

List of publications**I. Publications in scientific journals**

1. *Application of Polyelectrolytes Obtained by Radiation Processing to Potable and Waste Water Treatment*, E. Manaila, D. Martin, G. Craciun, D. Ighigeanu, C. Matei, C. Oproiu, N. Iacob, H. Iovu, M. Sandu, E. Vulpasu, G. Racoviteanu, IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, vol. 41, No. 3, 2005, ISSN 0093-9994, **IDS Number**: 934CQ, pp. 690-697.
2. *Polyelectrolytes driven from electron beam-induced polymerization*, D. Martin, E. Cirstea, D. Ighigeanu, G. Craciun, C. Oproiu, H. Iovu, Gh. Marin, N. Iacob, M. Nemteanu, VACCUM, Volume 77, Issue 4, 11 March 2005, ISSN 0042-207X), 908 YA, pp. 475-484.
3. *SO₂ and NO_x removal by electron beam and electrical discharge induced non-thermal plasmas*; Ighigeanu D, Martin D, Zissulescu E, Macarie R, Oproiu C, Cirstea E, Iovu H, Calinescu I, Iacob N; VACUUM Volume: 77 Issue: 4 Pages: 493-500 Published: MAR 11 2005
4. *Application of accelerated electron beam and microwave irradiation to biological waste treatment*; Martin D, Margaritescu I, Cirstea E, Togoe I, Ighigeanu D, Nemtanu MR, Oproiu C, Iacob N; VACUUM Volume: 77 Issue: 4 Pages: 501-506 Published: MAR 11 2005.

Publications in proceedings - ISI Web of Knowledge indexed papers

1. *Electron beam sterilization of the plates with agarose gel used for electrophoresis*, D.I. Ighigeanu, D.I. Martin, D.E. Stan, C.I. Matei, E.N. Manaila, G.D. Craciun, N.I. Iacob, C.V. Oproiu, A.I. Ighigeanu, American Institute of Physics BPU-6 Conference Proceedings, (ISBN 978-0-7354-0405-2) Vol. 899, **2007**, pp. 781.
2. *Vaccine biotechnology by accelerated electron beam and microwave irradiation*, G. Craciun, I. Togoe, L. Tudor, D. Martin, E. Manaila, N. Iacob, C. Oproiu, American Institute of Physics BPU-6 Conference Proceedings, (ISBN 978-0-7354-0405-2), Vol. 899, **2007**, pp. 769.
3. *Sinergistic effects of combined electron beam and microwave irradiation on microorganisms inactivation*, G. Craciun, D.I. Martin, E.N. Manaila, I. Togoe, D.I. Ighigeanu, N.I. Iacob, A.I. Ighigeanu, C.V. Oproiu, American Institute of Physics BPU-6 Conference Proceedings, (ISBN 978-0-7354-0405-2), Vol. 899, **2007**, pp. 770.
4. *Effects of electron beam and microwave irradiation on human blood proteins*, D.I. Martin, D.E. Stan, R.R. Radu, S.A. Cinca, I.D. Margaritescu, D.I. Chirita, G.D. Craciun, E.N. Manaila, D.I. Ighigeanu, N.I. Iacob, C.V. Oproiu, American Institute of Physics BPU-6 Conference Proceedings, (ISBN 978-0-7354-0405-2), Vol. 899, **2007**, pp. 815.
5. *Radiation interaction with therapeutic drugs and cell membranes*, D.I. Martin, E.N. Manaila, M.I. Moiescu, T.D. Savopol, E.A. Covacs, S.A. Cinca, C.I. Matei, I.D. Margaritescu, N.I. Iacob, D.I. Ighigeanu, G.D. Craciun, American Institute of Physics BPU-6 Conference Proceedings, (ISBN 978-0-7354-0405-2), Vol. 899, **2007**, pp. 816.
6. *Microwaves effects on human living cells and therapeutic drugs*, D. Ighigeanu, D. Martin, Moisesacu, MI, Manaila EN., Matei, CI, Iacob NI., Craciun, GD, T. Savopol, E. Covacs, I. Margaritescu, Proceedings of the 10th International Conference on optimization of Electrical and Electronic Equipments (Applications of Electrical Engineering in Biology Section), Brasov, May 20-21, **2006**, Vol I: Electrotechnics, Publisher: TRANSILVANIA UNIV PRESS-BRASOV, BD EROILOR NR 9, BRASOV, RO-500030, ROMANIA, **IDS Number**: BHU27, ISBN 973-635-703-1, 978-973-635-703-9, pp. 225-232.
7. *Microwave and electron beam effects on microorganisms survival in natural products*, D. Martin, G. Craciun, E. Manaila, D. Ighigeanu, C. Matei, C. Oproiu, N. Iacob, I. Togoe, I. Margaritescu, Proceedings of the 10th International Conference on optimization of Electrical and Electronic Equipments Applications of Electrical Engineering in Biology Section), Brasov, May 20-21, **2006**, Vol I: Electrotechnics, Publisher: TRANSILVANIA UNIV PRESS-BRASOV, BD EROILOR NR 9, BRASOV, RO-500030, ROMANIA, **IDS Number**: BHU27, ISBN 973-635-703-1, 978-973-635-703-9, pp. 233-240;
8. *Effects induced by electron beam irradiation on human blood proteins*, G. Craciun, D. Martin, E. Manaila, D. Ighigeanu, C. Oproiu, N. Iacob, D. Stan, I. Baciuc, E. Oprea, Proceedings of the 10th International Conference on optimization of Electrical and Electronic Equipments (Applications of Electrical Engineering in Biology Section), Brasov, May 20-21, **2006**, Vol I: Electrotechnics, Published: 2006, Publisher: TRANSILVANIA UNIV PRESS-BRASOV, BD EROILOR NR 9, BRASOV, RO-500030, ROMANIA, **IDS Number**: BHU27, ISBN 973-635-703-1, 978-973-635-703-9, pp. 241-248.
9. *Short pulse generators and elongated cylindrical cavities for electrical discharge induced non-thermal plasma*, D. Ighigeanu, D. Martin, C. Matei, C. Oproiu, E. Manaila, G. Craciun, N. Iacob, E. Zissulescu, R. Macarie, I. Calinescu, OPTIM 04: Proceedings of the 9th International Conference on optimization of Electrical and Electronic Equipments (Electromagnetic Processing of Materials Section), Brasov, May 20-21, **2004**, Vol I: Electrotechnics, Publisher: TRANSILVANIA UNIV PRESS-BRASOV, BD EROILOR NR 9, BRASOV, RO-500030, ROMANIA **IDS Number**: BHQ23, ISBN: 978-973-635-286-7, 973-635-286-2, pp. 155-162.

