

CURRICULUM VITAE

Last & first name: **GAVRILĂ Lucian Gheorghe**
Born at: December 19th, 1960, Agnita, Sibiu, ROMANIA
Professional address:
 “Vasile Alecsandri” University of Bacău,
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Studies:

Technical University “Gheorghe Asachi” Iași, Faculty of Industrial Chemistry: – chemical engineer (1985), doctor (PhD) in Chemistry/Inorganic Chemical Technology (1999)

Post doctoral studies:

- Francophone module in “Management and capitalization of industrial residues” with professor Jean Gouhier, director of “Rudology Institute”, University of Mans, Le Mans, France (1998);
- Training in chemical processes modeling at University of Littoral Cote d’Opale, Dunkerque, France (2001).

Professional activities:

- **Junior engineer** at Pulp & Paper Mill “Letea” Bacău (1985-1988);
- **Associate Assistant** (1986-1988), **Substitute Assistant** (1988-1990), **Assistant** (1990-1993) at the Faculty of Industrial Chemistry, Technical University “Gheorghe Asachi” Iași;
- **Lecturer** (1993-2000), **Associate Professor** (2000-2003), **Professor** (since 2003) at the Faculty of Engineering, “Vasile Alecsandri” University of Bacău;
- **Scientific Secretary** (Vice-dean for research) of the Faculty of Engineering, and **Head** of the Department of Chemical and Food Engineering (2004-2011);
- **Short-term** teaching mobilities (1-3 weeks) at: University of Orléans, France (2001); IUP Agro-Alimentaire of University of Caen, France (2001, 2003, 2004), University of Limoges, France (2007, 2009), ENSC Clermont Ferrand, France (2004, 2005, 2006, 2007, 2009, 2010, 2011);
- **Visiting professor** at *Institute of Organic and Analytical Chemistry (ICOA)*, University of Orléans, France (2009);
- **Technical and Scientific adviser** for water and wastewater treating and conditioning at *Gulf Coast Chemicals Inc.*, Houston, Texas, USA (1996-2000).
- **Director** of „*Depolluting Engineering Laboratory*” (since 2000),
- **Scientific Director** of the Research Center „*Chemistry & Engineering of Natural and Synthetic Products and Environmental Protection*” from the Research and Technology Transfer Department of the University of Bacău (2000-2006),
- **Scientific Director** of the Research Center “*Applied Chemistry and Process Engineering*” (since 2006);
- **Editor in chief** (since 2000) and founder of the international journal „*SCIENTIFIC STUDY AND RESEARCH - Chemistry & Chemical Engineering - Biotechnology - Food Industry*” (ISSN 1582-540X);

Member of the Scientific Board of the following journals: *Journal of Engineering Studies and Research* (Alma Mater, Bacău, Romania), *Annals. Food Science and Technology* (Valahia University Press, Târgoviște, Romania), *Buletinul Societății de Chimie din România* (Romanian Chemical Society, Bucharest, Romania);

- **Reviewer** for the following journals: *Applied Biochemistry and Biotechnology* (Springer), *Journal of Food Engineering* (Elsevier), *Letters in Organic Chemistry* (Bentham Science Publishers);

- **Member of the Organizing Committee** of *Colloque Franco-Roumain de Chimie Appliquée* – CoFrRoCA, editions 2000 (Bacău, Romania), 2002 (Bacău, Romania), 2004 (Slănic Moldova, Romania), 2006 (Clermont-Ferrand, France), 2008 (Bacău, Romania), 2010 (Orléans, France), 2012 (Bacău, Romania);

- **Member of the Scientific Committee** of different scientific events: *Colloque Franco-Roumain de Chimie Appliquée* (2000, 2002, 2004, 2006, 2008, 2010, 2012), *Integrated Systems for Agri-Food Production SIPA'07*, Sibiu, Romania (2007), *Innovative Materials and Processes*, Iași, Romania (2008, 2009, 2010, 2011), *International Conference of Applied Sciences. Chemistry and Chemical Engineering CISA*, Bacău, Romania (2010, 2011, 2012), *OPROTEH*, Bacău, Romania (2005, 2007, 2009, 2011), *IEEE International Conference on e-Health and Bioengineering*, EHB 2011, 24-26 Nov. 2011, Iași, Romania;

- **Evaluating expert** of research programs for: *Romanian National Council of Scientific Research* (CNCS), *Bulgarian National Science Fund* (NSFB), *French National Institute for Agricultural Research* (INRA);

- **Evaluating expert** of the *Romanian Agency for Quality Assurance in Higher Education* (ARACIS) for Chemical Engineering;

- **Evaluator of PhD thesis** at Technical University “Gheorghe Asachi” Iași, Romania (8) and University of Orléans, France (1);

Affiliation to professional organizations:

- Romanian Mechanical Fracture Association - ARMR (since 2000),

- Romanian Chemical Society - SChR (since 2002, vice-president for Bacău branch since 2004),

- Réseau Francophone Génie des Procédés Appliquée a la Agro-Alimentaire (GP3A) - since 2003,

- European Structure Integrity Society (ESIS) - since 2005

Professional achievements:

Books (7),

Book chapters (1),

Edited volumes (6),

Textbooks (7),

Scientific papers (78):

- in ISI journals: 10

- in ISI proceedings: 3

- in journals indexed in international databases: 30

- in proceedings indexed in international databases: 13

- published at international scientific events: 22

Papers communicated in congresses, sessions, symposia (36),

Research grants (14):

- from national competitions: 11

- from international competitions: 3

Book reviews (12).

