

Selected scientific research

Technical University of Cluj Napoca, North University Center of Baia Mare

Representative publications

- 1) Anca Peter, Bregnya Denisa, Mihaly-Cozmuta Leonard, Mihaly-Cozmuta Anca, Nicula Camelia, *Use of TiO₂ photocatalyst as alternative means for the cottage cheese preservation*, Carpathian Journal of Food Science and Technology, vol 2 (2), December 2010, 50-58.
- 2) A. Peter, L. Baia, M. Baia, E. Indrea, F. Toderas, V. Danciu, V. Cosoveanu, L. Diamandescu, *Porous Au - TiO₂ aerogels nanoarchitectures for photodegradation processes*, Journal of Optoelectronics and Advanced Materials, vol 12, iss.5, 2010, p. 1071 – 1077, ISSN ON-LINE: 1841 – 7132, FI / 2009 = 0.433.
- 3) Anca Peter, Monica Baia, Felicia Toderas, Mihaela Lazar, Lucian Barbu-Tudoran, Virginia Danciu, *Photo-catalysts based on gold-titania composites*, Studia Universitatis Babes-Bolyai, Chemia, LIV, 3, 2009, 161-171.
- 4) A. Peter, L. Baia, V. Cosoveanu, M. Baia, D. Constantin, E. Indrea, *Influence of the Si content ad thermal treatment temperature on structural and photocatalytic properties of titania-silica aerogels*, JOAM-Symposia, 1,1, 2009, 6-11.
- 5) L. Baia, M. Baia, F. Vasiliu, L. Diamandescu, A. Peter, V. Cosoveanu, V. Danciu, *Nanotech- Clean Technology Conference Proceedings*, www.ct-si.org, ISBN 978-1-4200-8502-0, (2008), Cap. 9, 683
- 6) L. Baia, M. Baia, A. Peter, V. Cosoveanu, V. Danciu, *Evaluating the thermal treatment parameters effect on the anatase nanocrystalites size of titania aerogels*, J. Optoelectron. Adv. Mater. 9 (3), 2007, p.671-674, FI. 1.106
- 7) A. Peter, I. C. Popescu, E. Indrea, P. Marginean and V. Danciu, *The influence of the heat treatment on the photoactivity of the TiO₂-SiO₂ aerogels*, Studia Universitatis Babes-Bolyai, CHEMIA, XII, 3, 2007, p.105-111.
- 8) L. Baia, A. Peter, V. Cosoveanu, E. Indrea, M. Baia, J. Popp, V. Danciu, *Synthesis and nanostructural characterization of TiO₂ aerogel for photovoltaic devices*, Thin Solid Films, 511-512, 2006, p. 512-516, FI./2006 = 1.666
- 9) Myroslav Sprynskyy; Tomasz Kowalkowski; Hlanganani Tutu; Leonard Mihaly Cozmuta; Ewa M. Cukrowska; Boguslaw Buszewski, 2011, *The Adsorption Properties of Agricultural and Forest Soils Towards Heavy Metal Ions (Ni, Cu, Zn, and Cd)*, Soil and Sediment Contamination: An International Journal, 20: 1, 12— 29
- 10) Tomasz Kowalkowski; Hlanganani Tutu; Leonard Mihaly Cozmuta; Miroslav Sprynskyy; Ewa M. Cukrowska; Boguslaw Buszewski *Assessment of mobility of heavy metals in two soil types by use of column leaching experiments and chemometric evaluation of elution curves*, International Journal of Environmental Analytical Chemistry, Intern. J. Environ. Anal. Chem. Vol. 90, No. 10, Ianuarie 2010, 797–811
- 11) L. Mihaly Cozmuta, Camelia Varga, Monica Marian, Anca Mihaly Cozmuta, Tutu Hlanganani, 2008, *Applying of artificial neuronal networks in modeling of ionic exchange copper recovery process*, Revista de Chimie (ISI), Nr. 7, 766 - 772, ISSN 0034-7752.

- 12) A. Mihaly Cozmuta, L. Mihaly Cozmuta, C. Varga, 2007, *Electrochemical recovery of copper from wastewaters using graphite volumic electrode*, Revista de Chimie, Nr. 12, 12-32, ISSN 0034-7752 (ISI)
- 13) L. Mihaly Cozmuta, T. Visan, A. Mihaly Cozmuta, 2006, *Energetically aspects regarding the adsorbtion of heavy metals on natural zeolites. The influence of pH on copper adsorbtion*, Revista de Chimie, vol. 57(11), 1130-1134, ISSN 0034-7752
- 14) L. Mihaly Cozmuta, T. Visan, A. Mihaly Cozmuta, C. Varga, V. Viman, Gh. Vatca, 2005, *Energetic aspects related to heavy metals adsorption on the surface of volcanic tuff. I. The influence of activation parameters in Cu²⁺ adsorption*, American Journal of Environmental Sciences, 1(2), 159 - 163, ISSN 1553-345X
- 15) L. Mihaly Cozmuta, A. Mihaly Cozmuta, C. Varga, Gh. Hotea, 2004, *Study about the recovery of Zn from acid mine drainage*, Journal of Mining and Metallurgy, 40(1), 65-74, ISSN 1450-5959
- 16) A. Mihaly Cozmuta, L. Mihaly Cozmuta, Gh. Vatca, 2003 – *Mathematic modelling of copper recovery process from wastewaters. III. The kinetic of cathodic reaction*, Revista de Chimie, vol. 54 (1), 20-24, ISSN 0034-7752
- 17) Otto Ketney, Tita Mihaela, Tita Ovidiu ,Laura Bretan , Florin Boltea , 2008 , *Reserches regarding aflatoxin production in Feta chesse by direct contamination with Aspergillus flavus* , Journal of agroalimentary processes and technologies , vol. XIV , no. 2 , p.442-445 , ISSN 1453-1399 (Article indexed in ISI Web of Knowledge , BDI Index: IFIS – International Food Information Service; CAS – Chemical Abstracts Service (CAS ref; 163659); Food Science Central – from the publishers of FSTA – Food Science and Technology Abstracts®; CABI – Publishing Website Serials Cited Submission; EVISA - European Virtual Institute for Speciation Analysis; Science and Engineering Journal Abbreviations; Index Copernicus)
- 18) Otto Ketney, Tita Mihaela, Tita Ovidiu ,Laura Bretan , Florin Boltea , 2008 , *Reserches regarding viability of probiotic level of some lactic bacterium and bifidobacterium colonies in the Feta cheese*, Journal of agroalimentary processes and technologies , vol. XIV , no. 2 , p.446-454 , ISSN 1453-1399 (Article indexed in ISI Web of Knowledge , BDI Index: IFIS – International Food Information Service; CAS – Chemical Abstracts Service (CAS ref; 163659); Food Science Central – from the publishers of FSTA – Food Science and Technology Abstracts®; CABI – Publishing Website Serials Cited Submission; EVISA - European Virtual Institute for Speciation Analysis; Science and Engineering Journal Abbreviations; Index Copernicus)
- 19) Otto Ketney, Tita Mihaela, Tita Ovidiu, Tița Cristina –Maria , 2009 , *Evaluation of cream quality in terms of content of 2, 3, 7,8 tetrachlorodibenzo-p-dioxin (TCDD) in the county of maramures* , 4th International conference on manufacturing science and education - MSE 2009 , vol. II , p.227-230 , ISSN 1843-2522
- 20) Otto Ketney, Tita Mihaela, Tita Ovidiu, Mandrean Nicoleta , 2009 , *The analyze of dairy products by the quality point of view and the role of these teachers activities in training for future specialists in milk industry* , 4th International conference on manufacturing science and education - MSE 2009 , vol. II , p 231-234 , ISSN 1843-2522
- 21) Tita Mihaela, Tita Ovidiu, Otto Ketney, Tița Cristina –Maria , 2009 , *Implementation of quality management in processing of cheese with downcast paste* , 4th International conference on manufacturing science and education - MSE 2009 , vol. II , p 247-250, ISSN 1843–2522
- 22) Otto Ketney, Mihaela Tița, Ovidiu Tița, Cristina Tița and Nicoleta Mândrean, 2009 , *Evaluation and Monitoring Milk-Raw Material Quality in Maramures County in Terms of Content of Aflatoxins* ,

