

CURRICULUM VITAE

Personal data:

Name : CORNELIA VASILE

Place of birth : Homorâciu, Prahova, România

Educational background : B.S. Vălenii de Munte, Prahova, 1960

Faculty of Chemistry "Bucharest " University Department of Physical Chemistry :1960 - 1965

Project for chemist' degree : "Kinetic Aspects by Thermogravimetry." supervised by prof. dr. doc. Eugen Segal, member of the Romanian Academy. Bucharest University, Diploma of Chemist, June 1965

Work experience:

1965 - 1966 - assistant professor, Medicine and Pharmacy University of Iasi

1966 - 1968 - chemist , "P.Poni" Institute of Macromolecular Chemistry, Iasi;

1968 - 1971 – PhD student, " Al. I. Cuza" University, Department of Physical Chemistry, Iasi;

1972 - 1978 - researcher, "P;Poni" Institute of Macromolecular Chemistry, Iasi;

1978 - 1995 - senior researcher, CPIII, II and I, "P. Poni" Institute of Macromolecular Chemistry, Iasi

1994 - present -supervisor MSc and PhD theses ;

1995 - 2014 - associate professor - Laval University, Quebec, Canada; “Gh. Asachi” Technical University and "Al. I. Cuza” University of Iasi. I supervised 32 PhD theses, 30 theses have been successfully presented.

Awards and honours:

1965 - "Bucharest" University award for the scientific research of students with the paper entitled: "Kinetics of Decomposition of Ni, Co and Cu complexes with pyridine";

1969 - "N. Teclu" distinction of the Romanian Academy for the study entitled: "Studies in the Polymerization, Copolymerization and Compatibility of Homogeneous systems based Acrylonitrile for Filable Solutions"

1986, 1987 2004, 2005, 2008, 2016, 2017, 2018 – 15 distinctions (gold or silver medals) awarded at the "Inventica" Symposia hold at Iasi and Ploiesti-Prahova for the patents (Romania Patents 879036, 88032, and 92783, etc.) concerning the recovery of polymer wastes by destructive and non- destructive procedures, EUROINVENT'2016 and INVENTICA' 2016, 2017, 2018 for patents on innovative and smart, bioactive food packaging.

2006 – Excellence Diploma and medal for participation to PC6 of the European Community for Research, Technological Development and Demonstrative Activities/ Ministry of Education and Research/ANCS

Titles:

Research project for doctor ' degree : " New methods for the Characterization of Binary and Ternary Polymer Blends", supervised by prof dr.doc I. A. Schneider, (now professor at Albert Ludwigs University, Freiburg - Germany), "Al. I. Cuza" University, Department of Physical Chemistry. 1968 – 1971, PhD diploma, thesis defense, November 22, 1971, approval June 1972.

Positions:

1971 - 1999 - associate lecturer or professor at "Al. I. Cuza University and Physical Chemistry Department and at Polytechnic University of Iasi, Department of Textile;

1995 – present – associate professor at LAVAL University, Quebec, Canada for supervising PhD theses

2000 - 2008 – professor at “Al.I. Cuza University, Faculty of Physics, Department of Plasma, Optics and Molecular Physics and master studies.

1998 – 2007 - professor at “Gh. Asachi” Technical University of Iasi, Faculty of Chemistry, Department of Macromolecules, as PhD theses supervisor.

Professional societies:

1980 - 1999 - member of Romanian Association of Scientists;

1990 - present - IUPAC member - representative of Romanian Academy Chemical Section for Affiliate IUPAC member Programme for Young Researchers

1990 - 1999 - member of Planetary Society (Pasadena - California).

In the last two cases I was contacted for our studies in the environment protection field;

1994 - 1999 member of the Board of the Directors by the General Assembly of the Mediterranean Network on Science and Technology of Advanced Polymer Based Materials

1994, 1996- member of the International Organising Committee of the First and second Mediterranean Exhibition of Technological Innovation.

1990 - present - member in the Romanian Academy Commission for " Thermal Analysis and Calorimetry" and "Environmental Protection"

1995 - member of the International Organizing Committee of the Fourth Mediterranean School for Advanced Polymer Based Materials - Crete, 5-9 June, 1995.

1996 - member of the Advisory Committee of International Journal of Polymeric Materials - USA and Scientific Committee of the MED-NET Magazine, Italy

1998 - member of the Romanian Association for Basic Sciences

1999 - member of the International Lignin Institute.