Professional interests:

Valorization of agro resources;
Intensification of heat and mass transfer under vibrations and ultrasounds;
Modeling and simulation of heat transfer processes in cooling systems;
Corrosion mitigation of metallic materials in industrial cooling systems;
Capitalization of spent catalysts from chemical and petrochemical plants.

Areas of expertise:

Treating and conditioning of water and wastewater;
Environmental protection, recycling, depollution;
Transfer phenomena and unit operations in process industries;
Corrosion and corrosion protection.

Bacău, February 2012

Professor Lucian Gh. GAVRILĂ, PhD



LIST OF PUBLICATIONS (SELECTION)

A. EDITED VOLUMES

1. Guillaumet, G., Grandclaudon, P., Fînaru, A., **Gavrilă, L.**, Elfakir, C., Berteina-Raboin, S., Routier, S., Suzenet, F. (editors), **Actes du Sixième Colloque Franco-Roumain de Chimie Appliquée "CoFrRoCA-2010"**, Ed. Alma Mater, Bacău, ISSN 2068-6382, 2010
2. **Gavrilă, L.**, Fînaru, A., Grandclaudon, P., (editors), **Actes du Cinquième Colloque Franco-Roumain de Chimie Appliquée "CoFrRoCA-2008"**, Ed. Alma Mater, Bacău, ISBN 978-973-1833-77-4, 2008
3. **Gavrilă, L.**, Fînaru, A., Grandclaudon, P., Djelveh, G., Troin, Y. (editors), **Actes du Quatrième Colloque Franco-Roumain de Chimie Appliquée "CoFrRoCA-2006"**, Ed. Alma Mater, Bacău, ISBN 978-973-8392-17-5, 2006
4. **Gavrilă, L.**, Fînaru, A., Grandclaudon, P. (editors), **Actes du Troisième Colloque Franco-Roumain de Chimie Appliquée "CoFrRoCA-2004"**, Ed. Alma Mater, Bacău (ISBN 973-8392-36-5) & Ed. Tehnica-Info, Chişinău, (ISBN 9975-63-183-5) 2004,
5. **Gavrilă, L.**, Fînaru, A., Grandclaudon, P. (editors), **Actes du Deuxième Colloque Franco-Roumain de Chimie Appliquée "CoFrRoCA-2002"**, Ed. Alma Mater, Bacău (ISBN 973-8392-04-7) & Ed. Tehnica-Info, Chişinău (ISBN 9975-63-140-1), 2002;
6. Fînaru, A., Azzouz, A., **Gavrilă, L.**, Grandclaudon, P. (editors) - **Actes du Colloque Franco-Roumain de Chimie Appliquée "COFrRoCA - 2000"**, Ed. Alma Mater Bacău, ISBN 973-99703-3-8, 2000

B. BOOKS AND BOOK CHAPTERS

1. Szép A., **Gavrilă, L.**, András Cs. D.: **Transzportfolyamatok és Művelettan I. Transzportfolyamatok Jegyzet (Transport phenomena and unit operations I. Transport phenomena – in Hungarian)**, Ed. Cermi, Iaşi, 2012, 259 p., ISBN 978-973-667-409-9
2. Szép A., **Gavrilă, L.**: **Transzportfolyamatok a Kémiai és Biokémiai Rendszerekben (Transport phenomena in chemical and biochemical processes – in Hungarian)**, Ed. Cermi, Iaşi, 2008, 286 p., ISBN 978-973-667-339-9
3. **Gavrilă, L.**: **Biotehnologii de depoluare și remediere a solului (Biotechnologies for soil depollution and remediation – in Romanian)** in: Caşcaval, D., Galaction, A.I. (editors): **Biotehnologia între știință și artă (Biotechnology between Science and Art)**, Casa de Editură Venus, Iaşi, 2007, ISBN 978-973-756-052-0
4. **Gavrilă, L.**: **Transportul fluidelor – aplicații în industria alimentară și biotehnologii (Transport of fluids – applications in food industry and biotechnologies – in Romanian)**, 2002, 206 p., Editura Tehnica-Info, Chişinău, ISBN 9975-63-141-X
5. **Gavrilă, L.**, Gavrilă, D.: **Apele industriale – surse, caracteristici, utilizări (Industrial waters – sources, characteristics, uses – in Romanian)**, 2002, 226 p., Editura Tehnica-Info, Chişinău, ISBN 9975-63-173-8
6. **Gavrilă, L.**: **Fenomene de transfer : Transfer de impuls (Transfer phenomena: Momentum transfer – in Romanian)**, 2000, 144 p., Ed. Alma Mater Bacău, ISBN 973-99487-7-4
7. **Gavrilă, L.**: **Fenomene de transfer : Transfer de căldură și masă (Transfer phenomena: Heat and mass transfer – in Romanian)**, 2000, 192 p., Ed. Alma Mater Bacău, ISBN 973-99487-8-2
8. **Gavrilă, L.**, Zichil, V.: **Bazele ingineriei în industria alimentară și biotehnologii - Fenomene de transfer (Fundamentals of engineering in food industry and biotechnologies – Transfer phenomena – in Romanian)**, 2000, 377 p., Editura Tehnica-Info, Chişinău, ISBN 9975-63-018-9

