395-4398, 2007.
- V. Fruth, L. Mitoseriu, D. Berger, A. Ianculescu, C. Matei, S. Preda, M. Zaharescu, Preparation and characterization of  $\text{BiFeO}_3$  ceramic, Progress in Solid State Chemistry 35, pp. 193-202, 2007.
- A. Ianculescu, D. Berger, M. Viviani, C. E. Ciomaga, L. Mitoseriu, E. Vasile, N. Drăgan, D. Crișan, Investigation of  $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$  ceramics prepared from powders synthesized by the modified Pechini route, J. Europ. Ceram. Soc., 27, pp. 3655-3658, 2007.
- D. Berger, F. Morfin, C. Matei, J.C. Volta, Studies on synthesis and characterization of  $\text{Co}_3\text{O}_4$  powders for CO oxidation, J. Optoelectron. Advan. Mater. 9(5), pp.1540-1545, 2007.

### Research projects

Programme/Project	Function	Period
PCCA 2 –project no. 131/2012, Drug delivery systems based on mesoporous inorganic matrix, acronym MESODRUG	Manager	2012 - present
Capacity /Module III – Bilateral Romania-Slovenia, Project no. 533/2012, Metal-oxide nanostructures for water treatment, acronym MONWAT	Manager	2012-present
Capacity /Module III – Bilateral Romania-France, Brâncuși, Project no. 483/2011, Nanocomposite materials for water effluents denitrification, MADECEAU	Manager	2011-2012
PNCDI II Partnership for priority fields – Contract no. 71-030, Advanced ceramic materials for components of IT-SOFC	UPB Scientific coordinator	2007-2010
PNCDI II Partnership for priority fields – Contract no. 32-116, Architectures of advanced materials with applications in the treatment of polluted waters - AMAP	UPB Scientific coordinator	2008-present
<i>New materials from mesoporous aluminosilicates class for controlling release of biologic active substance, research project POS CCE ID 691, acronym ZEOMED</i>	long term expert-activity scientific responsible	2010 - present
Project no. 33552/1.07.2003, no. theme 14, cod CNC SIS 124 Synthesis and characterisation of some perovskite ceramic materials for renewable energy sources	Manager	2002-2003
Project no. 5076, B109, A91, beneficiary ANSTI Lanthanum based oxides as catalysts for post-combustion	Manager	1999-2000

### Other information

#### ▪ Fellowships

- Dec.1996 – Aug. 1997, Program TEMPUS – JEP-7147 / 96, doctoral fellowship, Politecnico di Torino, Dip. di Scienza dei Materiali ed Ingegneria Chimica, Italia
- February. 2000 - May 2000, doctoral fellowship, Delft University of Technology, Laboratory for Inorganic Chemistry, The Netherlands
- March 2003 - sept. 2003, researcher CNRS, Institute de Recherche sur catalyse, Villeurbane, France
- Nov 2005 – April 2007, postdoc, ICMAB-CSIC Barcelona, Spain

#### ▪ Member of professional societies

- 1995-present - Romanian Society of Chemistry
- 2008-present - Romanian Society of ceramics and oxide materials (CEROM).