În atenţia Ministerului Cercetării Inovării şi Digitalizării din România

Cerere

Subsemnata **Dr. Ing. Adelina-Carmen Ianculescu**, profesor la Universitatea Naţională de Ştiinţă şi Tehnologie Politehnica Bucureşti, Facultatea de Inginerie Chimică şi Biotehnologii, prin prezenta solicit înscrierea în cadrul competiţiei "Gala Cercetării Româneşti" - Ediţia 2024, domeniul Chimie.

31.01.2024

Prof. Dr. Ing. Adelina-Carmen Ianculescu

Condiţii de eligibilitate îndeplinite pentru etapa de selectare

A. Lucrări în calitate de autor principal sau coautor încadrate cu tipul de document article, publicate în reviste indexate Web of Science JCR cuartila Q1 conform AIS (se ia în considerare ultima clasificare disponibilă în raport cu anul depunerii cererii)

- **24 lucrări** în calitate de autor principal sau coautor încadrate cu tipul de document article, publicate în reviste indexate Web of Science JCR cuartila Q1 conform AIS în perioada 2014 - 2023 (**11 lucrări** Q1 în ultimii 5 ani: 2019 - 2023)

1. L. Todan, L. Predoana, G. Petcu, S. Preda, D. C. Culita, A. Baran, R.-D. Trusca, V.-A. Surdu, B. S. Vasile, **A.-C. Ianculescu**, *Comparative Study of MgO Nanopowders Prepared by Different Chemical Methods*, Gels, **9** [8] (2023), art. no. 624, MDPI, ISSN: 2310-2861.
2. M. G. Alexandru, **A.-C. Ianculescu**✉, O. Carp, D. C. Culita, S. Preda, C. D. Ene, B. S. Vasile, V.-A. Surdu, A. Nicoara, F. Neatu, I. Pintilie, D. Visinescu, *Deciphering the role of water and a zinc-doping process in a polyol-based approach for obtaining Zn/Co/Al-based spinels: toward "green" mesoporous inorganic pigments*, Dalton Transactions, **52** (2023), 10386 - 10401, Royal Society of Chemistry, ISSN: 1477-9234.
3. L. Predoană, G. Petcu, S. Preda, J. Pandele-Cuşu, S. V. Petrescu, A. Băran, N. G. Apostol, R. M. Costescu, V.-A. Surdu, B. Ş. Vasile, **A.-C. Ianculescu**, *Copper-/Zinc-Doped TiO_2 Nanopowders Synthesized by Microwave-Assisted Sol–Gel Method*, Gels, **9** [4] (2023), art. no. 267, MDPI, ISSN: 2310-2861.
4. R.-E. Pătru, C. A.Stanciu, E. M. Soare, V.-A. Surdu, R. D. Truşcă, A. Ionuţ Nicoară, B. Ş. Vasile, G. Boni, L. Amarande, N. Horchidan, L. P. Curecheriu, L. Mitoşeriu, L. Pintilie, I. Pintilie, **A.-C. Ianculescu**✉, *Grain size-driven effect on the functional properties in $Ba_{0.6}Sr_{0.4}TiO_3$ ceramics consolidated by spark plasma sintering*, Journal of the European Ceramic Society, **43** [8] (2023), 3250-3265, Elsevier, ISSN (print): 0955-2219; ISSN (online): 1873-619X.
5. C. C. Gheorghiu, A. Ionescu, M.-I. Zai, D. Iancu, I. Burducea, G. Velisa, B. S. Vasile, **A. C. Ianculescu**, M. Bobeica, D. Popa, V. Leca, *Nanoscale Control of Structure and Composition for Nanocrystalline Fe Thin Films Grown by Oblique Angle RF Sputtering*, Materials, **15** [17] (2022), art. no. 6134; MDPI, ISSN: 1996-1944.
6. C. D. Ene, P. Cucos, **A. Ianculescu**, D. C. Culita, E. M. Anghel, A. Cucos, I. Atkinson, M. C. Chifiriuc, J. M. Calderón-Moreno, O. Carp, *Benign by design: porous spherical ZnO-alginate family via a dual-template synthesis*, Applied Surface Science, **580** (2022), art. no. 152231; Elsevier, ISSN: 0169-4332.

7. M. Botea, I. Pintilie, V.-A. Surdu, C.-A. Stanciu, R.-D. Truşcă, B. Ş. Vasile, R. Patru, **A.-C. Ianculescu**✉, L. Pintilie, *Structural, functional properties and enhanced thermal stability of bulk graded (Ba,Sr)TiO_3 structures obtained by spark plasma sintering*, Journal of Materials Research and Technology-JMR&T, **12** (2021), 2085-2103; Elsevier, ISSN: 2238-7854.
8. L. Curecheriu, C. Harnagea, M. T. Buscaglia, I. Pallecchi, B. S. Vasile, V.-A. Surdu, **A.-C. Ianculescu**✉, A. Pignolet, F. Rosei, L. Mitoseriu, V. Buscaglia, *Four-Fold Multifunctional Properties in Self-Organized Layered Ferrite*, Ceramics International, **46** [18], Part A, (2020), 28621-28630, Elsevier, ISSN: 0272-8842.
9. R. Dumitru, S. Negrea, **A. Ianculescu**, C. Păcurariu, B. Vasile, A. Surdu, F. Manea, *Lanthanum ferrite ceramic powders: synthesis, characterization and electrochemical detection application*, Materials, **13** [9] (2020), art. no. 2061; MDPI, ISSN 1996-1944.
10. R. E. Pătru, C. P. Ganea, C.-A. Stanciu, V.-A. Surdu, R. Truşcă, A.-C. **Ianculescu**✉, I. Pintilie, L. Pintilie, *(Ba,Sr)TiO_3 solid solutions sintered from sol-gel derived powders: An insight into the composition and temperature dependent dielectric behavior*, Ceramics International, **46** [4] (2020), 4180-4190, Elsevier, ISSN: 0272-8842.
11. R. Dumitru, **A. Ianculescu**, C. Păcurariu, L. Lupa, A. Pop, B. Vasile, A. Surdu, F. Manea, *$BiFeO_3$ - synthesis, characterization and its photocatalytic activity towards doxorubicin degradation from water*, Ceramics International, **45** [2], Part B, (2019), 2789-2802; Elsevier, ISSN: 0272-8842.
12. B. Bajac, M. Milanovic, Z. Cvejic, **A. Ianculescu**✉, P. Postolache, L. Mitoseriu, V. V. Srdic, *Magnetic properties of multilayer $BaTiO_3/NiFe_2O_4$ thin films prepared by solution deposition technique*, Ceramics International, **44** [13] (2018), 15965-15971, Elsevier, ISSN (print): 0272-8842; ISSN (online): 1873-3956.
13. M. Crişan, D. Mardare, **A. Ianculescu**✉, N. Drăgan, I. Niţoi, D. Crişan, M. Voicescu, L. Todan, P. Oancea, C. Adomniţei, M. Dobromir, M. Gabrovska, B. Vasile, *Iron doped TiO_2 films and their photoactivity in nitrobenzene removal from water*, Applied Surface Science, **455** (2018), 201-215, Elsevier, ISSN (print): 0169-4332, ISSN (online): 1873-5584.
14. O. Carp, A. Tîrşoagă, R. Ene, **A. Ianculescu**, R. F. Negrea, P. Chesler, G. Ioniţă, R. Birjega, *Facile, high yield ultrasound mediated protocol for ZnO hierarchical*

structures synthesis: formation mechanism, optical and photocatalytic properties, Ultrasonics Sonochemistry, **36** (2017) 326-335, Elsevier, ISSN: 1350-4177.

15. **A. Ianculescu**, I. Pintilie, C. A. Vasilescu, M. Botea, A. Iuga, A. Melinescu, N. Drăgan, L. Pintilie, *Intrinsic pyroelectric properties of thick, coarse grained* $Ba_{1-x}Sr_xTiO_3$ *ceramics*, Ceramics International, **42** [8] (2016), 10338-10348, Elsevier, ISSN (online): 1873-3956.
16. **A.-C. Ianculescu**, C.-A. Vasilescu, L. Trupină, B. S. Vasile, R. Truşcă, M. Cernea, L. Pintilie, A. Nicoară, *Characteristics of* Ce^{3+}*-doped barium titanate nanoshell tubes prepared by template-mediated colloidal chemistry*, Journal of the European Ceramic Society, **36** [7] (2016), 1633-1642, Elsevier, ISSN (print): 0955-2219; ISSN (online): 1873-619X.
17. M. Crişan, N. Drăgan, D. Crişan, **A. Ianculescu**, I. Niţoi, P. Oancea, L. Todan, C. Stan, N. Stănică, *The effects of Fe, Co and Ni dopants on* TiO_2 *structure of sol-gel nanopowders used as photocatalysts for environmental protection: A comparative study*, Ceramics International, **42** [2] Part B, (2016), 3088-3095, Elsevier, ISSN (print): 0272-8842; ISSN (online):1873-3956.
18. **A. C. Ianculescu**, C. A. Vasilescu, M. Crisan, M. Raileanu, B. S. Vasile, M. Calugaru, D. Crisan, N. Dragan, L. Curecheriu, L. Mitoseriu, *Formation mechanism and characteristics of lanthanum-doped* $BaTiO_3$ *powders and ceramics prepared by the sol–gel process*, Materials Characterization, **106** (2015), 195-207, Elsevier, ISSN (print): 1044-5803, ISSN (online): 1873-4189.
19. **A.** Stan, C. Munteanu, A. M. Musuc, R. Birjega, R. Ene, **A. Ianculescu**, I. Raut, L. Jecu, M. Badea Doni, E. M. Anghel, O. Carp, *A general, eco-friendly synthesis procedure of self-assembled ZnO-based materials with multifunctional properties*, Dalton Transactions, **44** [17] (2015), 7844-7853, The Royal Society of Chemistry (RSC) Publishing, ISSN (print): 1477-9226, ISSN (online): 1477-9234.
20. M. Răileanu, L. Todan, M. Voicescu, N. Drăgan, D. Crişan, M. Maganu, D. M. Vuluga, **A. Ianculescu**, D. C. Culiţă, *Sol-gel zirconia-based nanopowders with potential applications for sensors*, Ceramics International, **41** [3] (2015), 4381-4390; Elsevier, ISSN (print): 0272-8842, ISSN (online): 1873-3956.
21. O. Carp, A. Tîrşoagă, B. Jurcă, R. Ene, S. Şomăcescu, **A. Ianculescu**, *Biopolymer starch mediated synthetic route of multi-spheres and donut ZnO structures*, Carbohydrate Polymers, 115 (2015), 285-293, Elsevier, ISSN (print): 0144-8617, ISSN (online): 1879-1344.
22. N. Horchidan, **A. C. Ianculescu**✉, C. A. Vasilescu, M. Deluca, V. Musteata, H. Ursic, R. Frunza, B. Malic, L. Mitoseriu, *Multiscale study of ferroelectric-relaxor*

crossover in $BaSn_xTi_{1-x}O_3$ ceramics, Journal of the European Ceramic Society, **34** [15] (2014), 3661-3674, Elsevier ISSN: 0955-2219.

23. N. Drăgan, M. Crişan, M. Răileanu, D. Crişan, **A. Ianculescu**, P. Oancea, S. Şomăcescu, L. Todan, N. Stăniucă, B. Vasile, *The effect of Co dopant on TiO_2 structure of sol-gel nanopowders used as photocatalysts*, Ceramics International, **40** (2014), 12273-12284, Elsevier, ISSN: 0272-8842.
24. M. T. Buscaglia, F. Maglia, U. Anselmi-Tamburini, D. Marré, I. Pallecchi, **A. Ianculescu**, G. Canu, M. Viviani, M. Fabrizio,V. Buscaglia, *Effect of nanostructure on the thermal conductivity of La-doped $SrTiO_3$ ceramics*, Journal of the European Ceramic Society, **34** [2] (2014), 307-316; Elsevier ISSN: 0955-2219.

B. 4 Proiecte de cercetare naţionale şi internaţionale, câştigate prin competiţie, cu valoare de minimum 100.000 euro fiecare şi echipă de minimum 3 membri, în calitate de director/conducător de proiect

4 proiecte de cercetare, câştigate prin competiţie, în calitate de director/conducător de proiect

1. *Controlled functionalities in multiscale $BaTiO_3$-based systems by combining microstructural design and doping strategy (Funcţionalităţi controlate in sisteme pe bază de $BaTiO_3$ structurate la scale multiple, prin combinarea proiectării microstructurale cu strategia de dopare) – BATIFER*, Proiect no. PN-III-P4-ID-PCE-2016-0072 (2017-2019), contract no. 154/13.07.2017 – **175 645 EUR - director**
2. *Size effects, phase formation mechanisms, and roperties relations in micro- and nanostructured perovskite ferroic systems prepared by alternative routes (Efecte dimensionale, mecanisme de formare şi proprietăţi în sisteme perovskitice feroice micro si nanostructurate, preparate prin metode alternative) – FEROMAT*, Proiect PN-II-ID-PCE-2011-3-0668 (2011-2016), contract nr. 92/05.10.2011 – **309 962 EUR - director**
3. *Integrated development of concepts and new technologies for the preparation, characterization, modeling and applications of micro- and nanostructured ferroelectric ceramics (Dezvoltarea integrată de concepte şi tehnologii noi in domeniul preparării, caracterizării, modelării şi aplicaţiilor materialelor Feroelectrice Ceramice Micro- si Nanostructurate) – FEROCER*, Grant CEEX, Contract nr. 208/20.07.2006 (2006-2008) – **301 386 EUR - director**

4. *Controlling the electronic properties in heterostructures based on ferroelectric perovskites: from theory to applications (Controlul proprietăţilor electronice în heterostructuri bazate pe perovskiţi feroelectrici: de la teorie la aplicaţii) – CEPROFER*, Project PN-III-P4-ID-PCCF-2016-0047 (2018 - 2022), contract no. PCCF16/26.10.2018 – **268 633 EUR - coordonator UPB.**

C. Calitatea de cercetător/cadru didactic invitat la universităţi de prestigiu din străinătate

- Cercetător asociat (poste rouge CNRS), *Laboratoire de Génie Electrique (nume actual: Laboratory of Plasma and Energy Conversion - LAPLACE) - UMR 5213, Laboratoire: Matériaux Diélectriques dans la Conversion de l'Energie*, 118 Route de Narbonne 31062, Paul Sabatier University – Toulouse III, http://www.laplace.univ-tlse.fr, Toulouse, France (January 15, 2001 – January 14, 2002).
- Profesor invitat, *Faculté des Sciences et Ingénierie - Département de Chimie*, 118 Route de Narbonne 31062, Paul Sabatier – Toulouse III University (January 15 – February 28, 2002) – 8 lecţii invitate; Laboratoire d'Architecture et d'Analyse des Systèmes (LAAS), Toulouse, Franţa – 1 prelegere invitată; Institut National des Sciences Appliquées (INSA), Toulouse, Franţa – 1 prelegere invitată.
- Associated Senior Scientist (poste rouge CNRS), *Centre Interuniversitaire de Recherche et d'Ingénierie des Matériaux (CIRIMAT) - UMR 5085, Laboratoire: Oxydes à valence mixte (OVM)*, 118 Route de Narbonne 31062, Paul Sabatier – Toulouse III University, https://cirimat.cnrs.fr/, Toulouse, France (March 1, 2002 – April 1, 2003).
- Profesor invitat, *Université de Limoges*, 33 rue François Mitterrand, BP 23204, 87032 Limoges, France (October, 2005) – 4 lecţii invitate.