2005 – present – member in Management committees of the COST projects: E41, P12 and 868, E54, FP0901, FP 0602, FA0904, FP904.

Referee for the journals: J. Therm. Analysis, J. Polymer Degrad. Stability, J. Anal. Appl. Pyrolysis. Industrial Crops and Products, Biomacromolecules, J. Mater. Cycle and Management- Japan, Cell Chem Technol. J. Appl. Polym. Sci., etc.

Member of the Advisory Committee and Editorial Board of International Journal of Polymeric Materials - USA and Scientific Committee of the MED-NET Magazine, Italy, Polymers Research Journal – Nova Science USA, The Open Waste Management Polymers Research Journal -USA; J. of Environmental Protection and Open Waste Management Journal, International J. Polym. Sci. and Polymer Research J.; Bentham Science Publishers, International Journal of Nanomaterials, Nanotechnology and Nanomedicine; Journal Of Nanosciences and Nanomedicines.

Professional activities:

Main areas of research: Kinetics of Polymer Decomposition; Crystalline polymer blends and composites; Thermodynamics of Polymer Solutions and of Multicomponent Polymer Systems: Study of the Polymer Compatibility and Biocompatibility, Enzymatic Degradation; Recovery of Polymer Wastes by Destructive and non-Destructive Procedures ; Environmental Pollution and Protection; Thermal Methods of Investigation; Smart polymers; Drugs delivery; Food packaging (active, bioactive, smart, (bio)degradable)

Books: Editor of the 14 books, six in Romanian and 7 in English (Marcel Dekker Publ. and RAPRA Technol. Press, Brill Academics, Research SignPost Intern), one translated in Chinese language. Author of the 4 books 2 in Romanian and 2 in English.

Chapters in the Books published: 107;

List of publications: more than 600- available list;

Patents: 50 - available list;

Technical Papers: at least 90 related to the agreements with the industrial companies, of technical assistance, for design, applications of results, etc.

Citations : (approximatively) > 4500

Coordinator of Research programs (selected) :

1. Physical Chemistry of the Multicomponent Polymeric Systems - supported by Romanian Academy;
2. Impact of the polymers on environment and energy conservation – Priority programme of the Romanian Academy,
3. Noi derivati de celuloza
4. Modelling the Interfacial Properties of Polymeric Multicomponent Systems
5. Multicomponent Polymeric Systems with Superficial; Controlled Properties
6. New compatibilizing agents for polymer blends
7. Reactive processing of polymer Blends
8. Compatibility Studies for Polyolefins/Polystyrene Blends and Polyvinyle Chloride /Natural Polymer Blends supported
7. MATNANTECH. Elastomeric binary and ternary composites with controlled structures and special properties destined to obtain medical devices.
9. New performant materials with complex and contrrollable morphologies and special properties. Noi materiale performante, complexe cu morfologii controlabile si proprietati speciale
10. Compatibility Studies of Polyolefins/Polystyrene Blends and Polyvinyl Chloride/Natural Polymer Blends
11. New procedures for surface treatments of polymers
12. Complecsi interpolimerici pe baza de legaturi de hidrogen utilizati in formulari pentru eliberarea controlata si/sau la tinta a medicamentelor

