

PERSONAL INFORMATION

BADICA Petre


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 badica2003@yahoo.com; petre.badica@infim.ro;

Sex M | Date of birth 01/07/1967 | Nationality Romanian

WORK
EXPERIENCE

2008 -present **Senior Scientific Researcher 1st degree:**

National Institute of Materials Physics, Atomistilor 405 A, Magurele, Romania,
www.infim.ro

Scientific Research on science, engineering and physics of advanced materials
-(i) main field: materials science: synthesis, processing and characterization of materials as powders, single crystal objects, bulks, composites, nanostructured materials, thin films/heterostructures tapes/wires by conventional and unconventional methods/approaches; processing-structure-properties relationships
(ii) other fields: applied physics (superconductivity, others); biomaterials, archaeometry
(iii) materials: selected oxides, borides, carbides, composites, others

Business or sector Research

1996-2008 ***Senior Scientific Researcher II (2005-2008), Senior Scientific Researcher III (1997-2005), Scientific researcher (1996-1997)***

National Institute of Materials Physics, Atomistilor 405 A, Magurele, Romania,
www.infim.ro

Scientific Research on science, engineering and physics of advanced materials

Business or sector Research

1992-1993 ***Engineer (Research)***

Institute for Metallurgical Research (ICEM), Bucharest, Romania

-Al₂O₃-based ceramic for nylon leads

Business or sector Research

EDUCATION
AND TRAINING

1993-1996 ***Ph.D. in Engineering Sciences***

National Technical University of Ukraine 'Kiev Polytechnic Institute' Faculty of Physics and Engineering

PhD thesis title "Obtaining by cryochemical technique and properties investigations in superconducting Bi(Pb)-Sr-Ca-Cu-O ceramics"

1987-1992 Engineer (equivalent of MSc)

University 'Politehnica' Bucharest, Faculty of Materials Science and Engineering

Title of Diploma work: Experimental studies and investigations about obtaining superconducting materials in Y-Ba-Cu-O system (published in J. Superconductivity 8, 1995, 365)

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient-C2	Proficient-C2	Proficient-C2	Proficient-C2	Proficient-C2
TOEFL , 1991					
Russian	Proficient-C2	Proficient-C2	Proficient-C2	Proficient-C2	Proficient-C2
Diploma of translator Russian-Romanian in the field of 'Technics and Industry', Romanian Ministry of Culture, 1991.					
German	Independent-B1	Independent-B1	Independent-B1	Independent-B1	Independent-B1
Gothe Institute Certification, Mannheim, 2009					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Organisational / managerial skills

Among the organizers of scientific conferences:

MRS-J, IUMRS, ICCE, MRS-US, Japanese Applied Physics Society Meetings, Diaspora Workshop, Electroceramics, ROCAM, Advances in Nanophysics and Nanophotonics, SATF, ICAME

Job-related skills

Work with specialized scientific equipment for synthesis, processing and characterization of materials:

freeze drying, mechanical milling, magneto-thermal processing, Spark Plasma Sintering (SPS), Hot Press, Microwave and conventional furnaces, infrared-mirror-furnaces, MOCVD, PLD, magnetron sputtering, high magnetic field coils, manipulation of cryogenic liquids, SQUID-MPMS, PPMS, transport measurements, SEM/EDS, others.

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient	Proficient	Proficient	Proficient	Proficient

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Competent with most MSOffice programmes and with some professional software.

Other skills and competences

- A – Reviewer of articles** Reviewer for ISI Journals:
 Science, Supercond Sci Technol, J Alloy Comp, Applied Surf Sci, Cr Gr Design, Phys B, Phys. C, Solid State Sciences, J. Phys Soc Jpn, JJAP, Materials Design, Current Applied Physics, Materials Science and Engineering C, IEEE Trans Appl Supercond, J. Supercond Novel Mag., MRS Proc., Thin Solid Films, Ind Engg Chem Res, J Supercond Nov Mag, Mater Chem Phys, JMRT, others.
- B – Projects Evaluation** Evaluation of the projects
 -Romanian National University Research Council (UEFISCDI)
 -Bulgarian National Science Foundation (2009)
 - former member of the Independent Scientific Evaluation Group (ISEG) of NATO Science for Peace (2011-2014).
 - l'Agence Nationale de la Recherche (Apel a Proiect Chimie, matériaux, sciences de l'ingenierie, Edition 2015), France
 - ICC, Tohoku University, Japan (2015, 2016)
- Administrative** Vicepresident of the Scientific Council of INCDFM (elected) 2017-2019.
- Mentoring** Adviser/co-adviser/host of BSc, MSc and PhD students from University Politehnica Bucharest, University of Bucharest, and other universities from Japan, Ukraine, Japan, Italy, Singapore, Tunisia, France.
- Driving licence** B

Publications

(see attached Publication list)

216 articles (according to ISI) and (>30 other articles) in per-reviewed journals,
5 granted patents, 9 patent requests (OSIM-Romania).
9 book chapters (2 InTech, 5 Springer, 1 Nova, 1 AGIR);
1 book as Editor (Springer)

H19/ISI, citations (without self-citations on ISI) 1714.

Projects

Current:

- Team Leader project PTE 5/2020 (Partnership with industry)
- Director ERA-M project 74/2017 (Romania and Italy)
- Deputy Director POC 37_697 no 28/01.09.2016

Former:

- Team Leader PED 163/2017 (Partnership)
- Director PN-2 214/2014 (Partnership)
- Director Romanian side Copbil RO-Ukraine 3BM2016
- Team Leader PCCE 239/2010 (contract no 9, Complex Ideas)
- Team Leader PCCE C2-0006/2011 (contract no 6, Complex Ideas)
- Team Leader PN 7/2012 (Partnership)
- Team Leader Euroatom-EFDA BS-M8/2012/2013
- Director Romanian side Copbil Romania-China 505/2011
- Director Romanian side Copbil Romania-China 507/2011
- Director Romanian side Copbil Romania-China 629/2013
- Director Project Romanian Academy of Science ANSTI B, 1999

ANNEXES

Expertise field and Experience - 2019, 2020 shifted to 2021 due to Covid (14 days / year), Visiting Prof., NIMS, Tsukuba

Grants, fellowships, visiting, and collaboration

- 2015 (1 month) Visiting Professor, Tohoku University
- 2011-2017, (4x14 or 2 x 7 days/year), Visiting Scientist /Prof/Consultant, Nanyang Technological University, Singapore
- 2010, (3 month) Visiting Researcher-MANA Fellow, National Institute for Materials Science, Tsukuba, Japan
- 2008-2010, Alexander von Humboldt Fellow, Mainz University, Institute of Physics, Germany
- 2005-2008, NEDO Fellow, High Field Lab for Superconducting Materials, Institute for Materials Research, Sendai, Japan
- 2003-2005, Research Associate / Lecturer, Institute for Materials Research, Sendai, Japan
- 2002-2003, Special Researcher-NIMS Fellow, Superconductivity Center, National Institute of Materials Science, Tsukuba, Japan
- 2000-2002, JSPS post-doc Fellow, Lab of Superconducting Materials, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan
- 1999 (2.5 month) Visiting scholar, Davis, Dept. of Chem. Eng. & Materials Science, University of California, Davis, US
- 1997-1998 (2 x 15 days) Visiting Scholar, IUCN-Dubna, Lab. Neutron Physics "I.M. Frank", RUSSIA
- 1993-1996 Ph.D. fellowship of Romania-Ukraine Partnership Program at National Technical University of Ukraine, "Kiev Polytechnic Institute" (see Education and Training).

Member of -American Chemical Society

Professional Associations	-German Physical Society -Japanese Applied Physics Society (former) -Cryogenic Soc. of Japan (former) - Alumni JSPS, Romania (founding member, vicepresident) - Alumni Alexander von Humboldt, Romania - European Society of Applied Superconductivity - MRS Japan (former)
Notification, selections, awards	- Article Phys. Rev. Lett., 97, (2006) 017006 was selected by editors as cover story of the PRL issue - Article Applied Physics Letters 80, 3566 (2002) was selected for republication in Virtual Journal of Applications of Superconductivity, May 15, 2002 - Article J. Phys: Conf Series, 97, (2008) 012036 was selected for republication by European News Forum organized by IEEE Council on Superconductivity (CSC) and European Society for Applied Superconductivity - Prize for Best Poster at ASMM2D 2001, September 25-28, 2001, Mangalore, India for the work: A. Sundaresan, et al, Growth of $TiBa_2Ca_2Cu_3O_y$ superconducting thin film on CeO_2 buffered sapphire substrate. - 77 diplomas/medals/notifications at national/international invention fairs
Press coverage of research results	- P. Badica et al, Potential of using MgB_2-based materials for biomedical applications, Market Watch Nr. 180/15 Nov – 15 Dec. 2015 Page 27. - P. Badica et al, Supraconductors for the future, Market Watch Nr. 168/ 1 Sept. – 15 Oct. 2014 Page 23. - P. Badica, Convert The Light From The Sun By Integrating Er/Yb-CeO_2 Thin Film On The Si Solar Cells And Generate More Electric Energy, published online in Science Trends (https://sciencetrends.com/convert-the-light-from-the-sun-by-integrating-er-yb-ceo2-thin-film-on-the-si-solar-cells-and-generate-more-electric-energy/), 08.10.2018 - P. Badica, Bubble-Free $SrTiO_3$ Crystals 30 mm In Diameter By Flame-FusionGrowth Method, published online in Science Trends (https://sciencetrends.com/bubble-free-srtio3-crystals-30-mm-in-diameter-by-flame-fusion-growth-method/), 11.04.2019

Publication List

2021

1. Amélie Tribot, Dan Batalu, Clément Brasselet, Cédric Delattre, Lu Wei, Jonathan, Lao, Petre Badica, Philippe Michaud, Hélène de Baynast, Green polymers filaments for 3D-printing
(2021) chapter in book (Springer), (accepted)

2. Grigorescu MA, Aldica G, Pasuk I, Burdusel M, Sandu V, Kuncser A, Suzuki TS, Vasylyk O, Badica P, Partially-oriented MgB₂ superconducting bulks with addition of B₄C and cubic BN obtained by slip casting under high magnetic field and spark plasma sintering,
(2021) Mater. Res. Bull. 134, 111103
DOI: 10.1016/j.materresbull.2020.111103

3. Irina Gheorghe, Ionela Avram, Viorica Maria Corbu, Luminita Marutescu, Marcela Popa, Irina Balotesu, Ion Blajan, Venus Mateescu, Daniela Zaharia, Andreea Stefania Dumbrava, Octavia Emilia Zetu, Ionut Pecete, Violeta Corina Cristea, Dan Batalu, Mihai Alexandru Grigorescu, Mihail Burdusel, Gheorghe Virgil Aldica, Petre Badica, Adina Daniela Datcu, Nicoleta Ianovici, Coralia Bleotu, Veronica Lazar, Lia Mara Ditu, and Mariana Carmen Chifiriuc,
In Vitro Evaluation of MgB₂ Powders as Novel Tools to Fight Fungal Biodeterioration of Heritage Buildings and Objects
(2021) Frontiers in Materials 7, 01059
doi: 10.3389/fmats.2020.601059

4. Sandu V, Ionescu AM, Aldica G, Grigorescu MA, Burdusel M, Badica P, On the pinning force in high density MgB₂ samples,
(2021) Scientific Reports 11, 5951
doi: 10.1038/s41598-021-85209-2

5. Badica P. Alexandru-Dinu A, Grigorescu M, Locovei C, Kuncser A, Bartha C, Aldica G, Negru M, Batalu D, Cruceru N, Savulescu I, Kaolin clay pottery discovered in the roman city of Romula (Olt county, Romania)
(2021) Journal of Archaeological Science: Reports 36, 102899
doi.org/10.1016/j.jasrep.2021.102899

6. P. Badica, N. D. Batalu, M. C. Chifiriuc, M. Burdusel, M. A. Grigorescu, G. Aldica, I. Pasuk, A. Kuncser, M. Enculescu, M. Popa, L. G. Marutescu, I. Gheorghe, O. Thamer, C. Bleotu, G. Gradisteanu Pircalabioru, L. Opeti, V. Bonino, A. Agostino, M. Truccato, MgB₂ powders and bioevaluation of their interaction with planktonic microbes, biofilms, and tumor cells,
(2021) Journal of Materials Research and Technology 12, 2168-2184
<https://doi.org/10.1016/j.jmrt.2021.04.003>

7. P. Badica, N.D. Batalu, M. Burdusel, M.A. Grigoroscutea, G. Aldica, M. Enculescu, G. Gradisteanu Pircalabioru, M. Popa, L.G. Marutescu, B.G. Dumitriu, L. Olariu, A. Bicu, B. Purcareanu, L. Operti, V. Bonino, A. Agostino, M. Truccato, and M.C. Chifiriuc,

Antibacterial composite coatings of MgB₂ powders embedded in PVP matrix

(2021) Scientific Reports 11, 9591

<https://doi.org/10.1038/s41598-021-88885-2>

8. P. Badica, N.D. Batalu, E.F. Balint, N. Tudor, M. Burdusel, M.A. Grigosroscutea, G.V. Aldica, I.O. Trancau, M.C. Chifiriuc, F. Barbuceanu, A. Peteoca, C. Micsa, SISTEM BICOMPONENT COMPOZIT BIODEGRADABIL PENTRU MATERIALE DE OSTEOSINTEZĂ CU CONTROL BIOMECANIC, cerere brevet OSIM 2021.