C. PAPERS IN ISI JOURNALS

1. Chiriță-Tâmpu, I.R., Grosu, L., **Gavrilă, L.**, Fînaru, A., Elfakir, C.: „Twelve catecholamines and metabolites efficient separation”, *Revista de Chimie (Bucureşti)* (ISSN 0034-7752; IF₂₀₁₀ = 0,693), **vol. 62**, nr. 9, **2011**, p. 932-936;
2. Ştefănescu, I.A., **Gavrilă, L.**, Mocanu, D.R., Olariu, R.I., Arsene, C.: “Bioremediation perspective of *Bacillus megaterium* towards heavy metals in environments enriched with phosphogypsum”, *Revista de Chimie (Bucureşti)* (ISSN 0034-7752; IF₂₀₁₀ = 0,693), **vol. 62**, nr. 2, **2011**, p. 245-249;
3. Ştefănescu, I.A., **Gavrilă, L.**, Mocanu, R.: “Evaluation of the solubilization capacity of two strains of *Bacillus megaterium* for heavy metals from residual phosphogypsum”, *Romanian Biotechnological Letters* (ISSN 1224-5984; IF₂₀₁₀ = 0,219), **vol 16**, nr. 5, **2011**, p. 6513-6522;

4. Chiriță, I.-R., Dascălu, C., **Gavrilă, L.**, Elfakir, C.: “Simultaneous analysis of taurine and caffeine in energy drink using hydrophilic interaction chromatography with UV and evaporative light scattering detection on line”, *Revista de Chimie (București)* (ISSN 0034-7752; IF₂₀₁₀ = 0,693), **vol. 61**, nr. 12, **2010**, p. 1173-1176;
5. **Gavrilă, L.**, Zichil, V., Tudorache, E., Asaftei, S., Ivășcan, Șt.: “Turning to good value the Ni-containing waste catalysts from the ammonia industry. 3. Mechanical strength of the waste catalysts from methane reforming”, *Revista de Chimie (București)* (ISSN 0034-7752), **vol. 50**, nr. 11, **1999**, p. 801-806;
6. **Gavrilă, L.**, Tudorache, E., Ivășcan, Șt., Asaftei, S.: “Turning to good value the spent catalysts containing nickel from the ammonia industry .2. Possibilities of getting electroplating-grade nickel salts”, *Revista de Chimie (București)* (ISSN 0034-7752), **vol. 48**, nr. 6, **1997**, p. 512 - 520;
7. **Gavrilă, L.**, Ivășcan, Șt., Tudorache, E., Asaftei, S.: “Turning to good value the nickel containing - spent catalyst from the ammonia industry .1. Research on nickel solubilization process”, *Revista de Chimie (București)* (ISSN 0034-7752), **vol. 47**, nr. 11, **1996**, p. 1039-1045;
8. Bucur, I., Matza, G., Ivășcan, Șt., **Gavrilă, L.**, Gavrilă, D.: “Some consideration on corrosion resistance of the W1.4435,2 austenitic steel in the commercial urea plants. Corrosion rate measurements by ultrasound method”, *Revista de Chimie (București)* (ISSN 0034-7752), **vol. 47**, nr. 8, **1996**, p. 773-777;
9. Ivășcan, Șt., Matza, G., **Gavrilă, L.**, Gavrilă, D.: “Non-conventional means used in metallic systems corrosion rate measurements”, *Revista de Chimie (București)* (ISSN 0034-7752), **vol. 46**, nr. 11, **1995**, p. 1029-1034;
10. Balasanian I., Lupu, L., Olar, T., **Gavrilă, L.**: “Synthesis of flow diagrams in the sulfuric-acid industry using the logical technical methods”, *Revista de Chimie (București)*, **vol. 38**, nr. 9, **1987**, p. 791-797;

D. PAPERS IN ISI PROCEEDINGS

1. **Gavrilă, L.**, Fînaru, A.L., Simion, A.I., Apetrii, I.: „Modelling of the Thermophysical Properties of Apple Juice. I Density and Viscosity”, *Proceedings of the 14th DAAAM International Symposium „Intelligent Manufacture & Automation: Focus on Reconstruction and Development”*, 22 - 25 oct. **2003**, Sarajevo, Bosnia-Herzegovina, 115-116;
2. Apetrii, I., Ciocan, M.E., Simion, A.I., **Gavrilă, L.**: “Modelling of the Termophysical Properties of Milk. II. Thermal Capacity and Thermal Conductivity”, *Proceedings of the 13th DAAAM International Symposium “Intelligent Manufacturing & Automation: Learning From Nature”*, 23-26 oct. **2002**, Wien, Austria, ISBN 3-901509-29-1, p. 179-180;
3. **Gavrilă, L.**, Simion, A.I., Apetrii, I.: “Modelling of the Termophysical Properties of Milk. I. Density and Viscosity”, *Proceedings of the 13th DAAAM International Symposium “Intelligent Manufacturing & Automation: Learning From Nature”*, 23-26 oct. **2002**, Wien, Austria, ISBN 3-901509-29-1, p. 015 - 016;