Balkan region conference on engineering and business education & international conference on engineering and business education conference proceedings , vol. II , p. 407-410 , ISSN 1843-6730 (Conference Proceedings - ISI Thomson index)

23) Otto Ketney, Mihaela Tița, Ovidiu Tița, Letiția Oprean and Nicoleta Mandrean, 2009 , *Elisa Techniques to Detect Aflatoxin M1 in Dairy Products and the Role of these Activities to the Training of the Future Specialists in Expertise and Quality Control of Milk and Dairy Products* , Balkan region conference on engineering and business education & international conference on engineering and business education conference proceedings , vol. II , p. 411-415 , ISSN 1843-6730 (Conference Proceedings - ISI Thomson index).

24) Otto Ketney, Tița Mihaela , Noje Alexandra , Tița Ovidiu , Bretan Laura , 2009, *Evaluation of accuracy and uncertainty of ELISA assays for the determination of aflatoxin in milk* Integrated systems for agri-food production (SIPA 09) p. 67-70 ISBN 978-973-638-348-9

25) Otto Ketney, Tița Mihaela , Noje Alexandra , Tița Ovidiu , Bretan Laura , Florin Boltea , Moldovan Camelia , 2010 , *Photocolorimetric determination of ammonia (easily hydrolyzable nitrogen) in pork meat during storage* Journal of agroalimentary processes and technologies , vol. XVI , no. 1 , p. 59 - 61, ISSN 1453-1399 (Article indexed in ISI Web of Knowledge , BDI Index: IFIS – International Food Information Service; CAS – Chemical Abstracts Service (CAS ref; 163659); Food Science Central – from the publishers of FSTA – Food Science and Technology Abstracts®; CABI – Publishing Website Serials Cited Submission; EVISA - European Virtual Institute for Speciation Analysis; Science and Engineering Journal Abbreviations; Index Copernicus).

26) Anca Dumuta-Codre, Ovidiu Rotaru, Liviu Giurgiulescu, Florin Boltea, Liliana Crisan, Bianca Neghelea, Preliminary researches regarding the microwaves influence on the milk microflora, Analele Universitatii din Oradea-Fascicula Biologie, TOM XVII (1)/2010, pg. 103-107, ISSN 1224-5119;

27) Florin Boltea, Laura Bretan, Otto Ketney, Anca Dumuța, Heavy metals concentration în milk from Baia Mare depression, Journal of agroalimentary processes and technologies, 2010, vol. XVI, no. 2, p. 247-249, ISSN 1453-1399;

28) Florin Boltea, Laura Bretan, Otto Ketney, Anca Dumuța, Study on the Contamination with Heavy Metals of the Vegetation Harvested Around the Main Pollution Sources în Maramures, Journal of agroalimentary processes and technologies, 2010, vol. XVI, no. 2, p. 253 – 256, ISSN 1453-1399;

29) Anca Dumuta, O. Rotaru, L. Giurgiulescu, F. Boltea, Liliana Crisan, Microwaves effects on microorganisms existing in cow milk, Bulletin USAMV, Agriculture 65 (2)/2008, pg. 463, ISSN 1843-5246

30) Liviu Laurențiu GIURGIULESCU, Petre SĂVESCU, Comparative Study about Technological Potentia of Virginia and Oriental Tobaccos Use in Superior Cigarettes Process International Symposium Euro - aliment 2005 29 - 30 September 2005, Galați, România

31) Liviu GIURGIULESCU, Petre SĂVESCU, Ion CHIRCAN, Researches on the Influence of Biotechnological Parameters on the Extraction of the Polyphenols from Red Wines The annals of “Valahia” University of Târgoviște, 2005

32) Liviu GIURGIULESCU, Petre SĂVESCU, Ion CHIRCAN, Researches on the Influence of Biotechnological Parameters in the High Quality Red Wine Production The annals of “Valahia” University of Târgoviște, 2005

33) Giurgiulescu L., P. Săvescu, Raluca Giurgiulescu, Research regarding the influence of biotechnological factors in white wines obtaining with low volatile acidity, Buletinul USAMV-CLUJ-CN, 61/2005 ISSN 1454-2382.

- 34) Giurgiulescu Liviu, Săvescu Petre, Study regarding the influence of biotechnological factors in obtaining of wine with low volatile acidity, , Quality on food and beverages in the frame of EU standards, Balkan Enviromental Association and Romanian Academy of Agricultural and Forestry Sciences (AAFS), 23-24 February , Bucharest/2006 Romania
- 35) L. Giurgiulescu, Research regarding biotechnological possibility to reduce volatile acidity in wines , Scientifical Researches. Agroalimentary Processes and Technologies, Volume XI, No. 2 (2005), 275-280
- 36) L.Giurgiulescu, Research for the variation of the principal chemical compounds at Virginia 196 tobacco during fermentation, Scientifical Researches. Agroalimentary Processes and Technologies, Volume IX, (2005), 127-131
- 37) L.Giurgiulescu, Possibility for using of aromatic plants in healthy foods, Analele Universităţii din Craiova, Seria Horticultură, tehnologia Prelucrării produselor alimentare, Ingineria Mediului, 2005, pg. 301-304
- 38) L.Giurgiulescu, The researches for the technological potential of the Virginia tobacco variety cultivated in sandy area from Oltenia Analele Universităţii din Craiova, Seria Horticultură, tehnologia Prelucrării produselor alimentare, Ingineria Mediului, 2005, pg. 418-421
- 39) L.Giurgiulescu, The research about technological potential of Baragan tobacco variety cultivated in Câmpia Română, Analele Universităţii din Craiova, Seria Horticultură, tehnologia Prelucrării produselor alimentare, Ingineria Mediului, 2005, pg. 545-548
- 40) L.Giurgiulescu, Stoica Felicia, Ionică Laura, Research regarding the variation of quality sign at Oriental tobaccos cultivated in "Câmpia Română". Scientifical Researches Agroalimentary Processes and Technologies, Volume X, noi.2 (2005), 299-313
- 41) Giurgiulescu Liviu, Săvescu Petre, Reserch regarding the action of selected yeasts (L.S.A.), of temperatures and fermentation length on contents of some red wines constituents Simpozionul Ştiinţe, Procese şi Tehnologii Agroalimentare, New trends in food safety and processing, Facultatea de Tehnologia Produselor Agroalimentare, USAMV a Banatului, , 17-18 Mai Timişoara 2007
- 42) Rodica Diana APAN – THE GENERAL THEORY OF BUSINESS LAW, *universitary course, single author*, Sfera P.H., Cluj Napoca, 2007, CNCSIS code 62, p.226, I.S.B.N. 978-973-87830-7-2;
- 43) Rodica Diana APAN- BUSINESS LAW, PRACTICAL COURSEBOOK, Sfera p.h., Cluj Napoca, 2008, CNCSIS CODE 62, p.78, I.S.B.N.-978-973-87830-8-9;
- 44) Rodica Diana APAN- LEGAL PROTECTION OF CONSUMERS – CONSUMER CREDIT AND CONNECTED DOMAINS, *monography, single author*, Sfera P.H., Cluj Napoca, 2007, CNCSIS code 62, p.472, I.S.B.N. 978-973-87830-6-5;
- 45) Rodica Diana APAN, CONSUMER CREDIT – PROTECTION OF THE CONSUMERS' ECONOMIC INTERESTS, *monography, single author*, Sfera P.H , Cluj-Napoca, 2004, cod CNCSIS 62, p.269, I.S.B.N. 973- 86766-4-9;
- 46) Rodica Diana APAN, Angela MIFF-*COMMUNITY LAW*, *sylabus, joint authorr*, Sfera P.H., Cluj Napoca, 2008, CNCSIS code 62, p.120, I.S.B.N.978-973-1875-06-4;
- 47) Rodica Diana APAN – Consumers' health protection through instituting new regulations on iodised salt. Grounds for increased protection in certain parts of the Maramures region, article published in the Carpathian Journal of Food Science and Technology, vol. I (1), June 2009, Technical University of Cluj Napoca P.H.;