2020

1. P. Badica, G.Aldica, M.A.Grigoroscutea, M. Burdusel, I. Pasuk, D. Batalu, K. Berger, A. Koblishka-Veneva, & M. R. K. Koblishka, Reproducibility of small Ge₂C₆H₁₀O₇-added MgB₂ bulks fabricated by ex situ Spark Plasma Sintering used in compound bulk magnets with a trapped magnetic field above 5T

(2020) Scientific Reports 10, 10538

[Doi.org/10.1038/s41598-020-67463-y](https://doi.org/10.1038/s41598-020-67463-y)

2. Badica P, Aldica G, Burdusel M, Grigoroscutea M, Ionescu AM, Sandu V, Popa M, Enculescu M, Pasuk I, Kuncser A, Control of the critical current density through microstructural design by Ho₂O₃ and Te co-addition into MgB₂ processed by spark plasma sintering, Springer, chapter 11 in Superconductivity from materials science to practical applications, (Eds. P. Mele, P. Badica et al),

(2020) Springer p. 303-324

(https://doi.org/10.1007/978-3-030-23303-7_11)

3. Vasylykiv O, Demirskyi D, Borodianska H, Kuncser A, Badica P, High-temperature strength of boron carbide with Pt grain-boundary framework in situ synthesized during spark plasma sintering

(2020) Ceramics International 46, 9136-9144

DOI: doi.org/10.1016/j.ceramint.2019.12.163

4. Zaki MY, Nouneh K, Ebn Touhami M, Matei E, Badica P, Burdusel M, Negrila CC, Baibarac M, Pintilie L, Galca AC, Influence of boric acid concentration on the properties of electrodeposited CZTS absorber layers
(2020) *Physica Scripta*, 95, 054001
DOI: doi.org/10.1088/1402-4896/ab6afd

5. Gozzelino, Laura; Gerbaldo, Roberto; Ghigo, Gianluca; Torsello, Daniele; Bonino, Valentina; Truccato, Marco; Grigoroscutea, Mihai; Burdusel, Mihai; Aldica, Gheorghe; Sandu, Viorel; Pasuk, Iuliana; Badica, Petre, High magnetic shielding properties of an MgB₂ cup obtained by machining a Spark-Plasma-Sintered bulk cylinder
(2020) *Superconductor Science & Technology*, 33, 044018
DOI: <https://doi.org/10.1088/1361-6668/ab7846>

6. Batalu D, Aldica G, Burdusel M, Grigoroscutea M, Pasuk I, Kuncser A, Marinela A, Badica P, Enhanced critical current density at high magnetic fields in MgB₂ with Ga/In acetylacetonate processed by spark plasma sintering,
(2020) *Journal of Materials Research and Technology*, 9, 3724-3733
DOI: <https://doi.org/10.1016/j.jmrt.2020.01.109>

7. Petre BĂDICĂ, Mihai Alexandru GRIGOROȘCUȚĂ, Mihail BURDUȘEL, Gheorghe Virgil ALDICA, Aurelian Catalin Galca, Gabriel Socol, Andreea Mihailescu, Adam Lorinczi, Material optic, sensibil la gazul NO₂ la temperaturi joase, patent request OSIM Romania (2020) A / 00105

8. K Yokoyama, T Oka, K Berger, R Dorget, M Koblishka, M Grigoroscutea, M Burdusel, D Batalu, G Aldica, P Badica, N Sakai, M Muralidhar, M Murakami, Investigation of flux jumps during pulsed field magnetization in graphene-added MgB₂ bulks
(2020) *J. Phys.: Conf Series*, 1559, 012080
Doi:10.1088/1742-6596/1559/1/012080

9. A. Alimenti, K. Torokhtii, M. Grigoroscutea, P. Badica, A. Crisan, E. Silva, N. Pompeo, Microwave investigation of pinning in Te- and cubic-BN- added MgB₂
(2020) *J. Phys.: Conf Series*, 1559, 012039
Doi:10.1088/1742-6596/1559/1/012039

10. I. Solodkyi, I. Bogomol V.Bolbut P.Loboda, A.Kuncser O.Vasylykiv P.Badica, Hierarchical composites of B₄C–TiB₂ eutectic particles reinforced with Ti
(2020) *Ceram Int.* (in press)
Doi: 10.1016/j.ceramint.2020.07.312

11. Miu L, Ionescu AM, Miu D, Burdusel M, Badica P, Batalu D, Crisan A, Second magnetization peak, rhombic-to-square Bragg vortex glass transition, and intersecting magnetic hysteresis curves in overdoped BaFe₂(As_{1-x}P_x)(₂) single crystals,
(2020) *Scientific Reports* 10, 17274
DOI: 10.1038/s41598-020-74156-z

12. Samoylov AM, Ivkov, SA, Pelipenko DI, Sharov MK, Tsyganova VO, Agapov BL, Tutov EA, Badica P, Structural Changes in Palladium Nanofilms during Thermal Oxidation
(2020) Inorganic Materials 56, 1020-1026
DOI: 10.1134/S0020168520100131

13. Lorinczi Adam, Badica Petre et al, Chalcogenide Science in Romania
(2020) Physica Status Solidi B – Basic Solid State Physics 257, 2000284
DOI: 10.1002/pssb.202000284

2019

1. Grigoroscutea MA, Sandu V, Kuncser A, Pasuk I, G. Aldica, T. Suzuki, O. Vasylyuk, P. Badica, Superconducting textured MgB₂ bulk obtained by ex situ spark plasma sintering from green compacts processed by slip casting under 12T magnetic field
(2019) Superconductor Science & Technology 32(12) 125001
DOI: doi.org/10.1088/1361-6668/ab4620

2. Tateno Y, Endo K, Arisawa S, Vlaicu AM, Nedelcu L, Preda N, Secu M, Iordanescu R, Kuncser AC, Badica P, Growth of SrTiO₃ single crystals with a diameter of about 30 mm by the Verneuil method
(2019) Crystal Growth Design 19(2) 604-612
DOI: 10.1021/acs.cgd.8b01004

3. Souli M, Bensalem Y, Secu M, Bartha C, Enculescu M, Mejri A, Kamoun-Turki N, Badica, P. Effect of high gamma radiations on physical properties of In₂S₃ thin films grown by chemical bath deposition for buffer layer applications
(2019) Results in Physics 13 102115
DOI: 10.1016/j.rinp.2019.02.051

4. Gozzelino L, Gerbaldo R, Ghigo G, Laviano F, Torsello D, Bonino V, Truccato M, Batalu D, Grigoroscutea MA, Burdusel M, Aldica GV, Badica P, Passive magnetic shielding by machinable MgB₂ bulks: measurements and numerical simulations
(2019) Supercond Sci Technol 32(3) 034004
DOI: 10.1088/1361-6668/aaf99e

5. Endo, K, Arisawa S, Badica P, Epitaxial non-c axis twin-free Bi₂Sr₂CaCu₂O_{8+delta} thin films for future THz devices
(2019) Materials 12(7) 1124
DOI: 10.3390/ma12071124

6. Batalu, D., Nastase, F., Militaru, M., Gherghiceanu, M., Badica, P.

NiTi coated with oxide and polymer films in the in vivo healing processes

(2019) Journal of Materials Research and Technology. 8(1) 914-922

DOI: 10.1016/j.jmrt.2018.06.015

7. Souli, M., Reghima, M., Secu, M., Barthä, C., Enculescu, M., Mejri, A., Kamoun-Turki, N., Badica, P.

Physical properties investigation of samarium doped calcium sulfate thin films under high gamma irradiations for space photovoltaic and dosimetric applications

(2019) Superlattices and Microstructures, 126, pp. 103-119.

DOI: 10.1016/j.spmi.2018.12.021

8. Solodkyi, I., Bezdorozhev, O., Vterkovskiy, M., Bogomol, I., Bolbut, V., Krüger, M., Badica, P., Loboda, P.

Addition of carbon fibers into B4C infiltrated with molten silicon

(2019) Ceramics International, 45 (1), pp. 168-174.

DOI: 10.1016/j.ceramint.2018.09.148

9. Vasylykiv O, Borodianska H, Demirskyi D, Li P, Suzuki TS, Grigoroscuta MA, Pasuk I, Kuncser A, Badica P, Bulks of Al-B-C obtained by reactively spark plasma sintering and impact properties by Split Hopkinson Pressure Bar,

(2019) Scientific Reports 9 19484

DOI:10.1038/s41598-019-55888-z

10. M. A. Grigoroscuta, M. Burdusel, A.-M. Ionescu, G. V. Aldica, P. Badica, Metoda de procesare in mediu activ de sinterizare si banda/fir supraconductoare in teaca metalica usoara cu miez pe baza de MgB₂, patent request OSIM Romania (2019) A / 00351

11. Petre Bădică, Mihail Burdușel, Mihai Alexandru Grigoroșcuță, Gheorghe Virgil Aldica, Procedeu de procesare rapida pentru fabricarea corpurilor solide supraconductoare de MgB₂ // Fast processing technology for the fabrication of superconducting MgB₂ bulks, patent request OSIM Romania (2019) A / 00908

2018

1. Li, C.-J., Xue, H.-X., Qu, G.-L., Shen, S.-C., Hong, Y.-P., Wang, X.-X., Liu, M.-R., Jiang, W.-M., Badica, P., He, L., Dou, R.-F., Xiong, C.-M., Lü, W.-M., Nie, J.-C.

Influence of In-Gap States on the Formation of Two-Dimensional Electron Gas at ABO₃/SrTiO₃ Interfaces

(2018) Scientific Reports, 8 (1), art. no. 195.

DOI: 10.1038/s41598-017-18583-5

2. Aldica, G., Burdusel, M., Popa, S., Pasuk, I., Ionescu, A.M., Kuncser, A., Badica, P.

Ex Situ Spark Plasma Sintering of Short Powder-in-Tube MgB₂ Tapes with Open and Closed Ends

(2018) Journal of Superconductivity and Novel Magnetism, 31 (11), pp. 3423-3432.

DOI: 10.1007/s10948-018-4616-9

3. Grigoroscuta, M., Secu, M., Trupina, L., Enculescu, M., Besleaga, C., Pintilie, I., Badica, P.
Enhanced near-infrared response of a silicon solar cell by using an up-conversion phosphor film of Yb/Er – co-doped CeO₂
(2018) Solar Energy, 171, pp. 40-46.
DOI: 10.1016/j.solener.2018.06.057

4. Badica, P., Batalu, D., Burdusel, M., Grigoroscuta, M.A., Aldica, G.V., Enculescu, M., Gabor, R.A., Wang, Z., Huang, R., Li, P,
Compressive properties of pristine and SiC-Te-added MgB₂ powders, green compacts and spark-plasma-sintered bulks
(2018) Ceramics International, 44 (9), pp. 10181-10191.
DOI: 10.1016/j.ceramint.2018.03.008

5. Batalu, D., Nakamura, T., Enculescu, M., Popa, S., Pasuk, I., Aldica, G., Ionescu, A.M., Badica, P.
A Comparative Study of Ge-Based Organometallic Additions to MgB₂
(2018) IEEE Transactions on Applied Superconductivity, 28 (4), art. no. 7000205, .
DOI: 10.1109/TASC.2018.2808366

6. Aldica, G., Popa, S., Enculescu, M., Pasuk, I., Ionescu, A.M., Badica, P.
Dwell Time Influence on Spark Plasma-Sintered MgB₂
(2018) Journal of Superconductivity and Novel Magnetism, 31 (2), pp. 317-325.
DOI: 10.1007/s10948-017-4236-9

7. Samoylov AM, Ryabtsev SV, Popov VN, Badica P,
Palladium (II) oxide nanostructures as promising materials for gas sensors, ed. Kizas G, IntechOpen, chapter 12 in Novel nanomaterials synthesis and applications
(2018) pp. 211-229
DOI: 10.5772/intechopen.70149

8. Samoylov AM, Gvarishvili LJ, Ivkov SA, Pelipenko DI, Badica P,
Two-stage synthesis of Palladium (II) oxide nanocrystalline powders for gas sensor application,
(2018) Res. Dev. Mater. Sci. 8(1) 1-7.
DOI: 10.31031/RDMS.2018.08.000682

9. Mircea Negru, Dan Batalu, Petre Badica, Florica Mihu, Ingrid Poll,
Recycling of Roman bricks from Romula,
HERITAGE 2018 – 6th International Conference on Heritage and Sustainable Development,
2018, 12-15 June, Granada, Spain, p. 1451-1462.
e-ISBN 978-84-338-62

10. Badica P, Batalu D, Grigoroscuta MA, Burdusel M, Aldica GV, Popa M, Chifiriuc MC,

Pulberi, corpuri sinterizate si acoperiri pe baza de MgB₂ rezistente la colonizarea microbiana si cu eficienta impotriva filmelor microbiene si metoda de utilizare a acestora, (Powders, sintered bodies and coatings based on MgB₂ resistant to microbial colonization and efficient against microbial biofilms, and a method of their application), patent request OSIM (Romania)
(2018) A / 01129

Awarded:



11. Badica P, Batalu D, Grigorescu MA, Savulescu I, Negru M, Fabrication and ceramic material for bricks replicas of the Roman ones, patent request OSIM (Romania)
(2018) A/00740

2017

1. Solodkyi, I., Bogomol, I., Loboda, P., Batalu, D., Vlaicu, A.M., Badica, P.

Floating zone partial re-melting of B4C infiltrated with molten Si

(2017) Ceramics International, 43 (17), pp. 14718-14725.

DOI: 10.1016/j.ceramint.2017.07.203

2. Badica, P., Burdusel, M., Popa, S., Hayasaka, Y., Ionescu, M.A., Aldica, G.

Addition of Sb₂O₅ into MgB₂ Superconductor Obtained by Spark Plasma Sintering

(2017) Journal of Superconductivity and Novel Magnetism, 30 (8), pp. 2073-2080.

DOI: 10.1007/s10948-017-4016-6

3. Ionescu, A.M., Ivan, I., Enculescu, M., Grigorescu, M., Miu, D., Valeanu, M., Badica, P., Miu, L.

From an Anomalous Peak Effect to a Second Magnetization Peak in Nb-rich Nb-Ti Alloys

(2017) Journal of Superconductivity and Novel Magnetism, 30 (4), pp. 1103-1108.

DOI: 10.1007/s10948-016-3670-4

4. Aldica, G., Matei, C., Paun, A., Batalu, D., Ferbinteanu, M., Badica, P.

Thermal analysis on C₆H₁₀Ge₂O₇-doped MgB₂

(2017) Journal of Thermal Analysis and Calorimetry, 127 (1), pp. 173-179.

DOI: 10.1007/s10973-016-5877-9

5. Burdusel, M., Ionescu, A.M., Grigorescu, M., Batalu, D., Enculescu, M., Popa, S., Mihalache, V., Aldica, G., Badica, P.

Powder-in-tube tapes of MgB₂ in Fe-sheath processed by Ex-situ Spark Plasma Sintering

(2017) UPB Scientific Bulletin, Series B: Chemistry and Materials Science, 79 (2), pp. 155-172.

6. Ozturk, K., Dancer, C.E.J., Savaskan, B., Aksoy, C., Guner, B., Badica, P., Aldica, G., Celik, S.

The investigation on the regional nanoparticle Ag doping into MgTi_{0.06}B₂ bulk for improvement the magnetic levitation force and the bulk critical current

(2017) Journal of Alloys and Compounds, 724, pp. 427-434.

DOI: 10.1016/j.jallcom.2017.07.065

7. Grigorescu, M Burdusel M, Aldica G, Badica P,

Processing method and superconducting tape / wire in a light metal sheath with MgB₂ core, patent request

(2017) A / 00589

Awarded:



2016

1. Batalu, D., Paun, A., Ferbinteanu, M., Aldica, G., Vlaicu, A.M., Teodorescu, V.S., Badica, P.

Thermal analysis of repa-germanium (Ge-132)

(2016) Thermochimica Acta, 644, pp. 20-27.

DOI: 10.1016/j.tca.2016.10.005

2. Badica, P., Burdusel, M., Popa, S., Pasuk, I., Ivan, I., Borodianska, H., Vasylykiv, O., Kuncser, A., Ionescu, A.M., Miu, L., Aldica, G.

Reactive spark plasma sintering of MgB₂ in nitrogen atmosphere for the enhancement of the high-field critical current density

(2016) Superconductor Science and Technology, 29 (10), art. no. 105020, .