E. PAPERS IN JOURNALS INDEXED IN INTERNATIONAL DATABASES

1. Grigoraș, C.G., Simion, A.I., Rusu, L., **Gavrilă, L.**: „Mathematical Modeling of Moisture Loss during Apple Cubes Dehydration”, *Annals. Food Science and Technology* (ISSN 2065-2828), **2011**, **vol. 12**, nr. 2, 216-220;
2. Simion, A.I., Dobrovici, P.E., Rusu, L., **Gavrilă, L.**: „Modelling of the Thermo-Physical Properties of Grape Juice III. Viscosity and Heat Capacity”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2011**, **vol. 12**, nr. 4, 409-420;
3. **Gavrilă, L.**: „Studii și Cercetări Științifice – a Decade”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2010**, **vol. 11**, nr. 1, 3-10;
4. Simion, A.I., Grigoraș, C.G., Rusu, L., **Gavrilă, L.**: “Modeling of the thermo-physical properties of grapes juice II. Boiling point and density”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2009**, **vol. X**, nr. 4, 365-374;
5. Simion, A.I., Patriciu O.-I., Rusu, L., **Gavrilă, L.**: “Mathematical modeling of vitamin C losses in lemons during thermal treatments”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2009**, **vol. X**, nr. 4, 375-384;
6. Simion, A.I., Dobrovici, P., Rusu, L., **Gavrilă, L.**: “Modeling of the thermo-physical properties of grapes juice I. Thermal conductivity and thermal diffusivity”, *Annals. Food Science and Technology* (ISSN 2065-2828), **2009**, **vol. 10**, nr. 2, 363-368;

7. Grigoraș, C.G., **Gavrilă, L.**: “Sour cherries hot air dehydration”, *Annals. Food Science and Technology* (ISSN 2065-2828), **2009**, vol. **10**, nr. 1, 34-38;
8. Simion, A.I., Rusu, L., Ștefănescu, I., **Gavrilă, L.**: “Influence of various thermal treatments over vitamin C content in lemons”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2008**, vol. **IX**, nr. 4, 519-530;
9. Grigoraș, C.G., **Gavrilă, L.**: “Influence of the Technological Parameters on the Drying Velocity of Crumbled Fruits”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii – Industrie alimentară* (ISSN 1582-540X), **2008**, vol. **IX**, nr. 1, 113-120;
10. Istrati, L., **Gavrilă, L.**, Harja, M., Ciobanu, G., Ciocan, M.: „Obtention des produits de haute pureté par valorisation de déchets industriels: obtention de poudre du nickel métallique”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), **2006**, vol. **VII**, nr. 3, 637-642;
11. Istrati, L., **Gavrilă, L.**, Harja, M., Ciobanu, G., Ciocan, M.: „Valorisation du catalyseur Ni-Cr utilise pour l’hydrogenation du phenole”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), **2006**, vol. **VII**, nr. 3, 643-648;
12. Istrati, L., Ciobanu, G., Harja, M., **Gavrilă, L.**, Ceauș, R.: “Study concerning microbiological contamination of some cheese”, *Journal of Agroalimentary Processes and Technologies*, (Ed. Agroprint Timișoara), **2006**, vol. **XII**, nr. 1, p. 75-82;
13. Istrati, L., Harja, M., Ciobanu, G., **Gavrilă, L.**: “Molybdenum recovery from spent hydrofining catalysts I. The choice of the extraction method”, *Ovidiu University Annals of Chemistry*, vol. **17**, nr. 1, **2006**, p. 164-167;
14. **Gavrilă, L.**, Fînar, A., Ștefănescu, I., Panaite, O., Tudor, A.: “Environmental impact of mineral fertilizers manufacturing – a case history”, *Proceedings of 3rd Black Sea Basin Conference on Analytical Chemistry*, Constanța, Romania, 12-14 September 2005, *Ovidiu University Annals of Chemistry*, vol. **16**, nr. 1, **2005**, p. 61-64;
15. **Gavrilă, L.**, Istrati, L., Fînar, A., Ciocan M.E.: “Water consumption in oil refining facilities” în: *Buletinul Universității Petrol-Gaze din Ploiești* (ISSN 1221-9371), vol. **LVII**, Seria Tehnică nr. 2 (Ingineria și protecția mediului), Universitatea Petrol-Gaze din Ploiești, **2005**, p. 62-67;
16. Istrati, L., **Gavrilă, L.**, Harja, M., Ciobanu, G.: “Researches concerning platinum recovery of industrial waste”, *Buletinul Universității Petrol-Gaze din Ploiești* (ISSN 1221-9371), vol. **LVII**, Seria Tehnică nr. 2 (Ingineria și protecția mediului), Universitatea Petrol-Gaze din Ploiești, **2005**, p. 68-71;
17. **Gavrilă, L.**, Fînar, A., Istrati, L., Simion, A.I., Ciocan, M.E.: “Influence of temperature, fat and water content on the thermal conductivity of some dairy products”, *Scientific Researches. Agroalimentary Processes and Technologies*, (Ed. Agroprint Timișoara), **2005**, vol. **XI**, nr. 1, p. 205-210;
18. **Gavrilă, L.**: „Failure of shell and tube heat exchangers from industrial cooling water systems”, *Modelling and Optimization in the Machines Building Field – MOCM – 11* (ISSN 1224-7480), **2005**, vol. **2**, p. 27-32;
19. **Gavrilă, L.**, Gavrilă, D., Simion, A.I., Granero Rodrigues A.J.: “Possibilities of emissions reduction in nitrogen-based fertilizer plants”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), vol. **V**, nr. 1-2, **2004**, p. 159-166;
20. **Gavrilă, L.**, Gavrilă, D.: „Cooling Water Treatment – Controlled pH vs. Free pH”, *Ovidius University Annals of Chemistry* (ISSN 1223-7221), vol. **14**, nr. 1, Ovidius University Press, Constanța, **2003**, p. 137-140;
21. **Gavrilă, L.**, Gavrilă, D.: „Corrosion Mitigation and Heat Transfer Improvement in Refineries Cooling Systems”, *Ovidius University Annals of Chemistry* (ISSN 1223-7221), vol. **14**, nr. 1, Ovidius University Press, Constanța, **2003**, p. 141-144;
22. **Gavrilă, L.**, Gavrilă, D., Simion, A.I.: „Microbiologically Induced Corrosion and its Mitigation in Cooling Cycles”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), vol. **IV**, nr. 1-2, **2003**, p. 35-40;
23. **Gavrilă, L.**: „Capitalization of Spent NiO/α-Al₂O₃ Catalysts 4. Nickel Oxide Leaching Mechanism”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), vol. **III**, nr. 1-2, **2002**, p. 29-36;
24. **Gavrilă, L.**, Gavrilă, D., Simion, A., Casares Martín, C.: „Galvanic Corrosion in Cooling Water Environments”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), vol. **III**, nr. 1-2, **2002**, p. 93-108;

