




## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Victor FRUTH-OPRISAN**  
 Address   
 Mobile   
 E-mail(s) vfruth@icf.ro  
 Nationality Romanian  
 Date of birth   
 Gender Male

### Desired employment / Occupational field

**Senior Scientific Researcher  
CP1**

### Work experience

Dates 1987 → present  
 Occupation or position held Senior Scientific Researcher / Department 6 (Oxide compounds and material science) – Deputy Director - Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy  
 Main activities and responsibilities  
 - Research in the field of physical chemistry of the oxide materials (single and poly-component), particularly concerning the phase equilibrium, reaction mechanisms and correlations structure-properties in oxides (crystalline and glassy)  
 - Advanced ceramic materials with special properties (magnetic, electric, optic, mechanic, ex. superconductors, ionic conductors);  
 - Non conventional route of preparation. Nanopowders, bulk, thin and thick films, 1D nanostructures.  
 - Biomaterials; Cocrystals; Nutraceuticals

Name and address of employer Institute of Physical Chemistry "Ilie Murgulescu"  
202, Splaiul Independentei, 060021 Bucharest (Romania)  
 Type of business or sector Academic

Dates 1979 - 1987  
 Occupation or position held researcher  
 Main activities and responsibilities Technological Research in Portland Cement Industry  
 Name and address of employer PROCEMA  
6, Bulevardul Preciziei, Bucharest (Romania)  
 Type of business or sector Researcher

### Education and training

Dates 1974 - 1979  
 Title of qualification awarded "Politechnica" University of Bucharest, BSc graduation Diploma Chemical Engineering in 1979  
 Principal subjects / occupational skills covered Physical chemistry of the oxide materials  
 Name and type of organisation providing education and training University of Bucharest, Bucharest, Romania

Dates	1998																																								
Title of qualification awarded	PhD in Material Science "Politehnica" University of Bucharest,																																								
Principal subjects / occupational skills covered	Phase <i>Equilibria and properties in superconductor oxides from the system <math>M^{II} - M^{III} - Cu - O</math></i> – coordination: Prof. Dr. Doc. I. Teoreanu.																																								
Name and type of organisation providing education and training	"Politehnica" University of Bucharest, Chemical Engineering Faculty																																								
Level in national or international classification	ISCED 5																																								
<b>Personal skills and competences</b>																																									
Mother tongue(s)	<b>Romanian</b>																																								
Other language(s)																																									
Self-assessment <i>European level (*)</i>																																									
<b>French</b>																																									
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	<table border="1"> <thead> <tr> <th colspan="4">Understanding</th> <th colspan="4">Speaking</th> <th colspan="2">Writing</th> </tr> <tr> <th colspan="2">Listening</th> <th colspan="2">Reading</th> <th colspan="2">Spoken interaction</th> <th colspan="2">Spoken production</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>B1</td> <td>Independent user</td> <td>B1</td> <td>Independent user</td> <td>B2</td> <td>Independent user</td> <td>B2</td> <td>Independent user</td> <td>B2</td> <td>Independent user</td> </tr> <tr> <td>C1</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>B1</td> <td>Independent user</td> <td>B1</td> <td>Independent user</td> <td>B1</td> <td>Independent user</td> </tr> </tbody> </table> <p>(*) <i>Common European Framework of Reference (CEF) level</i></p>	Understanding				Speaking				Writing		Listening		Reading		Spoken interaction		Spoken production				B1	Independent user	B1	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	C1	Proficient user	C1	Proficient user	B1	Independent user	B1	Independent user	B1	Independent user
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C1	Proficient user	C1	Proficient user	B1	Independent user	B1	Independent user	B1	Independent user																																
Social skills and competences	Team work: I have worked in various types of team projects																																								
Organisational skills and competences	Good experience in project or team management																																								
Awards	<p>- Romanian Academy Award "Gh. Spacu" -2006 for the group of papers "Bismuth based advanced ceramics"</p> <p>- Romanian Chemical Society Award -2011</p> <p>-Silver medal at <i>Inventika 2009</i> and gold medal at <i>Eureka-Brussels 2009</i>, for patent <i>PROCEDURE FOR OBTAINING SILICON NITRIDE WITH DIRECTED STRUCTURE</i> ", OSIM file A 00229 / 27.03.2008</p> <p>Member in the board committee of ISRN Ceramics ( <a href="http://www.isrn.com/journals/ceramics/editors/">http://www.isrn.com/journals/ceramics/editors/</a> ) 2011-2017</p> <p>Member in the board committee of Romanian Journal of Materials ( <a href="http://solacolu.chim.upb.ro/ColegiuEditorialeng.htm">http://solacolu.chim.upb.ro/ColegiuEditorialeng.htm</a> )</p>																																								
<b>Other competences</b>																																									
<b>Education competence</b>	<p>Doctoral courses; Tutorials activities for students and masters; Conferences, workshops and summer school organiser.</p> <p>- Romanian Chemistry Society – member of the national comity 2016-2019</p> <p>- Romanian Ceramic Society (CEROM) -vice-president</p> <p>- European Ceramics Society (ECERS)- member</p> <p>- Romanian Electron Microscopy Society (SMER) – member of the director comity 2016-2021</p>																																								
Member of professional associations:																																									
<b>Additional information</b>																																									
Experience in other national/international programs	<ul style="list-style-type: none"> <li>• COST Action: CA22107 - Bringing Experiment and Simulation Together in Crystal Structure Prediction -national coordinator.</li> <li>• Proiectul nr. 98PTE/2022 cod proiect: PN-III-P2-2.1-PTE-2021-0393, Transfer de tehnologii inovative de co-cristalizare pentru dezvoltarea de produse functionale nutraceutice 2022-2024, Responsible of the project</li> <li>• Proiectul 634 PED, cod proiect: PN-III-P2-2.1-PED-2021-4171, Transformarea intr-un singur proces a celulozei in molecule platform: Acidul Lactic- Acronim CelMolLac 2022-2024,</li> </ul>																																								



