

CURRICULUM VITAE

Name: Mihai – Adrian, **Surname:** Brebu

Date and place of birth: October 29, 1971, Bacău, Romania

Nationality: Romanian, **Sex:** male

Permanent job address: Laboratory of Physical Chemistry of Polymers, “Petru Poni” Institute of Macromolecular Chemistry, Romanian Academy, 41A Grigore Ghica Vodă Alley, 700487 Iași, Romania; Tel.: +40-232-217454, Fax: +40-232-211299, E-mail: bmihai@icmpp.ro

Educational background:

1. **Ph.D. degree** – April 19, 2002: “P. Poni” Institute of Macromolecular Chemistry, Iași, Romanian Academy, Romania. Ph.D. thesis title: “Kinetics and Mechanism of Thermal Decomposition of Polymers”, co-supervisors: Dr. C. Vasile, “P. Poni” Institute of Macromolecular Chemistry, Iași, Romania and Prof. Y. Sakata, Okayama University, Okayama, Japan.
2. **M.Sc. degree** – July 1996: Faculty of Chemistry, “Al. I. Cuza” University, Iași, Romania. Speciality: “Synthesis, structure and reactivity of inorganic compounds”, M.Sc. project title: “Catalytic Pyrolysis of Medical Waste. Single-use Syringes”, supervised by Dr. C. Vasile.
3. **B.Sc. degree** – July 1995: Faculty of Chemistry, “Al. I. Cuza” University, Iași, Romania. Speciality: “Physical chemistry”, B.Sc. project title: “Intermittence in oscillate chemical systems”, supervised by Dr. G. Bourceanu.

Languages knowledge: *romanian* – mother tongue; *english* – good; *french* – satisfactory

Job experience:

1. 1995 – present: Researcher (2014: CS II; 2007: CS III; 2003: CS; 1995: AC), Laboratory of Physical Chemistry of Polymers, “Petru Poni” Institute of Macromolecular Chemistry, Iași, Romania.
2. April 2010 – March 2013: post-doctoral fellow “Cristofor I. Simionescu” (POSDRU/89/1.5/S/55216), “Petru Poni” Institute of Macromolecular Chemistry, Iași, research theme “Energy and/or materials from regenerable/recoverable polymeric resources”.
3. September 2008 – February 2009: foreign researcher fellow of Chubu Science and Technology Center, at Department of Materials Science (prof. Noriyoshi Kakuta), Toyohashi University, Toyohashi, Japan.
4. September 2004 – March 2006: post-doctoral fellow of Japan Society for Promotion of Science (JSPS), at Graduate School of Natural Science and Technology (prof. Yusaku Sakata), Okayama University, Okayama, Japan, research theme “Fundamental research on degradation of waste plastics from electric appliances and automobile shredder residue (ASR) into chemical feedstock”.
5. August – November 2003: foreign researcher fellow of Ventura Business Laboratory (VBL), at Graduate School of Natural Science and Technology (prof. Yusaku Sakata), Okayama University, Okayama, Japan, Department of Applied Chemistry, Faculty of Engineering, Okayama University, Okayama, Japan, VBL research theme “Molecular Technology for the Development of Intelligent Materials”.
6. March 2002: “CEEPUS Mobility Grant” PL105, at Institute of Materials Science and Applied Mechanics (prof. Marek Kozlowsky), Wroclaw University of Technology, Wroclaw, Poland, research theme “IPP/PA6/EPDM blends compatibilised with functionalised IPP”.
7. March 1999 - November 2000: visiting researcher, at Department of Applied Chemistry (prof. Yusaku Sakata), Faculty of Engineering, Okayama University, Okayama, Japan, research theme: “Fundamental studies on thermal degradation of nitrogen containing polymers and catalytic upgrading of the degradation oils”.

Main scientific interest: Polymer degradation and stability, kinetics and mechanisms of thermal degradation, treatment/valorisation of polymer waste, removal of heteroatoms from pyrolysis oils, use of natural compounds (e.g. essential/vegetal oils) to improve the antimicrobial/antioxidant properties of polymeric materials (e.g. food packaging), volatolomic analysis.