DOI: 10.1088/0953-2048/29/10/105020

3. Florea, N.M., Lungu, A., Balanuca, B., Badica, P., Craciun, L., Damian, C.M., Enculescu, M., Ionescu, C., Tihan, G., Iovu, H.

Effect of polyhedral oligomeric silsesquioxane nanoreinforcement on the properties of epoxy resin/monoglycidylether-terminated poly(dimethylsiloxane) nanocomposites

(2016) High Performance Polymers, 28 (6), pp. 724-734.

DOI: 10.1177/0954008315595447

4. Batalu, N.D., Semenescu, A., Mates, I.M., Negoita, O.D., Purcarea, V.L., Badica, P.

Computer assisted design and finite element analysis of contact lenses

(2016) Romanian journal of ophthalmology, 60 (3), pp. 132-137.

5. Aldica, G., Burdusel, M., Popa, S., Hayasaka, Y., Badica, P.

Graphene addition to MgB₂ superconductor obtained by ex-situ spark plasma sintering technique

(2016) Materials Research Bulletin, 77, pp. 205-211.

DOI: 10.1016/j.materresbull.2016.01.041

6. Vasylykiv, O., Demirskyi, D., Borodianska, H., Sakka, Y., Badica, P.

High temperature flexural strength in monolithic boron carbide ceramic obtained from two different raw powders by spark plasma sintering

(2016) Journal of the Ceramic Society of Japan, 124 (5), pp. 587-592.

DOI: 10.2109/jcersj2.15289

7. Vasylykiv, O., Demirskyi, D., Badica, P., Nishimura, T., Tok, A.I.Y., Sakka, Y., Borodianska, H.

Room and high temperature flexural failure of spark plasma sintered boron carbide

(2016) Ceramics International, 42 (6), pp. 7001-7013.

DOI: 10.1016/j.ceramint.2016.01.088

8. Sandu, V., Aldica, G., Popa, S., Enculescu, M., Badica, P.

Tellurium addition as a solution to improve compactness of ex-situ processed MgB₂-SiC superconducting tapes

(2016) Superconductor Science and Technology, 29 (6), art. no. 065012, .

DOI: 10.1088/0953-2048/29/6/065012

9. Batalu, D., Aldica, G., Badica, P.

Ge₂C₆H₁₀O₇-Added MgB₂ Superconductor Obtained by Ex-Situ Spark Plasma Sintering

(2016) IEEE Transactions on Applied Superconductivity, 26 (3), art. no. 7416627, .

DOI: 10.1109/TASC.2016.2533560

10. Semenescu, A., Radu-Ioniț ă, F., Mateș , I.M., Bădică, P., Batalu, N.D., Negoita, O.D., Purcarea, V.L.

Finite element analysis on a medical implant

(2016) Romanian journal of ophthalmology, 60 (2), pp. 116-119.

11. Endo, K., Arisawa, S., Kaneko, T., Tsuyumoto, I., Tateno, Y., Badica, P.

Characterization by X-Ray Diffraction of Non-c-Axis Epitaxial Bi₂Sr₂CaCu₂O_{8+δ} Thin Films

(2016) IEEE Transactions on Applied Superconductivity, 26 (3), art. no. 7405281, .

DOI: 10.1109/TASC.2016.2529005

12. Ionescu, A.M., Aldica, G., Popa, S., Enculescu, M., Sandu, V., Pasuk, I., Kuncser, A., Miu, L., Badica, P.

Spark plasma sintered MgB₂ co-added with c-BN and C60

(2016) Materials Chemistry and Physics, 170, pp. 201-209.

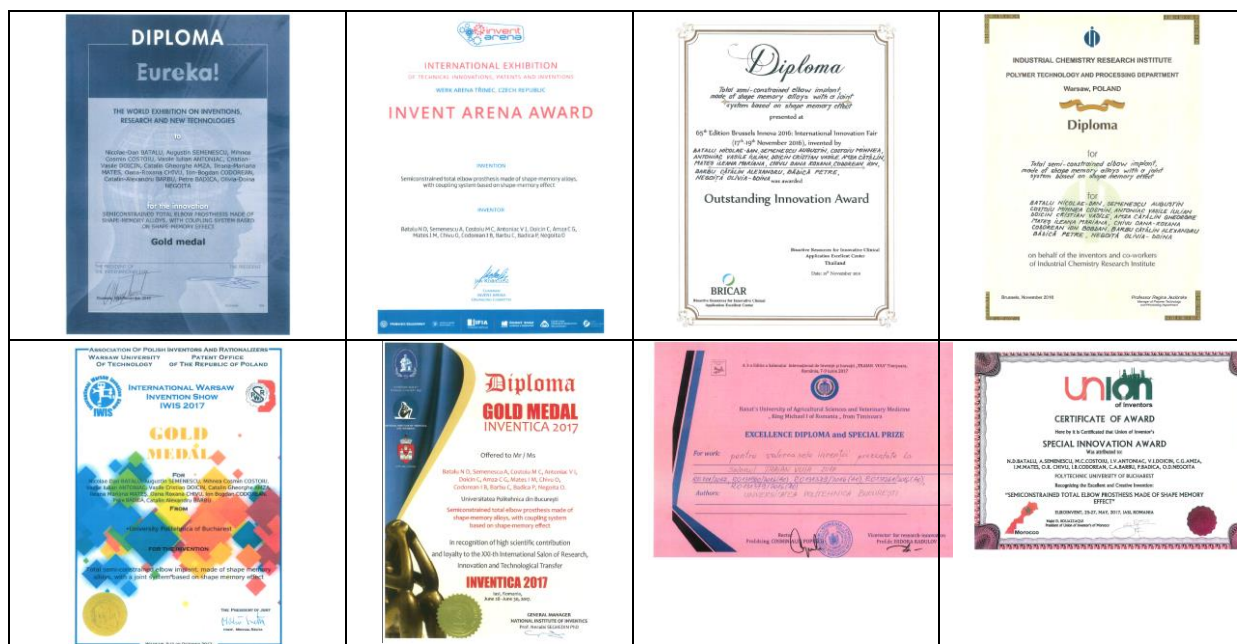
DOI: 10.1016/j.matchemphys.2015.12.040

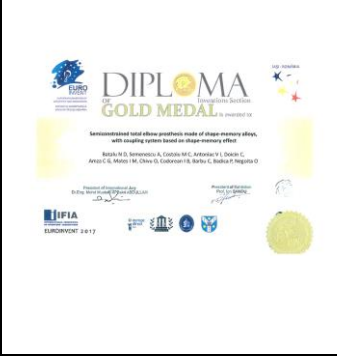
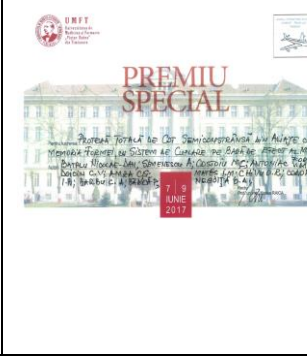
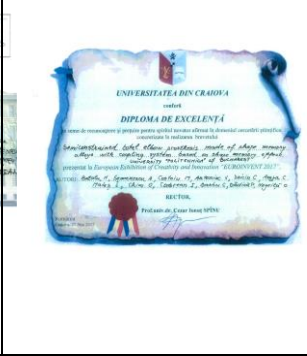
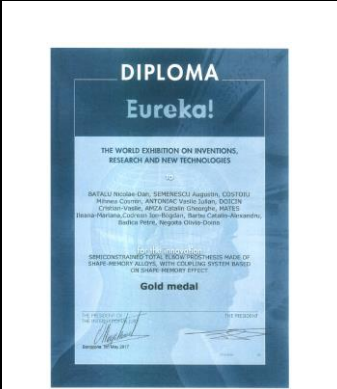
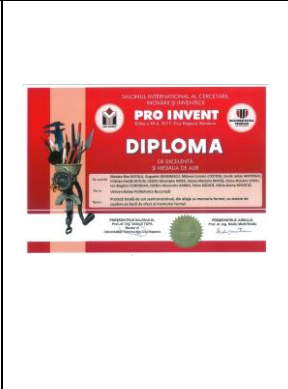
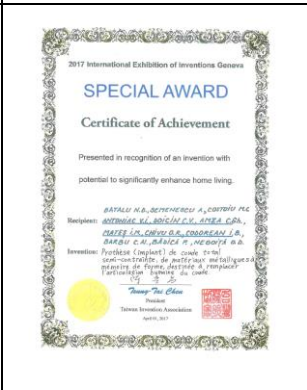
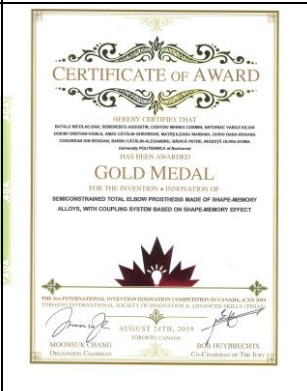
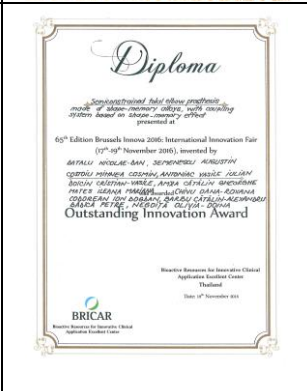
13. Badica, P., Aldica, G., Ionescu, A.M., Burdusel, M., Batalu, D.

The influence of different additives on MgB₂ superconductor obtained by ex situ spark plasma sintering: Pinning Force aspects, (2017) Correlated Functional Oxides: Nanocomposites and Heterostructures, (Eds Nishikawa et al), Springer, pp. 75-116. (ISBN 978-3-319-43777-4) (DOI: 10.1007/978-3-319-43779-8_4)

14. AMZA C G, ANTONIAC V I, BADICA P, BARBU C, BATALU N, CHIVU O, CODOREAN I B, COSTOIU M C, DOICIN C, MATES I M, NEGOITA O, SEMENESCU A,
SEMICONSTRAINED TOTAL ELBOW PROSTHESIS MADE OF SHAPE-MEMORY ALLOYS, WITH COUPLING SYSTEM BASED ON SHAPE-MEMORY EFFECT, patent
(2016) RO131379-A0 ; RO131379-B1, 2016-61849C

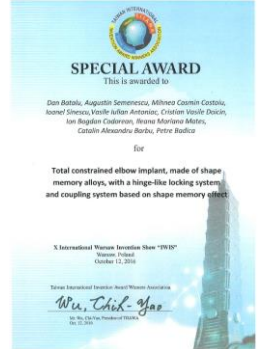
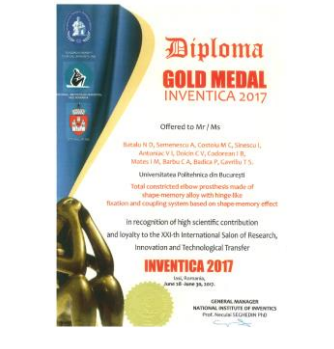
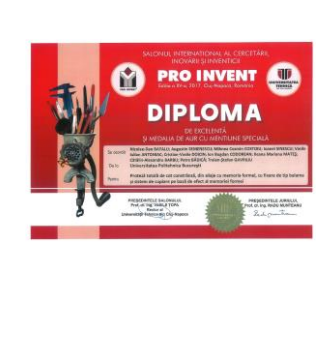
Awarded:



15. BATALU N, SEMENESCU A, COSTOIU M C, SINESCU I, ANTONIAC V I, DOICIN C, CODOREAN I B, MATES I M, BARBU C, BADICA P, GAVRILIU T,
TOTAL CONSTRICTED ELBOW PROSTHESIS MADE OF SHAPE-MEMORY ALLOY WITH HINGE-LIKE FIXATION AND COUPLING SYSTEM BASED ON SHAPE-MEMORY EFFECT, patent
(2016) RO131261-A0 ; RO131261-B1, 2016-52537M

Awarded:



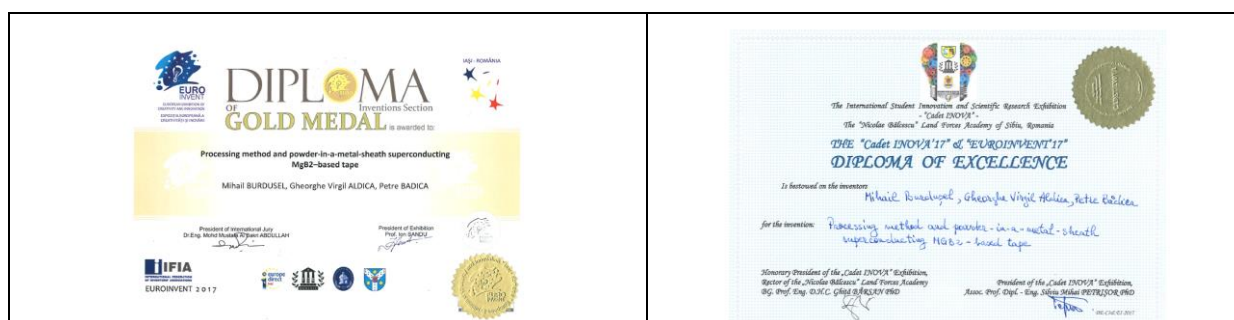
16. Burdusel M, Aldica G, Badica P,

Processing method and powder-in-a-metal-sheath superconducting MgB₂-based tape,.

patent

(2016) A / 00150

Awarded:



17. Tateno Y, Badica P, Arisawa S, Growth of SrTiO₃ single crystal by Verneuil method,

(2016) The Papers of Technical Meeting on „Physical Sensor”, IEE Japan, PHS-16-052, pp 5-8

18. Kawai S, Tsuchiya T, Arisawa S, Kezuka H, Tsuyumoto I, Tateno Y, Badica P, Endo K, Preparation of Bi-based oxide films by MOCVD targeting power electronics applications,

(2016) The Papers of Technical Meeting on „Physical Sensor”, IEE Japan, PHS-16-053, pp 9-14

2015

1. Aldica, G., Burdusel, M., Popa, S., Enculescu, M., Pasuk, I., Badica, P.

The influence of heating rate on superconducting characteristics of MgB₂ obtained by spark plasma sintering technique

(2015) Physica C: Superconductivity and its Applications, 519, pp. 184-189.

DOI: 10.1016/j.physc.2015.10.004

2. Burdusel, M., Aldica, G., Popa, S., Enculescu, M., Mihalache, V., Kuncser, A., Pasuk, I., Badica, P.

B₄C in ex-situ spark plasma sintered MgB₂

(2015) Current Applied Physics, 15 (10), pp. 1262-1270.

DOI: 10.1016/j.cap.2015.07.017

3. Batalu, D., Aldica, G., Popa, S., Kuncser, A., Mihalache, V., Badica, P.

GeO₂ - added MgB₂ superconductor obtained by Spark Plasma Sintering

(2015) Solid State Sciences, 48, pp. 23-30.