25. **Gavrilă, L.**, Istrati, L., Constantin, M.M., Simion, A., Ivășcan, Ș.: „Separation of nickel, aluminum and magnesium from spent steam reforming catalysts using ion exchange resins”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), **vol. II**, nr. 1-2, **2001**, p. 25-30;
26. **Gavrilă, L.**, Istrati, L., Constantin, M.M. Simion, A., Ivășcan, Ș.: „Purifying nickel sulfate solutions by ion exchange”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), **vol. II**, nr. 1-2, **2001**, p. 31-36;
27. Istrati, L., **Gavrilă, L.**, Balasanian, I., Harja, M., Nistor, D.: „The recovery of the used catalyst resulting from the sulfuric acid factories. I- Choosing a technological solution”, *Studii și cercetări științifice: Chimie și inginerie chimică – Biotehnologii - Industrie alimentară* (ISSN 1582-540X), **vol. II**, nr. 1-2, **2001**, p. 103-111;
28. Matza, G., Ivășcan, Șt., **Gavrilă, L.**, Iojoiu, E.E.: „Some correlations between steels structure and corrosion behavior”, *Buletinul Institutului Politehnic din Iași* (ISSN 0254-7104), **tom XLIII (XLVII)**, fasc. 1-2, Secția II, Chimie și Inginerie Chimică, **1997**, p. 21-28;
29. Matza, G., Ivășcan, Șt., **Gavrilă, L.**, Gavrilă, D., Apostolescu, N.: “Unconventional Methods Used for Corrosion Rate of Metallic Systems Measurement”, *Buletinul Institutului Politehnic din Iași* (ISSN 0254-7104), **tom XLIII (XLVII)**, fasc. 3-4, Secția II, Chimie și Inginerie Chimică, **1997**, p. 51-58;
30. Matza, G., Ivășcan, Șt., **Gavrilă, L.**, Gavrilă, D.: “Applications of Chemical and Electrochemical Methods in Estimating the Intergranular Corrosion Resistance of the Austenitic Stainless Steels Used in Urea Plants”, *Buletinul Institutului Politehnic din Iași*, **tom XLII (XLVI)**, fasc. 1-2, Secția II – Chimie și Inginerie Chimică, **1996**, p. 29-36;

F. PAPERS IN PROCEEDINGS INDEXED IN INTERNATIONAL DATABASES

1. **Gavrilă, L.**, Fînaru, A., Simion, A.I., Ciocan, M.E., Istrati, L.: “Dependence of some properties of liquid food products, byproducts and raw materials with temperature and composition”, *State-of-the-art and problems of agricultural science and education*, Plovdiv, Bulgaria, 19-20 October, **2005**, 295-300;
2. Istrati, L., Harja, M., **Gavrilă, L.**, Ciobanu, G., Rusu, N.: “Complex combination with phytonutritive and antipest effect for agriculture” în: *State-of-the-art and problems of agricultural science and education*, Plovdiv, Bulgaria, 19-20 October, **2005**, 379-384;
3. Istrati, L., Ciobanu, G., Balasanian, I., Harja, M., Ciocan, M., **Gavrilă, L.**: “Valorisation du catalyseur Zn-Cr utilisé pour la dehydrogenation du cyclohexanole a cyclohexanone”, *Actes du Troisième Colloque Franco-Roumain de Chimie Appliquée*, 22-26 sept., **2004**, Slănic Moldova, Ed. Alma Mater Bacău, ISBN 973-8392-36-5, Ed. Tehnica-Info Chișinău, p. 420-423;
4. Istrati, L., Harja, M., Ciobanu, G., **Gavrilă, L.**: “Obtention du carbonate de calcium d’usage pharmaceutique et cosmetique”, *Actes du Troisième Colloque Franco-Roumain de Chimie Appliquée*, 22-26 sept., **2004**, Slănic Moldova, Ed. Alma Mater Bacău, ISBN 973-8392-36-5, Ed. Tehnica-Info Chișinău, p. 559-561;
5. **Gavrilă, L.**, Gavrilă, D.: „Corrosion behaviour of mixed metallurgy heat exchangers in cooling water environments”, *Proceedings of the 4th European Stainless Steels Congress Science and Market Congress*, Association Technique de la Siderurgie Francaise, Paris, Franța, Revue de Metalurgie, Special Issue, vol. 1, **2002**, p. 114-119;
6. **Gavrilă, L.**, Istrati, L., Simion, A.I.: “Valorisation des catalyseurs uses de type NiO/ α -Al₂O₃. 3. CINETIQUE de la solubilisation de l’oxyde de nickel”, *Actes du 2-eme Colloque Franco-Roumain de Chimie Appliquee COFrRoCA 2002*, Bacău, 10-12 oct. **2002**, Ed. Alma-Mater Bacău, ISBN 973-8392-04-7, p. 281-284;
7. **Gavrilă, L.**, Gavrilă, D.: “Tendances actuelles dans le traitement des eaux de refroidissement”, *Actes du 2-eme Colloque Franco-Roumain de Chimie Appliquee COFrRoCA 2002*, Bacău, 10-12 oct. **2002**, Ed. Alma-Mater Bacău, ISBN 973-8392-04-7, p. 315-320;
8. Istrati, L., **Gavrilă, L.**, Harja, M., Balasanian, I.: “Possibilites de purification d’eaux residuaires provenant de la fabrication de l’acide adipique”, *Actes du 2-eme Colloque Franco-Roumain de Chimie Appliquee COFrRoCA 2002*, Bacău, 10-12 oct. **2002**, Ed. Alma-Mater Bacău, ISBN 973-8392-04-7, p. 351-354;
9. Istrati, L., **Gavrilă, L.**, Grosu, M.: “Recherches sur l’obtention de certains extraits des plantes. 1. Obtention de l’huile essentielle de basilic”, *Actes du 2-eme Colloque Franco-Roumain de Chimie Appliquee COFrRoCA 2002*, Bacău, 10-12 oct. **2002**, Ed. Alma-Mater Bacău, ISBN 973-8392-04-7, p. 155-156;