13. Orizont 2000: Improvement of the depollution technologies and control of the pollution generated by polymer waste by treatment and reduction of their quantity. Perfectionarea tehnologiilor de depoluare si controlul poluarii generate de deseuri polimerice prin tratarea sau reducerea cantitatii lor.
14. Noi sisteme polimerice inteligente cu aplicatii in eliberarea controlata de medicamente sau ca agenti de ingrosare,
16. CEEEX – CALIST Realizare de biopolimeri matriciali naturali multifunctionali pentru biocompatibilizarea polimerilor sintetici destinati utilizarii medicale
17. CEEEX, RELANSIN 3778: Noi tipuri de materiale micro si nanostructurate pentru productii noi in constructii, siguranta agroalimentara si bioinginerie
18. 2004-2006: RELANSIN 1993: Reindustrializare: Noi tipuri de compounduri polimerice cu proprietati performante pentru aplicatii speciale,
19. Relansin 2108: Noi filme biodegradabile pe bază de resurse regenerabile, cu aplicații în agricultură, ambalaje și alte produse cu durată determinată de viață.
20. O noua clasa de materiale din resurse regenerabile, 2005-2003: Amestecuri si biocompozite care contin polimeri naturali
21. CEEEX – VIASAN - Arhitecturi inovative degradabile, biocompatibile și bioactive pe bază de polimeri naturali și sintetici
22. Cercetari privind obtinerea unor combustibili si materii prime din surse regenerabile
23. Noi materiale inteligente, multi-responsive cu aplicatii in medicina, farmacie si industrie
24. Noi sisteme terapeutice donoare de oxid de azot cu eliberare controlata
25. Cercetari Experimentale Privind Terapia Locala a Durerii Cronice Inflammatory cu Analgezice Eliberate din Suporturi pe baza de Hidrogeluri - cod ID_2561/2008-2011,
26. Studii Privind Realizarea de Biosenzori Piezoelectrice Folosind un Substrat Polimeric,
27. PN II- 164/2012- Bionanocompozite antimicrobiene pentru aplicatii medicale (*BIONANOMED*)
29. Ionizing radiation and plasma discharge mediating covalent linking of stratified composites materials for food packaging –beneficiar IAEA –Vienna Austria 2014-2017

International Contracts:

1. Network CEEPUS PL105: New Materials and waste recycling
2. Member of the East European Center of Excellence for Material Recycling,
3. EUROLIGNIN Program: Coordination network for lignin OE standardization, production and applications, coordinator Agrotechnological Research Institute, ATO – Olanda.
4. “Influence of the Degradation Products of the Polymers on the Physiological Vegetative Processes of the Plants”
5. COST E 41: COST Action E41 Analytical tools with applications for wood and pulping chemistry – Finland;
6. COST P12; Structuring of Polymers – Italy:.
7. COST 868: Biotechnical Functionalization of Natural Polymeric Materials “Bio-PM”
8. 2008-2011 COST E54: Characterisation of the fine structure and properties of papermaking fibres using new technologies
9. 2006- 2008. Bilateral collaboration Romania - Italy “Modelling of the polymer structure and properties and coupling/release of bioactive substances by magnetic field application”.
10. 2006-2008 Bilateral collaboration Romania-France –Program Brancusi 2007-2009: *Elaboration des capteurs a ondes acoustiques” (Plascapt)* (nr. Dosar: 14883ph)
11. EUREKA E!3523 – Rec-Plastic – Ro / (2006-2008): *Valorificarea polietilentereftalului si a altor polimeri secundari in reperi de tip compozit si nanocompozit cu viata medie si lunga. EU: Plastics recycling technology using the remelting and restabilization method,*
12. NaPolyNet 2008-2011: Seventh Framework Programme: *Setting up research-intensive clusters across the EU on characterization of polymer nanostructures.*
13. COST FP0901: Analytical Techniques for Biorefineries.
14. COST FP0904: Thermo-Hydro-Mechanical Wood Behaviour and Processing
15. FP0602: Biotechnology for Lignocellulose Biorefineries (BIOBIO) – C. Vasile, member in management committee
16. COST FA0904: “Eco-sustainable Food Packaging based on Polymer Nanomaterials”
17. New Technologies for obtaining of bioactive packaging E!4952- BIOPACKAGING
18. FP7-PEOPLE-2009-IRSES - Biofuels from Solid Wastes grant

19. Ionizing radiation and plasma discharge mediating covalent linking of stratified composites materials for food packaging IAEA –Vienna, grant Nr: 17689
20. 2014 – present: Improving food safety through the development and implementation and active and biodegradable food packaging systems- ACTIBIOSAFE ISEE/30.06.2014
21. 2015 – present: Joint innovative training and teaching/learning program in enhancing development and transfer knowledge of application of ionizing radiation in materials processing Proiect Erasmus + TL-IRMP 2014-1-PL01-KA203-003611
22. Innovative and eco-sustainable processing and packaging for safe and high quality organic berry products with enhanced nutritional value - EcoBerries ERA MNT –project 2014-2017
23. COST Action TD1004: Theragnostics Imaging and Therapy: An Action to Develop Novel Nanosized Systems for Imaging-Guided Drug C. Vasile member in management committee
24. COST Action MP1404 Simulation and pharmaceutical technologies for advanced patient-tailored inhaled medicines (SimInhale)
25. COST Action FP1405: Intelligent packaging and printed electronics C. Vasile and R.P.Dumitriu member in management committee,