Refereed papers

10. *Combined Microwave and Electron Beam Exposure Facilities for Medical Studies and Applications*, D. Martin, S. Cinca, I. Margaritescu, M. Neagu, N. Iacob, D. Ighigeanu, C. Matei, G. Craciun, E. Manaila, D. Chirita, M. Moiescu, JOURNAL OF MICROWAVE POWER AND ELECTROMAGNETIC ENERGY, Vol.43, No.3, **2009**, pp. 12-20, Publisher: International Microwave Power Institute, Guest Editor: Dr. Satoshi Horikoshi, Tokyo University of Science, Chiba, Japan, ISSN: 0832-7823.

11. *Innovative Technologies with Electron Beam and Microwave for Food Safety*, D. Martin, G. Craciun, I. Togoe, E. Manaila, D. Ighigeanu, I. Margaritescu, N. Iacob, C. Matei, *Elektrotechnica & Electronica* (41), No. 5-6/2006, pp. 204-208, ISSN 0861-4717.
12. *Radiation Effects on Human Leukocyte Cultures with Bleomycin*, E. Manaila, D. Martin, G. Craciun, M. Moisescu, E. Kovacs, T. Savopol, D. Ighigeanu, I. Margaritescu, N. Iacob, I. Stoian, C. Matei, C. Oproiu, *Elektrotechnica & Electronica* (41), No. 5-6/2006, pp. 214-218, ISSN 0861-4717.
13. *Effects of Electron Beam Irradiation on Human Blood Proteins*, G. Craciun, D. Martin, D. Stan, I. Baci, E. Manaila, D. Ighigeanu, I. Margaritescu, D. Chirita, C. Matei, N. Iacob, C. Oproiu, *Elektrotechnica & Electronica* (41), No. 5-6/2006, pp. 219-223, ISSN 0861-4717.
14. *Application of Accelerated Electron Beam and Microwave Irradiation to Biological Decontamination of foods, Medical Objects and Waste Waters*, D. Martin, I. Margaritescu, M. Nemtanu, I. Togoe, C. Oproiu, D. Ighigeanu, E. Mateescu (Manaila), G. Craciun, N. Iacob, *Journal of Environmental Protection and Ecology*, vol 5 (2003), ISSN 1311-5065.