Experience in analysis and experimental techniques: pyrolysis techniques, thermal analysis methods (TG-DTG/FTIR-MSD, DTA, DSC), characterisation gas chromatographic methods (GC-TCD, GC-FID, GC-AED, GC-MS), Temperature Programmed Desorption/Degradation (TPD), FT-IR, H- and C- NMR, XRD spectroscopy, etc.

Scientific results: 6 chapters in books, 70 articles in journals (66 ISI, from which 62 in Web of Knowledge), 18 papers in symposium books, 5 conferences (3 international), 30 communications (19 international), 42 posters (34 international), 5 book reviews, more than 40 paper reviews, total citations: 986/868; h-index – Web of Science: 24 (Brebu M – author and Poni – address, or Brebu M – author and Okayama – address, or Mihai B – author and Poni – address); h-index – Scopus: 26 (Brebu, Mihai Adrian); h-index – Google Scholar (Mihai Brebu): 29; research projects: more than 20, patents: 1. Editor: *Molecules* (IF₂₀₁₉: 3.060).

Main Research Grants:

1. “Volatolomics test for the diagnosis of bovine tuberculosis – bTB-Test”, H2020-MSCA-RISE-2017 bTB- TEST (ref. 777832); 01.01.2018-31.12.2021 (48 months); 1 395 000 EUR total, 184 500 EUR PIMC partner, <https://cordis.europa.eu/project/rcn/212467/factsheet/en>; – principal investigator of PPIMC team.
2. “Development of a non-invasive breath test for early diagnosis of tropical diseases – Tropsense”, H2020-MSCA-RISE-2014 Tropsense (ref. 645758); 01.02.2015-31.01.2019 (48 months): 1 386 000 EUR total, 85 500 EUR PPIMC partner, <https://cordis.europa.eu/project/rcn/194384/factsheet/en>; – team member.
3. “Improving Food Safety through the Development and Implementation of Active and Biodegradable Food Packaging Systems” – ACTIBIOSAFE – ISEE/30.06.2014; EEA Grants Romania - Norway; 2014-2017 (34 months): 900 000 EUR total, 165 000 EUR PPIMC partner (project coordinator), www.actibiosafe.ro; – team member.
4. “Forest biorefineries: Added-value from chemicals and polymers by new integrated separation, fractionation and upgrading technologies” – AFORE – FP7-NMP-2008-LARGE-2-228589; 2009-2013 (48 months): 10 746 919 EUR total, 244 080 EUR PPIMC partner, <https://cordis.europa.eu/project/rcn/94657/factsheet/en>; – team member.
5. “Biofuels from Solid Wastes” – BIOFUEL – Grant FP7 PIRSES-GA-2009-247550; 2010-2013: 108 000 EUR total, 41 400 EUR PPIMC partner, <https://cordis.europa.eu/project/rcn/95838/factsheet/en>; – team member.
6. “Catalytic removal of potentially toxic compounds in liquid fuels from pyrolysis of polymer waste” – European Environment Agency Research Project 21/21.04.2004; 2004-2005 (24 months): 30 000 000 ROL; – project director.

List of Scientific Results

Chapters in books:

1. C. Vasile, **M. Brebu**, “Recycling of Waste of Electric and Electronic Equipment (WEEE)”, in “Recycling: Processes, Costs and Benefits”, Ed. Charlene J. Nielsen, Nova Press, 2011, ISBN: 978-1-62257-018-8, 91-140.
2. **M. Brebu**, “Products of degradation or interactions packaging/food”, in “New polymeric packaging for food” (in romanian - “Produsi de degradare sau interactiune ambalaje/alimente”, in “Noi ambalaje polimerice pentru alimente”), Eds. C. Vasile, C. N. Cheaburu, Pim – Iasi, 2010, 245-263.
3. C. Vasile, **M. Brebu**, C. M. Popescu, “Thermal modification of lignocellulosic materials and of lignin (pyrolysis)”, in “Lignin, source of feedstock and energy” (in romanian - “Modificarea termica a materialelor lignocelulozice si a ligninei (piroliza)”, in “Lignina, sursa de materii prime si energie”), Eds. G. Cazacu, M. I. Totolin, Pim – Iasi, 2010, 174-274.
4. C. Vasile, B. S. Munteanu, M. C. Pascu, A. Stoleriu, **M. Brebu**, L. Nita, A. Tomescu, A. Cojocariu, E. Nemes, T. Zaharescu: “Radiation Processing of Polyolefin-Containing Blends. IV Polyethylene/Polystyrene Blends Containing Compatibiliser”, in “Focus on Natural and Synthetic Polymer Science”, Eds. C. Vasile and G. E. Zaikov, Nova Science Publishers, 2006, 1 – 30.
5. **M. A. Brebu**, Y. Sakata, M. A. Uddin: “Degradation Behaviour of Polymer Blends and Thermal Treatment of Polymer Waste”, in “Handbook of Polymer Blends and Composites”, Eds. C. Vasile and A.K. Kulshreshtha, RAPRA Technology Ltd., 2003, Volume 3A, 561 – 614.
6. B. S. Munteanu, **M. Brebu**, C. Vasile: “Polystyrene and Styrene Copolymers – Based Blends”, in “Handbook of Polymer Blends and Composites”, Eds. C. Vasile and A.K. Kulshreshtha, RAPRA Technology Ltd., 2003, Volume 4A, 121 –184.

Published works in journals (*Web of Knowledge*):

1. **M. Brebu**, “Environmental Degradation of Plastic Composites with Natural Fillers - A Review”, *Polymers*, **12**, 166, 2020.
2. A. C. Aprotosoiaie, A. Miron, N. Ciocârlan, **M. Brebu**, C. M. Roșu, A. Trifan, G. Vochița, D. Gherghel, S. V. Luca, A. Niță, I. I. Costache, C. T. Mihai, “Essential oils of Moldavian Thymus species: Chemical composition, antioxidant, anti-Aspergillus and antigenotoxic activities”, *Flavour. Fragr. J.*, **34**, 175-186, 2019.
3. P. Aelenei, C. M. Rimbu, E. Guguianu, G. Dimitriu, A. C. Aprotosoiaie, **M. Brebu**, C. E. Horhogeia, A. Miron, “Coriander essential oil and linalool – interactions with antibiotics against Gram-positive and Gram-negative bacteria”, *Lett. Appl. Microbiol.*, **68**, 156-164, 2019.
4. Butnaru, E., Stoleru, E., Brebu, M.A., Darie-Nita, R.N., Bargan, A., Vasile, C., “Chitosan-based bionanocomposite films prepared by emulsion technique for food preservation”, *Materials*, **12**, 373, 2019.
5. Sandu, I., Iurcovschi, C.T., Sandu, I.G., Vasilache, V., Negru, I.C., Brebu, M., Ursu, P.S., Pelin, V., “Multianalytical study for establishing the historical contexts of the Church of the Holy Archangels from Cicau, Alba County, Romania, for its promotion as a world heritage good I. Assessing the preservation-restoration works from the 18th century”, *Revista de Chimie*, **70**, 2538-2544, 2019.
6. R. N. Darie-Niță, C. Vasile, E. Stoleru, D. Pamfil, T. Zaharescu, L. Tarțău, Niță Tudorachi, **M. A. Brebu**, G. M. Pricope, R. P. Dumitriu, K. Leluk, “Evaluation of the rosemary extract effect on the properties of polylactic acid-based materials”, *Materials*, **11**, 1825, 2018.
7. A. C. Grădinaru, A. Trifan, A. Șpac, **M. Brebu**, A. Miron, A. C. Aprotosoiaie, “Antibacterial activity of traditional spices against lower respiratory tract pathogens: combinatorial effects of *Trachyspermum ammi* essential oil with conventional antibiotics”, *Lett. Appl. Microbiol.*, **67**, 449-457, 2018.