48) Rodica Diana APAN-*The new categories of natural persons who carry on economic activities: legal framework vs. Economic consequences*, in press at *Studia Universitatis Vasile Goldis Arad*, Economic Sciences Series, no 19/2009, category B review, CNCSIS code 792, I.S.S.N. 158-2339, no.585/21.04.2009;

49) Rodica Diana APAN-*Protecting consumers' rights and economic interests on the consumer credit in Romania*, in press at *Studia Universitatis Vasile Goldis Arad*, Economic Sciences Series, no 19/2009, category B review, CNCSIS code 792, I.S.S.N. 158-2339, no.585/21.04.2009;

50) Rodica Diana APAN – *Landmarks of the enforcement procedure for uncontested claims on the basis of a European enforcement order*, study held at *The 7th International Symposium of The Romanian Regional Science Association Territorial Cohesion. Growth. Convergence. Competitiveness*, 12-13 June 2009, organized by the North University, Baia Mare, Romania;

51) Rodica Diana APAN-*The legal framework for consumer credit in Romania: facts and prospects*, study held in English at the *European Consumer Protection: Theory & Practice*, Leeds-Durham duo-colloquium, 16-17 December 2009, University House, Leeds, organized by Durham University, Institute of Commercial & Corporate Law and by the Centre for European Law & Legal Studies at the University of Leeds;

52) Rodica Diana APAN-*Consumer protection in Romania -a contemporary creation*, study held in English at the international conference *Teaching Consumer Law Conference, organized by the Houston University, Law Center, Center for Consumer Law, Texas, USA*, between 22-25 May 2008, published in English in “*Journal of Consumer and Commercial Law*“, Vol. 12, no. 1, Fall 2008, *Houston University, Law Center, Center for Consumer Law and Section of the State Bar of Texas*;

53) Rodica Diana APAN-*Is consumer protection in the credit market a kind of Cinderella in Romania?* Study held in English at the *European Responsible Credit Conference London, 13-14.11.2008*, organized by the *European Coalition for Responsible Credit - Germany; National Community Reinvestment Coalition - U.S.A; Centre for Economic and Social Inclusion – U.K.*, published in English in the “*Consumer Journal*“, Vol.4, 2009, *international specialized review of Consumer Awareness Organisation*, I.S.S.N. 0331-6327 and published in *Proceedings (International Multidisciplinary Conference, Nyiregyhaza, Hungary, 21-22 May 2009)*, *Proceedings categoria B+, cod CNCSIS 610, ISSN 1224-3264, pp.31-35*;

54) Rodica Diana APAN -*The legal regime of traders' liability, regulated by the laws on consumer protection - a new paradigm*, published in English in the *Proceedings of the Interdisciplinary Management Research V, no.1-2009, registered THOMPSON ISI, RePEc, EconPapers and Socionet, (International Conference Interdisciplinary Management Research, section Law and Economics, Poreč, Croatia, 8 – 10 May 2009)*, organized by the J.J.Strossmayer University Osijek -Hochschule Pforzheim University , ISBN 978-953-253-253-2/ ISSN 18470408, 2009, pp.577-590;

55) Nicolae TAMASAN-STAMATE, Rodica Diana APAN-*The business environment in Romania vs. a new challenge resulted from the regulations of communautarian brand*, published in English in *Proceedings (International Multidisciplinary Conference, Nirethaza, Hungary, 21-22 May 2009)*, *Proceedings categoria B+, CNCSIS code 610, ISSN 1224-3264, pp.319-324*;

Patent

1) Danciu Virginia, Cosoveanu Veronica, Peter Anca, Moldovan Zaharie, Nutiu George, Process for mineralisation through photocatalysis of organic polutants from waste waters, Patent no. 122840, accorded basis on Romanian Law 64/1991, starting date 6.05.2004, date of patent eliberation 30.03.2010.