Responsible of the project

- Interacademic research project - Piezoelectric and Multiferroic Molecular Perovskites for Flexible and Wearable Devices 2020-2023 – Director of the project
  - Interacademic research project "Porous materials based on MgO and metallic nanoparticles for catalytic applications"(AR-FRBCF-2018-2019) Belarus-Romania , Director of the project
  - Interacademic research project "Study and Development of Single-Phase Multiferroic Perovskite Ceramic and Thin Films for Multifunctional Devices" CNR Italy- Romanian Academy 2014-2016, Director of the project
  - European Regional Development Fund – ERDF, Intervention Domain: 2.2. Research and Development Infrastructure Investments and Administrative Capabilities Development, 2<sup>nd</sup> priority axis: Research, technological development and innovation for competitiveness, Project: INFRANANOCHEM "Modernizing the research and development infrastructure within the „Ilie Murgulescu" Institute of Physical Chemistry of the Romanian Academy, with extension of the interdisciplinary research in the field of nanomaterials and nanotechnologies", (2008-2011), Project Manager
  - COST MP0902 Composites of Inorganic Nanotubes and Polymers (COINAPO) (20010-2013) – MC for Romania
  - PNII (national complex project), *Ceramic materials, component of SOFC for IT (intermediate temperature)* (2007-2010), Director of the project
  - PNII (national complex project), *Superior composite armor plates for protection against multiple threatening* (2008-2011), Responsible of the project
  - PNII (national complex project), *Polymer-ceramic nanocomposites foams, for de-pollution of gas flow from thermal power plant* (2008-2011), Responsible of the project
  - CEEEX (center of excellence) project: "Optical and electrical processes in hybrid nanostructured materials obtained by intercalation of bi-dimensional crystalline structures" (2006-2008), Responsible of the project.
  - CEEEX (centre of excellence) project "Serpentinite and vinyl polymers based inorganic-organic hydride nanostructures for advanced composites" (NAHANOSCA)-(2005-2008), Responsible of the project.
  - CEEEX (centre of excellence) project "Analysis of the cement structures obtained with alternative combustible" (IARIS) (2005-2008), Responsible of the project
  - CEEEX (centre of excellence) project "Photoconduction and Photoluminescence processes in para-phenilen vinylen/carbon nanotubs and poly- Para phenilen vinylen/ oxide nanoparticles (COMPPPVNTCNPO)" (2005-2008), Responsible of the project
  - Grant AR *Ceramic films and nanopowder oxides with ionic conduction properties* (2005-2006), Director of the project
  - Scientific Cooperation *Modifications determined by twin-ions in zirconia composites* with Institute of Nuclear Science Vinca Belgrad (2005-2007), Coordinator of the Romanian group
  - *Polar Electroceramics* POLECER, thematic network in the frame of *Competitive and Sustainable Growth*, contract No G5RT-CT-2001-2005-05024 on 14/03/01 (2002-2006), Participant
  - Project COST 539, *Electroceramics from Nanopowders Produced by Innovative Methods* - ELENA (2005-2008), National responsible
  - Project COST 525 *Grain Boundary Engineering* (2003-2005), Participant
  - Interdisciplinary program for the prevention of high-risk phenomena at national scale, *Academica XIII* (155) 62 (2003): *Oxide films with mixed conduction as sensors in environment monitoring* (2003-2005), Responsible of the sub-project
  - Project MATNANTECH, *Research Centre in Nanotechnology for new Materials and Processing* (NANOMATFAB), Sub-program S10, Nr. Project 3100258, Contract 152 (310), 2003-2005, Participant
  - *Oxide materials with special electrical and magnetic properties* - Grant ANSTI/MEC 5206/1999 and 6029GR/2000 (1999-2001), Responsible of the project
- List of publications
- N. Terenti, N. Nedelko, E. Melnic, S. Preda, V. Fruth, J. Latuch, V. Ch Kravtsov, A. Slawska-Waniewska, A. Lazarescu, V. Lozan, Heterometallic Co–Sr -2,3-pyridinedicarboxylate complex and its related perovskite oxide: Synthesis, structural characterization and magnetic properties, *Journal of Solid State Chemistry* 331 (2024) 124538