CURRICULUM VITAE

IANCULESCU ADELINA – CARMEN

National University of Science and Technology "Politehnica" Bucharest

A. Personal information:

Name:Adelina-Carmen Ianculescu;

Birth date: September 2, 1963, Ploieşti / Prahova;

E-mail: ;

Mobile phone:

Languages: English, French and German.

B. Education (degrees and diplomas):

Institution and location	*Year*	*Degree*	*Training area*
- University "Politehnica" of Bucharest (UPB), Faculty of Industrial Chemistry	1997	PhD	Chemical Engineering / High-Permittivity Dielectric Ceramics
- University "Politehnica" of Bucharest, Faculty of Industrial Chemistry, Department of Oxide Materials Science and Engineering	1987	MD; Pedagogy specialization(certificate)	Solid Sate Chemistry / Technology of Silicates and Oxide Compounds
- High School no.18 of Bucharest	1982	Baccalaureate	Mathematics – Physics

C. Professional experience and jobs:

Period	*Function*	*Affiliation*
2011-present	Full Professor / PhD coordinator (Habil.)	Department of Science & Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology "Politehnica" Bucharest
2008-present	Full Professor	
2004-2008	Associate Professor	
March 1, 2002-March 31, 2003 (13 months)	Associated Senior Researcher (poste rouge CNRS)	Inter-University Research and Engineering Centre on Materials (C.I.R.I.M.A.T.) – UMR 5085
February 1, 2002-February 28, 2002	Visiting Professor	Faculty of Science and Engineering - Department of Chemistry–Toulouse III, France
February 1, 2001-January 31, 2002 (12 months)	AssociatedSenior Researcher (poste rouge CNRS)	Laboratory of Plasma and Energy Conversion (former Laboratory of Electrical Engineering)– UMR 5213, Paul Sabatier University – Toulouse III, France
2000-2001; 2003-2004	Lecturer	Department of Science & Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science, "Politehnica" University of Bucharest
1994-2000	Senior Researcher	"IlieMurgulescu" Institute of Physical Chemistry of the Romanian Academy, Bucharest, Romania
1990-1994	Scientific Researcher	
1987-1990	Engineer in Chemistry	Special Steels Factory, Târgovişte, Romania

D. Significant scientific achievements:

The scientific activity and the area of expertise of the candidate, Prof. Adelina-Carmen Ianculescu is focused on two main research directions, related to the field of advanced multifunctional, micro- and nanostructured oxide materials, *i.e.*: (a) oxides with electrical and magnetic properties, belonging to the class generically called "electroceramics", with applications in microelectronics, optoelectronics and spintronics and (b) environmentally friendly oxide catalysts and pigments.The main achievements of the candidate can be splitted in two categories, as described below:

(1) Starting with the PhD thesis entitled "Dielectric ceramics of type $M^{II} - M^{IV} - O$ with high permittivity", 1997), the topics of interest from the point of view of ***fundamental research***, the addressed studies have been related to: (*i*) physico-chemical processes and formation mechanisms in oxide compounds; (*ii*) phase equilibria and defect chemistry in oxides; (*iii*) phase transitions and grain boundary phenomena; (*iv*)

self-assembly phenomena and (*v*) composition – structure – properties relations in some multiscale-structured perovskite ceramics. Thesis [illegible]

self-assembly phenomena and (*v*) composition – structure – properties relations in some multiscale-structured perovskite ceramics. Thereby, the formation mechanisms of the perovskite phases during the thermal processing for a wide range of electroceramics, including dielectrics as ***Nb-doped $SrTiO_3$*** (• *J. Ther. Anal. Calorim.,72 (2003), 173*), semiconductors as ***(La,Sr)MnO_3 / (La,Ca)MnO_3*** (•*J. Ther. Anal. Calorim.,64 (2001), 1001*), ***$DyMnO_3$*** (• *J. Ther. Anal. Calorim.,72(2003), 253;* • *J. Alloy Compd.,* ***351*** *(2003), 314 - Q1*), ***(La,Sr)CrO_3 / (La,Ca)CrO_3***(• *J. Ther. Anal. Calorim.,66 (2001), 501*), ferroelectrics as ***Pb(Zr,Ti)O_3***(• *Key Eng. Mater.,* ***132-136*** *(1997), 1131*), relaxors as ***$PbMg_{1/3}Nb_{2/3}O_3$ / (Pb,La)$Mg_{1/3}Nb_{2/3}O_3$)*** (• *J. Eur. Ceram. Soc., 27 (2007), 4375 - Q1*), superconducting systems as ***Pb/Sb doped Bi – Sr – Ca – Cu – O*** (• *J. Eur. Ceram. Soc.,24 (2004), 1827 - Q1*), fast-ion conductors (• *J. Eur. Ceram. Soc.,* ***26*** *(2006), 3011 - Q1*) and magnetoelectric multiferroics as ***$BiFeO_3$*** (• *Solid State Sci., 23 (2013), 79;* • *J. Eur. Ceram. Soc.,* ***26*** *(2006), 3011 - Q1*) were intensively studied. These research efforts have been rewarded with the prize *"I. G. Murgulescu" of the Romanian Academy (2001)*, for the contribution "Correlation between the formation mechanism and the structural characteristics in perovskite-based oxide materials" (see the section "Titles, awards and national / international visibility"). Some of the results regarding the formation mechanisms in alkaline earth-doped lanthanum chromites(• *J. Ther. Anal. Calorim.,66 (2001), 501*) were cited in a highly ISI-quoted journal, *i.e.Progress in Materials Science*, I.F. = 37.4; AIS = 8.318;

More recently, in the context of the requirements for identifying new, environmentally-friendly perovskites for micro/nano/optoelectronics applications, the formation by solid state reactions of some lead-free ferroelectric and multiferroic perovskite solid solutions as: ***(a) Ba(Ti,Zr)O_3*** (• ***Monograph:*** *„Ba(Ti,Zr)O_3 – Functional Materials: From Nanopowders to Bulk Ceramics", NovaScience Publishers Inc, USA, 2010*), ***(b) Ba(Ti,Sn)O_3*** (• *J. Eur. Ceram. Soc.,* ***34*** *(2014), 3661 - Q1*), ***(c) Bi(Fe,Mn)O_3*** (• *J. Alloys Compd.,* ***504*** *(2010), 420 - Q1*) and ***(d) (1-x)$BiFeO_3$-x$BaTiO_3$*** (• *Patent RO123236-B1, 2011, "Preparation procedure by ceramic technology of high-purity $BiFeO_3$-$BaTiO_3$ solid solutions with low dielectric losses and room-temperature ferromagnetic characteristics";* • *J. Alloy Compd.,* ***506*** *(2010), 862 - Q1*) was a priority topic of the candidate's research activity. For the point of view of the aliovalently-doped $BaTiO_3$, the impact determined by the donor doping level on the defect chemistry, microstructural features, grain-boundary phenomena, phase transitions and functional properties was also analyzed in detail (• *Mater. Charact.,* ***106*** *(2015), 195 - Q1*); •*J. Alloy Compd.,* ***509*** *(2011), 10040 - Q1*). **Through these studies, the candidate**

imposed a significant paradigm shift. Earlier, it was considered that lightly (concentration < 0.5 at. %) donor-doped $BaTiO_3$ with La^{3+} or other rare earth species on Ba^{2+} sites results in a semiconducting behaviour. However, it was found that even for such low donor dopant concentrations, by tailoring the sintering strategy, coarse-grained RE-doped $BaTiO_3$ ceramics can show not only insulating properties, but they can also exhibit high tunability behaviour. This finding generated high citing degree of the work which presented these results in very prestigious AIS-quoted journals (*Chemical Review - I.F. = 62.1; AIS = 17.133; Nature Communications - I.F. = 16.6; AIS = 5.767, etc.*), as one can see below, in the section "Relevant citations".

Other research topics addressed by the candidate refers to: (*i*) the role of the topochemical reactions and of the type of interfaces in governing the self-assembly phenomena in ***$SrTiO_3$ mesocrystals*** prepared by the hydrothermal method (• *Cryst. Growth Des.,**15**, (2015), 5712;* • *Cryst. Growth Des., **12** (2012), 4450*) and (*ii*) composition – crystal structure – micro- / nano-structuring – properties relations in ***La-, Nb-, Sb-doped $SrTiO_3$ systems***used in electronic devices as internal boundary layer (IBLC) and multilayer (MLCC) ceramic capacitors (• *J. Eur. Ceram. Soc.,**27** [2-3] (2007, 1123- Q1;* • *J. Ther. Anal. Calorim.,72 (2003), 173;* • *J. Eur. Ceram. Soc., **34** (2014), 307 - Q1*) .

(2) Regarding the ***applied research***, notable results have been obtained towards the design and characterization by various and complementary investigation techniques of ***nanostructured ferroic perovskite systems*** (nanopowders, nanowires, nanoshell tubes, thin/thick films), as well as micro-, meso- and nano-structured bulk ceramics.

Starting with the research activity carried out as associate senior researcher (CNRS research position offered by the French state through recruitment) in two different laboratories of the University Paul Sabatier - Toulouse III, France (2001-2003), the candidate approached a new research direction, aiming the study of the structural and functional properties in ***undoped barium titanate products with confined geometry***, as ***nanoparticles*** (• *J. Electroceram., 24 (2010), 46*), ***thin films*** (• *J. Eur. Ceram. Soc., 27 (2007), 1129 - Q1;* • *Appl. Surf. Sci., 253 (2006), 344 - Q1*) and ***thick layers*** (• *Proc. Appl. Ceram., 3(2009), 65*), respectively. **It was found that the crystallinity, size, shape and aggregation tendency of the molecular/polymeric precursor particles prepared by wet-chemical routes governed not only the type of intermediates and physico-chemical processes which occur during the thermal decomposition, but also the characteristics (crystal structure, size, morphology, porosity and surface state) of the final ceramic $BaTiO_3$nanopowders. The interesting data reported**

about the influence of the preparation route and synthesis parameters on the morphological characteristics of undoped $BaTiO_3$ nanoparticles obtained by alternative wet-chemical methods (• *J. Electroceram., 24 (2010), 46*) **resulted in subsequent citations in highly AIS-quoted journalsas** *Chemical Society Reviews - I.F. = 46.2; AIS = 12.008* **(seesection "Relevant citations"). Besides, an innovative approach, consisting in successive cycles of rf-magnetron sputtering deposition – thermal treatment, as well as of tape-casting deposition – annealing – sintering, was proposed, in order to enhance ferroelectricity and to improve the dielectric behaviour by minimizing dielectric loss and leakage currents, as a result of both the high densification and grain size gradient in cross-section of multi-layered $BaTiO_3$ thin films** (• *J. Eur. Ceram. Soc., 27 (2007), 1129 - Q1;* • *Appl. Surf. Sci., 253 (2006), 344 - Q1*) **used in non-volatile memories and thick films used as passive components for high power filters, respectively** (•*Proc. Appl. Ceram., 3 (2009), 65*). **An extensive study regarding the effect of grain size decrease of the functional properties of the undoped bulk $BaTiO_3$ceramics** (• *J. Am. Ceram. Soc., 95 (2012), 3912 - Q1*) **attracted attention and enjoyed appreciation in the scientific community, being followed by citations in prestigious journals** (*Progress in Materials Science* - I.F. = 37.4; AIS = 8.318; *Advanced Functional Materials* - I.F. = 19.0; AIS = 3.987; *Advanced Science* - I.F. = 15.1, AIS = 3.548; *Review of Materials Research* - I.F. = 9.7; AIS = 4.297, etc. - **seesection "Relevant citations").**

Another "hot" and challenging fundamental topic addressed by the candidate refers to the key-role played by the "size effects" and restrictive geometry in ***homo- / aliovalently-doped bulk $BaTiO_3$ ceramics*** (• *J. Eur. Ceram. Soc., 43 (2023), 3250 - Q1;* • *Nanomaterials, 9 (2019), 1675*), when downscaling grain size from micro- toward nanometre range.

Significant contributions are associated to: (*i*) the synthesis of ferroelectric doped-$BaTiO_3$ and multiferroic doped-$BiFeO_3$ nanoparticles by various "soft" chemistry methods as: different variants of the sol-gel method, the modified Pechini procedure, co-precipitation, hydrothermal method, combustion route and the comparative study of their morpho-structural characteristics and (*ii*) the elaboration by template-mediated colloidal chemistry of 1D nanostructures with enhanced piezoelectric and ferroelectric activity.RE-doped $BaTiO_3$ (RE = La^{3+}, Ce^{3+}) ***nanopowders*** (• *J. Alloy Compd., 509 (2011), 10040 - Q1;* • *Mater. Charact.,106 (2015), 195 - Q1;* • *Nanomaterials, 9 (2019), 1675;*) **,** ***nanowires, nanoshell tubes and multiscale-structured bulk ceramics*** (• *J. Eur. Ceram. Soc., 36 (2016), 1633 - Q1;* • *Romanian patent no. RO33773-B1, 2021,*

"Preparation of unidimensional trivalent-cerium-doped $BaTiO_3$ nanostructures, with ferroelectric and piezoelectric properties; • Nanomaterials, 9 (2019), 1675;), were obtained and extensively investigated. The candidate extended her research area towards the electric, magnetic and optical properties induced by **RE-doping in another lead-free perovskite, *i.e.* $BiFeO_3$ systems**, as in the case of ***Eu^{3+}-doped $BiFeO_3$ nanopowders*** (• *Nanomaterials, 9 (2019), 1465*).