Representative papers presented at symposiums and conferences

- 1) Leonard Mihaly Cozmuta, Anca Mihaly Cozmuta, Camelia Nicula, Tutu Hlanganani, Elisee Bakatula, 2010, *Mathematical modelling of zinc adsorption process from solutions using volcanic tuff*, 7th INTERNATIONAL CONFERENCE ON APPLIED MATHEMATICS (ICAM7), Baia Mare, Romania, 1.09. 4.09. 2010
- 2) Varga Camelia, Marian Monica, Mihaly-Cozmuta L., Coman Mirela, Mihaly Cozmuta Anca, Mare Rosca Oana, 2008, *The mining activities impact on the vegetal associations in surrounding of Baia Mare town (Maramures county)*, 17th International Workshop "European Vegetation Survey" Brno, Czech Republic, 1-4 May 2008
- 3) L. Mihaly Cozmuta, C. Varga, A. Mihaly Cozmuta, 2007, *Recovery of copper ions from acid mine wastewaters using ionic exchange method*, CAPACITY BUILDING ON THE ECOMINING PRINCIPLE, International Seminar, Ecomining –Europe in 21th Century – the 2nd edition, 24-26 Octombrie, Sovata Praid, 2007, 413-423, ISSN 978-973-741-071-9
- 4) L. Mihaly Cozmuta, C. Varga, M. Marian, A. Mihaly Cozmuta, 2007, *Physical and chemical stability assessment of tailings ponds*, CAPACITY BUILDING ON THE ECOMINING PRINCIPLE, International Seminar Ecomining –Europe in 21th Century – the 2nd edition, 24-26 Octombrie, Sovata &Praid, 2007, 153-163, ISSN 978-973-741-071-9, pag. 152-161
- 5) A. Mihaly Cozmuta, L. Mihaly Cozmuta, C. Varga, 2007, *Pollution risk assessment in non-ferrous ores processing technologies. I. Disposal of wastewaters*, 1st International work shop Optoelectronic Techniques for Environmental Monitoring and Risk Assessment, 21-24 Mai, Bucuresti ISBN: 973-85818-9-3, pag. 145-151
- 6) L. Mihaly Cozmuta, A. Mihaly Cozmuta, C. Varga, 2007, *Risk elements in designing and exploitation of tailings ponds*, 1st International work shop Optoelectronic Techniques for Environmental Monitoring and Risk Assessment, 21-24 Mai, Bucuresti ISBN: 973-85818-9-3, 152-162
- 7) A. Mihaly Cozmuta, L. Mihaly Cozmuta, C. Varga, I. Bud, I. Denut, 2007, *Environment pollution with heavy metals caused by the tailings ponds' failures*, International work shop Heavy metals in the environment and the wellbeing of human and animals, Bucuresti 20 – 21 April, ISBN 978-973-0-04962-6
- 8) Otto Kenyey, On-Line WebSeminar "*Basics of HPLC Method Development*" organized by Agilent Technologies, Wilmington, USA, October 2008
- 9) Otto Kenyey, Seminar "*Mass spectrometry application of the table in different fields*" seminar organized by the Applied Biosystem, Cluj Napoca, October 2008
- 10) Otto Kenyey, On-Line WebSeminar "*Advances in HPLC Column Technologies*", organized by Agilent Technologies, Wilmington, USA, December 2008
- 11) Otto Kenyey, , On-Line WebSeminar , "Addressing Recent Bioanalytical Regulatory Guidelines on Metabolites and Matrix Effects with Triple Quadrupole LC/MS/MS" , Organized by Erin Chambers Waters Corporation Milford , MA, March 2009
- 12) Otto Kenyey, 4th International conference on manufacturing science and education – MSE 2009 , *Trends in engineering and academic education* , Organized by "Lucian Blaga" University of Sibiu , "Herman Oberth" Faculty of Engineering , Manufacturing Science Department with AGH University of Science and Technology Krakow –Poland, June 2009

13) Otto Kenyey, On-Line WebSeminar “*Chromatography software for advanced LC/MS/MS control and data processing*” Organized by Bruker Corporation, August 2009

14) Otto Kenyey, 5 BALKAN REGION CONFERENCE on ENGINEERING and BUSINESS EDUCATION in conjunction with 2nd INTERNATIONAL CONFERENCE on ENGINEERING and BUSINESS EDUCATION, Organized by "Lucian Blaga" University of Sibiu , Romania October 2009

15) Otto Kenyey, The 6th International Conference Integrated Systems for Agri-food Production , Organized by „Lucian Blaga” University Sibiu , Academy of Agricultura land Foresty Sciences , Politehnica University Timisoara , College of Nyíregyháza Faculty of Engineering and Agriculture , Nyíregyháza , Hungary, November 2009

16) Otto Kenyey, On-Line WebSeminar , “Aflatoxins B1, B2, G1,G2 have generally been analyzed by HPLC with Fluorescence detection. While the technique is broadly used, there are a number of advantages to an LC/MS/MS method”, organized by Agilent Technologies, Wilmington, USA, February 2010

17) Otto Kenyey, On-Line WebSeminar , “ Minimize Method Development Time for Pesticide Screening Using LC/MS Application Kit” , organized by Agilent Technologies, Wilmington, USA, October 2010

18) Otto Kenyey, On-Line WebSeminar , “ Using Deconvolution to Improve GC/MS Detection and Quantitation ” , organized by Agilent Technologies, Wilmington, USA, October 2010

Representative National Projects

1) *Advanced Nanostructured aerogel materials with application to environment depolution by heterogeneous photocatalysis*, members –Anca Peter - project coordinator.

2) *Innovative photocatalytic materials used to chemical and microbiological decontamination of air*, MATDECON-PN II 71-099/2007, national project.

3) *Rehabilitation of tailings ponds by application of amendments and cultivation of vegetal species with high adaptability to the heavy metals-RIVAM*, 2008-2011.

4) *Identification of technical solution for reducing the pollution impact on environment (soil, water) generated by the mine waters/hazardous with high content of heavy metals*, 2007-2008.

5) *Innovative photocatalytic materials used to chemical and microbiological decontamination of air*, MATDECON-PN II 71-099/2007, 2007-2010.

6) *Designing the hazards charts and environment assessment in mining areas of Maramures and Satu Mare counties using GIS – SIG*, 2005-2008.

7) *Connexions to European Excelency Research Related to Environment Problems - CONEEX*, 2005-2007.

Representative International Projects

1) *Developing of a biophysical system based on zeolites-microorganisms-vegetal species for ecoremediation of tailing ponds coming from gold-silver preparation industry – ZEMIP*, 2009-2011

Partners: Technical University of Cluj Napoca, University of Johhanesburg – South Africa

2) CII-HU-0010-03-0809 - Teaching and Learning Bioanalysis, 2008-2011

Partners: University of Pécs-Ungaria (coordonator consortiu), Technical University of Cluj Napoca - Romania, Graz University of Technology-Poland, Neophit Rilski South-West University-Bulgaria, Sofia University St.Kliment Ohridski-Bulgaria, University of Zagreb-Croatia, Charles University in Prague-Cehia, Palacký University, Olomouc-Cehia, Eötvös Loránd University – Ungaria, University of Debrecen-Ungaria, University Sts.Cyril and Methodius – Skopje-Macedonia, Warsaw University-Polonia, Universitatea babes Bolyai Cluj Napoca, Universitatea de Medicina si Farmacie Targu Mures -Romania, University in Prishtina with temporary seat in Kosovska Mitrovica, Comenius University in Bratislava-Slovakia, Constantine The Philosopher University in Nitra-Slovakia

3) *Education in separation and identification of organic xenobiotics in environmental samples and food product, 2005-2009*

Partners: Nicolaus Copernicus University – Torun, Poland (coordinator retea), Universitatea de Nord Baia Mare -Romania, University Pardubice-Czech Republic, Slovak University Technology – Slovak Republic, Technical University of Graz- Austria, University of Pecs – Hungary, Agricultural University Wrodaw – Poland, Medical University of Gdansk – Poland, Comenius University of Bratislava – Slovakia, University of Ljubliana – Slovenia, University of Sofia – Bulgaria, University of Zagreb-Croatia.

4) *Investigation of the Risk of Cyanide in Gold Leaching on Health an Environment in Central Asia and Central Europe, IRCYL, ICA 2- CT- 2000- 10065, 2000-2004*

Partners: IC Consultants Ltd Uk (coordonator consortiu), Universitatea de Nord Baia Mare – Romania, Medical Institute for Environmental Hygiene Germany; InfoMine Rusia; Kyrgyz Research Institute of Oncology and Radiolgy Kyrgyzstan; Kyrgyz Scientific Center of Haematology Kyrgyzstan; Institute for Regional Studies Kyrgyzstan; Pshysico- Chemical Methods Analysis Center Almaty Kazahstan; University Babes Bolyai Cluj Napoca Romania; Institute of Public Hygiene Cluj Napoca Romania; Institute of Analytical Instrumentation and Environmental Analyses Cluj Napoca Romania; Mining Consortium Research and Companies Deva Romania.