- Francesco Cordero, Floriana Craciun, Francesco Trequattrini, Simona Ionita, Daniel Lincu, Raul-Augustin Mitran, Victor Fruth, Simona Brajnicov, Antoniu Moldovan and Maria Dinescu, Phase Transition and Dynamics of Defects in the Molecular Piezoelectric TMCM-MnCl<sub>3</sub> and the Effect of Partial Substitutions of Mn, *Crystals* 2023, 13, 409. <https://doi.org/10.3390/cryst13030409>
- Andrada-Ioana Damian-Buda, Cristina-Daniela Ghițulică, Andreia Cucuruz, Georgeta Voicu, Daniela Culita, Victor Fruth-Oprîșan and Lucian Toma Ciocan, Mesoporous Bioactive Glass Nanoparticles in the SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-CaO-MO (M=Mg, Zn) System: Synthesis and Properties, *J. Funct. Biomater.* 2022, 13, 180. <https://doi.org/10.3390/jfb13040180>
- Catalina Haidau, Ruxandra Nastase-Bucur, Paul Bulzu, Erika Levei, Oana Cadar, Ionut Cornel Mirea, Luchiana Faur, Victor Fruth, Irina Atkinson, Silviu Constantin and Oana Teodora Moldovan, A 16S rRNA Gene-Based Metabarcoding of Phosphate-Rich Deposits in Muierilor Cave, South-Western Carpathians. Available from: [https://www.researchgate.net/publication/360732101\\_A\\_16S\\_rRNA\\_Gene-Based\\_Metabarcoding\\_of\\_Phosphate-Rich\\_Deposits\\_in\\_Muierilor\\_Cave\\_South-Western\\_Carpathians](https://www.researchgate.net/publication/360732101_A_16S_rRNA_Gene-Based_Metabarcoding_of_Phosphate-Rich_Deposits_in_Muierilor_Cave_South-Western_Carpathians) [accessed Jun 16 2022]. *Frontiers in Microbiology* 13:877481 DOI: 10.3389/fmicb.2022.877481
- Victor Fruth, Ligia Todan, Cosmin Iulian Codrea, Iuliana Poenaru, Simona Petrescu, Ludmila Aricov, Madalina Ciobanu, Luiza Jecu, Rodica Mariana Ion, Luminita Predoana, Multifunctional Composite Coatings Based on Photoactive Metal-Oxide Nanopowders (MgO/TiO<sub>2</sub>) in Hydrophobic Polymer Matrix for Stone Heritage Conservation, *Nanomaterials* 2021, 11 (10), 2586
- Cosmin Iulian Codrea, Alexa-Maria Croitoru, Cosmin Constantin Baci, Alina Melinescu \*, Denisa Ficai, Victor Fruth, Anton Ficai, *Advances in osteoporotic bone tissue engineering Journal of Clinical Medicine* 10(2)253, January 2021, doi.org/10.3390/jcm10020253
- Marius-George Parvan, Georgeta Voicu, Alina-Ioana Badanoiu, Victor Oprisan Fruth, *Self-sensing Piezoresistive Composites Based on Cement Incorporating Low Dosage of Carbon Black Used as Multifunctional Construction Materials*, *Revista de Chimie (Rev. Chim.)*, Year 2020, Volume 71, Issue 5, 30-44
- I. Atkinson, V. Parvulescu, J. Pandele Cusu, E.M. Anghel, M. Voicescu, D. Culita, S. Somacescu, C. Munteanu, M. Šćepanović, Z.V. Popovic, V. Fruth, *Influence of preparation method and nitrogen (N) doping on properties and photo-catalytic activity of mesoporous SrTiO<sub>3</sub>*, *Journal of Photochemistry and Photobiology A: Chemistry*, Vol 368, 1 January 2019, p 41-51