Further, the candidate's efforts were dedicated to find suitable approaches to tailor the electrical (dielectric/semiconducting, ferroelectric/relaxor, pyroelectric, piezoelectric) behaviour of the multiscale-structured doped-barium titanate ceramics derived from wet-chemically prepared nanopowders, by an appropriate compositional design and, especially, by controlling and tuning microstructure, using alternative sintering strategies and optimized conditions. **From this point of view, the candidate reported original results and innovative approaches, which reveal the advantages of the spark plasma sintering (SPS) technique in producing nanocrystalline ferroic ceramics, secondary-phase-free magnetoelectric composites, as well as compositionally graded ferroelectric/pyroelectric products with enhanced thermal stability. The candidate took advantage of winning through competition of some national projects, which provided her with the financial support to purchase a high-performance SPS equipment to develop such sophisticated materials. It is worth mentioning that the influence of the so-called "size effects" in nanostructured doped or highly substituted-$BaTiO_3$ products is almost unstudied. Therefore, in the context of the intensive development of nanotechnology, involving an ongoing trend to miniaturization and high integration, the candidate provided deep insight and original contributions regarding the change of the functional characteristics of the ceramics when downscaling grain size toward the nanometre range. It was found that the nanostructuring in such perovskites systems ensures a higher stability of the dielectric response, lower values of the dielectric constant, lower dielectric losses and even an increasing electrostatic energy storage capability and efficiency due to the reduction of hysteretic character, which make these dense electroceramics successful candidates for microwave and tunable devices** (• *J. Eur. Ceram. Soc., 43 (2023), 3250 - Q1; • Nanomaterials, 13 [22] (2023), 2974;• Nanomaterials, 13 [22] (2023), 2974;13 [22] (2023), 2934*)**.On the other hand, the thermal stability of the generated signal is also an important issue to be considered in the case of pyroelectric detectors. This means a good thermal stability of both, the permittivity and pyroelectric coefficient. The candidate found that a method to enhance the abovementioned thermal stability is to produce composition gradients**

inside the bulk ceramics such that each of the different component layer to have a different ferroelectric-paraelectric phase transition temperature. This way, in a compositional graded structure the temperature variation of the two parameters, the dielectric constant and pyroelectric coefficient will no longer be sharp at the transition, as it is typical for a single composition, but it will become diffuse, leading to almost constant values on extended temperature domains. The high-novelty approach proposed by the candidate, consists in producing symmetric (with respect to the electrodes) graded architectures, with potential applications for energy and power measurement of laser beams, very useful for the High-Power Laser-System ELI-NP of Măgurele, Bucharest (• *J. Mater. Res. Technol., **12**(2021), 2085; • Patent RO132197-B1, 2020, "Massive ferroelectric ceramics with improved properties for pyroelectric detection by concentration gradient"; • Patent RO132446-A0, 2023,"Pyroelectric detector based on ceramics with planar concentration gradient and universal pyroelectric signal amplifier for voltage mode"; • Chap. 10. Compositionally-graded ferroelectric ceramics and multilayers for electronic and sensing applications, pp. 223-232, in „Magnetic, Ferroelectric, and Multiferroic Metal Oxides", Elsevier, 2018*).

The analysed homovalently doped-$BaTiO_3$ systems were: (a) ***homogeneous $(Ba,Sr)TiO_3$ ceramics*** (*J. Eur. Ceram. Soc., **43**, (2023), 3250 - Q1; • Ceram. Int., **46** (2020), 4180 - Q1; • Patent RO125528-B1, 2012, "Process for obtaining a BST-type ceramic material"; • Ceram. Int., **42** (2016), 10338 - Q1; • J. Eur. Ceram. Soc., **27** (2007), 3655 - Q1; • Phase Transit., **79** (2006), 375*) and ***compositionally graded $(Ba,Sr)TiO_3$ products*** (• *J. Mater. Res. Technol., **12**(2021), 2085; • Patent RO132197-B1, 2020, "Massive ferroelectric ceramics with improved properties for pyroelectric detection by concentration gradient"; • Chap. 10. Compositionally-graded ferroelectric ceramics and multilayers for electronic and sensing applications, pp. 223-232, in „Magnetic, Ferroelectric, and Multiferroic Metal Oxides", Elsevier, 2018*), as well as (b) ***$Ba(Ti,Zr)O_3$ thin films and bulk ceramics*** (• *Appl. Surf. Sci., **265** (2013), 510 - Q1; • J. Eur. Ceram. Soc., **32**, (2012), 3551 - Q1*).

The same approach was used to prepare from nanopowders synthesized by the modified Pechini method and different variants of the sol-gel routes and to investigate more complex, multi-scale structured $BaTiO_3$-derived ceramics with piezoelectric and/or relaxor behaviour, as the ***lead-free $Ba_{0.85}Ca_{0.15}Ti_{0.90}Zr_{0.10}O_3$ (BCTZ)*** (• *Nanomaterials, **13** (2023),2934*) and the ***high-entropy $Bi_{0.2}K_{0.2}Ba_{0.2}Sr_{0.2}Ca_{0.2}TiO_3$ (BiKBSCT)*** (•*Nanomaterials, **13** (2023), 2974*) ***perovskites***. This research direction was later

extended also to the ***multiferroic nanosized $BiFeO_3$-based systems*** (• *Nanomaterials, 9 (2019), 1465*) and other ***multifunctional self-organized (Ba,Ti)-layered ferrites*** (*Ceram. Int., 46, Part A (2020), 28621 - Q1*), as well as to some peculiar magnetoelectric composites derived from core-shell ***$Ni_{0.50}Zn_{0.50}Fe_2O_4$@$BaTiO_3$*** and***$Fe_2O_3$@$BaTiO_3$ powders*** and consolidated by different sintering techniques.**The candidate found that the approach involving core-shell particles leads to composites with Maxwell-Garnett (0-3) microstructure, which determines improved dielectric properties and smaller conductivity due to a better isolation of the magnetic phase into the ferroelectric matrix and to a lower percolation, relative to the conventional composites of similar composition, prepared by mixing magnetic and ferroelectric powders synthesized by wet-chemical methods** (• *J. Appl. Phys., **118** (2014), 084102*). **She also shown the advantage of the consolidation by SPS in producing dense, secondary-phase free magnetoelectric composites, with controlled functional properties** (• *Chem. Mater., **22 (2010)**, 4740- Q1*). The works reporting these results were cited in prestigious journals as *Advanced Materials*, I.F. = 29.4; AIS = 6.781, *Nature Communications - I.F. = 16.6; AIS = 5.767, as well as Physics Reports-Review Section of Physics Letters* -I.F. = 29.9; AIS = 9.564 and*Nano Energy -I.F. = 17.6; AIS = 3.323*, respectively.

It is worth mentioning that, in the last decade, the candidate has shown a growing interest in investigatingopticalproperties and photocatalytic activity of some oxides. Thus, ***spinel $(Zn,Co)Al_2O_4$ nanopowders*** used as pigments (• *Dalton Trans., **52** (2023), 10386 - Q1; • Dyes Pigm., 87 (2010), 125 - Q1*), as well as ***Eu^{3+}-doped $BiFeO_3$ nanoparticles*** with photoluminescent properties (• *Nanomaterials, 9 (2019), 1465*) were prepared and analyzed. A former work regarding ***$(Zn,Co)Al_2O_4$ blue pigments*** was highly cited, receiving the *Certificate "Dyes and Pigments - Top Cited Papers for 2010 and 2011"* (see the section "Titles, awards and national / international visibility"). In the recent years, the candidate's research efforts were also focused on the photocatalytic oxidation as an advanced oxidation process involving semiconducting materials for both water and wastewater treatment. From this point of view, several oxide systems as ***MgO powders*** (• *Gels, 9 (2023), 624 - Q1*), ***S-, Ag-, Co-, Fe-, Ni-, Sn-, Cu-, Zn-doped TiO_2 powders*** (• *J. Non Cryst. Solids, **354** (2008), 705 - Q1; • J. Sol Gel Sci. Techn., **51** (2009), 315*; • *Ceram. Int., **40** (2014), 12273- Q1;• Appl. Catal. A-Gen., **504** (2015), 130; • Ceram. Int., **42** (2016), 3088 - Q1; • Catalysts, **13** (2023), 534; • Gels, **9** (2023), 267 - Q1*), ***Pd-, Au- and Fe-doped TiO_2 thin films*** (• *J. Phys. Chem. Solids, **69** (2008), 2548; • Appl. Surf. Sci., **257** (2011) - Q1, 4227; • Appl. Surf. Sci., **455** (2018), 201 -*

Q1), ***spinel $ZnCr_2O_4$ and $(Ni,Zn)Al_2O_4$ powders*** (• *Catalysts, 8 (2018), 210;* • *J. Nanopart. Res., 15 (2013), 1456.*) and ***$BiFeO_3$ nanoparticles*** (• *Ceram. Int., 45, Part B, (2019), 2789 - Q1*) have been studied. The works containing all these original contributions were highly cited especially in the prestigious journal *Applied Catalysis B-Environmental* - I.F. = 22.1, AIS = 2.990 (see the section "Relevant citations").

As perspective, future research of the candidate will aim to highlight the multifunctionality of other RE-doped $BaTiO_3$ and RE-$BiFeO_3$ (RE = Pr^{3+}, Nd^{3+}) products beyond their electric/magnetic behaviour, by combining photoluminescence induced by RE dopants with photocatalytic activity stimulated through the manipulation of spontaneous polarization, along with a better understanding of the key-role exerted by some extrinsic contributions, as particle/grain size, porosity, etc. This represents an extension of the research undertaken by the candidate up to date.

The original results of the research activity of the candidate were published in **133 ISI-quoted journals,** most of them in **AIS-Q1** and **AIS-Q2** journals), **1 monograph** (NovaScience, USA, 823 libraries), **10 book chapters** (1 Wiley, USA; 3 Elsevier, UK; 1NovaScience, USA; 1 MDPI, Switzerland; 1 InTech, Croatia; 3 Transworld Research Network, India) and they were also reported in**10 national patents.**

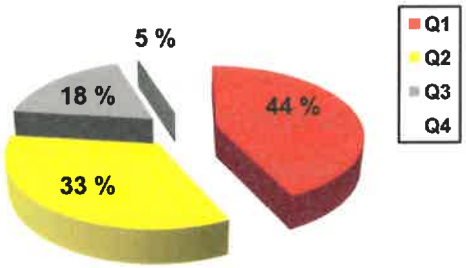

Fig. 1. Distribution of publications by the Article Impact Score (AIS) (2011– 2024).

Almost all the scientific papers published were followed by citations in AIS-quoted journals (some examples are giving in the section "Relevant citations"). The citing report is presented below.

- **3253 citations (3043 without self-citations), with an average per item of 21.83, Hirsch Index H = 34, according to *Web of Science Core Collection*;**
- **3503citations (3251 without self-citations), with an average per item of 23.66, Hirsch Index H = 36 (H = 34 without self-citations), according to*Scopus*;**
- **4256 citations, Hirsch Index H = 39, according to *Google Scholar.***

Profile addresses:

Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=56344052700

ORCID: https://orcid.org/0000-0003-1862-8165

Researcher ID: https://publons.com/researcher/AAQ-1959-2020/

Google Scholar: https://scholar.google.com/citations?user=l0dlpJ8AAAAJ&hl=en

E. The impact of research and/or innovation activity, assessed by the quality of citations in indexed journals (Journal CitationReports Q1) according to the influence score:

(a)Relevant citations:

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5. **A. Ianculescu**, A. Brăileanu, I. Pasuk, M. Zaharescu, „Phase formation study of alkaline earth-doped lanthanum chromites", *JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY*, **66** [2] (2001), 501-507; https://doi.org/10.1023/A:1013164917557 cited in:
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(b) 10 National Patents:

1. **Adelina-Carmen Ianculescu**, Cătălina-Andreea Stanciu, Bogdan Ştefan Vasile, Roxana Truşcă, Adrian Ionuţ Nicoară, Mihai Alexandru Eftimie, Vasile-Adrian Surdu, *Preparation of trivalent cerium-doped unidimensional nanostructure of barium titanate used as transducer, involves producing nanowires and nanotubes using e.g. barium acetate and titanium isopropoxide, depositing on substrate, and calcining (Procedeu de obţinere a unor nanostructuri unidimensionale de $BaTiO_3$ dopat cu ceriu cu caracteristici feroelectrice şi piezoelectrice)*, Patent no.RO133773-B1 / 28.12.2021, Derwent Primary Accession Number: 2020-01884J.
2. **Adelina-Carmen Ianculescu**, Liliana Mitoşeriu, Lavinia Petronela Curecheriu, Florin Mihai Tufescu, Florin Tufescu, *Process for obtaining a BST-type ceramic material (Procedeu de obţinere a unui material ceramicde tip BST)*, Patent no. RO125528-B1 / 28.12.2012, Derwent Primary Accession Number: 2010-J60045.
3. **Adelina-Carmen Ianculescu**, Liliana Mitoşeriu, Lavinia Petronela Curecheriu, Florin Mihai Tufescu, Florin Tufescu, *Method for measuring tunability of ceramic materials (Metodă de măsurare a tunabilităţii pentru materiale ceramice)*, Patent no. RO125567-B1 / 30.05.2011, Derwent Primary Accession Number: 2011-B47458.
4. **Adelina-Carmen Ianculescu**, Liliana Mitoşeriu, Lavinia Petronela Curecheriu, Florin Mihai Tufescu, Florin Tufescu, *BST ceramic device for measuring high voltages by galvanic separation (Dispozitiv cu ceramică de tip BST pentru măsurarea tensiunilor electrice înalte prin separare galvanică)*, Patent no. RO125566-B1 / 30.05.2011, Derwent Primary Accession Number: 2010-J60045.\
5. **Adelina-Carmen Ianculescu**, Georgeta Voicu, Daniela-Cristina Berger, Liliana Mitoşeriu, Felicia Prihor *Process of preparation by ceramic technology of high purity $BiFeO_3$-$BaTiO_3$ solid solutions, with low dielectric losses and*

ferromagnetic characteristics at room temperature (Procedeu de preparare prin tehnologi eceramică a soluţiilor solide de $BiFeO_3$-$BaTiO_3$ de înaltă puritate, cu pierderi dielectrice mici şi caracteristici feromagnetice la temperatura camerei), Brevet de invenţienr. RO123236-B1 eliberat la data de 30.03.2011, Derwent Primary Accession Number: 2011-E11079.