5) Project name: Leonardo da Vinci-2009, acronym MILKILAB

Nr. Partnership agreement: 809 din 14.04.2009

Theme Project: Laboratory methods and recommendations for good practice in animal husbandry to improve raw milk quality on dairy farms

Project manager: PhD. Eng. TIȚA Mihaela – Faculty of Agricultural Sciences, Food Industry and Environmental Protection. Member: Otto Keney

Partners: Universitatea Lucian Blaga din Sibiu , Colegiul Tehnic de Industrie Alimentara „Terezianum” din Sibiu , HBLA Ursprung – Austria

Representative publications

1. L. Baia, L. Diamandescu, L. Barbu-Tudoran, A. Peter, G. Melinte, V. Danciu, M. Baia Efficient dual functionality of Highly porous nanaocomposites based on TiO₂ and noble metal particles, *J. Alloys and Comp.* 509(6), 2672-2678 (2011)
2. Anca Peter, Virginia Danciu, *Aerogeluri pe baza de TiO₂ cu aplicatii la depoluarea mediului (Titania based aerogels with applications to environmental depolution)*, Ed. Risoprint, ISBN 978-973-53-0353-2 (2010), 158 pag
3. M. Popa, E. Indrea, P. Pascuta, V. Cosoveanu, I.C. Popescu and V. Danciu, Fe, Ce and Cu influence on morpho-structural and photocatalytic properties of TiO₂ aerogels, *Rev. Roum. Chim.*, 55(7), 369-375 (2010)
4. M. Popa, D. Macovei, E. Indrea, I. Mercioniu, I.C. Popescu, V. Danciu, Synthesis and structural characteristics of nitrogen doped TiO₂ aerogels, *Microporous and Mesoporous Materials*, 132, 80–86 (2010)
5. Zs. Pap, V. Danciu, Zs. Cegléd, Á. Kukovecz, A. Oszkó, A. Dombi, K. Mogyorósi, The influence of rapid heat treatment on the photocatalytic activity of titania photocatalysts, accepted to *Applied Catalysis B: Environmental* 101(3-4), 461-470 (2010).
6. Zs. Pap, L. Baia, K. Mogyorósi, A. Dombi, A. Oszkó, V. Danciu, The influence of the acetic and nitric acid concentration on the activity of N-doped titania made by rapid calcination, submitted to *Applied Catalysis B: Environmental* (2010)
7. M. Popa L. Diamandescu, F. Vasiliu, C. M. Teodorescu, V. Cosoveanu, M. Baia, M. Feder, L. Baia, V. Danciu, Synthesis, structural characterization, and photocatalytic properties of iron-doped TiO₂ aerogels, *J. Mater. Sci.* 44, 358–364 (2009)
8. Emil Indrea, Anca Peter, Danut T. Silipas, Simina Dreve, Ramona-Crina Suci, Marcela Corina Rosu, Virginia Danciu and Veronica Cosoveanu, Structural characterisation of binary SiO₂/TiO₂ nanoparticle aerogels by X-ray scattering, *Journal of Physical: Conference Series* 182, 012066 (2009)
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10. A. Peter, L. Baia, V. Cosoveanu, M. Baia, D. Constantin, I.C. Popescu, V. Danciu, Influence of Si content and thermal treatment temperature on structural and photocatalytic properties of titania-silica aerogels, *J. Optoelectron. Adv. Mater.- Sympozia* 1, 6-11 (2009)
11. M. Baia, V. Danciu, V. Cosoveanu, L. Baia, Porous nanoarchitectures based on TiO₂ aerogels and Au particles as potential SERS sensor for monitoring of water quality, *Vibrational Spectroscopy*, 48 (2), Pages 206-209 (20 November 2008)
12. V. Danciu, L. Baia, V. Cosoveanu, M. Baia, F. Vasiliu, L. Diamandescu, C.M. Teodorescu, M. Feder, J. Popp, Photocatalytic and structural properties of mixed titania and zirconia aerogels, *J. Optoelectron. Adv. Mater. – Rapid Communications*, 2(2), feb. 2008, p 76-80
13. M. Popa, I.C. Popescu, V. Danciu, Photocatalytic activity of metal doped TiO₂ aerogels prepared by sol-gel process, *Studia Universitatis Babes-Bolyai, CHEMIA*, LII, 3, 131-136 (2007)
14. V. Danciu, L.C. Cotet, V. Cosoveanu, P. Marginean, 'Preparation and Porous Structure

Determination of Resorcinol-Formaldehyde and Carbon Aerogels', *Studia Universitatis Babes-Bolyai, Chemia*, (2003), XLVIII, 2

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18. L.C. Cotet, M. Baia, L. Baia, I.C. Popescu, V. Cosoveanu, E. Indrea, J. Papp, V. Danciu, "Structural Properties of Some Transition Metal Highly Doped Carbon Aerogels", *Journal of Alloys and Compounds*, 434-435 (2007) 854

19. L.C.Cotet, A. Roig, I.C. Popescu, V. Cosoveanu, E. Molins, V. Danciu, "Synthesis of the Meso and Macro Carbon Aerogels", *Rev. Roum. Chim.* 52(11) (2007) 1077-1081

20. Dumitru, A. Morozan, I. Stamatina, V. Danciu, L.C.Cotet, "Correlation of different carbon support and catalytic activity for Pt based catalyst" *J. Optoelectr. Adv. Materials*, 10, 4 (2008) 904 – 906

21. Maicaneanu A., Cotet L.C., Danciu V., Stanca M., Phenol removal from water using carbon aerogel as adsorbant, *Studia Univ. Babes-Bolyai Chem.*, 4 1 (2009) 33.

22. Maicaneanu A., Cotet L.C., Danciu V., Stanca M., Iron doped carbon aerogels as catalyst for phenol total oxidation, *Studia Univ. Babes-Bolyai Chem.*, 3 (2009) 116.

Representative Projects

| | Period |
|--|---------------|
| 1. PN II-Partnership- project 71-136/2007 : Innovative photocatalytic materials applied to indoor air chemical and microbiological decontamination | 2007-2010 |
| 2. PN II-Human Resources – project 81/2010 “New SERS sensors for the detection of the wastewater organic pollutants” | 2010-2013 |
| 3. Bilateral collaboration RO-HU nr 21/2008: “Preparation and Characterization of Visible Light Activated Photocatalysts for Water and Air Decontamination | 2008-2009 |
| 4. COST Action 540 “Photocatalytic technologies and novel nanosurfaces materials –critical issues (“PHONASUM”) | 2006-2010 |
| 5. CEEEX – MATNANTECH contract 23 “Titania based nanomaterials and nanostructured films for photocatalytic degradation of organic pollutants” NANOTICATPOL | 2005-2007 |
| 6. MATNANTECH – Contract 205(403) – “New biomaterials based on natural polymers, titania and silica aerogels structures, with targeted applications” | 2004-2006 |