8. A. C. Aprotosoiaie, N. Ciocârlan, **M. Brebu**, A. Trifan, A. C. Grădinaru, A. Miron, "Chemical composition, antioxidant and antimicrobial activities of *Mentha Gattefossei* maire essential oil", *Farmacia*, **66**, 778-782, 2018.
9. C. Vasile, M. Râpă, M. Ștefan, M. Stan, S. Macavei, R. N. Darie-Niță, L. Barbu-Tudoran, D. C. Vodnar, E. E. Popa, R. Ștefan, G. Borodi, **M. Brebu**, "New PLA/ZnO:Cu/Ag bionanocomposites for food packaging", *Express Polym. Lett.*, **11**, 531-544, 2017.
10. C. Vasile, M. Sivertsvik, A. C. Mitelut, **M. A. Brebu**, E. Stoleru, J. T. Rosnes, E. E. Tanase, W. Khan, D. Pamfil, C. P. Cornea, A. I., M. E. Popa, "Comparative analysis of the composition and active property evaluation of certain essential oils to assess their potential applications in active food packaging", *Materials*, **10**, 45, 2017.
11. I. Rosca, A. R. Petrovici, M. Brebu, I. Stoica, B. Minea, N. Marangoci, "An original method for producing acetaldehyde and diacetyl by yeast fermentation", *Braz. J. Microbiol.* **47**, 949-954, 2016.
12. M. I. Guignard, C. Campagne, S. Giraud, **M. Brebu**, N. Vrinceanu, L. I. Cioca, "Functionalization of a bamboo knitted fabric using air plasma treatment for the improvement of microcapsules embedding", *J. Text. I.*, **106**, 119-132, 2015.
13. A. Trifan, A. C. Aprotosoiaie, **M. Brebu**, O. Cioancă, E. Gille, M. Hăncianu, A. Miron, "Chemical composition and antioxidant activity of essential oil from romanian *Satureja Montana* L.", *Farmacia*, **63**, 413-416, 2015.
14. A. C. Grădinaru, A. C. Aprotosoiaie, A. Trifan, A. Șpac, **M. Brebu**, A. Miron, "Interactions between cardamom essential oil and conventional antibiotics against *Staphylococcus Aureus* clinical isolates", *Farmacia*, **62**, 1214-1222, 2014.
15. L. Profire, M. Apotrosoaei, A. Oprea, **M. Brebu**, F. Lupascu, C. E. Lupusoru, C. Vasile, "The synthesis, characterization and biological evaluation of a new nitric oxide donor agent", *J. Serb. Chem. Soc.*, **79**, 389-400, 2014.
16. **M. Brebu**, T. Tamminen, L. Hannevold, M. Stöcker, I. Spiridon, "Catalytic upgrading of co-pyrolysis oils from bisphenol A polycarbonate and lignins", *Polym. Degrad. Stabil.*, **102**, 88-94, 2014.
17. E. Părpăriță, **M. Brebu**, Md. A. Uddin, J. Yanik, C. Vasile, "Pyrolysis behaviors of various biomasses", *Polym. Degrad. Stabil.*, **100**, 1-9, 2014.
18. **M. Brebu**, J. Yanik, T. Uysal, C. Vasile, "Thermal and catalytic degradation of grape seeds/polyethylene waste mixture", *Cellulose Chem. Technol.*, **48**, 665-674, 2014.
19. **M. Brebu**, M. Nistor, "Co-pyrolysis of various lignins with polycarbonate", *Cellulose Chem. Technol.*, **48**, 69-74, 2014.
20. **M. Brebu**, I. Bunia, M. Silion, "On the Molecular Mass of Pyrolysis Oils from Polyolefins", *Rev. Chim. (Bucharest)*, **63**, 1197-1200, 2013.
21. **M. Brebu**, T. Tamminen, I. Spiridon, "Thermal degradation of various lignins by TG-MS/FTIR and Py-GC-MS" *J. Anal. Appl. Pyrol.*, **104**, 531-539, 2013.
22. B. S. Munteanu, **M. Brebu**, C. Vasile, "Thermal behaviour of binary and ternary copolymers containing acrylonitrile", *Polym. Degrad. Stabil.*, **98**, 1889-1897, 2013.
23. C. L. Apetrei, A. Spac, **M. Brebu**, C. Tuchilus, A. Miron, "Composition, and antioxidant and antimicrobial activities of the essential oils of a full-grown *Pinus cembra* L. tree from the Calimani Mountains (Romania)", *J. Serb. Chem. Soc.*, **78**, 27-37, 2013.
24. **M. Brebu**, I. Spiridon: "Co-pyrolysis of LignoBoost[®] lignin with synthetic polymers", *Polym. Degrad. Stabil.*, **97**, 2104-2109, 2012.
25. S. Önenç, **M. Brebu**, C. Vasile, J. Yanik: "Copyrolysis of scrap tires with oily wastes", *J. Anal. Appl. Pyrol.*, **94**, 184-189, 2012.
26. A. M. Saviuc-Paval, I. Sandu, I. M. Popa, A. V. Sandu, **M. Brebu**, I. G Sandu, "Obtaining and Characterization of New Ceramic Pigments for Polychrome Artistic Elements. III. Thermogravimetric analysis", *Rev. Chim. (Bucharest)*, **63**, 273-282, 2012.
27. D. Rosu, L. Rosu, **M. Brebu**, "Thermal stability of silver sulfathiazole-epoxy resin network", *J. Anal. Appl. Pyrol.*, **92**, 10-18, 2011.