6. Lucian Pintilie, Ioana Pintilie, **Adelina-Carmen Ianculescu**, *Massive ferroelectric ceramics with improved properties for pyroelectric detection by concentration gradient (Ceramică masivă feroelectrică cu proprietăţi îmbunătăţite pentru detecţia piroelectrică prin gradient de concentraţie)*, Patent no. RO132197-B1 / 30.06.2020, Derwent Primary Accession Number: 2017-73426G.
7. Maria Crişan, Mălina Cristi Sultana Răileanu, Dorel Crişan, Nicolae Drăgan, Ines Niţoi, **Adelina Ianculescu**, Mihai Anastasescu, Virgil Marinescu, *Water purifying photocatalyst and its preparation process, in which the photocatalyst is presented as a titanium dioxide thin film or powder (Procedeu de obţinere a unui fotocatalizator de dioxid de titan sub formă de film sau pulbere şi fotocatalizatorul astfel obţinut)*, Patent no. RO125151-B1 / 26.02.2016, Derwent Primary Accession Number: 2010-J59792.
8. Oana Carp, Diana Beatrice Vişinescu, Greta Mihaela Socoteanu, Alina Jurcă, Mădălina Tudose, Bogdan Jurcă, Claudiu Octavian Mazilu, Carmen Ştefanescu, A. Cucoş, Petru Budrugeac, **Adelina-Carmen Ianculescu**, *Process for preparing simple and complex metal oxides (Procedeu de obtinere a oxizilor metalici simpli şi complecşi)*, Brevet de invenţienr. RO126757-B1, eliberat la data de 30.07.2013, Derwent Primary Accession Number: 2011-Q12852.
9. Ion Poeată, Alexandru Chiriac, Ion Mihăilescu, Gabriel Socol, Liviu Duţă, Andrei Popescu, Felix Sima, Marimona Miroiu, George Stan, Ştefana Petrescu, **Adelina-Carmen Ianculescu,** *Mesh made of Ti with biofunctionalized surface with nanostructured hydroxyapatite thin films for cranioplasty (Mesa de Ti cu suprafaţă biofuncţionalizată cu straturi subţiri nanostructurate de hidroxiapatită pentru cranioplastie)*, Patent no. RO128190-B1 /Derwent Primary Accession Number: 2013-F59993.
10. L. Pintilie, I. Pintilie, M. Botea, A. Iuga, M. Cioca, **A. C. Ianculescu**, D. V. Ofrim, D. M. Ofrim. B. Ofrim, *Pyroelectric detector based on ceramics with planar concentration gradient and universal pyroelectric signal amplifier for voltage mode (Detector piroelectric pe bază de ceramică cu gradient planar de concentraţie şi amplificator universal de semnal piroelectric pentru modul de*

lucru în tensiune), Patent no. RO132446-A0; Derwent Primary Accession Number: 2018-247017

F. The ability to attract research funds or to collaborate with public and/or private research organizations, evaluated by the number of research projects won and their value or by acquiring the quality of teacher/researcher/invited speaker at universities or at international eventsof prestige:

(a) Research projects /academic grants obtained through competitions and research management:

I. International projects:

1. *Romanian project leader* of the Bilateral Cooperation Program Romania - Greece *Development and Evaluation of Bioactive Multilayer Implant of Ceramic Coated Titanium for Tissues Engineering Applications*, no. C18873/2005 (2006-2007) – **5 000 EUR**.

2. *Coordinator of the research team of UPB* in 2 European COST projects: (a) *Single- and multiphase ferroics and multiferroics with restricted geometries (SIMUFER)*, FP7-ESF COST no. MP0904, (2010-2014) – ***Member of the Management Committee*** and (b) *Electroceramics from Nanopowders Produced by Innovative Methods, (ELENA)539,* (2006-2010).

II. National projects:

1. *Project leader in 5 national grants obtained through competition:*

- *Controlled functionalities in multiscale $BaTiO_3$-based systems by combining microstructural design and doping strategy (Funcţionalităţi controlate in sisteme pe bază de $BaTiO_3$ structurate la scale multiple, prin combinarea proiectării microstructurale cu strategia de dopare) – BATIFER*, Proiect no. PN-III-P4-ID-PCE-2016-0072 (2017-2019), contract no. 154/13.07.2017 – **175 645 EUR**
- *Size effects, phase formation mechanisms, and properties relations in micro- and nanostructured perovskite ferroic systems prepared by alternative routes (Efecte dimensionale, mecanisme de formare şi proprietăţi în sisteme perovskitice feroice micro şi nanostructurate, preparate prin metode alternative) – FEROMAT*, Proiect PN-II-ID-PCE-2011-3-0668 (2011-2016), contract nr. 92/05.10.2011 – **309 962 EUR**

- *Integrated development of concepts and new technologies for the preparation, characterization, modeling and applications of micro- and nanostructured ferroelectric ceramics (Dezvoltarea integrată de concepte şi tehnologii noi în domeniul preparării, caracterizării, modelării şi aplicaţiilor materialelor feroelectrice ceramice micro- şi nanostructurate) – FEROCER*, Grant CEEX, Contract nr. 208/20.07.2006 (2006-2008) – **301 386 EUR**
- *Establishing correlations between processing - formation mechanism - crystalline structure - morphological characteristics for $BaTiO_3$ nanopowders obtained by nonconventional routes (Stabilirea corelaţiilor procesare - mecanism de formare - structură cristalină - caracteristici morfologice pentru nanopulberi pe bază de titanat de bariu, obţinute prin metode neconvenţionale), Grant CNCSIS tip A, cod 281, contract nr. 139/14.03.2005 (2005-2007)* – **15 725 EUR.**
- *Structure–properties correlations in TiO_2-based oxide systems (Corelaţii structură–proprietăţi în sisteme oxidice pe bază de TiO_2)*, ANSTI grant no. 5206, Topic A11/2000 (2000-2002) – **19 757 EUR.**

2. *Partner team leader in 9 national grants obtained through competition:*

- *Controlling the electronic properties in heterostructures based on ferroelectric perovskites: from theory to applications (Controlul proprietăţilor electronice în heterostructuri bazate pe perovskiţi feroelectrici: de la teorie la aplicaţii) – CEPROFER*, Project PN-III-P4-ID-PCCF-2016-0047 (2018 - 2022), contract no. PCCF16/26.10.2018 – **268 633 EUR.**
- *Optimized pyroelectric materials through the polarization gradient concept and experimental model for a pyroelectric detector with potential for applications in monitoring high power/energy lasers (Materiale piroelectrice optimizate prin conceptul de gradient de polarizare şi model experimental de detector piroelectric cu potenţial de aplicaţii în monitorizarea laserilor de mare putere / energie) – OPTIPYROGRAD*, Project PN-II-PT-PCCA-2013-4-0470 (2014-2017), contract no. 238/09.09.2014 – **61 992 EUR.**
- *Oxide nanomaterials with photocatalytic properties applied in the advanced degradation of the xenobiotic compounds in the water (Nanomateriale oxidice cu proprietăţi fotocatalitice aplicate în degradarea avansată a compuşilor xenobiotici din apă) – NATIXEN*, Project PN-II-PT-PCCA-2011-3.1-0031 (2012-2016), contract no. 139/02.07.2012 – **78 523 EUR.**
- *Nonpolluting synthesis strategies of environmentally friendly ceramic pigments (Strategii de obţinere a unor pigmenţi ceramici prietenoşi mediului prin metode*

nepoluante) – *ECOPIG*, CNMP Grant, contract no. 32-146/2008, (2008-2011) – **41 328 EUR**.

- *Stimulation of cranio-spinale implants biointegration through coating with bioactive multilayer structures (Stimularea biointegrarii implanturilor cranio-spinale prin acoperirea cu structuri multistrat bioactive)* – *BIOSTIMP*, Grant PN2, contract no. 71-110/14.09.2007 (2007-2010) – **19 328 EUR**.
- *Molecular mechanisms of adhesion of differentiated osteoblasts from STEM cells and of bone tissue explants at orthopaedic biomaterials (Mecanismele moleculare ale adeziunii osteoblastelor diferenţiate din celule STEM şsi a explantelor de ţesut osos la biomateriale ortopedice)*– *OSTEOSTEM*, CEEX Grant, contract no. 151/2006 (2006-2008) – **30 996 EUR**.
- *Integrated technological network for processing of powders and nanostructured thin films (Reţea tehnologică integrată pentru procesarea de pulberi şi filme nanostructurate)*– *RETEBIOGLAS*, **CEEX** Grant, contract no. 307/13.09.2006 (2006-2008) – **45 461 EUR**.
- *Study of sol-gel coatings for osteointegrative functional structures (Studiul acoperirilor sol-gel pentru structuri functionale osteointegratoare)* – *OSTEOSOL*, CEEX Grant, contract no. 318/04.10.2006 (2006-2008) – **46 494 EUR**.
- *Interdisciplinary consortium to investigate multiferroic systems with magnetoelectric coupling (Consorţiu interdisciplinar pentru investigarea sistemelor multiferoice cu cuplaj magnetoelectric)* – *CONSMEMF*, CNCSIS Grant of AC type (Consortium) code 115, contract no. 196/05.06.2006 (2006-2008) – **10 332 EUR**.

(b) Teacher/researcher/invited speaker at universities of prestige

1. Associated Senior Scientist (poste rouge CNRS), *Laboratory of Electrical Engineering (current name: Laboratory of Plasma and Energy Conversion - LAPLACE) - UMR 5213,Laboratoire: Matériaux Diélectriques dans la Conversion de l'Energie*, 118 Route de Narbonne 31062, Paul Sabatier University – Toulouse III, http://www.laplace.univ-tlse.fr, Toulouse, France (February 1, 2001 – July 31, 2001 and August 1, 2001 – January 31, 2002).

CENTRE NATIONAL
DE LA RECHERCHE
SCIENTIFIQUE

LA DIRECTRICE GENERALE DU C.N.R.S

VU, le Décret n°69-894 du 26 septembre 1969 modifié concernant les chercheurs associés au C N R.S,

VU, la décision du Directeur Général n° 92-0792 du 16 décembre 1992 concernant les chercheurs associés du C.N.R.S,

VU, la note du Département Scientifique des Sciences pour l'Ingénieur en date du 12/07/2000.

VU, le courrier de M. DESPAX en date du 15/01/2001

Décision n°SG/01-09

DECIDE

La décision n°SG/00-60 en date du 22/01/01 est modifiée comme suit :

ARTICLE UNIQUE :

Madame Adelina-Carmen IANCULESCU , agent N° 197716

est recrutée en qualité de chercheur associé

Chercheur Associé C.R.A, Echelon 09 Indice majoré 622

Pour une période de 6 mois
Lire : du 01/02/2001 au 31/07/2001
Au lieu de : du 01-01-2001 au 30-06-2001
sous réserve de l'obtention du titre scientifique

Affectation : UMR 5003
Laboratoire de Génie Electrique de Toulouse
Université Paul Sabatier
118 Route de Narbonne
31062 TOULOUSE cedex

Fait à TOULOUSE, le 30 JAN. 2001

P/La Directrice Générale du C.N.R.S.
et par délégation,
La Déléguée Régionale

Pour le Délégué Régional empêché,
Katherine PIQUET-GAUTHIER

Claude DETREZ

Le Délégué Régional
Pour le Délégué Régional empêché
Madame K. PIQUET-GAUTHIER

Maïté ARMENGAUD

DÉLÉGATION MIDI-PYRÉNÉES
16 AVENUE ÉDOUARD BELIN - BP 4367 - 31055 TOULOUSE CÉDEX 4 - TÉL. : 05 61 33 60 00 - TÉLÉCOPIE : 05 62 17 89 01

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

Compte budgétaire : 64651
J'atteste de la disponibilité des crédits
La Déléguée Régionale
Pour le Délégué Régional Empêché

Katherine PIQUET-GAUTHIER
Armelle BARELLI

LA DIRECTRICE GENERALE DU C.N.R.S.

VU, le Décret n°69-894 du 26 septembre 1969 modifié concernant les chercheurs associés au C.N.R.S,

VU, la décision du Directeur Général n° 92-0792 du 16 décembre 1992 concernant les chercheurs associés du C.N.R.S.

VU, la décision de recrutement n°SG/01-09, en date du 30 janvier 2001,

VU, le courrier du Département S.T.I.C. en date du 26 juin 2001.