DOI: 10.1016/j.solidstatesciences.2015.06.013

4. Florea, N.M., Lungu, A., Badica, P., Craciun, L., Enculescu, M., Ghita, D.G., Ionescu, C., Zgiran, R.G., Iovu, H.

Novel nanocomposites based on epoxy resin/epoxy-functionalized polydimethylsiloxane reinforced with POSS

(2015) Composites Part B: Engineering, 75, pp. 226-234.

DOI: 10.1016/j.compositesb.2015.01.043

5. Cojocaru, M., Velcea, F., Badica, P.

Highly alloyed steel matrix for tools fabricated by powder metallurgy

(2015) Surface Engineering and Applied Electrochemistry, 51 (3), pp. 290-295.

DOI: 10.3103/S1068375515030059

6. Popescu, M., Sava, F., Lorinczi, A., Velea, A., Simandan, I.D., Badica, P., Burdusel, M., Galca, A.C., Matei, E., Preda, N., Secu, M., Socol, G., Jipa, F., Zamfirescu, M., Balan, A.

Ceramics and amorphous thin films based on gallium sulphide doped by rare-earth sulphides

(2015) Semiconductor Science and Technology, 30 (4), art. no. 044001, .

DOI: 10.1088/0268-1242/30/4/044001

7. Popescu, M., Lorinczi, A., Sava, F., Velea, A., Simandan, I.D., Badica, P., Burdusel, M., Galca, A.C., Socol, G., Jipa, F., Zamfirescu, M.

Thin films of amorphous Ga₂S₃ and rare-earth sulphides

(2015) Materials Letters, 142, pp. 229-231.

DOI: 10.1016/j.matlet.2014.12.028

8. Greculeasa, S., Miu, L., Badica, P., Nie, J., Tolea, M., Kuncser, V.

Electron reconfiguration and enhanced phonon activation in the superconducting state of a FeSe_{0.3}Te_{0.7} single crystal, as evidenced by Mössbauer spectroscopy

(2015) Journal of the Physical Society of Japan, 84 (1), art. no. 014701, .

DOI: 10.7566/JPSJ.84.014701

9. Badica, P., Endo, K.

Substrate-film lattice engineering for the growth by spin coating of c -Axis and Non- c -Axis BSCCO HTS epitaxial thin films

(2015) Oxide Thin Films, Multilayers, and Nanocomposites, (ed. P. Mele et al), Springer, pp. 27-38.

DOI: 10.1007/978-3-319-14478-8_2

10. Batalu, D., Aldica, G., Badica, P.

Composites of MgB₂ - Rare-earth-oxides: Fabrication by spark plasma sintering and functional properties

(2015) Proceedings of ICCM International Conferences on Composite Materials, 19-24th July, 2015, Copenhagen, Denmark.

<http://www.iccm-central.org/Proceedings/ICCM20proceedings/papers/paper-2220-3.pdf>

11. Burdusel, M., Miu, L., Zhao, P.H., Yan, W., Han, Y.L., Nie, J.C., Badica, P.

Growth and characterization by STM of BiCo₂Te₂ crystal objects: Whiskers and bows

(2015) Journal of Optoelectronics and Advanced Materials, 17 (3-4), pp. 426-430.

12. Cojocaru M, Dragomir D, Druga L, Kuncser V, Badica P, The effect of Ce added to carburizing paste on phase composition of carburized surface layers,

2015 ADVANCED MATERIALS RESEARCH, Vol 1114, Jul. 2015, Pages 183-189

(DOI:10.4028/www.scientific.net/AMR.1114.183)

13. Pintilie I, Badica P, Bulinski M, Kuncser V, Shapes and patterns in matter and fields: inter-related microscopic and macroscopic physical properties, Chapter 10 in On Form and Pattern, Eds. Vasilescu C, Flonta ML, Craciun I, Editura Academiei Romane, Humboldt Symposium, Bucharest 29-31 May, 2014, Pages 101-139.

(2015).

14. G. Aldica, M. Burdusel, P. Badica

Superconducting material, machined by cutting tools, and a magnetic field concentrator / storage device

Patent request

(2015) RO 131791-A2

Awarded:



15. P. BADICA, I. TISEANU, G. ALDICA, T. CRACIUNESCU, V. SANDU, G. JAKOB, M. RINDFLEISCH
Qualitative comparative analysis of MgB₂ powder-in-tube wires: superconductivity and X-ray cone-beam microtomography
(2015) JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS 17(11), 1636-1649

2014

1. Aldica, G., Burdusel, M., Badica, P.

Trapped magnetic field in a (NdFeB)-(MgB₂) pair-type bulk magnet

(2014) Physica C: Superconductivity and its Applications, 505, pp. 18-23.

DOI: 10.1016/j.physc.2014.07.001

2. Batalu, D., Stanciuc, A.M., Moldovan, L., Aldica, G., Badica, P.

Evaluation of pristine and Eu₂O₃-added MgB₂ ceramics for medical applications: Hardness, corrosion resistance, cytotoxicity and antibacterial activity

(2014) Materials Science and Engineering C, 42, pp. 350-361.

DOI: 10.1016/j.msec.2014.05.046

3. Badica, P., Aldica, G., Burdusel, M., Popa, S., Negrea, R.F., Enculescu, M., Pasuk, I., Miu, L.

Significant enhancement of the critical current density for cubic BN addition into ex situ spark plasma sintered MgB₂

(2014) Superconductor Science and Technology, 27 (9), art. no. 095013, .

DOI: 10.1088/0953-2048/27/9/095013

4. Aldica, G., Popa, S., Enculescu, M., Batalu, D., Miu, L., Ferbinteanu, M., Badica, P.

Addition of Ho₂O₃ of different types to MgB₂ in the ex-situ Spark Plasma Sintering: Simultaneous control of the critical current density at low and high magnetic fields

(2014) Materials Chemistry and Physics, 146 (3), pp. 313-323.

DOI: 10.1016/j.matchemphys.2014.03.030

5. Batalu, D., Aldica, G., Popa, S., Miu, L., Enculescu, M., Negrea, R.F., Pasuk, I., Badica, P.
High magnetic field enhancement of the critical current density by Ge, GeO₂ and Ge₂C₆H₁₀O₇ additions to MgB₂
(2014) Scripta Materialia, 82, pp. 61-64.
DOI: 10.1016/j.scriptamat.2014.03.024
6. Badica, P., Borodianska, H., Xie, S., Zhao, T., Demirskyi, D., Li, P., Tok, A.I.Y., Sakka, Y., Vasylykiv, O.
Toughness control of boron carbide obtained by spark plasma sintering in nitrogen atmosphere
(2014) Ceramics International, 40 (2), pp. 3053-3061.
DOI: 10.1016/j.ceramint.2013.09.141
7. Sandu, V., Badica, P., Aldica, G., Ferbinteanu, M., Hayasaka, Y.
Doping of MgB₂ using molecular magnets as precursors
(2014) Journal of Superconductivity and Novel Magnetism, 27 (8), pp. 1837-1843.
DOI: 10.1007/s10948-014-2538-8
8. Sandu, V., Aldica, G., Badica, P., Kuncser, A., Hayasaka, Y.
Insertion versus growth of magnetic nanoparticles in MgB₂ superconducting composites
(2014) Advanced Materials Research, 941-944, pp. 458-461.
DOI: 10.4028/www.scientific.net/AMR.941-944.458
9. Badica, P., Grasso, S., Borodianska, H., Xie, S.S., Li, P., Tatarko, P., Reece, M.J., Sakka, Y., Vasylykiv, O.
Tough and dense boron carbide obtained by high-pressure (300 MPa) and low-temperature (1600°C) spark plasma sintering
(2014) Journal of the Ceramic Society of Japan, 122 (1424), pp. 271-275.
DOI: 10.2109/jcersj2.122.271
10. Solodkyi, I., Borodianska, H., Zhao, T., Sakka, Y., Badica, P., Vasylykiv, O.
B₆O ceramic by in-situ reactive spark plasma sintering of a B₂O₃ and B powder mixture
(2014) Journal of the Ceramic Society of Japan, 122 (1425), pp. 336-340.
DOI: 10.2109/jcersj2.122.336
11. Bololoi, R., Burdusel, M., Badica, P., Batalu, D.
Total elbow implant. Computer assisted design and simulation
(2014) Key Engineering Materials, 638, pp. 161-164.
DOI: 10.4028/www.scientific.net/KEM.638.161
12. Batalu, D., Aldica, G., Burdusel, M., Badica, P.
Short review on rare earth and metalloid oxide additions to MgB₂ as a candidate superconducting material for medical applications
(2014) Key Engineering Materials, 638, pp. 357-362.

DOI: 10.4028/www.scientific.net/KEM.638.357

13. Endo, K., Kaneko, T., Moriguchi, T., Takemata, H., Takada, T., Ikenaga, N., Badica, P.
Growth of (001) or (115) Bi-2201 Thin Films by Spin Coating and MOCVD Targeting Future Electronics Applications

(2014) Journal of Physics: Conference Series, 507 (PART 1), art. no. 012011,

DOI: 10.1088/1742-6596/507/1/012011

14. Batalu, D., Aldica, G., Burdusel, M., Popa, S., Enculescu, M., Pasuk, I., Miu, D., Badica, P.

Ge-Added MgB₂ Superconductor Obtained by Ex Situ Spark Plasma Sintering

(2014) Journal of Superconductivity and Novel Magnetism, 28 (2), pp. 531-534.

DOI: 10.1007/s10948-014-2705-y

15. Badica, P., Aldica, G.V., Burdusel, M., Borodianska, H., Sakka, Y., Vasylykiv, O.

Challenges of nanostructuring and functional properties for selected bulk materials obtained by reactive spark plasma sintering

(2014) Japanese Journal of Applied Physics, 53 (5 SPEC. ISSUE 1), art. no. 05FB22, .

DOI: 10.7567/JJAP.53.05FB22

16. Iorga, S., Cojocaru, M., Chivu, A., Ciuca, S., Burdusel, M., Badica, P., Leuvrey, C., Schmerber, G., Ulhaq-Bouillet, C., Colis, S.

Influence of the carbo-chromization process on the microstructural, hardness, and corrosion properties of 316L sintered stainless steel

(2014) Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 45 (7), pp. 3088-3096.

DOI: 10.1007/s11661-014-2247-8

17. Miu, L., Mele, P., Ivan, I., Ionescu, A.M., Crisan, A., Badica, P., Miu, D.

Magnetization relaxation in superconducting YBa₂Cu₃O₇ films with embedded nanorods and nanoparticles chapter 9 in Size Effects in Nanostructures,

(2014) Springer Series in Materials Science (eds. Kuncser V, Miu L), 205, pp. 293-317.

DOI 10.1007/978-3-662-44479-5_9 (ISSN 0933-033X, ISBN 978-3-662-44478-8).

18. Kaneko T, Arisawa S, Yamasaki H, Tsuyumoto I, Badica P, Endo K,

Orientation control of Bismuth-based cuprate superconducting thin films,

(2014) The Papers of Technical Meeting on Physical Sensors, IEE Japan, Pages 19-24.

19. V. Sandu, G. Aldica, P. Badica, A. Kuncser, Y. Hayasaka

Insertion versus growth of magnetic nanoparticles in MgB₂ superconducting composites

(2014) ADVANCED MATERIALS RESEARCH, Vols 941-944, pp 458-461

DOI: 10.4028/www.scientific.net/AMR.941-944.458

20. Batalu D, Aldica G, P. Badica,
Nanocompozite supraconductoare de MgB_2 cu adaosuri pe bază de pământuri rare obținute prin metoda Spark Plasma Sintering (Superconducting nano composites of MgB_2 with rare-earth- based additions obtained by spark plasma sintering), chapter 4 in
(2014) *Tratat de Stiinta si Ingineria Materialelor Metalice (Proiectare, calitatea produselor – materiale speciale – inginerie economica metalurgica, Vol. 6)*, Ed. M.O Cojocaru, N. Ghiban, AGIR Publishing house, Pages 1041-1064 (ISBN 978-973-720-533-9 (Vol. 6))

2013

1. Zhao, P.H., Yan, W., Han, Y.L., Shen, S.C., Aldica, G., Sandu, V., Badica, P., Nie, J.C.

Enhancement of superconductivity in quenched α -FeSe flakes

(2013) *Journal of Superconductivity and Novel Magnetism*, 26 (12), pp. 3349-3353.

DOI: 10.1007/s10948-013-2194-4

2. Bogomol, I., Badica, P., Shen, Y., Nishimura, T., Loboda, P., Vasyukiv, O.

Room and high temperature toughening in directionally solidified B 4C-TiB₂ eutectic composites by Si doping

(2013) *Journal of Alloys and Compounds*, 570, pp. 94-99.

DOI: 10.1016/j.jallcom.2013.03.084

3. Aldica, G., Popa, S., Enculescu, M., Badica, P.

Te and SiC co-doped MgB_2 obtained by an ex situ spark plasma sintering technique

(2013) *Scripta Materialia*, 68 (6), pp. 428-431.

DOI: 10.1016/j.scriptamat.2012.11.011

4. Burdusel, M., Aldica, G., Popa, S., Enculescu, M., Pasuk, I., Badica, P.

MgB_2 with addition of Bi_2O_3 obtained by spark plasma sintering technique

(2013) *Journal of Superconductivity and Novel Magnetism*, 26 (5), pp. 1553-1556.

DOI: 10.1007/s10948-012-2015-1

5. Endo K, P. Badica, N. Ikenaga

Multi-component oxide thin films and heterostructures for electronics: growth principles

(2013) Conference: Symposium A on Adaptive, Active and Multifunctional Smart Materials Systems of CIMTEC / 4th International Conference on Smart Materials, Structures and Systems Location: Montecatini Terme, ITALY Date: JUN 10-14, 2012

ADAPTIVE, ACTIVE AND MULTIFUNCTIONAL SMART MATERIALS SYSTEMS Book Series: Advances in Science and Technology Volume: 77 Pages: 209-214

doi:10.4028/www.scientific.net/AST.77.209

6. Endo K, Kaneko T, Takada T, Ikenaga N, Badica P, Takemata H, Arisawa S, Endo T, Kezuka H,

Preparation and orientation control of Bi-2201 thin films by spin coating,
(2013) The Papers of Technical Meeting on Physical Sensors, IEE Japan, p. 19-22.

7. Aldica G, Burdusel M, Cioca M, Badica P

A MgB₂-based superconducting machinable by cutting tools, a magnetic field concentrator / storage device
patent

(2013) RO 130 252-A2

Awarded:



2012

1. Badica, P., Aldica, G., Burdusel, M.

Superconducting composites of MgB₂ with additions obtained by Spark Plasma Sintering

(2012) Materials Research Society Symposium Proceedings, 1454, pp. 115-121.

DOI: 10.1557/opl.2012.1255

2. Endo, K., Badica, P., Arisawa, S., Kezuka, H., Nanto, H., Ikenaga, N., Seto, M., Saito, H., Endo, T.

Thin film composite heterostructures of oxide multicomponent perovskites for electronics

(2012) Materials Research Society Symposium Proceedings, 1454, pp. 175-181.