Communications: 600 (see above)

Invited Conferences: *Selected*

1. *NaPolynet meeting: Demonstration (training) course: Characterization methodology and tools for new polymer nanostructured materials, Atena, Grecia, 13-15 mai 2009: Mechanical and thermal characterization of nanostructured polymeric materials*
2. *Seminar European FP7: The implementation of research potential of the Latvian State Institute of Wood Chemistry in the European Research Area (WOOD-NET) (Specific programme - Capacities Project type: Coordination and support action - Support action FP7 Grant Agreement No 203459, Riga, 27 octomber 2009 - Green polyvinylalcohol / starch nanocomposites*
3. *The 11th Symposium on Feedstock Recycling of Japan – FSRJ'11, September 16 – 17, 2008, Kumamoto, Japan: Status and perspectives in plastic production, consumption and plastic waste management in Romania;*
3. *Architecture and composition influence on the properties of some smart polymeric materials designed as matrices in drug delivery systems; C. Vasile, G-G. Bumbu, R. P. Dumitriu, E-MRS Fall Meeting 2008: Workshop: Current trends in nanostructured polymer and sol-gel films, 15-20 september, Warsaw;*
4. *New smart polymeric materials, C. Vasile; 14th- Rolduc polymer meeting, Kerkrade, The Netherlands*
5. *Some new aspects on Polymer Waste Recycling / Recovery, Monterrey, Mexico, UANL, 23 January, 2006*
6. *Some new solutions for valorization of the biomass components as high-value materials and chemicals Mexico, UANL*
7. *Degradation of Lime wood painting supports III Pyrolysis – GC of aged wood, COST E41 meeting Stockholm, 6-9 november, 2005*
8. *Polymer Degradation and Waste Recycling/Recovery, C. Vasile, EUROGREEPOL The First European Summer School on Green Chemistry of Polymers, 21 – 27 August 2005, Iasi, Romania, Book of Lectures, p. 46 – 70*
9. *Pyrolysis of the PCB. Feedstock Recycling of Plastics, ISFR'2007 Jeju, Korea September 16 – 20, 2007.*
10. *Pyrolysis of the thermoplastic and thermosets fractions of used computers and liquid fraction upgrading, The 3rd ISFR in Karlsruhe (Germany) 23-25 September, 2005.*
11. *Lignin as a source of new compounds, Stockholm, 2005, KTH*
12. *Natural Polymer/Synthetic Polymer blends and grafted copolymers. EGE University, Faculty of Science, Chemistry Department, Izmir – Turkey, 3 august 2004.*

Collaborations:

The Weizman Institute of Science, Israel; LAVAL University, Quebec, Canada ;Okayama University, Faculty of Engineering, Japan ; Universitatea Massachusetts – Lowell – USA; Natural and Synthetic Polymer Waste including Biomass Recycling and Recovery, Universidad Autonoma de Nuevo Leon, Monterrey, Mexico,; China, Chinese Academy of Sciences, Changchun Institute of Applied Chemistry, State Key Laboratory of Polymer Physics and Chemistry; France “Elaboration de captateurs a ondes acoustiques PVDF” Universite Le Mans, . Poland – Polytechnic University of Wroclaw, Program CEEPUS –

Advanced polymer materials and recycling of polymer waste; Italy – Development of polymer based materials for eco-sustainable packaging, Institutul de Stiinta si Tehnologie Materialelor Plastice Arco Felice, Italia – dr. Clara Silvestre; Greece – Polymeric materials for medical and pharmaceutical purposes, Universitatea din Patras Grecia and University of West Macedonia, Food Packaging; Germany– Thermodynamics and rheology of polysaccharides-based blends with potential use in pharmacy, Universitatea din Mainz, Institut fur Physikalische Chemie, Mainz; Czech Republik Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic ; Institute of Biochemistry Moscow; Budapest University; Bulgaria – University of Chemical Technology and Metallurgy, Departement of Physico-Mathematical and Technical Sciences; Turkey – Ege University, Chemistry Department, Pyrolysis of polymer waste and utilization of pyrolysis products in petrochemical processes; Slovenia – Maribor Univesity, Chemistry department, - Biopackaging. NOFIMA SA, Norway- Biopackaging.

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