DECIDE
Décision n°SG/01-66

ARTICLE UNIQUE :

Mad DÉLÉGATION MIDI-PYRÉNÉES
16 AVENUE ÉDOUARD BELIN - BP 4367 - 31055 TOULOUSE CÉDEX 4 - TÉL. : 05 61 33 60 09 - TÉLÉCOPIE : 05 62 17 29 01
est recrutée en qualité de chercheur associé

Chercheur Associé C.R.A, Echelon 09, Indice majoré 622,

pour une durée supplémentaire de 6 mois

soit : **du 1er août 2001 au 31 janvier 2002**

POUR AMPLIATION
Le Délégué Régional Midi-Pyrénées
Pour le Délégué Régional Empêché,
M. ARMENGAUD

Affectation : UMR 5003 – dirigée par M. SEGUI
Laboratoire de Génie Electrique de Toulouse
Université Paul Sabatier - 118 Route de Narbonne
31062 TOULOUSE cedex

VU, le Contrôleur financier

Pour le Contrôleur Financier
et par délégation
Signé : C. PROKOCIMER

26 JUIL. 2001

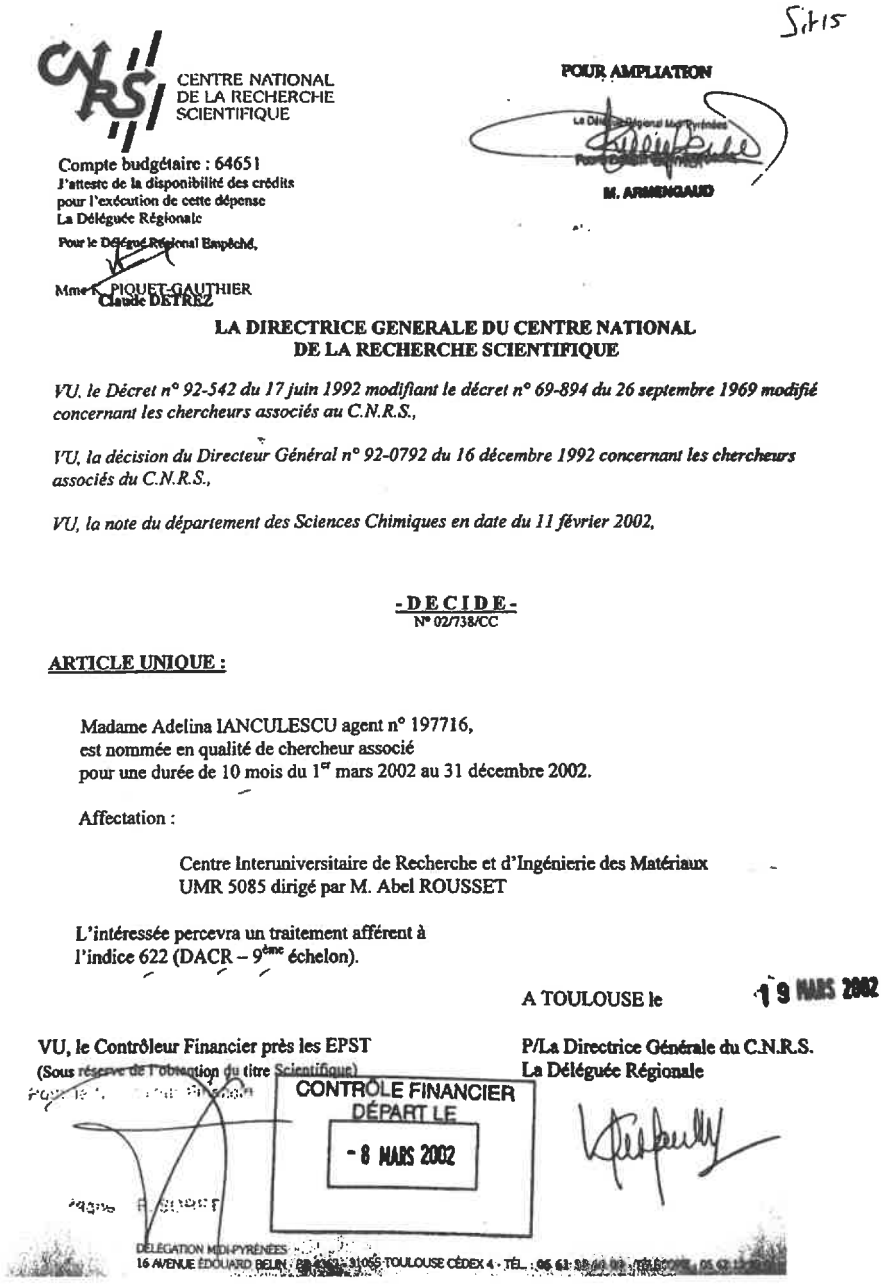
Fait à Toulouse, le 2 Août 2001

P/La Directrice Générale du C.N.R.S.
et par délégation,
La Déléguée Régionale
SIGNE
Katherine PIQUET-GAUTHIER

DÉLÉGATION MIDI-PYRÉNÉES
16 AVENUE ÉDOUARD BELIN - BP 4367 - 31055 TOULOUSE CÉDEX 4 - TÉL. : 05 61 33 60 09 - TÉLÉCOPIE : 05 62 17 29 01

2. Visiting professor, *Faculty of Science and Engineering - Department of Chemistry*, 118 Route de Narbonne 31062, Paul Sabatier – Toulouse III University (February 1, 2002 – February 28, 2002) – 8 invited lectures; Laboratoire d'Architecture et d'Analyse des Systèmes (LAAS), Toulouse, France – 1 invited lecture; L'Institut National des Sciences Appliquées (INSA), Toulouse, France – 1 invited lecture.

3. Associated Senior Scientist (poste rouge CNRS), *Inter-University Research and Engineering Centre on Materials – C.I.R.I.M.A.T. - UMR 5085, Laboratoire: Oxydes à valence mixte (OVM)*, 118 Route de Narbonne 31062, Paul Sabatier – Toulouse III University, https://cirimat.cnrs.fr/, Toulouse, France (March 1, 2002 – December 31, 2002 and January 1, 2003 – March 31, 2003).



Sitis

CENTRE NATIONAL
DE LA RECHERCHE
SCIENTIFIQUE

Compte budgétaire : 64651
J'atteste de la disponibilité des crédits
pour l'exécution de cette dépense
La Déléguée Régionale
Pour le Délégué Régional Empêché,
Mme L. PIQUET-GAUTHIER
Claude DETREZ

POUR AMPLIATION
La Déléguée Régionale Midi-Pyrénées
M. ARMENGAUD

LA DIRECTRICE GENERALE DU CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

VU, le Décret n° 92-542 du 17 juin 1992 modifiant le décret n° 69-894 du 26 septembre 1969 modifié concernant les chercheurs associés au C.N.R.S.,

VU, la décision du Directeur Général n° 92-0792 du 16 décembre 1992 concernant les chercheurs associés du C.N.R.S.,

VU, la note du département des Sciences Chimiques en date du 11 février 2002,

-DECIDE-
N° 02/738/CC

ARTICLE UNIQUE :

Madame Adelina IANCULESCU agent n° 197716,
est nommée en qualité de chercheur associé
pour une durée de 10 mois du 1er mars 2002 au 31 décembre 2002.

Affectation :

Centre Interuniversitaire de Recherche et d'Ingénierie des Matériaux
UMR 5085 dirigé par M. Abel ROUSSET

L'intéressée percevra un traitement afférent à
l'indice 622 (DACR – 9ème échelon).

A TOULOUSE le 19 MARS 2002

VU, le Contrôleur Financier près les EPST
(Sous réserve de l'obtention du titre Scientifique)

CONTRÔLE FINANCIER
DÉPART LE
- 8 MARS 2002

P/La Directrice Générale du C.N.R.S.
La Déléguée Régionale

DÉLÉGATION MIDI-PYRÉNÉES
16 AVENUE ÉDOUARD BELIN - 31055 TOULOUSE CÉDEX 4 - TÉL. : 05 61 33 60 00 - TÉLÉCOPIE : 05 61 25

CENTRE NATIONAL
DE LA RECHERCHE
SCIENTIFIQUE

SERVICE DU PERSONNEL ET DES RESSOURCES HUMAINES
Bureau du personnel

ATTESTATION

La Déléguée Régionale pour la région Midi-Pyrénées du Centre National de la Recherche Scientifique atteste que l'accueil de Madame **Adelina IANCULESCU**, en qualité de chercheur associé est prolongé pour une durée de trois mois à compter du **1er janvier 2003 jusqu'au 31 mars 2003**.

Fait pour servir et valoir ce que de droit,

Toulouse, le 18 décembre 2002

La Déléguée Régionale

Pour le Délégué Régional Empêché,
Mme K. PIQUET-GAUTHIER

Claude DETREZ

DÉLÉGATION MIDI-PYRÉNÉES
16 AVENUE ÉDOUARD BELIN - BP 4367 - 31055 TOULOUSE CÉDEX 4 - TÉL. : 05 61 33 60 00 - TÉLÉCOPIE : 05 62 17 29 01

4. Visiting professor, University of Limoges, 33 rue François Mitterrand, BP 23204, 87032, Limoges, France (October, 2005) – 4 invited lectures.

5. Visiting professor, University AlexandruIoan Cuza, Iaşi (March 7 – 15, 2008) – 3 invited lectures.

(c) Invited speaker at international eventsof prestige

23 plenary/invited/key note lectures at international conferences, e.g.:

- "Barium strontium titanate functional materials: from nanopowders to multiscale-structured bulk ceramics", 17th International Conference on Physical Chemistry (ROMPHYSCHEM), September 25-27, 2023, Bucharest, Romania – ***key note lecture***;
- "Properties of bulk graded (Ba,Sr)TiO_3 ceramics with various architectures obtained by spark plasma sintering", Ceramics in Europe Conferences, July 10-14, 2022, Cracow, Poland –***invited lecture***;
- "Ferroic inorganic perovskites used in electronics: from nanopowders to micro- and nanostructured ceramics", 3rd World Congress on Nanomaterials 2020, August 28-29, 2020, Prague, Czech Republic (Webinar) –***plenary lecture***;
- "One-Dimensional Ce^{3+}-doped $BaTiO_3$ nanostructures: synthesis and properties", EMN Meeting on Nanowires, November 26-30, 2019, Port Louis, Mauritius – ***invited lecture***;
- "Multifunctional perovskite oxides - The key of electroceramics ", 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 20), 6-9 September 2017, Poiana Braşov, Romania –***plenary lecture***;
- "Investigation of size effects and their influence on the structure and functional properties of some $BaTiO_3$-based systems with confined geometry", Electroceramics XV, June 27-29, 2016, Limoges, France – ***key note lecture***;
- "Ferroic Perovskite Materials used in Electronics: Synthesis and Properties", 14th International Conference on Fromtiers of Polymers and Advanced Materials (ICFPAM-14), Octomber 31-November 4, 2016, Daejeon, South Korea – ***invited lecture***;
- "Influence of grain size and solute content on the dielectric and ferroelectric behaviour of Ba(Ti,Zr)O_3 ceramics", the 8th International Conference on Advanced Materials (ROCAM 2015), July 7-10, 2015, Bucharest, Romania– ***key note lecture***;
- "Modification of functional properties induced by size effects in barium titanatatezirconate ceramics", 19th Romanian International Conference on Chemistry

and Chemical Engineering (RICCCE 19), 2-5 September 2015, Sibiu, Romania – ***key note lecture***, etc.

G. Professional prestige, assessed by the degree of recognition/appreciation of the candidate's scientific activity in the international academic community:

The candidate's standing in the international academic community and her contributions to world science is proved by:

(a) Books and book chapters published/edited by the candidate at prestigious international publishing houses

1. ***1 book:***

- **Adelina Ianculescu**, Liliana Mitoşeriu, „Ba(Ti,Zr)O_3 – Functional Materials: From Nanopowders to Bulk Ceramics", (3 editions) NovaScience Publishers Inc, Hauppauge New York, USA, 2010, ISBN-10: 1616687525; ISBN-13: 978-1-61761-779-9, purchased by **1213 bookstores and university libraries** belonging to universities and colleges from USA, Canada, Australia, New Zealand, India, China, Hong Kong, Taiwan, Singapore, Korea, Thailand, Malaysia.Philippines, South Africa, UK, France, Germany, Italy, Sweden, Denmark, Norway, Finland, Netherlands, Spain, Austria, Russia, Latvia, Lithuania, Georgia, Poland, Czech Republic, Hungary, Slovenia, Slovakia, Turkey, Greece,Cyprus, Bulgaria, Serbia, Lebanon, Morocco, Mexico, Brazil, Colombia, Ecuador, Armenia, Egypt, Jordan, Kuwait, Saudi Arabia, Mongolia, Bahrain, United Arab Emirates, etc., (e.g. (1) Stanford University Libraries - USA, (2) Yale University Library - USA, (3) University of Chicago Library - USA, (4) Northwestern University Library - USA, (5) Pennsylvania State University Libraries - USA, (6) Korea University Library - Seoul Korea, (7) University of Alberta Library - Canada, (8) Cardiff University Library - UK, (9) University of Groningen Library - Netherlands, (10) Maastricht University Library - Netherlands, etc., according to the website http://www.worldcat.org/).

2. ***10 book chapters:***

- Maria Crişan, **Adelina Ianculescu**, Ines Niţoi, Petruţa Oancea, Dorel Crişan, Nicolae Drăgan, Chap. 10. *Fe-doped TiO_2 nanomaterials for water depollution*, pp. 265-313 in „Nanotechnology in the Beverage Industry: Fundamentals and Applications" (2 editions), Elsevier, 2020, Ed. Tuan Anh Nguyen, ISBN: 978-0-12-819941-1; DOI: 10.1016/B978-0-12-819941-1.00010-9, purchased by **191 bookstores and university libraries** (e.g. (1) Stanford University Libraries - USA, (2) Johns Hopkins

University/Sheridan Libraries and the Milton S. Eisenhower Library - USA, (3) Cornell University Library - USA, (4) TechnischeUniversitätMünchen / Universitäts-bibliothek - Germany, (5) Eindhoven University of Technology Library -Netherlands, (6) Delft University of Technology Library - Netherlands, (7) University of Manchester Library - UK, (8) University of Edinburgh - Main Library - UK, (9) Rutgers University Libraries - USA, (10) National University of Singapore Libraries - Singapore, etc.);

- R. Dumitru, F. Manea, C. Pacurariu, L. Lupa, A. Pop, A. Cioabla, A. Surdu, **A. Ianculescu**, *Synthesis, Characterization of Nanosized $ZnCr_2O_4$ and its Photocatalytic Performance in the Degradation of Humic Acid from Drinking Water*, pp. 230-245 in "Nanomaterials for Environmental Purification and Energy Conversion" (2 editions), MDPI, 2019, Basel, Switzerland, Ed. EwaKowalska, AgataMarkowska-Szczupak, Marcin Janczarek, ISBN: 978-3-03921-814-1 (Pbk), ISBN: 978-3-03921-815-8 (PDF); DOI: 10.3390/books978-3-03921-815-8, purchased by **172 bookstores and university libraries** (e.g. (1) Universitätsbibliothek Heidelberg - Germany, (2) NiedersächsischeStaats- und UniversitätsbibliothekGöttingen - Germany, (3) Universitätsbibliothek Weimar - Germany, (4) Universitätsbibliothek Erfurt / Forschungsbibliothek Gotha - Germany, (5) KarlsruherInstitutfürTechnologie, KIT-Bibliothek - Germany, (6) UniversitätsbibliothekBraunschweig - Germany, (7) TechnischeUniversität Hamburg / Universitätsbibliothek - Germany, (8) UniversitätsbibliothekLüneburg - Germany, (9) Swansea University, Information Services and Systems (Library) - UK, (10) University of Victoria Libraries - Canada, etc.);
- **Adelina-Carmen Ianculescu**, Cătălina-Andreea Stanciu, Chap. 8. *Nanosized $BaTiO_3$-based systems*, pp. 153-200, in „Magnetic, Ferroelectric, and Multiferroic Metal Oxides" (3 editions),Part. 1, Section II, Elsevier, 2018, Ed. Biljana Stoianović, Ghenadii Korotcenkov, ISBN: 978-0-12-811180-2; DOI: 10.1016/B978-0-12-811180-2.00008-6(purchased by **216 bookstores and university libraries** (e.g. (1) MIT Libraries / Massachusetts Institute of Technology Libraries - USA, (2) Stanford University Libraries - USA, (3) University of Chicago Library - USA, (4) Princeton University Library - USA, (5) Cornell University Library - USA, (6) Pennsylvania State University Libraries - USA, (7) Johns Hopkins University/Sheridan Libraries and the Milton S. Eisenhower Library - USA, (8) McGill University Library - Canada, (9) University of Manchester Library - UK, (10) University of Edinburgh - Main Library - UK, etc.);
- **Adelina-Carmen Ianculescu**, Ioana Pintilie, Lucian Pintilie, Chap. 10.