DOI: 10.1557/opl.2012.1345

3. Batalu, D., Bojin, D., Ghiban, B., Aldica, G., Badica, P.

Corrosion behavior of pristine and added MgB₂ in Phosphate Buffered Saline Solution

(2012) IOP Conference Series: Materials Science and Engineering, 40 (1), art. no. 012032.

DOI: 10.1088/1757-899X/40/1/012032

4. Zhichao, G., Hongli, S., Zhiyong, L., Sandu, V., Aldica, G., Badica, P.

The critical current density of SiC-doped MgB₂ as determined from the Campbell penetration depth using the tunnel-diode resonator technique

(2012) Optoelectronics and Advanced Materials, Rapid Communications, 6 (11-12), pp. 976-979.

5. Cagliero, S., Borfecchia, E., Mino, L., Calore, L., Bertolotti, F., Martinez-Criado, G., Operti, L., Agostino, A., Truccato, M., Badica, P., Lamberti, C.

Insight into non-linearly shaped superconducting whiskers via a synchrotron nanoprobe

(2012) Superconductor Science and Technology, 25 (12), art. no. 125002, .

DOI: 10.1088/0953-2048/25/12/125002

6. Endo, K., Badica, P., Arisawa, S., Kezuka, H., Endo, T.

Growth aspects of thin-film composite heterostructures of oxide multicomponent perovskites for electronics

(2012) Japanese Journal of Applied Physics, 51 (11 PART2), art. no. 11PG09, .

DOI: 10.1143/JJAP.51.11PG09

7. Badica, P., Aldica, G., Burdusel, M., Endo, K.

Composites of MgB₂ with Bi₂O₃, Bi, Sb₂O₃, or Sb obtained by ex-situ spark plasma sintering

(2012) Japanese Journal of Applied Physics, 51 (11 PART2), art. no. 11PG13, .

DOI: 10.1143/JJAP.51.11PG13

8. Badica, P., Agostino, A., Khan, M.M.R., Cagliero, S., Plapcianu, C., Pastero, L., Truccato, M., Hayasaka, Y., Jakob, G.

Bi-2212 and Y123 highly curved single-crystal-like objects: Whiskers, bows and ring-like structures

(2012) Superconductor Science and Technology, 25 (10), art. no. 105003, .

DOI: 10.1088/0953-2048/25/10/105003

9. Plapcianu, C., Agostino, A., Badica, P., Aldica, G.V., Bonometti, E., Ieluzzi, G., Popa, S., Truccato, M., Cagliero, S., Sakka, Y., Vasykiv, O., Vidu, R.

Microwave synthesis of fullerene-doped MgB₂

(2012) Industrial and Engineering Chemistry Research, 51 (34), pp. 11005-11010.

DOI: 10.1021/ie3005429

10. Zhao, P.H., Yan, W., Yang, J.Y., Han, Y.L., Aldica, G., Sandu, V., Badica, P., Nie, J.C.

A simple fabrication of FeSe superconductors with high upper critical field

(2012) Journal of Superconductivity and Novel Magnetism, 25 (6), pp. 1781-1785.

DOI: 10.1007/s10948-012-1540-2

11. Borodianska, H., Demirskyi, D., Sakka, Y., Badica, P., Vasykiv, O.

Grain boundary diffusion driven spark plasma sintering of nanocrystalline zirconia

(2012) Ceramics International, 38 (5), pp. 4385-4389.

DOI: 10.1016/j.ceramint.2011.12.064

12. Aldica, G., Batalu, D., Popa, S., Ivan, I., Nita, P., Sakka, Y., Vasykiv, O., Miu, L., Pasuk, I., Badica, P.
Spark plasma sintering of MgB₂ in the two-temperature route
(2012) *Physica C: Superconductivity and its Applications*, 477, pp. 43-50.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-DOI: 10.1016/j.physc.2012.01.023>
13. Vasykiv, O., Borodianska, H., Badica, P., Grasso, S., Sakka, Y., Tok, A., Su, L.T., Bosman, M., Jan Ma
High hardness B₄C/B₂O₃/BN composites with 3D mesh-like fine grain-boundary structure by reactive spark
plasma sintering
(2012) *Journal of Nanoscience and Nanotechnology*, 12 (2), pp. 959-965.
DOI: 10.1166/jnn.2012.5875
14. Aldica, G., Popa, S., Enculescu, M., Badica, P.
Enhancement of critical current density and irreversibility field by Te or TeO₂ addition to MgB₂ bulk processed
by spark plasma sintering
(2012) *Scripta Materialia*, 66 (8), pp. 570-573.
DOI: 10.1016/j.scriptamat.2012.01.006
15. Burdusel, M., Aldica, G., Popa, S., Enculescu, M., Badica, P.
MgB₂ with addition of Sb₂O₃ obtained by spark plasma sintering technique
(2012) *Journal of Materials Science*, 47 (8), pp. 3828-3836.
DOI: 10.1007/s10853-011-6238-5
16. Batalu, D., Bojin, D., Aldica, G., Popa, S., Badica, P.
Influence of La₂O₃ addition powders with different morphology on MgB₂ superconducting ceramic
(2012) *ECCM 2012 - Composites at Venice, Proceedings of the 15th European Conference on Composite
Materials*, (ISBN 978-88-88785-33-2), 4 pages, Venice, Italy, 24-28 June 2012

2011

1. Sandu, V., Aldica, G., Popa, S., Badica, P., Cimpoiasu, E., Dumitrache, F., Sandu, E.
Transport properties of superconducting MgB₂ composites with carbon-encapsulated Fe nanospheres
(2011) *Journal of Applied Physics*, 110 (12), art. no. 123921, .
DOI: 10.1063/1.3672820
2. Endo, K., Badica, P., Nanto, H., Takei, Y., Arisawa, S., Yamasaki, H., Develos-Bagarinao, K., Endo, T.
Growth of complex epitaxial multi-component oxide thin films and heterostructures with strong anisotropy
(2011) *Materials Research Society Symposium Proceedings*, 1368, pp. 19-24.
DOI: 10.1557/opl.2011.1022
3. Batalu, D., Bojin, D., Aldica, G., Stanciuc, A., Moldovan, L., Bucur, M., Badica, P.
Evaluation of MgB₂-based nano composites for medical applications

(2011) 24th European Conference on Biomaterials - Annual Conference of the European Society for Biomaterials, 1 p.

4. Endo, K., Badica, P., Uehara, G., Kado, H.

MOMBE growth of YBa₂Cu₃O₇ thin films with c-axis, a-Axis and (103/110) Orientations on SrTiO₃ substrate

(2011) IEEE Transactions on Applied Superconductivity, 21 (3 PART 3), art. no. 5719534, pp. 2771-2774.

DOI: 10.1109/TASC.2011.2106753

5. El Tahan, A., Jakob, G., Miu, D., Ivan, I., Badica, P., Miu, L.

Vortex creep crossover in YBCO/PrBCO superlattices during standard magnetization relaxation measurements

(2011) Superconductor Science and Technology, 24 (4), art. no. 045014, .

DOI: 10.1088/0953-2048/24/4/045014

6. Borodianska, H., Badica, P., Uchikoshi, T., Sakka, Y., Vasylyk, O.

Nanometric La_{0.9}Sr_{0.1}Ga_{0.8}Mg_{0.2}O_{3-x} ceramic prepared by low-pressure reactive spark-plasma-sintering

(2011) Journal of Alloys and Compounds, 509 (5), pp. 2535-2539.

DOI: 10.1016/j.jallcom.2010.11.079

7. Badica, P., Crisan, A., Aldica, G., Endo, K., Borodianska, H., Togano, K., Awaji, S., Watanabe, K., Sakka, Y., Vasylyk, O.

'Beautiful' unconventional synthesis and processing technologies of superconductors and some other materials

(2011) Science and Technology of Advanced Materials, 12 (1), art. no. 013001.

DOI: 10.1088/1468-6996/12/1/013001

2010

1. Badica, P., Jakob, G.

A facile semi-open method for synthesis of non-centrosymmetric superconducting Li₂(Pd,Pt)₃B bulks and thin films

(2010) Physica C: Superconductivity and its Applications, 470 (SUPPL.1), pp. S655-S657.

DOI: 10.1016/j.physc.2009.11.067

2. Miu, L., Ivan, I., Badica, P., Jakob, G., Miu, D., Mele, P., Matsumoto, K., Mukaida, M., Yoshida, Y., Horide, T., Ichinose, A., Horii, S.

Origin of the fast magnetization relaxation at low temperatures in HTS with strong pinning

(2010) Physica C: Superconductivity and its Applications, 470 (20), pp. 1126-1129.

DOI: 10.1016/j.physc.2010.05.054

3. Badica, P., Salem-Sugui Jr., S., Alvarenga, A.D., Jakob, G.

Non-centro-symmetric superconductors $\text{Li}_2\text{Pd}_3\text{B}$ and $\text{Li}_2(\text{Pd}_{0.8}\text{Pt}_{0.2})_3\text{B}$: Amplitude and phase fluctuation analysis of the experimental magnetization data

(2010) Superconductor Science and Technology, 23 (10), art. no. 105018, .

DOI: 10.1088/0953-2048/23/10/105018

4. Aldica, G., Badica, P., Plapcianu, C., Groza, J.R., Popa, S.

Flux jumps anomalous behaviour in FAST-processed MgB_2 composites

(2010) Journal of Optoelectronics and Advanced Materials, 12 (9), pp. 2000-2003.

5. Miu, L., Aldica, G., Badica, P., Ivan, I., Miu, D., Jakob, G.

Improvement of the critical current density of spark plasma sintered MgB_2 by C_{60} addition

(2010) Superconductor Science and Technology, 23 (9), art. no. 095002, .

DOI: 10.1088/0953-2048/23/9/095002

6. Miu, L., Ivan, I., Badica, P., Jakob, G., Miu, D., Mele, P., Matsumoto, K., Mukaida, M., Yoshida, Y., Horide, T., Ichinose, A., Horii, S.

Magnetization relaxation in YBCO films with improved supercurrent transport properties

(2010) Journal of Physics: Conference Series, 234 (PART 1), art. no. 012026.

DOI: 10.1088/1742-6596/234/1/012026

7. Aldica G, Tiseanu I, Badica P, Craciunescu T, Rindfleisch M

X-ray micro-tomography as a new and powerful tool for characterization of MgB_2 superconductor, chapter 11 in

(2010) Superconductor (Ed. Adir Moyses Luiz), Sciyo, pages 229-248

DOI: 10.5772/10125 (ISBN 978-953-307-107-7)

8. Endo K, Badica P, Arisawa S, Kezuka H,

Preparation of oxide thin films with perovskite-related structure for future sensors,

(2010) The Papers of Technical Meeting on Physical Sensors, IEE Japan, p. 51-54 (Tokyo, June 17-18, 2010,

Technical Meeting on Sensors and Micromachines 2010)

9. A. Eltahan, P. Badica, G. Jakob,

Evolution from a-axis to c-axis orientation in $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films on (001) SrTiO_3 grown by sputtering vs.

growth temperature, post-annealing or two-temperatures template growth, (2010) The Papers of Technical

Meeting on Physical Sensors, IEE Japan, p. 55-61 (Tokyo, June 17-18, 2010, Technical Meeting on Sensors and Micromachines 2010)

10. Endo K, Badica P, Kezuka H, Endo T, Nanto H,

Thin films of the insulating (001) CaCuO_2 infinite-layer with low roughness and highly uniform morphology,

(2010) Trans Mater Res Soc Jpn 35[1], pp151-153.

11. Endo K, Badica P, Nanto H, Kezuka H, Arisawa S, Endo T,

Growth control of high-T_c superconducting thin films for future electronics,
(2010) Trans Mater Res Soc Jpn 35[4], pp. 993-996.

2009

1. Endo, K., Badica, P., Kado, H.

Growth of Non-c-Axis BSCCO superconductor- insulator heterostructures

(2009) IEEE Transactions on Applied Superconductivity, 19 (3), art. no. 5067065, pp. 3439-3442.

DOI: 10.1109/TASC.2009.2018524

2. Awaji, S., Inoue, T., Takahashi, K.-I., Badica, P., Nishijima, G., Watanabe, K.

Current transport mechanism and control of the v-value for ag/bi2212 wires and tapes

(2009) IEEE Transactions on Applied Superconductivity, 19 (3), art. no. 5153165, pp. 3071-3075.

DOI: 10.1109/TASC.2009.2018211

3. Endo, K., Badica, P.

(001) Bi₂Sr₂Ca₂Cu₃O 10 superconducting thin films on substrates with large film-substrate lattice mismatch and different film-substrate lattice mismatch anisotropy

(2009) Crystal Growth and Design, 9 (1), pp. 391-394.

DOI: 10.1021/cg800604b

4. Aldica, G., Sandu, V., Plapcianu, C., Badica, P., Groza, J.R.

Magnetic properties of MgB₂-Fe sandwiches produced by Field-Assisted-Sintering technique

(2009) Journal of Physics: Conference Series, 150 (5), art. no. 052006, .

DOI: 10.1088/1742-6596/150/5/052006

5. Vasylykiv, O., Borodianska, H., Badica, P., Zhen, Y., Tok, A.

Nanoblast synthesis and consolidation of (La 0.8Sr 0.2)(Ga 0.9Mg 0.1)O 3-δ under spark plasma sintering conditions

(2009) Journal of Nanoscience and Nanotechnology, 9 (1), pp. 141-149.

DOI: 10.1166/jnn.2009.J008

6. Tiseanu, I; Craciunescu, T; Badica, P, Aldica GV, Rindfleisch M

Characterization of Superconducting Wires By Cone-Beam Micro-Tomography

(2009) 2008 IEEE NUCLEAR SCIENCE SYMPOSIUM AND MEDICAL IMAGING CONFERENCE (2008

NSS/MIC; IEEE Nuclear Science Symposium/Medical Imaging Conference, Date: OCT 19-25, 2008 Dresden GERMANY), VOLS 1-9 Pages: 5513-5516

7. Endo K, Badica P, Kikuchi Y, Kezuka H,
Preparation of high-quality oxide superconducting thin films applied to future sensing devices,
(2009) The Papers of Technical Meeting on Physical Sensors, IEE Japan, p. 25-29.