10. **Gavrilă, L.**, Gavrilă, D.: „A mathematical model of the corrosion-abrasion in a stainless steel tubular urea synthesis reactor”, *Annals of DAAAM for 2001 Proceedings of the 12th International DAAAM Symposium*, ISBN 3-901509-19-4, DAAAM International, Vienna, Austria, **2001**, p. 151-152;
11. **Gavrilă, L.**, Zichil, V.: „Lubricating properties of multigrade oil worsening – Correlation between vibration amplitude and oil viscosity”, *Annals of DAAAM for 2001 Proceedings of the 12th International DAAAM Symposium*, ISBN 3-901509-19-4, DAAAM International, Vienna, Austria, **2001**, p. 153-154;
12. **Gavrilă, L.**, McDonald, A.C., Zichil, V., Gavrilă, D.: “Improving Stainless Steel Heat Exchangers Performance by Chemical Treatment of Recirculated Cooling Water”, *Proceedings of the International Congress & 3rd European Congress “Stainless Steels ’99 – Science and Market”*, **Vol. I, Marketing and Application**, Associazione Italiana di Metalurgia (ISBN 88-85298-34-6), Milano, Italia, **1999**, p. 261-269;
13. Matza, G., **Gavrilă, L.**, Zichil, V., Ivășcan, Șt.: Corrosion Behaviour of W1.4435.2 Stainless Steel in Urea Plants” în: *Proceedings of the International Congress “Stainless Steels ’96”*, Verein Deutscher Eisenhuettenleute (ISBN 3-514-00601-6), Duesseldorf/Neuss, Germania, **1996**, p. 171-176;

G. PAPERS PUBLISHED AT INTERNATIONAL SCIENTIFIC EVENTS

1. Istrati, L., Harja, M., **Gavrilă, L.**, Ciobanu, G., Rusu, N.: “Environmental study regarding pollution in oil extraction areas, Bacău district, Romania. III – Pollution of the groundwaters”, *Proceedings of the 10th International Research/Expert Conference „Trends in the Development of Machinery and Associated Technology” TMT 2006*, Barcelona – Lloret del Mar, Spain, 11-15 Sept. **2006**, 1107-1110;
2. **Gavrilă, L.**, Istrati, L., Fînaru, A., Ștefănescu, I., Ciocan, M.E., Simion, A.I.: “Manufacture of mineral fertilizers from an environmental point of view”, *Proceedings of the 9th International Research/Expert Conference „Trends in the Development of Machinery and Associated Technology” TMT 2005*, Antalya, Turkey, 26-30 Sept. **2005**, 979-982;
3. Istrati, L., **Gavrilă, L.**, Harja, M., Ciobanu, G., Rusu, N.: “Enviromental study regarding pollution in oil extraction areas, Bacau district, Romania. II – Pollution of the surface waters”, *Proceedings of the 9th International Research/Expert Conference „Trends in the Development of Machinery and Associated Technology” TMT 2005*, Antalya, Turkey, 26-30 Sept. **2005**, 983-986;
4. **Gavrilă, L.**, Gavrilă, D., Istrati, L., Fînaru, A., Ciocan, M.E., Simion, A.I.: “Improving of heat transfer efficiency in shell and tube heat exchangers by cooling water conditioning”, *4th DAAAM Conference on Advanced Technologies for Developing Countries, ATDC’05*, Slavonski Brod, Croatia, 21-24 September, **2005**, 513-518;
5. **Gavrilă, L.**, Gavrilă, D., Ciocan, M.E., Simion, A.I.: “Corrosion control in water cooled shell and tube heat exchangers”, *5th International Conference “Research and Development in Mechanical Industry” RaDMI 2005*, Vrnjačka Banja, Serbia and Montenegro, 04-07 September, **2005**;
6. **Gavrilă, L.**, Istrati, L., Fînaru, A., Simion, A.I., Ciocan, M.E.: “Fresh water consumption reduction in mineral fertilizers manufacturing”, în: *Water Supply and Sewerage Services – Past, Present and Future*, Opatija, Croatia, 12-16 October, **2005**, 211-220;
7. **Gavrilă, L.**, Fînaru, A., Simion, A-I., Ciocan, M.E.: “Mathematical Models for the Calculus of Thermal and Physical Properties of Food: Milk and Cream Density and Viscosity”, *Proceedings of the International Conference “Agriculture and Food Sciences, Processes and Technologies”*, 12-13 May, **2005** Sibiu, Ed. Univ. “Lucian Blaga” din Sibiu, ISBN 973-739-093-8, **Vol. 2** (ISBN 973-739-095-4), p. 217-222 ;
8. Istrati, L., Harja, M., Dabija, A., **Gavrilă, L.**, Ciocan, M.: “Researches Concerning the Valorization of Spent Catalysts Ni/Al₂O₃ Used in Phenol Hydrogenation”, *Proceedings of the International Conference “Agriculture and Food Sciences, Processes and Technologies”*, 12-13 May, **2005** Sibiu, Ed. Univ. “Lucian Blaga” din Sibiu, ISBN 973-739-093-8, **Vol. 2** (ISBN 973-739-095-4), p. 9-14;
9. **Gavrilă, L.**, Gavrilă, D., Simion A.I.: “Water Consumption Reduction in Chemical and Petrochemical Plants”, *4th International Conference of the Chemical Societies of the South-East European Countries ICOSECS 4*, 18-21 July **2004**, Belgrade, vol. II, ISBN 86-7132-020-0, p. 170;
10. **Gavrilă, L.**, Fînaru, A.L., Apetrii, I., Simion, A.I.: „Simulation des proprietes thermophysiques du jus des fruits”, *Actes du seminaire d’animation regionale (Region Europe Centrale et Occidentale) SAR 2004*, 12-14 May **2004**, Ed. Tehnica-Info, Chișinău, ISBN 9975-63-233-5, p. 72-77;
11. **Gavrilă, L.**, Fînaru, A.L., Istrati, L., Apetrii, I.: „Modeling of the physical properties of apple juice. II Thermal Conductivity”, in: D Țucu, D. Mnerie (editors) *Proceedings of the International Conference „Integrated Systems*