Compositionally-graded ferroelectric ceramics and multilayers for electronic and sensing applications, pp. 223-232, in „Magnetic, Ferroelectric, and Multiferroic Metal Oxides" (3 editions),Part. 1, Section III, Elsevier, 2018, Ed. Biljana Stoianović, Ghenadii Korotcenkov, ISBN: 978-0-12-811180-2; DOI: 10.1016/B978-0-12-811180-2.00010-4, purchased by **216 bookstores and university libraries** (e.g. (1) MIT Libraries / Massachusetts Institute of Technology Libraries - USA, (2) Stanford University Libraries - USA, (3) University of Chicago Library - USA, (4) Princeton University Library - USA, (5) Cornell University Library - USA, (6) Pennsylvania State University Libraries - USA, (7) Johns Hopkins University/Sheridan Libraries and the Milton S. Eisenhower Library - USA, (8) McGill University Library - Canada, (9) University of Manchester Library - UK, (10) University of Edinburgh - Main Library - UK, etc.);

- **Adelina Ianculescu**, Daniela C. Berger, Catalina A. Vasilescu, Marius Olariu, Bogdan S. Vasile, Lavinia P. Curecheriu, Andreja Gajović, Roxana Truşcă, Chap. 1. *Incorporation mechanism and functional properties of Ce-doped $BaTiO_3$ ceramics derived from nanopowders prepared by the modified-Pechini method*, pp. 13-43, in „Nanoscale Ferroelectrics and Multiferroics: Key Processing and Characterization Issues, and Nanoscale Effects" (9 editions), vol. 1, John Wiley & Sons, Ltd, 2016, Ed. Miguel Algueró, Marty Gregg, L. Mitoseriu, Print ISBN: 978-1-118-93575-0; Online ISBN: 978-1-118-935743; DOI:10.1002/9781118935743, purchased by **758 bookstores and university libraries** (e.g.(1) MIT Libraries / Massachusetts Institute of Technology Libraries - USA, (2) Stanford University Libraries - USA, UC Berkeley Libraries - USA, (3) Pennsylvania State University Libraries - USA, (4) University of California, Davis/Shields Library - USA, (5) McGill University Library - Canada, (6) Imperial College London/Document Delivery, (7) Central Library - UK, (8) Oxford Brookes University Library - UK, (9) Sorbonne Université/PARIS-BSU-BCPR - France, (10) Bibliothek der Humboldt-Universität Berlin - Germany, etc);
- Speranţa Tanasescu, Alina Botea, **AdelinaIanculescu**, Chap.15. *Effects of Doping and Oxygen Nonstoichiometry on the Thermodynamic Properties of Some Multiferroic Ceramics*, pp. 347-372, in „Ferroelectrics – Physical Effects" (3 editions), InTech Open Acces Publisher, Rijeka, Croatia, 2011, Ed. Mickaël Lallart, ISBN: 978-953-307-453-5, purchased by **137 bookstores and university libraries** (e.g. (1) MIT Libraries / Massachusetts Institute of Technology Libraries - USA, (2) University of Chicago Library - USA, (3) McGill University Library - Canada, (4) Université de Montréal/UdeM Library - Canada, (5) University of Queensland - Australia, (6) UQ Library, Radboud University/University Library - Netherlands, (7) University of

Groningen Library - Netherlands, (8) University of Twente / University Library - Netherlands, (9) Oxford Brookes University Library - UK, (10) University of Bristol Library - UK, etc.);

- Maria Crişan, Mălina Răileanu, **Adelina Ianculescu**, Dorel Crişan, Nicolae Drăgan, Chap. 1. *Sol-gel TiO_2 - based oxide systems*, pp. 1-134, în „The Sol-Gel Process: Uniformity, Polymers and Applications" (3 editions), Ed. Rachel E. Morris, NovaScience Publisher's, Inc., Hauppauge New York, USA, (2011), ISBN: 978-1-61761-621-1, purchased by **50 bookstores and university libraries** (e.g. (1) Universitätsbibliothek Marburg - Germany, University of Leeds, (2) Brotherton Library - UK, (3) Johns Hopkins University/Sheridan Libraries and the Milton S. Eisenhower Library - USA, (4) North Carolina State University/NC State University Libraries - USA, (5) University of Cincinnati - Main Campus/Langsam Library - USA; (6) Rice University/Fondren Library - USA, (7) Tulane University/Howard-Tilton Memorial Library - USA, (8) Nanyang Technological University/NTU Libraries - Singapore, (9) University of Western Sydney - Australia, (10) Monash University Library - Australia/Penrith Campus, Ward Library, etc.);
- **Adelina Ianculescu**, Sophie Guillemet-Fritsch, Bernard Durand, Ana Brăileanu, Maria Crişan, Daniela Berger, Chap. IV. *$BaTiO_3$nanopowders and nanocrystalline ceramics: I. Nanopowders*, pag. 89-118, în „New Developments in Advanced Functional Ceramics", Transworld Research Network, India, 2007, ISBN: 81-7895-248-3 (purchased by **6 bookstores and university libraries**);
- Liliana Mitoşeriu, **Adelina Ianculescu**, Chap. II. *Ferroelectric-relaxor crossover in $PbFe_{2/3}W_{1/3}O_3$ – $PbTiO_3$ solid solutions*, pag. 19-60, în „New Developments in Advanced Functional Ceramics", Transworld Research Network, India, 2007, ISBN: 81-7895-248-3 (purchased by **6 bookstores and university libraries**);
- Liliana Mitoşeriu, Dan Ricinschi, **Adelina Ianculescu**, Chap. XII. *Multiferroic $BiFeO_3$: functional properties and possible mechanisms for high polarization*, pag. 317 – 338, în „New Developments in Advanced Functional Ceramics", Transworld Research Network, India, 2007, ISBN: 81-7895-248-3 (purchased by **6 bookstores and university libraries**).

(b) Titles, awards and national / international visibility:

1. Title of FELLOW of the European Ceramic Society, in recognition of achievements and contributions to the field of Ceramics, 2023, Lyon, France (https://ecers.org/en/ec/fellowship);

2."I.G. Murgulescu" Award of the Romanian Academy (for the year 2001), for the contribution "Correlation between the formation mechanism and the structural characteristics in perovskite-based oxide materials";

ACADEMIA ROMÂNĂ

premiul Ilie Murgulescu

ADELINA IANCULESCU

pentru Grupul de lucrări: *Corelații, mecanism de formare-caracteristici structurale în materiale oxidice pe bază de perovskiți.*

Dat în București la 19.XII.2003

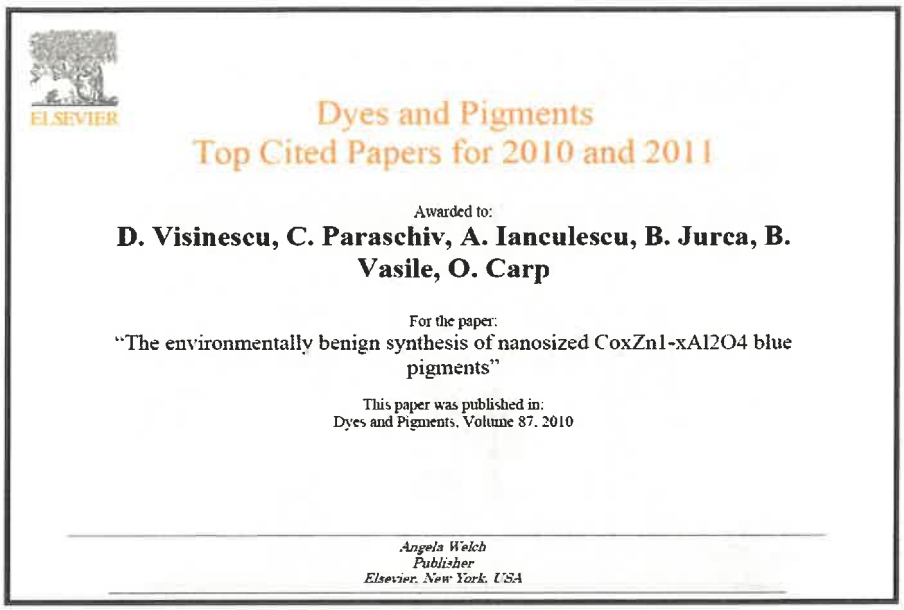
Nr. 8/1

Președinte,

Secretar general,

3. Hamamatsu Award, for the contribution „*Functional properties of the (1-x)$BiFeO_3$ – x$BaTiO_3$*, authors: F. Prihor, P. Postolache, L. Curecheriu, **A. Ianculescu,** L. Mitoşeriu, presented at the 9th European Conference on Applications of Polar Dielectrics, Roma (Italy), 2008 – 5000 €;

4. Certificate "Dyes and Pigments - Top Cited Papers for 2010 and 2011" (Elsevier New York, USA), for the group of authors: D. Visinescu, C. Paraschiv, **A. Ianculescu**, B. Jurca, B. Vasile, O. Carp for the work: "*The environmentally benign synthesis of nanosized $Co_xZn_{1-x}Al_2O_4$ blue pigments*" published in Dyes and Pigments (Elsevier), **87** [2] (2010) 125-131;



ELSEVIER

Dyes and Pigments
Top Cited Papers for 2010 and 2011

Awarded to:
D. Visinescu, C. Paraschiv, A. Ianculescu, B. Jurca, B. Vasile, O. Carp

For the paper:
"The environmentally benign synthesis of nanosized CoxZn1-xAl2O4 blue pigments"

This paper was published in:
Dyes and Pigments, Volume 87, 2010

Angela Welch
Publisher
Elsevier, New York, USA

5. Full Member of the Editorial Board of the MDPI journal "Nanomaterials", I.F. = 5.3;(https://www.mdpi.com/journal/nanomaterials/editors) 2020 - present.

Prof. Dr. Seong-Ju Hwang Website
Department of Materials Science and Engineering, Yonsei University, Seoul 03722, Korea
Interests: nanosheet, nanohybrid, batteries, electrocatalysts, photocatalysts, X-ray absorption spectroscopy

Prof. Dr. Adelina-Carmen Ianculescu Website
Department of Oxide Materials Science & Engineering, Faculty of Applied Chemistry and Materials Science "Politehnica" University of Bucharest, 1 – 7 Gheorghe Polizu, P.O. Box 12 - 134, District 1 011061 Bucharest, Romania
Interests: oxide nanomaterials (nanopowders, nanowires, nanotubes, thin films and nanostructured ceramics); bulk electroceramics (ferroelectrics, multiferroics, dielectrics, semiconductors, thermoelectrics, magnetoelectric composites: BaTiO3-based systems, BiFeO3-based systems, Pb(Zr,Ti)O3, undoped and dope; oxide catalysts (TiO2-based systems, LaFeO3, NiFe2O4, CoFe2O4, ZnAl2O4, NixZn1-xAl2O4, CoAl2O4, CoxZn1-xAl2O4)
Special Issues, Collections and Topics in MDPI journals
Special Issue in *Nanomaterials*: Ferroic Nanomaterials: From Synthesis to Applications