28. **M. Brebu**, I. Spiridon, "Thermal degradation of keratin waste", *J. Anal. Appl. Pyrol.*, **91**, 288-295, 2011.
29. **M. Brebu**, G. Cazacu, O. Chirila, "Pyrolysis of lignin – a potential method for obtaining chemicals and/or fuels", *Cellulose Chem. Technol.*, **45**, 43-50, 2011.
30. C. Vasile, C. M. Popescu, M. C. Popescu, **M. Brebu**, S. Willfor, "Thermal behaviour/treatment of some vegetable residues. IV. Thermal decomposition of eucalyptus wood", *Cellulose Chem. Technol.*, **45**, 29-42, 2011.
31. **M. Brebu**, C. Vasile, "Thermal degradation of lignin – A review", *Cellulose Chem. Technol.*, **44**, 353-363, 2010.
32. K. Murata, **M. Brebu**, Y. Sakata, "The effect of silica–alumina catalysts on degradation of polyolefins by a continuous flow reactor", *J. Anal. Appl. Pyrol.*, **89**, 30-38, 2010.
33. **M. Brebu**, S. Ucar, C. Vasile, J. Yanik, "Co-pyrolysis of pine cone with synthetic polymers", *Fuel*, **89**, 1911–1918, 2010.
34. C. Vasile, **M. Brebu**, H. Darie, G. Cazacu, "Effect of some environmentally degradable materials on the pyrolysis of plastics II: influence of cellulose and lignin on the pyrolysis of complex mixtures", *J. Mater. Cycles Waste Manag.*, **12**, 147–153, 2010.
35. K. Murata, **M. Brebu**, Y. Sakata, "Thermal degradation of polyethylene into fuel oil over silica–alumina by a continuous flow reactor", *J. Anal. Appl. Pyrol.*, **86**, 354-359, 2009.
36. K. Murata, **M. Brebu**, Y. Sakata, "The effect of PVC on thermal and catalytic degradation of polyethylene, polypropylene and polystyrene by a continuous flow reactor", *J. Anal. Appl. Pyrol.*, **86**, 33-38, 2009.
37. A. Korkmaz, J. Yanik, **M. Brebu**, C. Vasile, "Pyrolysis of the tetra pak", *Waste Management*, **29**, 2836-2841, 2009.
38. V. Popescu. C. Vasile, M. Brebu, G. L. Popescu, M. Moldovan, C. Prejmerean, L. Stănuț, C. Trișcă-Rusu, I. Cojocaru, "The characterization of recycled PMMA", *J. Alloys Compd.*, **483**, 432-436, 2009.
39. C. Vasile, M. Brebu, M. C. Popescu, "Thermal behaviour/treatment of agricultural biomass I. Thermal behaviour of oilseed rape (*Brassica Napus L.*)", *Cellulose Chem. Technol.*, **42**, 159-169, 2008.
40. C. Vasile, **M. A. Brebu**, M. Totolin, J. Yanik, T. Karayildirim, H. Darie, "Feedstock recycling from the printed circuit boards of used computers", *Energy and Fuels*, **22**, 1658-1665, 2008.
41. **M. Brebu**, E. Jakab, Y. Sakata: "Effect of flame retardants and Sb₂O₃ synergist on the thermal decomposition of high-impact polystyrene and on its debromination by ammonia treatment", *J. Anal. Appl. Pyrol.*, **79**, 346-352, 2007.
42. N. M. M. Mitan, **M. Brebu**, T. Bhaskar, A. Muto, Y. Sakata, Individual and simultaneous degradation of brominated high impact polystyrene and brominated acrylonitrile-butadiene-styrene and removal of heteroelements (Br, N, and O) from degradation oil by multiphase catalytic systems, *J. Mater. Cycles Waste Manag.*, **9**, 56-61, 2007.
43. N. M. M. Mitan, **M. Brebu**, T. Bhaskar, A. Muto, Y. Sakata, M. Kaji, Co-processing of DVDs and CDs with vegetable cooking oil by thermal degradation, *J. Mater. Cycles Waste Manag.*, **9**, 62-68, 2007.
44. C. Vasile, **M.A. Brebu**, T. Karayildirim, J. Yanik, H. Darie, "Feedstock Recycling from Plastics and Thermosets Fractions of Used Computers II) Pyrolysis Oil Upgrading", *Fuel*, **86**, 477-485, 2007.
45. **M. Brebu**, Y. Sakata: "Novel debromination method for flame-retardant high impact polystyrene (HIPS-Br) by ammonia treatment", *Green Chemistry*, **8**(11), 984-987, 2006.
46. **M. Brebu**, T. Bhaskar, A. Muto, Y. Sakata: "Alkaline hydrothermal treatment of brominated high impact polystyrene (HIPS-Br) for bromine and bromine-free plastic recovery", *Chemosphere*, **64**(6), 1021-1025, 2006.
47. C. Vasile, **M. A. Brebu**: "Thermal Valorisation of Biomass and of Synthetic Polymer Waste. Upgrading of Pyrolysis Oils", *Cell. Chem. Technol.*, **40**(7), 489-512, 2006.