II. Chapters in scientific books

1. D. Martin, G. Craciun, I. Margaritescu, M. Neagu, E. Manaila, D. Ighigeanu, L. Tudor, N. Iacob, Chapter 9: *Application of Electron Accelerators in Conjunction with Microwave Sources in Medical Studies* in "Practical Aspects and Applications of Electron Beam Irradiation" (eds. M.R. Nemțanu, M. Brașoveanu), ISBN 978-81-7895-541-4, Research Signpost/Transworld Research Network, India (in press)

III. Papers in Proceedings of scientific meetings, symposia, workshops or conferences

1. *Combined Microwave and Electron Beam Exposure Facilities for Medical Studies and Applications*, D. Martin, S. Cinca, I. Margaritescu, M. Neagu, N. Iacob, D. Ighigeanu, C. Matei, G. Craciun, E. Manaila, D. Chirita, M. Moisescu, *Proceedings of Global Congress on Microwave Energy Applications (GCMEA 2008 MAJIC 1st)*, August 4-8, 2008, Otsu, Japan, A publication of Japan Society of Electromagnetic Wave Energy Application, ISBN: 978-4904068-04-5, pp. 771-774.
2. *Exposure Systems for Combined Microwave and Electron Beam Applications to Biochemistry and Biophysics*, D. Martin, S. Cinca, C. Matei, N. Iacob, I. Margaritescu, T. Savopol, E. Manaila, G. Craciun, C. Oproiu, *Proceedings of 11th International conference on Microwave and High Frequency Heating*, 3-6 Septembrie 2007, Oradea, Romania, ISBN 978-973-759-333-7, pp. 17-20.
3. *Effects of Combined Microwave and electron Beam Irradiation on Human Blood Compoments*, D. Martin, D. Stan, s. Cinca, R. radu, M. Neagu, G. Craciun, E. Manaila, D. Ighigeanu, I. margaritescu, D. Chirila, N. Iacob, C. Matei, C. Oproiu, *Proceedings of 11th International conference on Microwave and High Frequency Heating*, 3-6 Septembrie 2007, Oradea, Romania, ISBN 978-973-759-333-7, pp. 21-24.
4. *Vaccine Biotechnology Obtained by Application of Microwave and Electron Beam Irradiation*, G. Craciun, I. Togoe, D. Martin, L. Tudor, E. Manaila, D. Ighigeanu, N. Iacob, C. Oproiu, *Proceedings of 11th International conference on Microwave and High Frequency Heating*, 3-6 Septembrie 2007, Oradea, Romania, ISBN 978-973-759-333-7, pp. 25-28.
5. *Microwave Exposure Effects on Drugs Cell Uptake*, N. Iacob, D. Martin, M. Moisescu, S. Cinca, E. Manaila, E. Kovacs, G. Craciun, D. Ighigeanu, I. Margaritescu, D. Chirila, C. Oproiu, M. Iordache, *Proceedings of 11th International conference on Microwave and High Frequency Heating*, 3-6 Septembrie 2007, Oradea, Romania, ISBN 978-973-759-333-7, pp. 29-32.
6. *Water Treatment with Polyelectrolytes Obtained by Radiation Technologies*, E. Manaila, D. Martin, G. Craciun, D. Ighigeanu, A. Anton, D. Vulpasu, C. Oproiu, N. Iacob, M. Iordache, *Proceedings of 11th International conference on Microwave and High Frequency Heating*, 3-6 Septembrie 2007, Oradea, Romania, ISBN 978-973-759-333-7, pp. 287-290.
7. *Microwave effects on human living cells and therapeutic drugs*, D. Ighigeanu, D. Martin, E. Manaila, C. Matei, N. Iacob, G. Craciun, *Proceedings of 10th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2006)*, 18-19 May 2006, Brasov, Romania, Vol. 1, pp. 225-232, ISBN 973-635-703-1, 978-973-635-703-9.
8. *Microwave and Electron Beam Effects on Microorganisms survival in Natural Products*, D. Martin, G. Craciun, E. Manaila, D. Ighigeanu, C. Matei, c. Oproiu, N. Iacob, *Proceedings of 10th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2006)*, 18-19 May 2006, Brasov, Romania, Vol. 1, pp. 233-240, ISBN 973-635-703-1, 978-973-635-703-9.
9. *Effects Induced by Electron Beam Irradiation on Human Blood Proteins*, G. Craciun, D. Martin, E. Manaila, D. Ighigeanu, C. Oproiu, N. Iacob, *Proceedings of 10th International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2006)*, 18-19 May 2006, Brasov, Romania, Vol. 1, pp. 241-248, ISBN 973-635-703-1, 978-973-635-703-9.
10. *Biochemical effects induced by irradiation on human blood plasma*, D. Ighigeanu, D. Martin, D. Stan, I. Baci, H. Iovu, E. Manaila, G. Craciun, I. Margaritescu, N. Iacob, *Proceedings of Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE XIV*, 22-24 September 2005, Bucharest, Romania, Vol. 4, pp. SO2-67 - SO2-74, ISBN: 973-718-284-7, 973-718-288-X.
11. *Irradiation system for biotechnologies*, D. Martin, D. Ighigeanu, C. Matei, E. Manaila, G. Craciun, H. Iovu, I. Calinescu, N. Iacob, *Proceedings of Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE XIV*, 22-24 September 2005, Bucharest, Romania, Vol. 4, pp. SO2-75 - SO2-82, ISBN: 973-718-284-7, 973-718-288-X.
12. *Microwave applicators for bioelectromagnetic experiments*, D. Martin, C. Matei, T. Savopol, D. Ighigeanu, E. Kovacs, I. Calinescu, H. Iovu, I. Margaritescu, E. Manaila, G. Craciun, N. Iacob, *Proceedings of Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE XIV*, 22-24 September 2005, Bucharest, Romania, Vol. 4, pp. SO2-83 - SO2-90, ISBN: 973-718-284-7, 973-718-288-X.
13. *Radiations interaction with therapeutic drugs*, E. Manaila, D. Martin, M. Radu, M. Moisescu, T. Savopol, E. Kovacs, D. Ighigeanu, H. Iovu, I. Margaritescu, N. Iacob, *Proceedings of Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE XIV*, 22-24 September 2005, Bucharest, Romania, Vol. 4, pp. SO2-61 - SO2-66, ISBN: 973-718-284-7, 973-718-288-X.
14. *Sinergistics effects obtained by combined electron beam and microwave irradiation*, D. Martin, E. Manaila, D. Ighigeanu, G. Craciun, C. Oproiu, N. Iacob, prezentata la International Symposium on Utilization of Accelerators, 5-9 June 2005, Dubrovnik Croatia, pp. 69-70, IAEA-CN-115;
15. *Electron beam processed polyelectrolytes*, E. Manaila, D. Martin, D. Ighigeanu, G. Craciun, C. Oproiu, A. Anton, N. Iacob, prezentata la International Symposium on Utilization of Accelerators, 5-9 June 2005, Dubrovnik Croatia pp. 71-72, IAEA-CN-115;