- Irina Matsukevich, Irina Atkinson, Sierhei Basarab, Gabriela Petcu, Simona Petrescu, V. Parvulescu and V. Fruth, *Composite materials based on MgO and metallic nanoparticle for catalytic application*, *Romanian Journal of Materials* 49(4)483-490.
- Anamaria Zaharia, Anita-Laura Radu, Stela Iancu, Ana-Mihaela Florea, Teodor Sandu, Iulian Minca, Victor Fruth-Oprisan, Mircea Teodorescu, Andrei Sarbu and Tanta-Verona Iordache, *Bacterial cellulose-poly(acrylic acid-co-N,N'-methylene-bis-acrylamide) interpenetrated networks for the controlled release of fertilizers*, *RSC Adv.*, 2018, 8, 17635
- Floriana Craciun, Francesco Cordero, Bogdan S. Vasile, Victor Fruth, Maria Zaharescu, Irina Atkinson, Roxana Trusca, Lucian Diamandescu, Liviu C. Tanase, Pietro Galizia, Marin Cernea and Carmen Galassi, *Combined use of Mössbauer spectroscopy, XPS, HRTEM, dielectric and anelastic spectroscopy for estimating incipient phase separation in lead titanate-based multiferroics*, *Physical Chemistry Chemical Physics*, Issue 21, 2018,
- F. Craciun, F. Cordero, M. Cernea, V. Fruth, I. Atkinson, N. Stanica, B.S. Vasile, R. Trusca, A. Iuga, P. Galizia, C. Galassi, *Multiferroic (Nd,Fe)-doped PbTiO<sub>3</sub> ceramics with coexistent ferroelectricity and magnetism at room temperature*, *Ceramic International* 45(70)2018, <https://doi.org/10.1016/j.ceramint.2018.08.147>
- A. Zaharescu, A.L. Chiriac, S. Ion, A.M. Gavrilă, T. Sandu, I.I. Minca, V. Fruth, M. Teodorescu, T.V. Niculescu, *Bacterial cellulose-poly(acrylic acid-co-N,N'-methylene-bis-acrylamide) interpenetrated networks for the controlled release of fertilizers*, *RSC Advances* 8(32)17635-17644
- F. Craciun, M. Cernea, V. Fruth, M. Zaharescu, I. Atkinson, N. Stanica, L.C. Tanase, L. Diamandescu, A. Iuga, C. Galassi, *Novel multiferroic (PbNd)(TiFeMn)O<sub>3</sub> ceramics with coexisting ferroelectricity and ferromagnetism at ambient temperature*, *Materials and Design*, 110(2016) 693-704
- C. Nistor, R. Ianchis, M. Ghiurea, C.A. Nicolae, C.I. Spataru, D. Culita, J. Pandele, V. Fruth, F. Oancea, D. Donescu, *Aqueous Dispersions of Silica Stabilized with Oleic Acid Obtained by Green Chemistry*, *Nanomaterials* 6(1)9 2016, DOI: [10.3390/nano6010009](https://doi.org/10.3390/nano6010009)
- D. Ion-Ebrasu, S. Enache, Arizoiu, M. Filip, S. Preda, M. Varlam, V. Fruth, I. Stefanescu, *Tailored DC/Sputtered Niobium Oxide Properties for PEM Electrolysis Application*, *ECS Transaction* 69(17) 859-868, DOI: [10.1149/06917.0859ecst](https://doi.org/10.1149/06917.0859ecst)