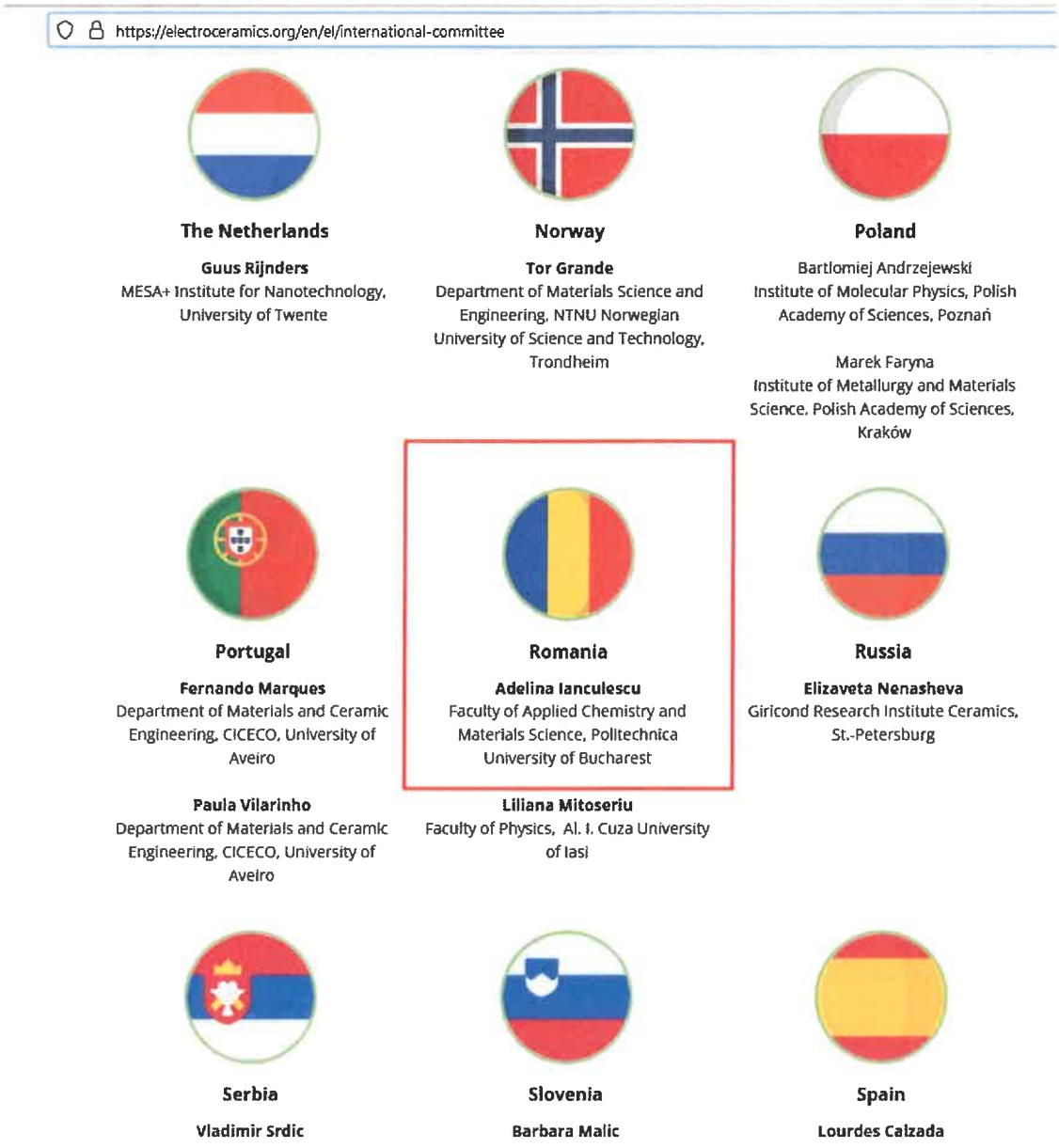
Prof. Dr. Daniela Iannazzo Website SciProfiles
Department of Engineering, University of Messina, Contrada Di Dio, I-98166 Messina, Italy
Interests: organic synthesis; advanced synthetic methodologies for the organic functionalization of nanomaterials for applications in drug delivery, biosensors, tissue engineering and in environmental field
Special Issues, Collections and Topics in MDPI journals
Special Issue in *Nanomaterials*: Graphene-Based Materials for Cancer Therapy
Special Issue in *Materials*: Future Trends in Materials for Biomedical Applications
Special Issue in *Materials*: Future Trends in Materials for Tissue Engineering Applications
Special Issue in *Pharmaceutics*: Carbon-Based Nanomaterials as Multifunctional Nanoplatforms for Cancer Diagnosis and Treatment

Prof. Dr. Maria Ibáñez Website
Institute of Science and Technology of Austria, Am Campus 1, 3400 Klosterneuburg, Austria
Interests: material science, energy, thermoelectricity, nanocrystals
Special Issues, Collections and Topics in MDPI journals
Special Issue in *Nanomaterials*: Nanostructured Materials for Thermoelectrics

Prof. Dr. Hirotaka Ihara Website
Department of Applied Chemistry and Biochemistry, Kumamoto University, Kumamoto 860-8555, Japan
Interests: bio-inspired self-assembling chemistry with small molecules and core-shell hybrid materials as intelligent fillers and their applications for solar energy conversion, optical management, separation chemistry, and so on
Special Issues, Collections and Topics in MDPI journals
Special Issue in *Nanomaterials*: Self Assembled Nanostructures for Molecular Recognition

(c) Member of Scientific Societies

1. Member of the International Committee of the Electroceramics Network (2018 – present; https://electroceramics.org/en/el/international-committee), representing Romania.



2. Member of the Council of the European Ceramic Society (2016 – present; https://ecers.org/en/ec/council-members), representing Romania.

Romania

Adrian Volceanov
University POLITEHNICA of Bucharest
SIMONa department

Adelina Ianculescu
University "POLITEHNICA" Bucharest
Faculty of Applied Chemistry and Materials Science Department of Science and Engineering of Oxide

Russia

Vladimir Shevchenko
Institute of Silicate Chemistry of Russian Academy of Sciences, St. Petersburg

Larisa Mezentseva
Institute of Silicate Chemistry of Russian Academy of Sciences, St. Petersburg

Serbia

Branko Matovic
Department of Material Science
Vinka Institute of Nuclear Science

Vladimir V. Srdic
Faculty of Technology
University of Novi Sad

Slovak Republic

Pavol Sajgalik
Slovak Academy of Sciences - Bratislava

Zoltan Lences
Institute of Inorganic Chemistry
Slovak Academy of Sciences - Bratislava

Slovenia

Matjaz Spreitzer
Advanced Materials Department
Jožef Stefan Institute - Ljubljana

Andraz Kocjan
Department for Nanostructured Materials
Jožef Stefan Institute - Ljubljana

Spain

Begoña Ferrari
Instituto de Cerámica y Vidrio, CSIC - Madrid

María Canillas Pérez
Universidad Politécnica de Madrid

Sweden

Erik Adolfsson
Swerea - Swedish Research - K'sta

Switzerland

Marcel Menet
Swiss Association for Materials Science and Technology (SVMT)

Thomas Graule
Empa - Swiss Federal Laboratories for Materials Science and Technology
Laboratory for High Performance Ceramics

Turkey

Taner Kavas (President)
Turkish Ceramic Federation - Istanbul

Alpagut Kara
Turkish Ceramic Federation - Istanbul

Member of the:

3. European Scoiety of Electron Microscopy (2011 – present);
4. Societatea Română de Microscopie Electronică (2011 – present);
5. International Confederation for Thermal Analysis and Calorimetry - ICTAC (2008 – present);

6. Comisia de Analiză Termică şi Calorimetrie din România - CATCAR (2007 – present);
7. Societatea Română de Chimie (1998 – present);
8. European Ceramic Society (1993 – present);
9. Societatea Română de Ceramică (1993 – present);

(d) Member of the scientific / organizing committees of prestigious international events

1. Member of the International Advisory Committee of the 18th Conference & Exhibition of the European Ceramic Society - ECerS, 2-6 July, 2023, Lyon, France (https://www.ecers2023.org/en/commitees/international-advisory-committee/12)

International Advisory Committee

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> José Carlos Almeida - University of Aveiro, Portugal
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> Katalin Balazsi - Centre for Energy Research, ELKH, Hungary
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> Young-Wook Kim - Korean Ceramic Society
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> Zviad Kovziridze - Georgian Ceramists Association, Georgia
> Marcel Menet - Swiss Association for Materials Science and Technology, Switzerland
> Gary Messing - American Ceramic Society
> Alexander Michaelis - Fraunhofer Institute for Ceramic Technologies and Systems, Germany
> Larisa Mezentseva - Russian Academy of Sciences, Russia
> Detlev Nicklas - Deutsche Keramische Gesellschaft e.V., Germany
> Tatsuki Ohji - National Institute of Advanced Industrial Science and Technology, Japan
> Victor Carlos Pandolfelli - Universidade Federal de São Carlos, Portugal
> Paola Palmero - Polito, Torino, Italy
> Wei Pan - Tsinghua University, China
> María Canillas Pérez - Universidad Politécnica de Madrid, Spain
> Zbigniew Pędzich - AGH Krakow, Poland
> Jacques Poirier - University of Orléans, France
> Michal Pribyl - PROMAT Praha, Czech Republik
> Klaus Reichmann - Graz University of Technology, Austria
> Jacques Rennotte - Belgian Ceramic Research Centre, Belgium
> Erling Ringgaard - Meggitt A/S, Denmark
> Pavol Sajgalik - Slovak Academy of Sciences, Slovakia
> Kristine Salma-Ancane - Riga Technical University, Latvia
> Vladimir Shevchenko - Russian Academy of Sciences, Russia
> Matjaz Spreitzer - Slovenian Chemical Society, Slovenia
> Vladimir V. Srdic - University of Novi Sad, Serbia
> Mikoaj Szafran - Warsaw University of Technology, Poland
> Richard Todd - Oxford University, UK
> Athena Tsetsekou - National Technical University of Athens, Greece
> Jingyang Wang - Chinese Ceramic Society
> Kjell Wiik - Norwegian University of Science and Technology, Norway
> Louis Winnubst - University of Twente, The Netherlands

2. Co-organiser of the Symposium 8 - Functional Ceramics of the 18th Conference & Exhibition of the European Ceramic Society - ECerS, 2-6 July, 2023, Lyon, France; (https://www.ecers2023.org/en/program/scientific-symposia/22)

Symposium 6 (S6) - Ceramics and sustainable development

Symposium 7 (S7) - Glass-ceramics and glasses

Symposium 8 (S8) - Functional Ceramics

The symposium will offer an interdisciplinary meeting point for scientists from academia and industry to present and discuss the state-of-the-art, and developments in the broad field of functional ceramics. Besides new fundamental insights, the development of advanced functional ceramics and composites with improved, new or tailored properties relies on emerging processing routes that open new application perspectives. The aim of the symposium is also to highlight advances in the understanding of structure/microstructure/properties relationships.

Topics

- Dielectrics (high K, microwave, high-temperature applications)
- Ferroics (ferroelectrics, antiferroelectrics, relaxor ferroelectrics, multiferroics)
- Magnetic materials
- Thermoelectrics
- Ionic, electronic and mixed conductors, defect chemistry and transport
- Lead-free piezoelectric ceramics (from composition and other critical elements to devices, i.e., electromechanical sensors and actuators, energy harvesting ...)
- Caloric materials and applications, cooling technologies
- Modelling, simulation and in situ characterization techniques
- Transparent optical ceramics (passive and active)
- Composite materials (for new/tailored functionalities)

Highlight Speakers

Harvey AMORIN, ICMM-CSIC, Spain
Catherine BISHOP, University of Canterbury, New Zealand
M. Lourdes CALZADA, ICMM-CSIC, Spain
Diletta GIUNTINI, Eindhoven University of Technology, Netherlands
Heli JANTUNEN, University of Oulu, Finland
Hamideh KHANBAREH , University of Bath, United Kingdom
Christian PITHAN , Forchungszentrum Jülich GmbH, PGI-7, Germany
Clive RANDALL , The Pennsylvania State University, USA
Yiquan WU , New York State College of Ceramics, Alfred University, USA
Zuo-Guang YE, Simon Fraser University, Canada

Keynote Speakers

Andreja BENCAN GOLOB, Jozef Stefan Institute, Slovenia
Mari-Ann EINARSRUD, NTNU Norwegian University of Science and Technology, Norway
Andreas KLEIN, Technical University of Darmstadt, Germany
Albert TARANCÓN, IREC, Spain

Organisers

Catherine ELISSALDE
ICMCB, CNRS, University Bordeaux, France

Barbara MALIČ
Jožef Stefan Institute, Slovenia

Co-organisers

Miguel ALGUERÓ, Instituto de Ciencia de Materiales de Madrid (ICMM), CSIC, Spain
Vincenzo BUSCAGLIA, Institute of Condensed Matter Chemistry and Technologies for Energy (ICMATE), CNR, Italy
Adrian GOLDSTEIN, Israel Ceramic and Silicate Institute, Israel
Juri KORUZA, Technical University Graz, Austria
Adelina IANCULESCU, Politechnica University of Bucharest, Romania
Pascal MARCHET, University of Limoges, France
Jürgen RÖDEL, Technical University of Darmstadt, Germany
Vladimir SRDIĆ, University of Novi Sad, Serbia
Marlies K. VAN BAEL, Hasselt University, Belgium
Paula VILARINHO, University of Aveiro, Portugal

3. Member of the International Advisory Committee of the «Ceramics in Europe» Network (ICC9, ECerS XVII, Electroceramics XVIII), July 10-14, 2022, Krakow, Poland.
(https://www.ceramicsineurope2022.org/komitet) (2022);

International Advisory Committee

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Palani Balaya - National University of Singapore, Singapore
Csaba Balázsi - Centre for Energy Research, ELKH, Hungary
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Eamonn De Barra - University of Limerick, Ireland
Carmen Baudín - Spanish Society of Ceramics and Glass, Spain
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Francis Cambier - European Ceramic Society, Belgium
Laifei Cheng - Northwestern Polytechnical University, China
Thomas W. Coyle - University of Toronto, Canada
Lidija Ćurković - University of Zagreb, Croatia
Marco Deluca - Austrian Ceramic Society, Austria
Michele Dondi - Italian Ceramic Society, Italy
Hugo Fernandes - University of Aveiro, Portugal
Begoña Ferrari - Instituto de Cerámica y Vidrio, Spain
Thomas Graule - Empa, Switzerland
Stuart Hampshire - University of Limerick, Ireland
Astri Bjørnetun Haugen - Technical University of Denmark, Denmark
Kiyoshi Hirao - National Institute of Advanced Industrial Science and Technology, Japan
Yoshihiro Hirata - Kagoshima University, Japan
Nobuhito Imanaka - Osaka University, Japan
Dongliang Jiang - Shanhai Institute of Ceramics, China
Sylvia Johnson - American Ceramic Society, USA
Alpagut Kara - Turkish Ceramic Federation, Turkey
Adelina Ianculescu - University Politehnica Bucharest, Romania
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Deug Joong Kim - Korean Ceramic Society, Korea
Walter Krenkel - University of Bayreuth, Germany
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Zviad Kovziridze - Georgian Ceramists Association, Georgia
Thomas Kronberg - Finnish Ceramic Society, Finland
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Zoltan Lences - Slovak Academy of Sciences, Slovakia
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Erkki Levänen - Tampere University of Technology Finland
Hua-Tay Lin - Guangdong University of Technology, China
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Hasan Mandal - Sakarya University, Turkey
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Branko Matović - Vinča Institute of Nuclear Sciences, Serbia
Marcel Menet - Swiss Association for Materials Science and Technology, Switzerland
Alexander Michaelis - Fraunhofer Institute for Ceramic Technologies and Systems, Germany
Larisa Mezentseva - Russian Academy of Sciences, Russia
Vojislav Mitic - Serbian Ceramic Society, Serbia
Makio Naito - Osaka University, Japan
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Detlev Nicklas - Deutsche Keramische Gesellschaft e.V., Germany
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Pavol Šajgalík - Slovak Academy of Sciences, Slovakia
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Vladimir Shevchenko - Russian Academy of Sciences, Russia
Dileep Singh - Argonne National Laboratory, USA
Mrityunjay Singh - American Ceramic Society, USA
Somnuk Sirisoonthorn - The National Science and Technology Development Agency, Thailand
Matjaz Spreitzer - Slovenian Chemical Society, Slovenia
Vladimir V. Srdic - University of Novi Sad, Serbia
Mikołaj Szafran - Warsaw University of Technology, Poland
Junichi Tatami - Yokohama National University, Japan
Richard Todd - Oxford University, UK
Samuel Marcio Toffoli - University of São Paulo, Brazil
Athena Tsetsekou - National Technical University of Athens, Greece
Wei-Hsing Tuan - National Taiwan University, Taiwan
Kjell Wiik - Norwegian University of Science and Technology, Norway
Louis Winnubst - University of Twente, The Netherlands
Moritz von Witzleben - European Ceramics Society, Germany
Pietro Vincenzini - World Academy of Ceramics, Italy
Adrian Volceanov - Romanian Ceramic Society, Romania
Tatjana Volkov-Husović - Serbian Chemical Society, Ceramic Division, Serbia
Paolo Zannini - Italian Ceramic Society, Italy
Yanchun Zhou - Aerospace Research Institute of Materials & Processing Technology, China
Yu Zhou - Harbin Institute of Technology, China

4. Member of the Scientific Committee of several editions of the International Conference of Physical Chemistry - ROMPHYSCHEM;

5. Member of the Scientific Committee of several editions of the Romanian International Conference on Chemistry and Chemical Engineering (RICCCE);

6. Member of the Organizing Committee of several editions of the European Symposium on Thermal Analysis and Calorimetry - ESTAC;

7. Member of the Organizing Committee of the international conference under the auspices of NATO "Seventh International Conference on Frontiers of Polymers and Advanced Materials", ICFPAM, Bucharest June 10-15, 2003.