- for Agri-Food Production SIPA '03", 20-22 nov. **2003**, Ed. Orizonturi Universitare Timișoara, ISBN 973-638-066-1, p. 57-62;
12. **Gavrilă, L.**, Gavrilă, D., Simion, A.I., Granero Rodríguez, A.J., Casares Martín, C.: „Possibilities of Water Consumption Reduction and Corrosion Mitigation in Fertilizers Plants”, *Proceedings of the Conference on Water Science and Technology, 43rd Annual Science Week*, , 18 - 21 oct. **2003**, Damascus, Syria, 12 pag.;
 13. **Gavrilă, L.**, Gavrilă, D.: „Failure of Stainless Steel Heat Exchangers in Sulfur Recovery Units from Oil Refineries”, *Proceedings of the 3rd International Conference “Research and Development in Mechanical Industry - RaDMI 2003”*, Herceg Novi, Serbia & Montenegro, 14 - 18 Sept. **2003**, p. 698-705;
 14. **Gavrilă, L.**, Gavrilă, D.: „Corrosion of Metallic Materials in Cooling Water Systems of Chemical, Petrochemical and Power Plants”, *Proceedings of the 3rd International Conference “Research and Development in Mechanical Industry - RaDMI 2003”*, Herceg Novi, Serbia & Montenegro, 14 - 18 Sept. **2003**, p. 706-713;
 15. **Gavrilă, L.**, Gavrilă, D.: „Corrosion of Austenitic Stainless Steel in High Pressure Equipment of Urea Plants”, *Proceedings of the 7th International Research/Expert Conference „Trends in the Development of Machinery and Associated Technology” TMT 2003*, Lloret de Mar, Barcelona, Spain, 15-17 Sept. **2003**, p. 232-235;
 16. **Gavrilă, L.**, Gavrilă, D.: „Corrosion behaviour of Austenitic stainless steels in water cooling systems”, *Proceedings of the Stainless Steel World 2002 International Conference*, paper P0226, KCI Publishing BV, Zutphen, Olanda, **2002**, p.226.01-226.13;
 17. **Gavrilă, L.**, Gavrilă, D.: “Cooling Water Treatment – Controlled pH vs Free pH” (rezumat), *3rd International Conference of the Chemical Societies of the South-Eastern European Countries on «Chemistry in the New Millennium - an Endless Frontier»*, 22-25 sept., **2002**, Vol. II, Ed. Nemira București, ISBN 973-569-556-1, p. 266;
 18. **Gavrilă, L.**, Zichil, V. – "Desagregation en milieu acide des catalyseurs uses de type NiO/ α -Al₂O₃ – Modeles algebriques de bilan de materiaux", *Actes du Colloque Franco-Roumain de Chimie Appliquee*, Ed. Alma Mater Bacau (ISBN 973-99703-3-8), **2000**, p. 124-131;
 19. **Gavrilă, L.**, Zichil, V. – "Desagregation en milieu acide des catalyseurs uses de type NiO/ α -Al₂O₃ – Modeles cinetiques et mathematiques", *Actes du Colloque Franco-Roumain de Chimie Appliquee*, Ed. Alma Mater Bacau (ISBN 973-99703-3-8), **2000**, p. 132-140;
 20. **Gavrilă, L.** : “A Mathematical Model of Lubricating Oil Oxidation Under Vibrating Conditions” în: *Proceedings of the 8th Conference “Vehicle and Environment” (CONAT '96)*, **vol. I**, Universitatea Transilvania, Brașov, **1996**, p. 319-324;
 21. Zichil, V., **Gavrilă, L.**, Fînar, A., Schnakovszky, C.: “Simulated Process of Oils Break Out. 1-Correlation Between Amplitudes and Frequencies of Vibration Movement and Viscosity of Mineral Oils” în: *Proceedings of the International Conference on Intelligent Technologies in Human-Related Sciences – ITHURS '96*, **vol. II**, Universidad de Leon (ISBN 84-7719-560-9), Spania, **1996**, p. 385-388;
 22. **Gavrilă, L.**, Zichil, V., Asaței, S., Fînar, A. și Schnakovszky, C.: “Simulated Process of Oils Break Out. 2-Correlation Between Amplitudes and Frequencies of Vibration Movement and Organic Acidity of Mineral Oils” în: *Proceedings of the International Conference on Intelligent Technologies in Human-Related Sciences – ITHURS '96*, **vol. II**, Universidad de Leon (ISBN 84-7719-560-9), Spania, **1996**, p. 389-392;