2008

1. Aldica, G., Plapcianu, C., Badica, P., Groza, J.R.
Superconducting layered composites of Fe-MgB₂ obtained by field assisted sintering
(2008) A Global Road Map for Ceramic Materials and Technologies: Forecasting the Future of Ceramics,
International Ceramic Federation - 2nd International Congress on Ceramics, ICC 2008, Final Programme, 7 p.
2. Miu, L., Ivan, I., Aldica, G., Badica, P., Groza, J.R., Miu, D., Jakob, G., Adrian, H.
Analysis of magnetization relaxation in MgB₂ bulk samples obtained by electric-field assisted sintering
(2008) Physica C: Superconductivity and its Applications, 468 (22), pp. 2279-2282.
DOI: 10.1016/j.physc.2008.08.001
3. Miu, L., Ivan, I., Aldica, G., Badica, P., Groza, J.R., Miu, D., Jakob, G., Adrian, H.
Vortex pinning behaviour in MgB₂ bulk samples obtained by electric-field assisted sintering
(2008) Journal of Optoelectronics and Advanced Materials, 10 (11), pp. 2976-2980.
4. Badica, P., Aldica, G., Craciunescu, T., Tiseanu, I., Ma, Y., Togano, K.
Microstructure of MgB₂ samples observed by x-ray microtomography
(2008) Superconductor Science and Technology, 21 (11), art. no. 115017, .
DOI: 10.1088/0953-2048/21/11/115017
5. Badica, P., Kondo, T., Togano, K., Aldica, G.
Superconducting MgB₂ ceramics and tapes prepared from mechanically milled powders
(2008) Journal of Optoelectronics and Advanced Materials, 10 (10), pp. 2753-2756.
6. Oguro, H., Awaji, S., Nishijima, G., Badica, P., Shikanai, F., Kamiyama, T., Katagiri, K., Watanabe, K.
Influence of deviatoric strain for superconducting parameters of Nb 3Sn wires
(2008) IEEE Transactions on Applied Superconductivity, 18 (2), art. no. 4493385, pp. 1047-1050.
10.1109/TASC.2008.921907
7. Sandim, M.J.R., Cangani, M.P., Sandim, H.R.Z., Ghivelder, L., Awaji, S., Badica, P., Watanabe, K.
Microstructural and magnetic characterization of CuNb/Nb₃Sn wires with different architectures
(2008) IEEE Transactions on Applied Superconductivity, 18 (2), art. no. 4517332, pp. 1022-1025.
DOI: 10.1109/TASC.2008.920575

8. Mihalache, V., Aldica, Ghe.-V., Badica, P.
Addition of Li-based salts into superconducting $\text{Bi}_{1.8}\text{Pb}_{0.4}\text{Sr}_{1.8}\text{Ba}_{0.2}\text{Ca}_2\text{Cu}_3\text{O}_x$ ceramic
(2008) Journal of Optoelectronics and Advanced Materials, 10 (4), pp. 922-925.
9. Yuan, H.Q., Salamon, M.B., Badica, P., Togano, K.
A penetration depth study on the non-centrosymmetric superconductors $\text{Li}_2(\text{Pd}_{1-x}\text{Pt}_x)_3\text{B}$
(2008) Physica B: Condensed Matter, 403 (5-9), pp. 1138-1139.
DOI: 10.1016/j.physb.2007.10.343
10. Aldica, Gh.-V., Nita, P., Tiseanu, I., Craciunescu, T., Badica, P.
High density MgB_2 superconductor: Structure and morphology through microtomography and SEM investigations
(2008) Journal of Optoelectronics and Advanced Materials, 10 (4), pp. 929-932.
11. Endo, K., Badica, P.
Film-substrate lattice-engineering of HTS thin films
(2008) Journal of Physics: Conference Series, 108 (1), art. no. 012045, .
DOI: 10.1088/1742-6596/108/1/012045
12. Endo, K., Badica, P.
Growth by MOCVD of (001) Bi_{2223} superconducting thin films on (001) and (110) MgO substrates
(2008) Journal of Physics: Conference Series, 97 (1), art. no. 012202, .
DOI: 10.1088/1742-6596/97/1/012202
13. Badica, P., Oguro, H., Awaji, S., Nishijima, G., Watanabe, K.
Mechanical treatments at room temperature of Nb_3Sn practical wires: Pre-torsion for wires with a different architecture
(2008) Journal of Physics: Conference Series, 97 (1), art. no. 012036.
DOI: 10.1088/1742-6596/97/1/012036
14. Aldica, G., Sandu, V., Badica, P., Nishijima, G., Awaji, S., Watanabe, K.
Doped MgB_2 prepared by field assisted sintering technique
(2008) Journal of Physics: Conference Series, 97 (1), art. no. 012079, .
DOI: 10.1088/1742-6596/97/1/012079
15. Watanabe, K., Oguro, H., Badica, P., Awaji, S., Nishijima, G., Tsubouchi, H., Meguro, S.
High-strength $\text{CuNb}/\text{Nb}_3\text{Sn}$ strand cables with residual strain controlled by the repeated bending treatment
(2008) Journal of Physics: Conference Series, 97 (1), art. no. 012008, .
DOI: 10.1088/1742-6596/97/1/012008
16. Inoue T, Awaji S, Takahashi K, Badica P, Nishijima G, Watanabe K,
Transport properties of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$ materials with in-field heat-treatment,

(2008) J. Cryo. Soc. Jpn, 43(9), 387-393.

2007

1. Aldica, G., Khodash, V., Badica, P., Groza, J.R.

Electrical conduction in initial field assisted sintering stages

(2007) Journal of Optoelectronics and Advanced Materials, 9 (12), pp. 3863-3870.

2. Endo, K., Badica, P.

Growth of stacked heterostructures of SIS-type with S = YBCO or BSCCO and i = (Ba,Ca)CuO₂ or (Sr,Ca)CuO₂

(2007) Superconductor Science and Technology, 20 (11), pp. S430-S436.

DOI: 10.1088/0953-2048/20/11/S25

3. Takahashi, K.-i., Awaji, S., Badica, P., Watanabe, K., Togano, K.

Influence of intergrowth Bi₂223 phase on the E-J properties of Bi₂Sr₂CaCu₂O₈ whiskers

(2007) Physica C: Superconductivity and its Applications, 460-462 II (SPEC. ISS.), pp. 823-824.

DOI: 10.1016/j.physc.2007.04.084

4. Badica, P., Togano, K., Takeya, H., Hirata, K., Awaji, S., Watanabe, K.

Discovery of Li₂(Pd,Pt)₃B superconductors

(2007) Physica C: Superconductivity and its Applications, 460-462 I (SPEC. ISS.), pp. 91-94.

DOI: 10.1016/j.physc.2007.03.163

5. Sandu, V., Aldica, G., Badica, P., Groza, J.R., Nita, P.

Preparation of pure and doped MgB₂ by the field-assisted sintering technique and superconducting properties

(2007) Superconductor Science and Technology, 20 (8), art. no. 020, pp. 836-842.

DOI: 10.1088/0953-2048/20/8/020

6. Badica, P., Oguro, H., Awaji, S., Nishijima, G., Watanabe, K.

Maximization of the critical current of practical Nb₃Sn wires through complex mechanical treatments at room temperature

(2007) Superconductor Science and Technology, 20 (8), art. no. 015, pp. 810-813.

DOI: 10.1088/0953-2048/20/8/015

7. Oguro, H., Awaji, S., Nishijima, G., Badica, P., Watanabe, K., Shikanai, F., Kamiyama, T., Katagiri, K.

Room and low temperature direct three-dimensional-strain measurements by neutron diffraction on as-reacted and prebent CuNb Nb₃Sn wire

(2007) Journal of Applied Physics, 101 (10), art. no. 103913, .

DOI: 10.1063/1.2732445

8. Mihalache, V., Aldica, G., Badica, P.

Synthesis of Bi(Pb)-2223 from two different precursors with the same stoichiometry
(2007) Journal of Optoelectronics and Advanced Materials, 9 (6), pp. 1767-1771.

9. Aldica, G., Badica, P., Groza, J.R.

Field-assisted-sintering OfMgB2 superconductor doped with SiC and B4C
(2007) Journal of Optoelectronics and Advanced Materials, 9 (6), pp. 1742-1745.

10. Badica, P., Awaji, S., Oguro, H., Nishijima, G., Watanabe, K.

Behavior of Nb3Sn composite wires: Multiple room temperature bending cycles
(2007) IEEE Transactions on Applied Superconductivity, 17 (2), pp. 2672-2675.
DOI: 10.1109/TASC.2007.899606

11. Badica, P.

Preparation through the vapor transport and growth mechanism of the first-order hierarchical structures of MoO3 belts on sillimanite fibers
(2007) Crystal Growth and Design, 7 (4), pp. 794-801.
DOI: 10.1021/cg060893s

12. Aldica, G., Plapcianu, C., Badica, P., Valsangiacom, C., Stoica, L.

Synthesis by oxalic (citric) route and electrical and magnetic characterization of Sr2FeMoO6 perovskite
(2007) Journal of Magnetism and Magnetic Materials, 311 (2), pp. 665-670.
DOI: 10.1016/j.jmmm.2006.08.031

13. Badica, P., Awaji, S., Nishijima, G., Oguro, H., Sandim, M.J.R., Cangani, M.P., Ghivelder, L., Katagiri, K., Watanabe, K.

Performance of as-reacted and multiple bent ('pre-bent') practical Nb 3Sn bronze route wires with different architectures
(2007) Superconductor Science and Technology, 20 (3), art. no. 028, pp. 273-280.
DOI: 10.1088/0953-2048/20/3/028

2006

1. Badica, P., Sandu, V., Aldica, G., Iyo, A., Kito, H., Hirai, M., Tanaka, Y.

Fish-tail effect and irreversibility field of (Cu,C)Ba2Ca 3Cu4Ox-(LiF)y superconductor
(2006) Journal of Superconductivity, 18 (4), pp. 489-497.
DOI: 10.1007/s10948-005-0023-0

2. Yuan, H.Q., Vandervelde, D., Salamon, M.B., Badica, P., Togano, K.

A penetration depth study on Li2Pd3B and Li 2Pt3B
(2006) AIP Conference Proceedings, 850, pp. 633-634.

DOI: 10.1063/1.2354869

3. Badica, P., Awaji, S., Oguro, H., Nishijima, G., Watanabe, K.

Relationship between architecture, filament breakage and critical current decay in Nb₃Sn composite wires repeatedly in-plane bent at room temperature

(2006) Superconductor Science and Technology, 19 (4), pp. 323-332.

DOI: 10.1088/0953-2048/19/4/014

4. Shimojima, T., Ishizaka, K., Tsuda, S., Kiss, T., Yokoya, T., Chainani, A., Shin, S., Badica, P., Yamada, K., Togano, K.

Angle-resolved photoemission study of the cobalt oxide superconductor Na_xCoO₂·yH₂O: Observation of the fermi surface

(2006) Physical Review Letters, 97 (26), art. no. 267003, .

DOI: 10.1103/PhysRevLett.97.267003

5. Endo, K., Badica, P., Sato, H., Akoh, H.

Novel approach to growth of precipitate-free, high-quality oxide thin films suitable for device applications

(2006) Thin Solid Films, 515 (2 SPEC. ISS.), pp. 493-495.

DOI: 10.1016/j.tsf.2005.12.278

6. Badica, P., Togano, K., Awaji, S., Watanabe, K., Kumakura, H.

Review on Bi-Sr-Ca-Cu-O whiskers

(2006) Superconductor Science and Technology, 19 (10), art. no. R01, pp. R81-R99.

DOI: 10.1088/0953-2048/19/10/R01

7. Rueff, J.-P., Calandra, M., D'Astuto, M., Leininger, Ph., Shukla, A., Bosak, A., Krisch, M., Ishii, H., Cai, Y., Badica, P., Sasaki, T., Yamada, K., Togano, K.

Phonon softening in Na_xCoO₂·yH₂O: Implications for the Fermi surface topology and the superconducting state

(2006) Physical Review B - Condensed Matter and Materials Physics, 74 (2), art. no. 020504, .

DOI: 10.1103/PhysRevB.74.020504

8. Yuan, H.Q., Agterberg, D.F., Hayashi, N., Badica, P., Vandervelde, D., Togano, K., Sigrist, M., Salamon, M.B. S-wave spin-triplet order in superconductors without inversion symmetry: Li₂Pd₃B and Li₂Pt₃B

(2006) Physical Review Letters, 97 (1), art. no. 017006, .

DOI: 10.1103/PhysRevLett.97.017006

9. Endo, K., Badica, P., Sato, H., Akoh, H.

A new growth method of high-quality precipitate-free HTS thin films applied for electronics

(2006) Journal of Electroceramics, 16 (4), pp. 599-603.

DOI: 10.1007/s10832-006-9926-9

10. Endo, K., Badica, P., Sato, H., Akoh, H.

HTS thin films: A convenient method for removal of precipitates-segregates

(2006) Journal of Physics: Conference Series, 43 (1), art. no. 067, pp. 267-271.

DOI: 10.1088/1742-6596/43/1/067

11. Doria, M.M., Salem-Sugui Jr., S., Badica, P., Togano, K.

Landau and Ott scaling for the kinetic energy density in the low- T_c conventional superconductors Li_2Pd_3B and Nb

(2006) Physical Review B - Condensed Matter and Materials Physics, 73 (18), art. no. 184524, .

DOI: 10.1103/PhysRevB.73.184524

12. Awaji, S., Oguro, H., Nishijima, G., Badica, P., Watanabe, K., Harjo, S., Kamiyama, T., Katagiri, K.

Neutron diffraction study on prebending effects for bronze route $Nb-3Sn$ wires without reinforcement

(2006) IEEE Transactions on Applied Superconductivity, 16 (2), art. no. 1643071, pp. 1228-1231.

DOI: 10.1109/TASC.2006.870005

13. Endo, K., Badica, P., Sato, H., Akoh, H.

New growth approach of high-quality oxide thin films for future device applications: Independent control of supersaturation and migration

(2006) Superconductor Science and Technology, 19 (5), pp. S221-S225.

DOI: 10.1088/0953-2048/19/5/S12

14. Aldica, G., Plapcianu, C., Badica, P., Valsangiacom, C., Popescu, B.

The magnetic effects in Sr_2FeMoO_6 perovskite type compound obtained by soft chemistry

(2006) Journal of Optoelectronics and Advanced Materials, 8 (2), pp. 461-463.

15. Badica, P., Togano, K., Awaji, S., Watanabe, K.

Growth of superconducting MgB_2 films by pulsed-laser deposition using a Nd-YAG laser

(2006) Superconductor Science and Technology, 19 (2), pp. 242-246.

DOI: 10.1088/0953-2048/19/2/016

16. Badica, P., Kondo, T., Togano, K., Yamada, K.

Anisotropy of $Na_{0.35}CoO_2 \cdot 1.3H_2O$ superconductor

(2006) Journal of Physics and Chemistry of Solids, 67 (1-3), pp. 590-593.

DOI: 10.1016/j.jpcs.2005.10.128

2005

1. Badica, P., Togano, K.

Growth of superconducting and non-superconducting whiskers in the Bi-Sr-Ca-Cu-O (BSCCO) system

(2005) Journal of Materials Research, 20 (12), pp. 3358-3367.

DOI: 10.1557/jmr.2005.0413

2. Endo, K., Badica, P., Sato, H., Akoh, H.

A new approach using artificial substrates for growth of high-quality precipitate-free HTS thin films, toward electronic device applications

(2005) Materials Research Society Symposium Proceedings, 868, pp. 24-30.