(e) Review / evaluation activity

1. Reviewer for19 ISI-quoted journals (15 ISI-quoted journals from abroad and 4 ISI-quoted national journals): Journal of the American Ceramic Society – *Wiley*; Journal of the European Ceramic Society – *Elsevier*; Journal of Thermal Analysis and Calorimetry – *Springer*; Optical Materials – *Elsevier*; Applied Surface Science – *Elsevier*; Materials Science & Engineering B – *Elsevier*; Journal of Alloys and Compounds – *Elsevier*; Ceramic International – *Elsevier*; Thin Solid Films – *Elsevier*; Chemical Physics Letters – *Elsevier*; Journal of Applied Physics – *AIP (American Institute of Physics)*; Journal of Nanoparticles Research – *Springer*; Materials & Design – *Elsevier*; Nanomaterials – *MDPI*; Processing and Application of Ceramics – Serbia; Journal of Optoelectronic and Advanced Materials; Revue Roumaine de Chimie, RevistaRomână de Materiale (Romanian Journal of Materilas); Scientific Bulletin-University "Politehnica" of Bucharest (series B Chemistry and Materials Science);

2. Member of the jury of the "Student Speech Contest" held at each edition of the Conference of the European Ceramics Society (evaluator representing Romania: 2013 – present);

3. Member of the jury for the defense of the PhD thesis "Hydroxyapatite-based architectured and nano-structured bioactive coatings fabricated by cold spray", author **Puiu Alberto Ion**, coordinators: Dr. Alain Denoirjean, Dr.Fabrice Rossignol, Dr. Nicolas Tessier-Doyen, (2021) – University of Limoges, France;

4. Member of the jury for the defense of 32 PhD theses in Romania.

5. Member of the jury for the defense of 6 Habilitation theses in Romania;

6. Reviewer for 4 books / monographs.

H. Training Activity:

The candidate is the ***Coordinator of the research activity*** of the Technological Platform "Micro and Nanostructured Multifunctional Materials–3MN", due to a National CNCSIS Grant for "Interdisciplinary training and research platforms / laboratories", which attracted **1.095.199 EUR, *Coordinator of the Research Laboratory of Materials Shaping*** from "Politehnica" University of Bucharest and Head of the

Research Laboratory of "Technology of Ceramics & Refractory Products" of the Department of Science & Engineering of Oxide Materials and Nanomaterials, "Politehnica" University of Bucharest. She possesses also the quality of ***Mentor*** in 4 projects for young scientists:

• *Oxide perovskites designed by configurational entropy (EntroPer)*, PN-III-P1-1.1-PD-2021-0625 (2022 - 2024);

• *Intumescent materials for passive fire protection(IMPasFire)*, PN-III-P1-1.1-PD-2019-0709, (2020-2022);

• *Size-driven phenomena as origin for novel traits of advanced ferroelectric nanostructured (Ba,Sr)TiO_3 ceramics(SPONTAN)*, PN-III-P1-1.1-PD-2019-0739 (2020-2022) and

• *Investigation of the mesoscopic polar order and size effects in driving polarization mechanisms of tunability in perovskites (IMPOTUN)*, PN-II-RU-TE-2012-3-0150, (2013-2015).

As a research team leader, Prof. A. Ianculescu coordinated the training and scientific development of young researchers, as is the case of Dr. Cătălina-Andreea Stanciu (Vasilescu), starting with her doctoral and postdoctoral activity and continuing with her current research activity. All the young members of the research team, *i.e.* Cătălina-Andreea Stanciu (Vasilescu), Bogdan Ştefan Vasile, and, more recently, Vasile-Adrian Surdu, Adrian Ionuţ Nicoară, Vladimir Lucian Ene and Elena-Mirabela Soare, were involved in elaborating joint scientific papers, conference contributions, national patents, as well as in activities related to the national / international grants of the candidate.She also coordinated 2 projects of inter-academic cooperation Romania - France and several Socrates - Erasmus projects with University of Limoges, France, involving the exchange of students for research interships.

National University of Science and Technology "Politehnica" Bucharest
Faculty of Chemical Engineering and Biotechnologies
Departament of Science and Engineering of Oxide Materials and Nanomaterials

Ianculescu Adelina - Carmen

PUBLICATIONS IN JOURNALS QUOTED in Q1&Q2 quartals

- red zone (Q1 - AIS) – 57 articles; - yellow zone (Q2 - AIS) – 39 articles;

1. V.-A. Surdu, M.-A. Marinică, R.-E. Pătru, O.-C. Oprea, A. I., Nicoară, B. Ş. Vasile, R. Truşcă, **A.-C. Ianculescu**, High-Entropy Lead-Free Perovskite $Bi_{0.2}K_{0.2}Ba_{0.2}Sr_{0.2}Ca_{0.2}TiO_3$ Powders and Related Ceramics: Synthesis, Processing, and Electrical Properties, Nanomaterials, 13 [22] (2023), art. no. 2974, MDPI, ISSN: 2079-4991.

2. V. L. Ene, V. R. Lupu, C. V. Condor, R. E. Patru , L. M. Hrib, L. Amarande, A. I. Nicoara, L. Pintilie, A.-C. Ianculescu, *Influence of Grain Size on Dielectric Behavior in Lead-Free 0.5 $Ba(Zr_{0.2}Ti_{0.8})O_3$–0.5 $(Ba_{0.7}Ca_{0.3})TiO_3$ Ceramics*, Nanomaterials, 13 [22] (2023), art. no. 2934, MDPI, ISSN: 2079-4991.

3. L. Todan, L. Predoana, G. Petcu, S. Preda, D. C. Culita, A. Baran, R.-D. Trusca, V.-A. Surdu, B. S. Vasile, **A.-C. Ianculescu**, *Comparative Study of MgO Nanopowders Prepared by Different Chemical Methods*, Gels, 9 [8] (2023), art. no. 624, MDPI, ISSN: 2310-2861.

4. M. G. Alexandru, **A.-C. Ianculescu***, O. Carp, D. C. Culita, S. Preda, C. D. Ene, B. S. Vasile, V.-A. Surdu, A. Nicoara, F. Neatu, I. Pintilie, D. Visinescu, Deciphering the role of water and a zinc-doping process in a polyol-based approach for obtaining Zn/Co/Al-based spinels: toward "green" mesoporous inorganic pigments, Dalton Transactions, 52 (2023), 10386 - 10401, Royal Society of Chemistry, ISSN: 1477-9234.

5. L. Predoană, G. Petcu, S. Preda, J. Pandele-Cuşu, S. V. Petrescu, A. Băran, N. G. Apostol, R. M. Costescu, V.-A. Surdu, B. Ş. Vasile, **A.-C. Ianculescu**, *Copper-/Zinc-Doped TiO_2 Nanopowders Synthesized by Microwave-Assisted Sol–Gel Method*, Gels, 9 [4] (2023), art. no. 267, MDPI, ISSN: 2310-2861.

6. R.-E. Pătru, C. A.Stanciu, E. M. Soare, V.-A. Surdu, R. D. Truşcă, A. Ionuţ Nicoară, B. Ş. Vasile, G. Boni, L. Amarande, N. Horchidan, L. P. Curecheriu, L. Mitoşeriu, L. Pintilie, I. Pintilie, **A.-C. Ianculescu**, *Grain size-driven effect on the functional properties in $Ba_{0.6}Sr_{0.4}TiO_3$ ceramics consolidated by spark plasma sintering*, Journal of the European Ceramic Society, 43 [8] (2023), 3250-3265, Elsevier, ISSN (print): 0955-2219; ISSN (online): 1873-619X.

7. L. Predoană, E. M. Ciobanu, G. Petcu, S. Preda, J. Pandele-Cusu, E. M. Anghel, S. V. Petrescu, D. C. Culita, A. Baran, V.-A. Surdu, B. S. Vasile, **A. C. Ianculescu**, *Photocatalytic Performance of*

Sn–Doped TiO_2 Nanopowders for Photocatalytic Degradation of Methyl Orange Dye, Catalysts, 13 [3] (2023), art. no. 534, MDPI, ISSN: 2073-4344.

8. C. C. Gheorghiu, A. Ionescu, M.-I. Zai, D. Iancu, I. Burducea, G. Velisa, B. S. Vasile, **A. C. Ianculescu**, M. Bobeica, D. Popa, V. Leca, *Nanoscale Control of Structure and Composition for Nanocrystalline Fe Thin Films Grown by Oblique Angle RF Sputtering*, Materials, 15 [17] (2022), art. no. 6134; MDPI, ISSN: 1996-1944.

9. D. Gingasu, I. Mindru, **A.-C. Ianculescu**, L. Diamandescu, V.-A. Surdu, G. Marinescu, C. Bartha, S. Preda , M. Popa, M. C. Chifiriuc, *Soft Chemistry Synthesis and Characterization of $CoFe_{1.8}RE_{0.2}O_4$ (RE^{3+} = Tb^{3+}, Er^{3+}) Ferrite*, Magnetochemistry, 8 [2] (2022), art. no. 12; MDPI, ISSN: 2312-7481.

9. C. D. Ene, P. Cucos, **A. Ianculescu**, D. C. Culita, E. M. Anghel, A. Cucos, I. Atkinson, M. C. Chifiriuc, J. M. Calderón-Moreno, O. Carp, *Benign by design: porous spherical ZnO-alginate family via a dual-template synthesis*, Applied Surface Science, 580 (2022), art. no. 152231; Elsevier, ISSN: 0169-4332.

10. M. Botea, I. Pintilie, V.-A. Surdu, C.-A. Stanciu, R.-D. Truşcă, B. Ş. Vasile, R. Patru, **A.-C. Ianculescu**, L. Pintilie, *Structural, functional properties and enhanced thermal stability of bulk graded (Ba,Sr)TiO_3 structures obtained by spark plasma sintering*, Journal of Materials Research and Technology-JMR&T, 12 (2021), 2085-2103; Elsevier, ISSN: 2238-7854.

11. R. Dumitru (Vodă), S. Negrea, C. Pacurariu, A. Surdu, **A. Ianculescu**, A. Pop, F. Manea, *$CuBi_2O_4$ Synthesis, Characterization, and Application in Sensitive Amperometric/Voltammetric Detection of Amoxicillin in Aqueous Solutions*, Nanomaterials 11 [3] (2021), art. no. 740; MDPI, ISSN: 2079-4991.

12. L. Curecheriu, C. Harnagea, M. T. Buscaglia, I. Pallecchi, B. S. Vasile, V.-A. Surdu, **A.-C. Ianculescu**, A. Pignolet, F. Rosei, L. Mitoseriu, V. Buscaglia, *Four-Fold Multifunctional Properties in Self-Organized Layered Ferrite*, Ceramics International, 46 [18], Part A, (2020), 28621-28630, Elsevier, ISSN: 0272-8842.

13. R. Dumitru, S. Negrea, **A. Ianculescu**, C. Păcurariu, B. Vasile, A. Surdu, F. Manea, *Lanthanum ferrite ceramic powders: synthesis, characterization and electrochemical detection application*, Materials, 13 [9] (2020), art. no. 2061; MDPI, ISSN 1996-1944.

14. R. E. Pătru, C. P. Ganea, C.-A. Stanciu, V.-A. Surdu, R. Truşcă, A.-C. **Ianculescu,** I. Pintilie, L. Pintilie, *(Ba,Sr)TiO_3 solid solutions sintered from sol-gel derived powders: An insight into the composition and temperature dependent dielectric behavior*, Ceramics International, 46 [4] (2020), 4180-4190, Elsevier, ISSN: 0272-8842.

15. C. A. Stanciu, I. Pintilie, A. V. Surdu, R. Truşcă, B. S. Vasile, M. A. Eftimie, **A.-C. Ianculescu**, *Influence of sintering strategy on the characteristics of sol-gel $Ba_{1-x}Ce_xTi_{1-x/4}O_3$ ceramics*, Nanomaterials, 9 [12] (2019), art. no. 1675 (1-22), MDPI, ISSN: 2079-4991.

16. V.-A. Surdu, R. D. Truşcă, B. Ş. Vasile, O. C. Oprea, E.Tanasă, L. Diamandescu, E. Andronescu, **A. C. Ianculescu**, *$Bi_{1-x}Eu_xFeO_3$ powders: synthesis, characterization, magnetic and*

photoluminescence properties, Nanomaterials, 9 [10] (2019), art. no. 1465, MDPI, ISSN: 2079-4991.

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