48. S. B. Munteanu, **M. Brebu**, C. Vasile: "Thermal and thermo-oxidative behaviour of butadiene-styrene copolymers with different architectures", *Polym. Degrad. Stabil.*, **89**(3), 501-512, 2005.
49. **M. Brebu**, T. Bhaskar, K. Murai, A. Muto, Y. Sakata, Md. A. Uddin: "Removal of nitrogen, bromine, and chlorine from PP/PE/PS/PVC/ABS-Br pyrolysis liquid products using Fe- and Ca-based catalysts", *Polym. Degrad. Stabil.*, **87**(2), 225-230, 2005.
50. I. G. Sandu, S. Stoleru, I. Sandu, **M. Brebu**, A.V. Sandu: "Authentication of ancient bronze coins by archeological patina study. I. Composition and Structure", *Revista de Chimie*, **56**(10), 981-994, 2005 (Romanian).
51. **M. Brebu**, T. Bhaskar, K. Murai, A. Muto, Y. Sakata, Md. A. Uddin: "The effect of PVC and/or PET on thermal degradation of polymer mixtures containing brominated ABS", *Fuel*, **83**, 2021-2028, 2004.
52. **M. Brebu**, T. Bhaskar, K. Murai, A. Muto, Y. Sakata, Md. A. Uddin: "The individual and cumulative effect of brominated flame retardant and polyvinylchloride (PVC) thermal degradation of acrylonitrile-butadiene-styrene (ABS) copolymer", *Chemosphere*, **56**, 433-440, 2004.
53. **M. Brebu**, T. Bhaskar, K. Murai, A. Muto, Y. Sakata, Md. A. Uddin: "Thermal degradation of PE and PS mixed with ABS-Br and debromination of pyrolysis oil by Fe- and Ca- based catalysts", *Polym. Degrad. Stabil.*, **84**(3), 459-467, 2004.
54. T. Bhaskar, K. Murai, T. Matsui, **M. Brebu**, M. A. Uddin, A. Muto, Y. Sakata, K. Murata: "Studies on thermal degradation of Acrylonitrile-Butadiene-Styrene copolymer (ABS-Br) containing brominated flame retardant", *J. Anal. Appl. Pyrol.*, **70**(2), 369-381, 2003.
55. R. N. Darie, **M. Brebu**, C. Vasile, M. Kozlowski: "On the compatibility of the IPP/PA6/EPDM blends with and without functionalized IPP. I. Thermo-oxidative behaviour", *Polym. Degrad. Stabil.*, **80**, 551-566, 2003.
56. I. C. A. Sandu, **M. Brebu**, C. Luca, I. Sandu, C. Vasile: "Thermogravimetric Study on the Ageing of Lime Tree Made Supports of Old Paintings", *Polym. Degrad. Stabil.*, **80**, 83-91, 2003.