3. Endo, K., Badica, P., Sato, H., Akoh, H.

New growth method of high-quality, multicomponent oxide thin films used in strongly correlated electron device applications: Impurity-precipitate issues and their problem solving

(2005) Proceedings of SPIE - The International Society for Optical Engineering, 5932, art. no. 593211, pp. 1-7.

DOI: 10.1117/12.622561

4. Kondo, T., Badica, P., Nakamori, Y., Orimo, S., Togano, K., Nishijima, G., Watanabe, K.

MgB₂/Fe superconducting tapes made using mechanically milled powders in Ar and H₂ atmospheres

(2005) Physica C: Superconductivity and its Applications, 426-431 (II), pp. 1231-1237.

DOI: 10.1016/j.physc.2005.02.104

5. Endo, K., Badica, P.

Preparation of stacked structures based on HTS by MOCVD: Growth problems of c-axis and non c-axis BiSrCaCuO/Bi₄Ti₃O₁₂ heterostructures

(2005) IEEE Transactions on Applied Superconductivity, 15 (2 PART III), pp. 3066-3069.

DOI: 10.1109/TASC.2005.848741

6. Kudo, T., Nakamori, Y., Orimo, S.-I., Badica, P., Togano, K.

Hydrogen effects on synthesis processes and electrical resistivities of LiBC

(2005) Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 69 (5), pp. 433-438.

DOI: 10.2320/jinstmet.69.433

7. Badica, P., Kondo, T., Togano, K.

Superconductivity in a new pseudo-binary Li₂B(Pd_{1-x}Ptx)₃ (x = 0-1) boride system

(2005) Journal of the Physical Society of Japan, 74 (3), pp. 1014-1019.

DOI: 10.1143/JPSJ.74.1014

8. Badica, P.; Sandu, V.; Aldica, G., et al.

Fish-tail effect and irreversibility field of (Cu,C)Ba₂Ca₃Cu₄O_x-(LiF)_y superconductor

(2005) JOURNAL OF SUPERCONDUCTIVITY Volume: 18 Issue: 4 Pages: 489-497

9. Badica, P.; Togano, K.

Superconducting and non-superconducting whiskers in Bi-Sr-Ca-Cu-O system in NEW DEVELOPMENTS IN CRYSTAL GROWTH RESEARCH, (Ed. George V. Karas), Nova

(2005), pages 39-74

ISBN 1-59454-539-1

2004

1. Togano, K., Badica, P., Nakamori, Y., Orimo, S., Takeya, H., Hirata, K.
Superconductivity in the metal rich Li-Pd-B ternary boride
(2004) Physical Review Letters, 93 (24), art. no. 247004, .
DOI: 10.1103/PhysRevLett.93.247004
2. Badica, P., Kondo, T., Kudo, T., Nakamori, Y., Orimo, S., Togano, K.
Magnetization measurements on Li₂Pd₃B superconductor
(2004) Applied Physics Letters, 85 (19), pp. 4433-4435.
DOI: 10.1063/1.1814433
3. Endo, K., Badica, P., Sato, H., Akoh, H.
Growth of high-quality precipitate-free thin films suitable for electronic devices: A new concept for substrates
(2004) Advanced Materials, 16 (21), pp. 1894-1897.
DOI: 10.1002/adma.200400750
4. Kondo, T., Badica, P., Nakamori, Y., Sun, W., Orimo, S.-I., Togano, K.
Influence of atmosphere on the synthesis of MgB₂ superconductor
(2004) Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 68 (9), pp. 636-641.
DOI: 10.2320/jinstmet.68.636
5. Badica, P., Togano, K., Awaji, S., Watanabe, K., Iyo, A., Kumakura, H.
Application of elevated magnetic fields during growth of BiSrCaCuO superconducting whiskers and studies of growth defects for better understanding of the growth mechanism
(2004) Journal of Crystal Growth, 269 (2-4), pp. 518-534.
DOI: 10.1016/j.jcrysgro.2004.05.115
6. Endo, K., Badica, P.
Infinite-layer (Ca,Sr)CuO₂ films grown by MOCVD: Surface morphology and structural studies
(2004) Physica C: Superconductivity and its Applications, 408-410 (1-4), pp. 904-905.
DOI: 10.1016/j.physc.2004.03.156
7. Badica, P., Togano, K., Kumakura, H.
A modified airtight two-crucible method for growth of Bi-2212 whiskers from glassy pellets
(2004) Superconductor Science and Technology, 17 (7), pp. 891-898.
DOI: 10.1088/0953-2048/17/7/011
8. Sasaki, T., Badica, P., Yoneyama, N., Yamada, K., Togano, K., Kobayashi, N.

Superconducting properties under magnetic field in Na $0.35\text{CoO}_2 \cdot 1.3\text{H}_2\text{O}$ single crystal

(2004) Journal of the Physical Society of Japan, 73 (5), pp. 1131-1134.

DOI: 10.1143/JPSJ.73.1131

9. Mihalache, V., Aldica, G., Badica, P., Crisan, A.

Anomalies of AC susceptibility losses in the doped $[\text{Bi}(\text{Pb})] 2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_x$ superconductor

(2004) Superconductor Science and Technology, 17 (4), pp. 724-730.

DOI: 10.1088/0953-2048/17/4/030

10. Badica, P., Iyo, A., Aldica, G., Kito, H., Crisan, A., Tanaka, Y.

$(\text{Cu}, \text{C})\text{Ba}_2\text{Ca}_3\text{Cu}_4\text{O}_x\text{-(LiF)}_y$: Addition of LiF - An effective way to synthesize overdoped superconductor

(2004) Superconductor Science and Technology, 17 (3), pp. 430-437.

DOI: 10.1088/0953-2048/17/3/022

11. Badica, P., Aldica, G., Iyo, A., Bradea, I., Jaklovszky, J.

Ba/Zr=1:1 freeze-dried and conventional chloride powders: Synthesis of BaZrO_3 and phase formation

(2004) Materials Letters, 58 (1-2), pp. 250-256.

DOI: 10.1016/S0167-577X(03)00455-5

12. Badica, P., Kondo, T., Togano, K.

Critical current density and magnetic-field irreversibility of Na $0.35\text{CoO}_2 \cdot 1.3\text{H}_2\text{O}$ superconductor

(2004) Applied Physics Letters, 84 (4), pp. 559-561.

DOI: 10.1063/1.1641512

13. Sumida M, Matsumoto A, Badica P, Kumakura H,

Effect of post-annealing on superconductive properties of dip-coated Bi-2223 tapes,

(presented at The 8th IUMRS International Conference on Advanced Materials (IUMRS-ICAM), 2003, October 8-13, Yokohama, Japan)

(2004) Transactions of Materials Research Society of Japan, 29[4], 1249-1252.

14. Endo K, Badica P, Endo T,

Similarity in the surface morphology between as-grown (119) Bi-2223 and (103) Y-123 thin films obtained by MOCVD,

(presented at WSEAS/IASME Conferences, 2004, August 17-19, Corfu, Greece)

(2004) IASME Transactions 3[1], 586-589.

15. Endo K, Badica P, and Endo T,

Synthesis by MOCVD of c-axis $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10}$ superconducting films on (001) and (110) MgO substrates, (Proc of Asia Pacific Microwave Conference (APMC'04), 2004, December 15-18, New Delhi, India, eds. A.K.

Verma, E.K. Sharma, Mridula Gupta, R.S. Gupta and Sanjeev Singh, published as electronic files on CD).

(2004)

2003

1. Aldica, G., Groza, J.R., Badica, P., Bunescu, M.-C.

BPSCCO superconductor with addition of Ag₂O synthesized under electrical field

(2003) Journal of Superconductivity and Novel Magnetism, 16 (6), pp. 1001-1005.

(5*) Yurchenko, I.A., Alekseev, A.F., Yurchenko, D.O., Badica, P., Gridasova, T.Ya., Morozov, V.V., Nemirovsky, A.V., Peklun, V.F.

Erratum: Intensification of synthesis and examination of technological parameters influence on the properties and structure of Bi-(Pb)-Sr-Cu-Ca-O ceramics (Physica C (2003) 384 (111-124) PII: S092145340201804X)

(2003) Physica C: Superconductivity and its Applications, 387 (3-4), p. 420.

DOI: 10.1016/S0921-4534(03)00703-2

2. Endo, K., Badica, P., Itoh, J.

AFM observation of as-grown (1 1 9) Bi-2223 and (1 0 3) Y-123 thin films by MOCVD

(2003) Physica C: Superconductivity and its Applications, 386, pp. 292-295.

DOI: 10.1016/S0921-4534(02)02136-6

3. Endo, K., Badica, P., Itoh, J.

(Ca,Ba)CuO₂ films grown by MOCVD: Surface morphology and structural studies

(2003) Physica C: Superconductivity and its Applications, 386, pp. 318-322.

DOI: 10.1016/S0921-4534(02)02147-0

4. Endo, K., Badica, P., Itoh, J.

Preparation and characterization of (0 0 1) SmBa₂Cu₃O_y thin films by MOCVD

(2003) Physica C: Superconductivity and its Applications, 386, pp. 323-326.

DOI: 10.1016/S0921-4534(02)02149-4

5. Yurchenko, I.A., Alekseev, A.F., Yurchenko, D.O., Badica, P., Gridasova, T.Ya., Morozov, V.V., Nemirovsky, A.V., Peklun, V.F.

Intensification of synthesis and examination of technological parameters influence on the properties and structure of Bi-(Pb)-Sr-Cu-Ca-O ceramics

(2003) Physica C: Superconductivity and its Applications, 384 (1-2), pp. 111-124.

DOI: 10.1016/S0921-4534(02)01804-X

6. Badica, P., Aldica, G.

Bi-2223 freeze-dried ceramic: Specific features, related problems and search for new solutions

(2003) Journal of Optoelectronics and Advanced Materials, 5 (4), pp. 1029-1039.

7. Mihalache, V., Aldica, G., Badica, P.

Anomalous suppression of superconductivity in LiCl-doped Bi-2223

(2003) Physica C: Superconductivity and its Applications, 392-396 (PART 1), pp. 185-188.

DOI: 10.1016/S0921-4534(03)01102-X

8. Endo, K., Badica, P., Aldica, G.

Control of the growth mechanism of (119) Bi-2223 superconducting thin films. Two-dimensional nucleation growth and step-flow growth

(2003) Journal of Optoelectronics and Advanced Materials, 5 (4), pp. 1023-1028.

9. Endo, K., Badica, P., Abe, K.

(119) Oriented Bi-2223 thin films grown on (100) NdGaO₃ by MOCVD

(2003) IEEE Transactions on Applied Superconductivity, 13 (2 III), pp. 2710-2712.

DOI: 10.1109/TASC.2003.811963

10. Nie, J.C., Badica, P., Hirai, M., Kodama, Y., Crisan, A., Sundaresan, A., Tanaka, Y., Ihara, H.

Electron-doped superconductivity in Sr_{1-x}Ca_xCuO_{2-δ} infinite-layer thin films

(2003) Physica C: Superconductivity and its Applications, 388-389, pp. 441-442.

DOI: 10.1016/S0921-4534(02)02568-6

11. Endo, K., Badica, P., Moriyasu, Y., Abe, K.

Growth by MOMBE of C-axis superconducting YBCO thin films on different substrates: In situ RHEED monitoring of the growth

(2003) IEEE Transactions on Applied Superconductivity, 13 (2 III), pp. 2792-2794.

DOI: 10.1109/TASC.2003.812014

12. Badica, P., Sundaresan, A., Crisan, A., Nie, J.C., Hirai, M., Fujiwara, S., Kito, H., Ihara, H.

TiBa₂Ca₂Cu₃O_y superconducting films on MgO with different morphologies

(2003) Physica C: Superconductivity and its Applications, 383 (4), pp. 482-490.

DOI: 10.1016/S0921-4534(02)01836-1

13. Badica, P., Crisan, A., Hirai, M., Iyo, A., Kito, H., Aldica, G., Tanaka, Y.

LiF addition to (Cu,C) Ba₂Ca₃Cu₄O_y superconductor

(2003) Physica C: Superconductivity and its Applications, 388-389, pp. 395-396.

DOI: 10.1016/S0921-4534(02)02535-2

14. Crisan, A., Badica, P., Fujiwara, S., Nie, J.-C., Sundaresan, A., Iyo, A., Tanaka, Y.

Nanodots-induced pinning centers in thin films: Effects on critical current density, activation energy and flux jump rate

(2003) IEEE Transactions on Applied Superconductivity, 13 (2 III), pp. 3726-3729.

DOI: 10.1109/TASC.2003.812527

15. Crisan, A., Badica, P., Hirai, M., Kito, H., Iyo, A., Tanaka, Y.

Intra- and inter-grain critical current density in (Cu,C):1234 superconductors

(2003) Physica C: Superconductivity and its Applications, 388-389, pp. 421-422.

DOI: 10.1016/S0921-4534(02)02550-9

16. Nie, J.C., Badica, P., Hirai, M., Sundaresan, A., Crisan, A., Kitô, H., Terada, N., Kodama, Y., Iyo, A., Tanaka, Y., Ihara, H.

Electron-doped superconductivity induced by oxygen vacancies in as-grown $\text{Sr}_{0.6}\text{Ca}_{0.4}\text{CuO}_{2-\delta}$ infinite-layer films

(2003) Superconductor Science and Technology, 16 (1), pp. L1-L3.

DOI: 10.1088/0953-2048/16/1/101

17. Endo K, Badica P, Itoh J,

Two-layered thin film structures of HTS on infinite layer cuprate prepared by MOCVD,

(2003) Proc of 6th EUCAS, 2003, 14-18 Sept, 2003, Sorrento, Italy (eds. A. Andreone, G.P. Pepe, R. Cristiano and G. Masullo) IoP Conf. Series 181, pp. 1669-1675.

18. Badica P, Togano K, Fukutomi M, Kumakura H,

Fabrication and Characterization of BSCCO whiskers,

(2003) Proc of the 6th EUCAS, 2003, 14-18 Sept, 2003, Sorrento, Italy (eds. A. Andreone, G.P. Pepe, R. Cristiano and G. Masullo) IoP Conf. Series 181, pp 1180-1187.

2002

1. Badica, P., Crisan, A., Ihara, H.

The influence of TI and O content from the starting mixture on phase formation in (Cu,Tl)-1234 system

(2002) Physica C: Superconductivity and its Applications, 378-381 (PART 1), pp. 683-687.

DOI: 10.1016/S0921-4534(02)01521-6

2. Endo, K., Abe, K., Badica, P., Ishikawa, H., Yoshizawa, T., Itoh, J.

Preparation by MOCVD and characterization by AFM of the (1 1 9) oriented Bi-2223 thin films

(2002) Physica C: Superconductivity and its Applications, 378-381 (PART 2), pp. 1274-1277.