H. BOOK REVIEWS

1. Anca-Irina Galaction, Dan Cașcaval: **Metaboliți secundari cu aplicații farmaceutice, cosmetice și alimentare** (Secondary metabolites with pharmaceutical, cosmetic and food applications), Casa de Editură Venus, Iași, 2006, in: *Studii și Cercetări Științifice: Chimie și Inginerie Chimică, Biotehnologii, Industrie Alimentară*, **vol. VI, nr. 2, 2005, p. 144**;
2. Dan Cașcaval, Corneliu Oniscu, Anca-Irina Galaction: **Inginerie biochimică și biotehnologie 3. Procese de separare** (Biochemical engineering and biotechnology 3. Separation processes), Ed. Performantica, Iași, 2004, in: *Studii și Cercetări Științifice: Chimie și Inginerie Chimică, Biotehnologii, Industrie Alimentară*, **vol. VI, nr. 2, 2005, p. 180**;
3. Pauline M. Doran: **Bioprocess Engineering Principles**, Academic Press, London, 1995, in: *Revista de Chimie*, **vol. 47, nr. 8, 1996, p. 724**;
4. * * * : **Roskill's Metals Databook 1991**, Roskill Information Services Ltd., London, 1991, in: *Revista de Chimie*, **vol. 44, nr. 4, 1993, p. 381**;

5. * * * : **The Economics of Chromium 1991**, Roskill Information Services Ltd., London, 1991, in: *Revista de Chimie*, vol. 44, nr. 4, 1993, p. 396;
6. Frank N. Kemmer (editor): **The NALCO Water Handbook**, McGraw-Hill Book Company, 1988, in: *Revista de Chimie*, vol. 44, nr. 3, 1993, p. 300;
7. Martyn W. Twigg (editor): **Catalyst Handbook**, Wolfe Publishing Ltd., London, 1989, in: *Revista de Chimie*, vol. 43, nr. 8, 1992, p. 490;
8. Frank Roberts, Brian Atwood (editors): **World Pulp & Paper Technology 1990**, Sterling Publications International Ltd., London, 1989, in: *Celuloză și Hârtie*, vol. 41, nr. 4, 1992, p. 48-49;
9. Pierre Vallette, Christian de Choudens: **Le Bois, la Pâte, le Papier**, Centre Technique de l'Industrie des Papiers, Cartons et Cellulose, Grenoble, 1989, in: *Celuloză și Hârtie*, vol. 41, nr. 4, 1992, p. 49;
10. Paul C. Dillon: **Corrosion Control in the Chemical Process Industries**, McGraw-Hill, 1986, in: *Celuloză și Hârtie*, vol. 41, nr. 4, 1992, p. 50;
11. Paul C. Dillon: **Materials Selection for the Chemical Process Industries**, Mc.Graw-Hill, 1992, in: *Celuloză și Hârtie*, vol. 41, nr. 4, 1992, p. 50;
12. Ken L. Patrick (editor): **Bleaching Technology for Chemical and Mechanical Pulps**, Miller Freeman Inc., San Francisco, 1991, in: *Celuloză și Hârtie*, vol. 41, nr. 4, 1992, p. 51-52;
13. Ken L. Patrick (editor): **Modern Mechanical Pulping in the Pulp and Paper Industry**, Miller Freeman Inc., San Francisco, 1989, in: *Celuloză și Hârtie*, vol. 41, nr. 4., 1992, p. 52-53;
14. U.H.F. Sander, H. Fischer, U. Rothe, R. Kola: **Sulphur, Sulphur Dioxide and Sulphuric Acid – An Introduction to their Industrial Chemistry and Technology**, The British Sulphur Corporation Ltd., London, 1984, in: *Revista de Chimie*, vol. 43, nr. 10, 1992, p. 662;

I. INTERNATIONAL RESEARCH GRANTS

1. *Valorisation chimique des agro-ressources. Caracterisation et isolement de molecules bioactives dans des extraits de plantes*, ECONET, French Gouvernement, team member, 2007-2009, 50,000 Euro;
2. *Synthèse et analyse de molécules hétérocycliques pour traiter le cancer et les maladies du système nerveux central*, PAI BRANCUSI 14944RB, French and Romanian Gouvernement, team member, 2007-2008, 10,000 Euro;
3. *Elimination des pesticides des eaux usées par photocatalyse*, Agence Universitaire de la Francophonie grant (international project: Morocco, France, Romania), director for the Romanian part, 2005 – 2006, 19,000 Euro;