7. Bilateral Collaboration Bulgaria-Romania, “Synthesis, physical-chemical and morphological characterization and toxicity testing of titanium dioxide (TiO₂) and silicon dioxide (SiO₂) polymeric nanoparticle, with respect to their application as drug carriers” 2005-2006
8. MATNANTECH – Contract C101(204) – “Multifunctional advanced materials based on titania and carbon aerogels” 2002-2004
9. Project COBASE RO-USA/ “Initiation of a Joint Program Between Brooklyn College of the City University of New York and Babeş-Bolyai University of Cluj-Napoca, Romania – in Research and Education in Environmental Studies with an Emphasis on Photocatalytic Degradation of Organic Pollutants Relevant to the Transylvanian Landscape “ 2001-2002

P2 – ICA Research and Development

Representative publications

1. Mihaela Begea, Ion Stroia, Sevastita Vraciu (2005). *Clean-up technologies for malt and brewing industry*, Journal of Environmental Protection and Ecology, Book 4, vol. 6, 137-141.
2. Gheorghe Mencinicopschi, Ion Stroia, Mihaela Begea (2005). *Complex utilisation of starchy raw materials by complementary and alternate technologies*, Journal of Environmental Protection and Ecology, Book 2, vol. 6, 415-422.
3. Ion Stroia, Mihaela Begea, Elena Boca, Elena Baron, Gheorghe Bâldea, Stela Muşu, Constanţa Mihai (Liţa), Emilian Vamanu (2007). *Food grade lactic acid from cereals*, Journal of Environmental Protection and Ecology, Book 2, vol. 8, 365-373, ISSN 1311-5065.
4. Paul Begea, Ion Ghinoiu, Ion Stroia, Mihaela Begea (2007). *Culinary activities - specific way for the capitalization of touristic potential of the rural settlements from Draşna-Chiojd sub-carpathian depression*, Journal of Environmental Protection and Ecology, Book 2, vol. 8, 401-409, ISSN 1311-5065.
5. Mihaela Begea, Ion Stroia, Elena Boca, Mariana Vladescu, Paul Begea (2007). *Utilisation of NG ATP HYGIENE equipment for reading and interpretation of results for ATP analysis in canned foods enterprises*, Journal of Environmental Protection and Ecology, Book 2, vol. 8, 380-393, ISSN 1311-5065.
6. Mihaela Begea, Ion Stroia, Constanţa Mihai (Liţa), Emanuela Gheorghe, Elena Baron (2007). *Factors influencing the quality of wine active dried yeast*, Journal of Environmental Protection and Ecology, Book 3, vol. 8, 625-639, ISSN 1311-5065.
7. Gheorghe Mencinicopschi, Ion Stroia, Mihaela Begea (2006). *Enzymes 'at work' in food industry*, Journal of Environmental Protection and Ecology, Book 1, vol. 7, 137-141, ISSN 1311-5065.
8. Mihaela Begea, Mariana Vlădescu, Gheorghe Bâldea, Cornelia Cîmpeanu, Cristina Stoicescu, Marius Toboşaru, Paul Begea (2010). *Utilization of last generation enzymes for industrial use in order to obtain bioethanol from locally available agricultural renewable resources*, Romanian Agricultural Research, nr. 27, 15-20, ISSN 1222-4227.

9. Cîmpeanu Cornelia, Câmpeanu Gheorghe, Begea Mihaela, Vlădescu Mariana, Cornea Petruța (2010). *Bioethanol production by new thermotolerant Romanian yeast strains*, Romanian Biotechnological Letters, vol. 15(3), 5310-5316, ISSN 1224 – 5984.
10. F. Peter, L. Poppe, C. Kiss, E. Szocs-Biro, G. Preda, C. Zarcu, A. Olteanu “*Influence of precursors and additives on microbial lipases stabilized by sol-gel entrapment*”, Biocatal. Biotransform., 2005, 23 (3-4), 251-260.
11. C. Kiss, C. Zarcu, C. Csunderlik, F. Péter, “*Enantioselective acylation of secondary alcohols by biocatalysis with Pseudomonas fluorescens lipase immobilized by sol-gel method*” (Rom). Revista de Chimie, 2007, 58 (8), pp. 799-804
12. C. Zarcu, C.Kiss, L.Corici, R.Croitoru, C.Csunderlik, F. Peter, “*Combined Sol-gel Entrapment and Adsorption Method to Obtain Solid-Phase Lipase Biocatalysts*” Revista de Chimie, 2009, 60 (9), pp. 922-927.

Representative Projects

Romanian national projects

1. Project RELANSIN 931/2000 - Elaboration of biotechnological procedure to produce active dry brewing yeast (2000-2002) (Romanian Ministry for Education and Research)
2. Contract AGRAL 32/2001 - Complex capitalization of starchy raw material through complementary and alternative technologies (Romanian Ministry for Education and Research)
3. Project BIOTECH 3352/2003 – Food and feed protein and vitamin concentrates obtained through biotechnologies (2003-2005) (Romanian Ministry for Education and Research)
4. Project BIOTECH 3344/2003 – Procedure for rapid evaluation of microbiological purity in biotechnology (2004-2005) – scientific manager, researcher / national project
5. Project RELANSIN 2105/2004 - Enzymatic technology and installation to obtain high purity lactic acid from corn for food industry and pharmaceutical use (2004-2006) (Romanian Ministry for Education and Research)
6. Project RELANSIN 1953/2004 - Modernized technologies for canned foods in conformity with requirements of European Union market (2004-2006) (Romanian Ministry for Education and Research)
7. Project BIOTECH 4685/2004 - Biotechnology for conversion of fats in order to obtain single-cell protein biomass with utilisation in food industry (2004-2006) (Romanian Ministry for Education and Research)
8. Project AGRAL 273/2004 - Production of selected dried yeast strain in order to capitalize the specific sensorial characteristics of Romanian wines (2004-2006) (Romanian Ministry for Education and Research)
9. Project AGRAL 5492/2004 - Development of analyse method and impedimetric immunosensors for rapid detection of aminoglycosides (2004-2006) (Romanian Ministry for Education and Research)
10. Project CEEX 40/2006 - Increasing of food safety using unconventional processes for thermal treatment of liquid food products (2006-2008) (Romanian Ministry for Education and Research)

11. Project CEEEX 1117/2006 - Development and validation of immunoenzymatic techniques to detect pathogens, mycotoxins and allergens in foods (2006-2008) (Romanian Ministry for Education and Research)
12. Project CEEEX 63/2006 - Performant microfiltrant composites – effective solution for food safety (2006-2008) (Romanian Ministry for Education and Research)
13. Project RELANSIN 930/2000 - Elaboration of biotechnological procedure to produce high concentrate vinegar (Romanian Ministry for Education and Research)
14. Project RELANSIN 1235/2001 - Complex studies and researches regarding the elaboration and implementation of the technology for natural oil from oleaginous raw materials (Romanian Ministry for Education and Research)
15. Project AGRAL PPB6/2003 - Elaboration of the research and technological development strategy in agriculture, forestry and food industry in the context of integration within European Research Area (Romanian Ministry for Education and Research)
16. Project RELANSIN 2019/2004 - Equipment and technology for ultrasound production with utilisation in food industry (Romanian Ministry for Education and Research)
17. Project Complex 51-020/2007- Development of sustainable technologies to produce baking yeast (2007-2010) (Romanian Ministry for Education and Research)
18. Project PNCD II-P4-6. Biotechnologies - *Innovative technologies of preserving and using of probiotic lactic bacteria with superior performance to increase food security*
19. Project CNCSIS PD-53 – The study of the encapsulation processes of biological agents used in lactose hydrolysis technologies
20. Project BIOTECH 934/2005 – Assuring the food safety and quality of sheep and goat milk by improveing the gathering, preserving and processing systems
21. Project CEEEX 40/2006 – Researc regarding the increase of food safety by using nonconventional termical treatment processes of liquid food products