DOI: 10.1016/S0921-4534(02)01749-5

3. Nie, J.C., Sundaresan, A., Hirai, M., Ishiura, Y., Badica, P., Crisan, A., Ihara, H.

Cum-1Bam(Sr,Ca)_nCu_{n+1}O_{2m+2} _{n+1} superlattice thin film by layer-by-layer growth techniques

(2002) Physica C: Superconductivity and its Applications, 378-381 (PART 2), pp. 1278-1282.

DOI: 10.1016/S0921-4534(02)01690-8

4. Sundaresan, A., Nie, J.C., Hirai, M., Crisan, A., Fujiwara, S., Asada, H., Badica, P., Ishiura, Y., Kito, H., Ihara, H.

Growth of $\text{TiBa}_2\text{Ca}_2\text{Cu}_3\text{O}_y$ superconducting thin film on CeO_2 buffered sapphire substrate
(2002) *Physica C: Superconductivity and its Applications*, 378-381 (PART 2), pp. 1283-1286.
DOI: 10.1016/S0921-4534(02)01692-1

5. Alam, S., Islam, A.T.M.N., Tanaka, I., Badica, P., Oyanagi, H., Kawanaka, H., Rahman, M.O., Yanagisawa, T.
Temperature dependent polarized XANES spectra for Zn-doped LSCO system

(2002) *Physica C: Superconductivity and its Applications*, 378-381 (PART 1), pp. 78-83.
DOI: 10.1016/S0921-4534(02)01386-2

6. Crisan, A., Badica, P., Hirai, M., Kito, H., Iyo, A., Tanaka, Y.

Third-harmonic susceptibility for studying dissipation in heavy ion irradiated (Cu, C) $\text{Ba}_2\text{Ca}_3\text{Cu}_4\text{O}_{12-y}$ high-temperature superconductors
(2002) *Superconductor Science and Technology*, 15 (8), pp. 1240-1243.
DOI: 10.1088/0953-2048/15/8/313

7. Endo, K., Ishikawa, H., Badica, P., Matsuhata, H., Yoshizawa, T., Abe, K., Itoh, J., Kajimura, K.

MOCVD growth and AFM observation of non c-axis oriented Bi-2223 superconducting thin films
(2002) *Physica C: Superconductivity and its Applications*, 372-376 (PART 2), pp. 1071-1074.
DOI: 10.1016/S0921-4534(02)00845-6

8. Endo, K., Sato, H., Yamamoto, K., Mizukoshi, T., Yoshizawa, T., Abe, K., Badica, P., Itoh, J., Kajimura, K., Akoh, H.

Fabrication of intrinsic Josephson junctions on BSCCO superconducting films grown by MOCVD
(2002) *Physica C: Superconductivity and its Applications*, 372-376 (PART 2), pp. 1075-1077.
DOI: 10.1016/S0921-4534(02)00846-8

9. Badica, P., Iyo, A., Crisan, A., Ihara, H.

(Cu, Ti) $\text{Ba}_2\text{Ca}_3\text{Cu}_4\text{O}_x$ compositions: II. Heating rate applied to synthesis of superconducting ceramics
(2002) *Superconductor Science and Technology*, 15 (6), pp. 975-982.
DOI: 10.1088/0953-2048/15/6/324

10. Badica, P., Iyo, A., Crisan, A., Ishiura, Y., Sundaresan, A., Ihara, H.

(Cu, Ti) $\text{Ba}_2\text{Ca}_3\text{Cu}_4\text{O}_x$ compositions: I. The influence of synthesis time and temperature on the phase formation and evaporation-condensation mechanism
(2002) *Superconductor Science and Technology*, 15 (6), pp. 964-974.
DOI: 10.1088/0953-2048/15/6/323

11. Crisan, A., Badica, P., Fujiwara, S., Nie, J.C., Sundaresan, A., Tanaka, Y., Ihara, H.

Strong reduction of thermally activated flux jump rate in superconducting thin films by nanodot-induced pinning centers

(2002) Applied Physics Letters, 80 (19), pp. 3566-3568.

DOI: 10.1063/1.1478782

12. Iyo, A., Ishiura, Y., Tanaka, Y., Badica, P., Tokiwa, K., Watanabe, T., Ihara, H.

Effects of residual carbon on phase formation of $\text{TiBa}_2\text{Ca}_{n-1}\text{Cu}_n\text{O}_y$ ($n = 3$ and 4) superconductors

(2002) Physica C: Superconductivity and its Applications, 370 (3), pp. 205-209.

DOI: 10.1016/S0921-4534(01)00927-3

13. Badica, P., Aldica, G., Crisan, A.

Decomposition of $\text{Ca: Cu} = 1:1$ nitrate powder: Thermal analysis and structural studies

(2002) Journal of Materials Science, 37 (3), pp. 585-594.

DOI: 10.1023/A:1013777826319

14. Badica, P., Aldica, G., Groza, J.R., Bunescu, M.-C., Mandache, S.

Reactive-field-assisted-sintering of freeze-dried powders in the BSCCO system

(2002) Superconductor Science and Technology, 15 (1), pp. 32-42.

DOI: 10.1088/0953-2048/15/1/307

15. Endo, K; Moriyasu, Y; Teherani, FH, Yoshizawa, T; Badic(a) P et al.

Preparation of YBCO superconducting films by MOMBE

(Conference Information: 5th European Conference on Applied Superconductivity, EUCAS 2001, Date: AUG 26-30, 2001 TECH UNIV DENMARK LYNGBY DENMARK)

(2002) PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 372 Pages: 604-607

16. Endo, K., Badica, P.

(119) Bi-2223 thin films grown by MOCVD on (100) NdGaO_3 and (110) SrTiO_3

(2002) Proceedings of SPIE - The International Society for Optical Engineering, 4811, pp. 130-139.

DOI: 10.1117/12.457698

17. Badica P, Hirai M, Kito H, Crisan A, Iyo A, Tanaka Y,

Tl-based superconducting phases obtained by evaporation-condensation technique,

(2002) Proc. of the 4th International Conference "Science and Engineering HTS Superconductivity" of the Forum on New Materials, within CIMTEC 2002, July 14-19, Florence, Italy (eds P. Vicenzini and S. Cerasara), Techna, pp. 105-112.

18. Endo K, Badica P,

Preparation by MOCVD and AFM observation of as-grown (119) Bi-2223 and (103) Y-123 thin films

(2002) Proc. of the 4th International Conference "Science and Engineering HTS Superconductivity" of the Forum on New Materials, within CIMTEC 2002, July 14-19, Florence, Italy (eds P. Vicenzini and S. Cerasara), Techna, pp. 113-120.

2001

1. Alexe, G., Badica, P., Aldica, G., Mironova, G.M.

Neutron diffraction direct observation of the decomposition processes in a Bi:Pb:Sr:Ca:Cu=1.7:0.3:2.0:2.5:3.5 nitrate freeze dried powder

(2001) Materials Science Forum, 378-381 (I), pp. 340-345.

2000

1. Badica P, Aldica G, Mandache S,

Se addition to (Bi, Pb)₂Sr₂Ca₂Cu₃O_x freeze-dried ceramic

(2000) Journal of Superconductivity and Novel Magnetism, 13 (4), pp. 529-533.

2. Aldica G, Badica P, Alexe G,

Non-isothermal pyrolyzation of the spray-frozen freeze dried complex nitrate in Bi(Pb)-Sr(Ba)-Ca-Cu system investigated by X-ray diffraction analysis

(2000) Materials Science Forum, 321 (II), pp. 834-839.

3. Badica P, Aldica G, Bunesco M-C, Nemyrovsky AV,

Studies concerning secondary synthesis processes in [Bi(Pb)]₂[Sr(Ba)]₂Ca₂Cu₃O_y freeze dried superconducting ceramic

(2000) Journal of Materials Science Letters, 19 (7), pp. 561-563.

DOI: 10.1023/A:1006765825483

4. Badica P, Aldica G, Alexe G, Crisan A,

Synthesis of the Ca_{0.45}Cu_{0.55}O peritectic phase using a mixture of nitrate powders

(2000) Materials Letters, 43 (4), pp. 180-184.

DOI: 10.1016/S0167-577X(99)00256-6

5. Bedike (P), Morozov VV; Aldika G, et al.

Effect of process parameters in the decomposition of a cryochemical salt product of the Bi-Pb-Sr-Ca-Cu-O system on the structure and properties of a ceramics

(2000) POWDER METALLURGY AND METAL CERAMICS Volume: 39 Issue: 5-6 Pages: 295-302

6. Aldica G, Badica P,

Studies of two-powders mixtures in Bi(Pb)-Sr(Ba)-Ca-Cu-oxide/nitrate system obtained by freeze drying used for synthesis of 2223 superconducting ceramic

(2000) Romanian Journal of Physics, vol.45, no.5-6 Pages: 493-500

1999

1. Badica, P., Aldica, G.

Phase Formation During Nonisothermal Decomposition of the Freeze-Dried Bi:Pb:Sr:Ba:Ca:Cu = 1.8:0.4:1.8:0.2:1.2:2.0 Complex Nitrate Powder

(1999) Journal of Superconductivity, 12 (5), pp. 609-615.

DOI: 10.1023/A:1007739716481

2. Badica, P., Aldica, G., Mandache, S.

One step synthesis of Bi(Pb)-2223 phase in Bi(Pb)-Sr(Ba)-Ca-Cu nitrate freeze dried powder

(1999) Superconductor Science and Technology, 12 (3), pp. 162-167.

DOI: 10.1088/0953-2048/12/3/010

1998

1. Badica, P., Aldica, G., Morozov, V.V., Popa, S., Mandache, S.

The influence of sintering environment and intermediate grounding on the scattering of the superconducting characteristics in BSCCO ceramic produced by spray-frozen, freeze drying method

(1998) Applied Superconductivity, 4 (12), pp. 583-589.

DOI: 10.1016/S0964-1807(97)00040-9

1997

1. Bunescu, M.-C., Aldica, G., Badica, P., Vasiliu, F., Nita, P., Mandache, S.

SEM studies on BSCCO superconducting ceramic produced by spray frozen, freeze drying technique

(1997) Physica C: Superconductivity and its Applications, 281 (2-3), pp. 191-197.

DOI: 10.1016/S0921-4534(97)00633-3

2. Aldica, G., Badica, P., Mandache, S., Popa, S.

The influence of synthesis environment on magnetic properties and phase content in BSCCO superconducting ceramic obtained by spray-frozen, freeze drying technique

(1997) Key Engineering Materials, (136 PART 2), pp. 1227-1230.

3. Badica, P., Aldica, G., Morozov, V.V., Alexeev, A.F., Gridasova, T.Y.

The influence of synthesis environment and time on volumetric characteristics of BSCCO superconducting ceramic obtained by spray-frozen, freeze drying technique

(1997) Key Engineering Materials, (136 PART 2), pp. 1231-1234.

4. Aldica G, Badica P, Alexeev AF, Fradina I,
Synthesis by spray-frozen, freeze drying technique and pyrolysis of the Ca:Cu=1:1 nitrate precursor powder,
(ROCAM'97, 24-26 Nov. 1997, Bucuresti, Romania)
(1997) Analele. Univ. Bucuresti. 46, 173-177
5. Labusca E, Radulescu I, Badica P, Vasiliu F,
Considerations about surface-state influence on some specific properties of high-alumina sintered ceramics,
(ROCAM'97, 24-26 Nov. 1997, Bucuresti, Romania)
(1997) Analele. Univ. Bucuresti. 46, 165-168.
6. Radulescu AV, Labusca E, Badica P, Vasiliu F,
Aspects concerning the wear of some new hard advanced alumina ceramics for cutting tools,
(ROCAM'97, 24-26 Nov. 1997, Bucuresti, Romania)
(1997) Analele. Univ. Bucuresti. 46, 169-172.
7. Bascoveanu I, Manea A, Badica P, Barbu A,
High purity aluminum nitride synthesis and sintering with rare earth oxide additions,
(ROCAM'97, 24-26 Nov. 1997, Bucuresti, Romania)
(1997) Analele. Univ. Bucuresti. 46, 161-164.
8. Aldica G, Badica P,
Phase modifications during high-temperature pyrolysis process of the spray-frozen, freeze dried nitrate powder
in Bi(Pb)-Sr(Ba)-Ca-Cu-O system,
(BPU-3, 2-5 Sept. 1997, Cluj-Napoca, Romania)
(1997) Proceedings Supplement of Balcan Physics Letters 5, 666-671.
9. Badica P, Aldica G,
The influence of starting composition on phase modifications in Bi(Pb)-Sr(Ba)-Ca-Cu-O pyrolysed powder
obtained by spray-frozen, freeze drying technique,
(BPU-3, 2-5 Sept. 1997, Cluj-Napoca, Romania)
(1997) Proceedings Supplement of Balcan Physics Letters 5, 662-665.

1996

1. Badica, P., Aldica, G., Alexeev, A.F., Gridasova, T.Y., Morozov, V.V.
Structural modifications of superconducting phases in Bi(Pb)-Sr-Ca-Cu-O system
(1996) Physica C: Superconductivity and its Applications, 259 (1-2), pp. 92-96.
DOI: 10.1016/0921-4534(96)00021-4
2. Badica, P., Aldica, G., Alexeev, A.F., Gridasova, T.Y., Morozov, V.V.

Influence of pyrolyzation temperature on final characteristics of BSCCO ceramic produced by spray-frozen, freeze drying method

(1996) Journal of Materials Science Letters, 15 (3), pp. 187-188.

DOI: 10.1007/BF00274446

3. Aldica, G., Geru, I.I., Puscasu, B.M., Constantinescu, F., Badica, P.

Structural modifications of the superconducting phases on Bi system by electron beam irradiation

(1996) Journal of Superconductivity, 9 (3), pp. 273-276.

DOI: 10.1007/BF00727547

1995

1. Aldica, G., Popescu, M., Popa, S., Bunescu, M.-C., Badica, P.

Sintering time and properties of YBa₂Cu₃O₇ superconducting ceramics

(1995) Journal of Superconductivity, 8 (3), pp. 365-372.

DOI: 10.1007/BF00728173

2. Aldica G, Alexeev AF, Badica P, Gridasova TY, Morozov VV,

Obtaining and properties in Bi(Pb) high-T_c superconducting ceramics,

(XIII Scientific Seminar: Theory and properties of refractory compounds and metals, 3-5 Aug. 1994, Herson, Ukraine)

(1995) Elektronnoe stroenie i svoistva tugoplavkikh metalov i soedinenii, ed. IPM-NANU, pp. 95-98 (in Russian)

1993

1. Alexeev AF, Belaus MF, Gridasova TY, Badica P,

Crychemical technology for obtaining of high-T_c superconducting Bi cuprates ceramics,

('50 years of activity of the Faculty of Physics and Engineering, Kiev Polytechnical Institute (NTUU)', 1993, Kiev, Ukraine)

(1993) Sbornic nauchnih i metodicheskikh trudov KPI, 2 (1994), 66-72 (in Russian)