- A. Zaharia, A. Sarbu, A.L. Radu, K. Jankova, A. Daugaard, S. Hvilsted, F.X. Perrin, M. Teodorescu, C. Munteanu and V. Fruth, *Preparation and characterization of polyacrylamide-modified kaolinite containing poly [acrylic acid-co-methylene bisacrylamide] nanocomposite hydrogels*, Applied Clay Science, Volume 103, January 2015, Pages 46–54
- C. Andronescu, V. Fruth, E. Volceanov, R. Scurtu, C. Munteanu, M. Zaharescu, *Microwave Sintering Of Sr And Mg-Doped Lanthanum Gallate (Lsgm) Solid Electrolytes*, Romanian Journal Of Materials, Volume 44, Issue 1 (2014) 79-87
- Radu, A.-L., Damian, C., Fruth, V., Iordache, T.-V., Zaharia, A., Iovu, H., Sarbu, A. *Unique polyvinyl acetate-mesoporous synthetic zeolite composites prepared in ultrasonic field*, Microporous and Mesoporous Materials, Volume 198, 1 November 2014, Pages 281-290
- Velciu, G., Melinescu, A., Marinescu, V., Fruth, V., Scurtu, R., Preda, M., *Synthesis and characterization of solid electrolytes based on CeO<sub>2</sub> for intermediate temperature fuel cells*, Romanian Journal of Materials, Volume 44, Issue 2, 2014, Pages 131-140
- V.Fruth, G.Tanase, I. Atkinson, J. Pandele, G. Aldica, M. Zaharescu, *Synthesis and characterization of glass-ceramic superconductors in (Pb, B)-doped Bi-Sr-Ca-Cu-O system*, June 2014, Revue Roumaine de Chimie 59(6-7):375-383
- R. Scurtu, G. Nichifor, C. Andronescu, V.Fruth, P.Osiceanu, *La<sub>0.8</sub>Sr<sub>0.2</sub>Ga<sub>0.83</sub>Mg<sub>0.17</sub>O<sub>3-δ</sub> perovskites investigated by impedance spectroscopy and X-ray photoelectron spectroscopy*, June 2014, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 76(2):67-76
- M. Prekajski, V.Fruth, C. Andronescu, L.V.Trandafilovic, J.Meletaskic, A.Kremenovic, B. Matovic, *Thermal stability of Ce<sub>1-x</sub>BixO<sub>2-δ</sub> (x = 0.1–0.5) solid solution*, November 2013, Journal of Alloys and Compounds 578, DOI: [10.1016/j.jallcom.2013.05.006](https://doi.org/10.1016/j.jallcom.2013.05.006)
- Nicolescu, T.V., Meouche, W., Branger, C., Margailan, A., Sarbu, A., Fruth, V., Donescu, D. *A new microemulsion approach for producing molecularly imprinted polymers with selective recognition cavities for gallic acid*, Polymer International 62 (6)2012 <https://doi.org/10.1002/pi.4382>
- A.Stoica, L.Jecu, A.Gheorghe, I. Raut, M. Stoenescu, M. Ghiurea, M. Danila, I.M. Deleanu, V. Fruth, *Biodegradation of Poly(vinyl alcohol) and Bacterial Cellulose Composites by Aspergillus niger*, March 2011, Journal of Environmental Polymer Degradation 19(1):69-79, DOI: 10.1007/s10924-010-0257-1
- M. Radovic, Z. Dohc'evic'-Mitrovic', A. Golubovic', V. Fruth, S. Preda, M. Scepanovic and Z.V. Popovic', *Influence of Fe<sup>3+</sup> doping on optical properties of CeO<sub>2-y</sub> nanopowders*, Ceramics International 39(5)4929-4936, 2013, <http://dx.doi.org/10.1016/j.ceramint.2012.11.087>,
- V.Fruth, G.E. Dobrescu, V.Braton, C. Hornoiu, S. Preda, C. Andronescu, M. Popa, *Structural and electrochemical features of Bi<sub>2</sub>O<sub>3</sub>-based fast oxide ion conductors*, June 2013, Journal of the European Ceramic Society 27(13-15):4421-4424, DOI: 10.1016/j.jeurceramsoc.2007.02.174
- Z. Dohcevic-Mitrovic, A. Golubovic, M. Radovic, V. Fruth, A. Kremenovic, A. Meden, B. Babic, M. Scepanovic, and Z. V. Popovic, *Mesoporous CeO<sub>2</sub> nanopowders with different particle sizes*, Phys. Status Solidi A 208, No. 6, 1399–1402 (2011) / DOI 10.1002/pssa.201000355
- A. Zaharia, A. Sarbu, V. Fruth, F. Constantin, M. Teodorescu, N. Petrov, *New inorganic/organic composite obtained by gelcasting process as precursors for porous ceramics materials*, January 2012, Revista Romana de materiale = Romanian journal of materials = RRM 42(2):172-178
- N. Preda, L. Mihut, M. Baibarac, I. Baltog, J. Pandele, C. Andronescu, V. Fruth, *Films and crystalline powder of BiI<sub>3</sub> intercalated with ammonia*, Journal of the European Ceramic Society 30, (2010) 475–479.
- V. Fruth, M. Popa, J. Calderon-Moreno, E.Tenea, M. Anastasescu, P. Osiceanu, L. Predoana, B. Malic, M. Zaharescu, *Perovskite type nanopowders and thin films obtained by chemical methods*, Processing and Application of Ceramics 4[3](2010)
- V.Fruth, C. Andronescu, C. Hornoiu, C.Tenea, A.Rusu, R. Scurtu, *Processing of (La,Sr)(Ga,Mg)O<sub>3</sub> solid electrolyte using an enhanced solid state technique*, Roumanian Journal of Materials, 41 1 (2011) 299-305
- A.L. Chiriac, A. Sarbu, S. Motoc, L. Mara, V. Fruth, S. Garea, S.O. Dima, G. Nechifor, L. Sarbu, H. Iovu, *New Method for Silicon Nitride Synthesis Via Hybrid Polymer Nanocomposites*, December 2010, MATERIALE PLASTICE 47(2):2010
- V.Fruth, M. Popa, J.C. Moreno, E.Tenea, M. Anastasescu, P. Osiceanu, E. Anghel, L. Predoana, B. Malic, M. Zaharescu, *Perovskite type nanopowders and thin films obtained by chemical methods*, September 2010, Processing and Application of Ceramics 4(3):167-182, DOI: 10.2298/PAC1003167F
- N. Preda, E. Rusen, A. Musuc, M. Enculescu, E. Matei, B. Marculescu, V. Fruth, I. Enculescu, *Synthesis and properties of poly(methyl methacrylate-2-acrylamido-2-methylpropane sulfonic acid)/PbS hybrid composite*, August 2010, Materials Research Bulletin 45(8):1008-1012,