International projects

1. Bilateral research programme Romania – Republic of Moldavia – common contracts with the National Institute of Vinery and Wine Chisineu (1994 – 2002)
2. Program COST 835 - Micromycètes toxigènes les plus importants au niveau agricole (1999 – 2001)
3. PHARE Small Projects Programme Project “SAFE FOOD All Over Europe” (PHARE/2004/082-071-77)
4. Bilateral Collaboration Programme Italia – Romania, University from Verona, Faculty of Sciences, Department of Science and Technology / Microflora evaluation during spontaneous fermentations of Amarone and Cabernet Sauvignon wines and selection of microorganisms useful for maintaining the “territorial” typical traits of wines (2006 – 2008)
5. ARW-NATO - Food Safety and Security: Global Holistic Approaches for the Future and Environmental Impacts (membru) – 2007

Representative publications

1. A.M. Jastrzębska, A.R. Kunicki, A.R. Olszyna, E. Karwowska, Al₂O₃-Ag nanopowders – new method of synthesis, characterization and biocidal activity, *Advances in Applied Ceramics: Structural, Functional and Bioceramics*, 110, 2 (2011) 108-113
2. A.M. Jastrzębska, A.R. Kunicki, A.R. Olszyna, Properties of Al₂O₃-Ag nanopowders produced by an innovative thermal decomposition-reduction method and chemical silver nitrate reduction, *Ceramic Materials*, 62, 3 (2010) 403-408
3. A. Sidorowicz, A. Jastrzębska, A. Olszyna, A. Kunicki, Study of the properties of Al₂O₃-Ag nanopowders produced by thermal decomposition-reduction method and colloidal nanosilver impregnation, *Electronic Materials*, 2 (T.38) (2010) 30-38
4. A. Jastrzębska, A. Olszyna, A. Kunicki, Study of the properties of Al₂O₃-Ag nanopowders produced by thermal decomposition-reduction method and colloidal nanosilver impregnation, *Materials Engineering*, 3: 175 (2010) 514-516
5. P. Czarnecka, T. Ciach, A. Kunicki, A. Olszyna, M. Gołaszewska, A. Jastrzębska, Producing and properties of the polylactide-alumina nanocomposite fibres, *Materials Engineering*, 3: 175 (2010) 467-469
6. A. Jastrzębska, A. Kunicki, A. Olszyna, The effect of precursor thermal decomposition temperature on properties of the acquired Al₂O₃-Ag₂O nanopowders, *Composites*, 10: 3 (2010) 270-275
7. T. Ząbkowski, A. Kunicki, A. Olszyna, A. Sołgała, M. Kuś, K. Szczepocka, Bactericidal activity of silver nanocomposites, *Pharmacies Magazine*, vol XVII, nr 6-7 (198-199) (2010), ISSN 1233-2755, str 51-55
8. W. Ziemkowska, M. Cyrański, A. Kunicki, Alkylaluminium derivatives of difenic acid: novel aluminium carboxylates, *Inorganic Chemistry*, 48 (2009) 7006-7008
9. A. Zawada, A. Kunicki, W. Ziemkowska, A. Pietrzykowski, A. Olszyna, Synthesis and sintering of Al₂O₃ – Si₃N₄ nanocomposites, *Ceramic Materials*, 103 (2008) 451-458
10. A. Sołgała, A.R. Olszyna, A. Kunicki, Influence of alumina precursor modifier on the morphology of resultant Al₂O₃ nanopowder, *Ceramic Materials*, 60, 4 (2008) 262-265
11. A. Kunicki, K. Leszczyńska, Trends in investigations of controlled hydrolysis reaction of aluminium organic compounds, *Chemical Industry*, 86 (2007) 611-616
12. J. Zachara, I. D. Madura, A. R. Kunicki, How the bonding mode in cyclopentadienylaluminum complexes influences the Cp - ligand aromaticity, *Polish Journal of Chemistry*, 81 (2007) 745-755
13. K. Leszczyńska, I. D. Madura, A. R. Kunicki, J. Zachara, M. Łoś, New route to alkylaluminum hydroxides via hydrolysis of cyclopentadienylaluminum complexes, *Journal of Organometallic Chemistry*, 692 (2007) 3907-3913

Patents

1. Kunicki, A. Olszyna, M. Gołaszewska, G. Karolczak, M. Kuś, J. Jureczko, A. Jastrzębska, Method of acquiring of modified alumina nanoparticles, patent application (14.03.2011)

2. D. Chmielewska, A. Kunicki, A. Olszyna, M. Kuś, A. Jastrzębska, Modified alumina nanoparticles and method of acquiring of modified alumina nanoparticles, patent application (14.03.2011)
3. Kunicki, A. Olszyna, A. Jastrzębska, M. Kuś, M. Gołaszewska, Method of acquiring of modified alumina nanoparticles, patent application nr P-391219 (14.05.2010)
4. Kunicki, A. Olszyna, M. Kuś, A. Jastrzębska, P. Czarnecka, Method of acquiring of modified alumina nanoparticles, patent application nr. P-391199 (12.05.2010)
5. Jastrzębska, A. Olszyna, A. Kunicki, Method of acquiring of modified alumina nanoparticles, patent application nr. P-390762 (18.03.2010)
6. Sołgała, A. Olszyna, A. Kunicki, Modified alumina nanoparticles and method of acquiring of modified alumina nanoparticles, patent application nr. P-386489 (10.11.2008)
7. A. Kunicki, K. J. Kurzydłowski, A.R. Olszyna, A. Pietrzykowski, W. Ziemkowska, A. Zawada, Method of crushing powder agglomerates, patent application nr. P379998 (21.06.2006)

Representative Projects

1. Warsaw University of Technology internal project for the year 2009, Optically active composite materials applicable for optical boosters configurations and solid state lasers, finished in 2009, Warsaw University of Technology, Institute of Microelectronics and Optoelectronics of Faculty of Electronics and Information Technology, coordinator: R. Piramidowicz, executors: A. Olszyna, A. Kunicki, A. Jastrzębska, M. Kostecki, A. Zawada
2. Project nr. KBN nr PBZ-KBN-095/T08/2003, Nanoparticles modified materials. Technologies-Properties-Applications, finished in 2006, Warsaw University of Technology, Faculty of Chemistry, executor: A. Kunicki
3. Project nr. KBN 3 T08E 026 27, Advanced composite materials with different forms of Al₂O₃ nanoparticles, Warsaw University of Technology, Faculty of Chemistry, finished in 2007, coordinator: A. Kunicki, executor: A. Olszyna
4. Project nr. 1 T09A 010 30, Factors influencing the nature of cyclopentadienyl ligand bonding in the aluminium complex compounds, Warsaw University of Technology, Faculty of Chemistry, finished in 2006, coordinator: A. Kunicki
5. Project nr. R08 017 02, Unique technology of acquiring alumina ceramic nanoparticles using metalorganic precursors, finished in 2010, Warsaw University of Technology, Faculty of Chemistry, coordinator: A. Kunicki, executor: A. Olszyna
6. Project nr. N N507 469538, Synthesis and properties of silver nanoparticles on the surface of nanoalumina carrier, starting date: 2010 ending date: 2012, Warsaw University of Technology, Faculty of Materials Science and Engineering, coordinator: A. Olszyna, executor: A. Jastrzębska
7. Project nr. POIG.01.03.01-14-013/08, Composites and nanocomposites ceramic-metal for aviation and car industry, Warsaw University of Technology, Faculty of Materials Science and Engineering, ending date: 2012, task leader: A. Olszyna
8. POIG.01.03.01-12-024/08, Sintered materials for blade tools applications for high speed machining, Warsaw University of Technology, Faculty of Materials Science and Engineering, ending date: 31.03.2014, task leader: A. Olszyna.