57. T. Bhaskar, K. Murai, **M. Brebu**, T. Matsui, M. A. Uddin, A. Muto, Y. Sakata: "Thermal degradation of ABS-Br mixed with PP and catalytic debromination by iron oxide carbon composite catalyst (Fe-C)", *Green Chemistry*, **4**, 603-606, 2002.
58. **M. Brebu**, M. A. Uddin, A. Muto, Y. Sakata, C. Vasile: "The Role of Temperature Program and Catalytic System on the Quality of Acrylonitrile-Butadiene-Styrene Degradation Oil", *J. Anal. Appl. Pyrol.*, **63**(1), 43-57, 2002.
59. C. Vasile, **M. Brebu**, R. Darie, H. Darie, Md. A. Uddin, Y. Sakata: "Thermal and Catalytic Decomposition of Mixed Plastics. III. PVC-containing Mixed Plastics", *Revue Roumaine de Chimie*, **47**(10-11), 1185-1191, 2002.
60. **M. Brebu**, M. A. Uddin, A. Muto, Y. Sakata, C. Vasile: "Catalytic Degradation of Acrylonitrile-Butadiene-Styrene Into Fuel Oil. 1. The Effect of Iron Oxides on the Distribution of Nitrogen-containing Compounds", *Energy and Fuels*, **15**(3), 559-564, 2001.
61. **M. Brebu**, M. A. Uddin, A. Muto, Y. Sakata, C. Vasile: "Catalytic Degradation of Acrylonitrile-Butadiene-Styrene Into Fuel Oil. 2. Changes in the Structure and Catalytic Activity of Iron Oxides", *Energy and Fuels*, **15**(3), 565-570, 2001.
62. C. Vasile, H. Pakdel, **B. Mihai**, P. Onu, H. Darie, S. Ciocăleu: "Thermal and catalytic decomposition of mixed plastics", *J. Anal. Appl. Pyrol.*, **57**, 287-303, 2001.
63. **M. Brebu**, M. A. Uddin, A. Muto, Y. Sakata, C. Vasile: "Composition of Nitrogen-Containing Compounds in Oil Obtained from Acrylonitrile-Butadiene-Styrene Thermal Degradation", *Energy and Fuels*, **14**(4), 920-928, 2000.
64. E. Avram, **M. Brebu**, A. Warszawsky, C. Vasile: "Polymers with pendent functional groups. V. Thermooxidative and thermal behavior of the chloromethylated polysulfones", *Polym. Degrad. Stab.*, **69**(2), 175-181, 2000.

65. **M. Brebu**, C. Vasile, S. R. Antonie, M. Chiriac, M. Precup, J. Yang, C. Roy: “Study of the natural ageing of PVC insulation for electrical cables”, *Polym. Degrad. Stab.*, **67**, 209-221, 2000.

Patents

1. E. Butnaru, E. Stoleru, **M. Brebu**, M. Râpă, C. Vasile: “Procedeu și compoziție pentru obținerea de noi materiale polimerice prin încorporarea de uleiuri vegetale în matricea de chitosan, cu aplicații în industria ambalajelor pentru alimente”, OSIM A/00576/11.08.2016.