DOI: 10.1016/j.materresbull.2010.04.002

- L. Mihut, N. Preda, M. Baibarac, I. Baltog, J. Pandele, C. Andronescu, V. Fruth, *Films and crystalline powder of Bi<sub>3</sub> intercalated with ammonia*, January 2010, Journal of the European Ceramic Society 30(2):475-479, DOI: 10.1016/j.jeurceramsoc.2009.05.046
- L. Mihut, N. Preda, M. Baibarac, I. Baltog, R. Ramer, J. Pandele, C. Andronescu, V. Fruth, *Films and crystalline powder of Pbl 2 intercalated with ammonia and pyridine*, March 2009, Journal of Materials Science: Materials in Electronics 20(S1):465-470, DOI: 10.1007/s10854-008-9681-6
- M. Popa, S. Preda, V. Fruth, K. Sedláčková, C. Balázs, D. Crespo, J.M. Calderón-Moreno. 2009. *BiFeO<sub>3</sub> films on steel substrate by the citrate method*, Thin Solid Films 517 (8): 2581-2585
- V. Fruth, E.M. Anghel, E. Tenea, C. Andronescu, I. Atkinson, M. Popa. 2008. *BiFeO<sub>3</sub> thin films deposited on different substrates*, Romanian Journal of Materials 38 (1) 2008
- M. Popa, D. Crespo, J.M. Calderon-Moreno, S. Preda, V. Fruth. 2007. *Synthesis and Structural Characterization of Single-Phase BiFeO<sub>3</sub> Powders from a Polymeric Precursor*. J. Am. Ceram. Soc. 90 (9):2723-2727
- Sârbu, A. L. Radu, L. Mara, V. Fruth, G. Nechifor, S. Motoc, S. O. Dima, M. Beda, *Inorganic-organic hybrids for advanced composites obtaining*, June 2008, Scientific Study and Research: Chemistry and Chemical Engineering IX(2):229-234
- V. Fruth, L. Mitoseriu, D. Berger, A. Ianculescu, C. Matei, S. Preda, M. Zaharescu. 2007. *Preparation and characterization of BiFeO<sub>3</sub> ceramic*, Progress in Solid State Chemistry 35 (2-4): 193-202
- V. Fruth, M. Popa, J. Calderon-Moreno, E. Anghel, M. Gartner, M. Anastasescu, P. Osiceanu, M. Zaharescu, *Chemical Solution Deposition and Characterization of BiFeO<sub>3</sub> Thin Films*, December 2007, Journal of the European Ceramic Society 27(13):4417-4420, DOI: 10.1016/j.jeurceramsoc.2007.02.175
- V. Fruth, E. Tenea, M. Gartner, M. Anastasescu, M. Zaharescu. 2007. *Preparation of BiFeO<sub>3</sub> films by wet chemical method and their characterisation*. J. Eur. Ceram. Soc. 27 (2-3): 937-940
- D. Berger, C. Matei, F. Papa, D. Macovei, V. Fruth, J.P. Deloume. 2007. *Pure and doped lanthanum manganites obtained by combustion method*. J. Eur. Ceram. Soc. 27 (13-15): 4395-4398
- C. Matei, D. Berger, S. Stoleriu, F. Popa, V. Fruth, *Synthesis of lanthanum ferrite nanopowder by combustion method*, June 2007, OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS 9(6):1793-1796
- D. Berger, C. Matei, F. Papa, G. Voicu, V. Fruth. 2007. *Pure and doped lanthanum cobaltites obtained by combustion method*. Progress in Solid State Chemistry 35 (2-4): 183-191
- M. Popa, D. Crespo, J. Calderon- Moreno, S. Preda, V. Fruth, *Synthesis and Structural Characterization of Single-Phase BiFeO<sub>3</sub> Powders From a Polymeric Precursor*, July 2007, Journal of the American Ceramic Society 90(9):2723 – 2727, DOI: 10.1111/j.1551-2916.2007.01779.x
- V. Fruth, A. Ianculescu, D. Berger, S. Preda, G. Voicu, E. Tenea, M. Popa, *Synthesis, Structure and Properties of Doped Bi<sub>2</sub>O<sub>3</sub>*, December 2006, Journal of the European Ceramic Society 26(14):3011-3016, DOI: 10.1016/j.jeurceramsoc.2006.02.019
- V. Fruth, D. Berger, C. Matei, A. Ianculescu, I. M. Popa, E. Tenea, M. Zaharescu, *Preparation and Characterization of BiFeO<sub>3</sub> Nanopowders*, September 2005, Journal de Physique IV 128(1155-4339):7-11, DOI: 10.1051/jp4:2005128002
- V. Fruth, M. Popa, D. Berger, R. Ramer, M. Gartner, A. Ciulei, M. Zaharescu. 2005. *Deposition and Characterization of Bismuth Oxide Thin Films*. J. Eur. Ceram. Soc. 25 (12): 2171-2174
- D. Berger, V. Fruth, I. Jitaru, J. Schoonman. 2004. *Synthesis and Characterisation of La<sub>1-x</sub>Sr<sub>x</sub>CoO<sub>3</sub> with Large Surface Area*. Materials Letters 58 (19): 2418-2422
- V. Fruth, M. Popa, A. Ianculescu, M. Stir, S. Preda, G. Aldica, *High-T-c phase obtained in the Pb/Sb doped Bi-Sr-Ca-Cu-O system*, June 2004, Journal of the European Ceramic Society 24(6):1827-1830, DOI: 10.1016/S0955-2219(03)00449-7
- V. Fruth, M. Popa, D. Berger, L. Predoana, M. Gartner, M. Zaharescu, *Antimony doped Bi<sub>2</sub>O<sub>3</sub> thin films*, January 2004, Key Engineering Materials 264:1245-1248
- M. Zaharescu, M. Crisan, M. Preda, V. Fruth, S. Preda, *Al<sub>2</sub>TiO<sub>5</sub> - based ceramics obtained by hydrothermal process*, November 2003, Journal of Optoelectronics and Advanced Materials 5(5):1411-14
- D. Berger, N. Landschoot, C. Ionica, F. Papa, V. Fruth, *Synthesis of Pure and Doped Lanthanum Cobaltite by the Combustion Method*, October 2003, Journal of Optoelectronics and Advanced Materials 5(3):719-724
- D. Berger, V. Fruth, I. Jitaru. 2004. *Pure and Doped Lanthanum Cobaltites Obtained From Maleate-Based Precursors*. Rev. Roum. Chim. 49 (3-4): 293-299
- M. Jitianu, V. Fruth, *Structural aspects of antimony doped Bi<sub>2</sub>O<sub>3</sub>*, October 2002, Revue