P4 - S.C. L&G Consulting

Patents

1. Patent no. 113817/03.08.1999 issued by OSIM Bucharest – „Wire Clamps device for rotary cell filters"
2. Patent no. 111289/30.09.1997 issued by OSIM – „Enzymatic pulp bleaching process "
3. Patent no. 55198/28.11.2007 - Bleaching of pulp and fibers of annual plants with POM "

Participation to conferences

1. Second International Symposium on themes of pulp and paper backed by SC SOMES SA Dej in 1998 „Implementation of bleaching with hydrogen peroxide at SC SOMES SA” Authors: Eng Gheorghe Benea, Eng Maria Bacaran Eng. Grigore Carciun, Eng. Adela Olaru, Eng Gheorghe Dutuc, Eng. Adrian Racolta, Eng Rodica Laslo, Eng. Monica Malutan
2. Fourth International Symposium held from 5 to 7 September 2006 CEPROHART Braila: (1) „API Max simulation processes, Author: Eng Gheorghe Dutuc - API Romania (2) „Monitoring energy consumption EMNN”, Author: Gheorghe Eng Dutuc - API Romania
3. International Symposium on issues supported by pulp and paper pulp and paper department of IPI, University Gheorghe Asachi -2007 Research on the chips impregnation, Authors: PhD. Eng Gheorghe Dutuc, PhD. Eng Grigore Craciun, Prof. Dr. Eng. Gavrilesu, Dan, Dr. Eng. Paul P Obrocea
4. Fifth International Symposium held from 3 to 5 September 2008 CEPROHART Braila "clean technologies for pulp and paper industry" 1) Effects of polioxometalate aditivation (POM) on cooking, impregnation of softwood, Authors: Gheorghe Dutuc Eng, Eng Grigore Craciun Ec Adrian Itu, Prof.. Dan Gavrilesu, Prof. Alexander Botár Eng, Dr. Eng Bogdan Botár
5. Obtaining pulp from annual plants by ecological processes with POM, Authors: PhD. Eng. Grigore Craciun, PhD. Eng.Gheorghe Dutuc, Prof. Dr. Eng Gavrilesu Dan, Prof. Dr. Eng Alexandru Botar, ec. Adrian Itu, Eng. Monica Malutan
6. Faculty of Environmental Sciences Conference in Cluj-Napoca 2008 "Quality and environmental security at the beginning of XXI century" „Effects of polioxometalates aditivation (POM) on impregnation and sulphate pulps, Authors: Eng. Gheorghe Dutuc, Eng Grigore Craciun, Ec Adrian Itu, Prof. Dr. Eng. Dan Gavrilesu, Prof. Dr. Eng. Alexandru Botar, Dr. Eng. Bogdan Botar

Articles published in journals:

1. PhD. Eng. Grigore Craciun, Prof. Dr. Eng Gavrilesu Dan, Prof. Dr.Eng. Alexandru Botar, PhD. Eng. Gheorghe Dutuc, Process TCF bleaching of pulp wood and annual plants POM catalysts class, Volume Nr.11/2007 Environment & Progress, a publication edited CNCSIS C Faculty of Environmental Science, University "Babes Bolyai" Cluj-Napoca.
2. PhD. Eng Gheorghe Dutuc, PhD. Eng Grigore Craciun, Prof. Dr. Eng. Gavrilesu Dan, Dr. Eng. Paul P Obrocea, Research on the wood chips impregnation, No.2/2008 of IPI Bulletink.
3. PhD. Eng. Grigore Craciun, PhD. Eng. Gheorghe Dutuc, Prof. Dr. Eng Gavrilesu Dan, Prof. Dr. Eng Alexandru Botar, ec. Adrian Itu, Eng. Monica Malutan, Review of Pulp and Paper, „Obtaining pulp from annual plants by ecological processes with POM, No. 3 / 2008 of the 2008.

4. PhD. Eng. Gheorghe Dutuc, PhD. Eng. Grigore Craciun, Ec Adrian Itu, Prof. Dr. Eng. Dan Gavrilesu, Prof. Dr. Eng. Alexandru Botar, Dr. Eng. Bogdan Botar, No. 4 Review of Pulp and Paper 2008, „Effects of polioxometalates aditivation (POM) on impregnation and sulfate pulps”.
5. PhD. Eng. Gheorghe Dutuc, PhD. Eng. Grigore Craciun, Ec Adrian Itu, Prof. Dr. Eng. Dan Gavrilesu, Prof. Dr. Eng. Alexandru Botar, Dr. Eng. Bogdan Botar, Additive with polioxometalati (POM) on impregnation, No. Volume 13 / 2009 Environment & Progress, a publication edited by C CNCSIS Environmental Science Faculty of the University "Babes Bolyai" Cluj-Napoca.
6. PhD. ing Craciun Grigore, PhD. ing Gheorghe Dutuc, Prof. Dr. Eng Gavrilesu Dan, Prof. Dr. Eng Alexander Botár, ec. Adrian Itu, Monica Eng Malutan, Obtaining pulp from annual plants by ecological processes, Iasi Polytechnic Institute Bulletin, December 2008

Projects

1. Starting the installation of plasticizer to viscose fiber (1988-CFCH)
2. Modernization of Electrolysis (1994-Somes Dej)
3. Bleaching flow Modernization I (1994-1998 Somes Dej)
4. Modernization of paper machine manufactured in several stages (1994-2007 Somes Dej)
5. Battery of washing filters in the brown stock washing plant (1999 Somes Dej)
6. Acquisition and installation of medium consistency pumps in the installation of Bleaching II (2000 Somes Dej)
7. Screening instalation modernization (2001 Somes Dej)
8. Modernization kettle for animal waste (2005 - Protan)
8. Installing a new ESP in recovery boiler instalation (2007 Somes Dej)
9. Acquisition and installation of equipment for fiber recovery from white waters at PM(2007 Somes Dej)
10. Acquisition and installation of a washing press (2007 Somes Dej)
11. Sand separator installation and level indicator at Kamyrr cooking instalation (2007 Somes Dej)
12. Installing a new washer for nodes in the screening instalation (2007 Somes Dej)
13. Relocation of corrugated paper machine from Germany to Dej, the modernization of the technological flow (2006-2007)