Roumaine de Chimie 47(10):1171-1176

- V. Fruth, D. Berger, M. Balasoiu, G.Tanase, M. Jitanu, I. Teoreanu, *Effect of the  $Sb_{2}O_{3}$  Addition on the  $Bi_{2}O_{3}$  Polymorphism*, January 2002, Key Engineering Materials 206-213:1357-1360
- I.Jitaru, D.Berger, V.Fruth, A. Novac, N.C. Stoica, F. Papa, *Lanthanum chromites doped with divalent transition metals*, March 2000, Ceramics International 26(2):193-196, DOI: 10.1016/S0272-8842(99)00039-5
- D. Berger, V.Fruth, P.Nita, I.Jitaru, *Wet-chemical methods for the synthesis of strontium doped  $LaCrO_{3}$  ceramic powders*, January 2000, Journal of Optoelectronics and Advanced Materials , Conference: Romanian Conference on Advanced Materials (ROCAM 2000), Volume: 2
- L.Marta, I.Gr, V.Fruth, M.Zaharescu, L.Jantschi, *HIGH-Tc SUPERCONDUCTING MATERIALS. COMPARATIVE STUDY: COPRECIPITATION VS SOLID STATE PHASE PREPARATION*, January 2000
- M.Zaharescu, V.Fruth, M.Popa, G.Tanase, N.Dragan and I.Teoreanu, *Influence of the powder characteristics on the properties of the Bi-based superconductors*, J.Eur.Ceram.Soc. 18(1998)1251-1255
- I.Jitaru, C.Guran, E. Andronescu, D.Berger, C.Matei and V.Fruth, *Heteropolynuclear complex precursors used in  $M(III)M(II)_{2}Cu_{3}O_{7-\delta}$* , Engineering Materials Vols 132-136 (1997) p.1273-1276
- I.Jitaru, C.Guran, I.Stoica, D.Berger, E.Andronescu, V.Fruth, M.Danescu, A.Novac, M. Magureanu and T.Mosteanu, *Heteropolinuclear complex compounds as precursors of  $LaCrO_{3}$* , Engineering Materials Vols 132-136 (1997) p1361-1364
- C.Guran, I.Jitaru, E.Andronescu, D.Berger, C. Matei, V. Fruth, *Heteropolynuclear Complex Precursors Used in  $M(III)M(II)_{2}Cu_{3}O_{7-\delta}$  Mixed Oxides Synthesis ( $M(III)=La, Ce, Y; M(II)=Sr, Ba$ )*, April 1997, Key Engineering Materials 132-136:1273-1276, DOI: 10.4028/www.scientific.net/KEM.132-136.1273
- I.Teoreanu, V.Fruth, M.Zaharescu, G.Tanase and Z. Hegedus, *Glass and glass-ceramic obtained in the doped BSCCO system*, Engineering Materials vols 132-136 (1997) 1235-1239
- I.Teoreanu, V.Fruth, M.Zaharescu, G.Tanase and G.Aldica, *Study on the  $Bi(Pb,Sb)-Sr-Ca-Cu-O$  superconductors prepared by the solid state reaction technique*, Rev. Roum. Chim. 40[10] (1995) 1003
- I.Teoreanu, V.Fruth, M.Zaharescu, G.Tanase and G.Aldica, *Influenta raportului  $(Sr,Ca)O:CuO$  asupra mecanismelor de formarea fazelor supraconductoare in sistemul BSCCO*, Materiale de Constructii, vol XXV, 1 (1995) 27-35
- I.Teoreanu, V.Fruth, M. Zaharescu, G.Tanase, M.Popa, R.Popescu, M.Stan, G.Aldica, *Some preparation aspects of ceramic materials with superconducting properties in the BSCCO system*, Academic Publishing House, Sofia, p336-341, 1994
- I.Teoreanu, V.Fruth, M. Zaharescu, G., Tanase, R.Popescu, M.Stan and Gh.Aldica, *The influence of dopants on the formation mechanism of the superconductive phases in the  $Bi-Sr-Ca-Cu-O$  system*, Third Euro-Ceramics vol.2, p659, Ed. By P. Duran and J.F. Fernsiez Faenza Edifice Iberica, 1994
- V. Fruth, M. Zaharescu and G. Aldica, *Promotion of the high-Tc phase in B-doped  $(Bi,Pb)_{2}Sr_{2}Ca_{2}Cu_{3}O_{y}$  superconductors prepared by melt-quenching method*, Applied Superconductivity, 1(1993) 693
- M. Zaharescu, A. Braileanu, R. Manaila, V. Fruth and G. Tanase, *Contribution to the study of formation mechanism of the compounds in the  $Bi_{2}O_{3}-(Sr,Ca)O-CuO$  system*, MAT.RES.BULL, 27 (1992) 491-498

## Patents

- Procedeu scalabil de cocrystalizare pentru obținerea unei compoziții nutraceutice pe bază de resveratrol prin metoda macinării/omogenizării în prezența fazei lichide, Fruth-Oprisani Victor, Daniel Lincu, Coca Iordache, Mihaela Popa, Jeanina Cusu-Pandele, Raul Augustin Mitran, Irina Atkinson, Simona Ionita, Mirabela Soare, Vladut Cristina, Adriana Rusu - A2023/ 00736.
- Co-cristal Febuxostat - Acridină cu eliberare prelungită, Doriana-Timeea Ungur, Cosmin Iulian Codrea, Raul-Augustin Mitran, Jeanina Pandele-Cusu, Victor Fruth Oprisan, Mihaela Maria Pop, Coca Angela Iordache, A2023/ 00737.
- Obținerea Catalitică De Carbune Mezoporos din deseuri de biomasa : Verziu Nicolae Marian, Marin Maria Minodora, Dumitru Aurelia Anca, Fruth Oprisan Victor, Pandele Cusu Jeanina, Lazar Sorana Elena, A2023/00257
- *CO-Crystals*, US 2021/0032210 A1, Feb 4, 2021, Mihaela Maria Pop, Paula Vasilichia Bulieris, Ingemar Pongratz, Victor Fruth-Oprisani, Raul-Augustin Mitran
- *Procedeu de obținere a unor pelicule nanocompozite destinate protecției componentelor*

*arhitecturale litice ale patrimoniului cultural* , A2019-00350/10.06.2019 , Fruth O V, Todan L, Predoană L, Poenaru I, Aricov L, Leontieș A, Ciobanu E, Petcu G, Ion RM, Iancu L, Jecu L, Răut I, Călin M

- *Procedeu de prelucrare a serpentinei, produse si instalatie* , RO 128499/2016 , Mara Eleonora-Luminita, Predica Vasile, Sarbu Andrei, Sarbu Liliana, Enache Lenuta, Badilita Viorel, Capota Petre, Fruth-Oprisan Victor, Garea Sorina Alexandra, Soare Victoria, Neagu Eleonora, Purcaru Victoria, Stoiciu Florentin, Gherghe Sandica Liliana, Lupu Cornelia, Ghita Mihai, Ispas Adriana, Lungu Anamaria
- *Procedeu de obtinere a spumelor ceramice din micro si nanocompozite cu geluri polimerice.* ,RO 128205 B1/2016 , Sarbu Andrei, Lungu Anamaria, Mara Eleonora Luminita, Fruth-Oprisan Victor, Teodorescu Mircea, Vasilescu Paul, Garea Sorina Alexandra, Bombos Dorin, Iovu Horia, Sarbu Liliana , Ciripoiu Anita Laura, Zaharia Emilian
- *Silice mezoporoasa si procedeu de obtinere a acesteia* , RO123556/2013 , Mara Eleonora Luminita, Velea Teodor, Sarbu Andrei, Sarbu Liliana, Beda Mariana, Abagiu Traian Alexandru. Motoc Stefania, Fruth- Oprisan Victor, Garea Sorina Alexandra, Onisei Silviana, Sirbu Elena
- *Procedeu de obtinere a nitrurii de siliciu cu structura dirijata* RO123567/2013 , Sarbu Andrei, Mara Eleonora Luminita, Abagiu Traian Alexandru, Motoc Stefania, Fruth-Oprisan Victor, Iovu Horia, Garea Sorina Alexandra, Beda Mariana, Sarbu Liliana, Radu Anita Laura, Dima Stefan Ovidiu
- Obtaining methods of the oxide thin films starting from mixtures of salts/polymers in aqueous solutions, Ro 127413 27.02.2015, Section 5/2012 registered at OSIM, V. Fruth, E. Volceanov, A. Musuc, I. Atkinson, C. Andronescu, J. Pandelescu, A. Rusu “

12.03.2024