16. E. Zissulescu, R. Macarie, I. Calinescu, C. Matei, C. Oproiu, E. Manaila, G. Craciun, N. Iacob, Proceedings of the 9th International Conference on Optimization of Electrical and Electronic Equipments, May 20-21, **2004**, Brasov, Romania, vol.1, pp. 155-162, ISBN 973-635-286-2;
17. *Application of Polyelectrolites Obtained by Radiation Processing to Potable and Waste Water Treatment*, E. Manaila, D. Martin, G. Craciun, D. Ighigeanu, H. Iovu, C. Matei, C. Oproiu, N. Iacob, M. Sandu, E. Vulpasu, G. Racoviteanu, Proceedings of the 9th International Conference on Optimization of Electrical and Electronic Equipments, May 20-21, **2004**, Brasov, Romania, vol.1, pp. 103-110, ISBN 973-635-286-2;
18. *Microwaves Induced Changes of Some Biophysical Properties of Cellular Membrane*, T. Savopol, R. Pologea-Moraru, G. Sajin, E. Kovacs, D. Martin, E. Manaila, D. Ighigeanu, Proceedings of the 9th International Conference on Optimization of Electrical and Electronic Equipments, May 20-21, **2004**, Brasov, Romania, vol.1, pp. 111-114, ISBN 973-635-286-2;
19. *Microwawe applicators and pulse power generators for electrical discharge induced non-thermal plasma*, D. Martin, D. Ighigeanu, I. Calinescu, E. Cirstea (Manaila), H. Iovu, C. Oproiu, N. Iacob, Proceedings of 13th International Conference on Chemistry and Chemical Engineering, Bucharest, Romania, 16-20 September, **2003**, Vol. 1, ISBN 973-652-823-5, Section 7, pp. 21-30;
20. *Non-thermal plasmas induced by electron beam and electrical discharge for SO₂ and NO_x removal*, D. Ighigeanu, D. Martin, E. Zissulescu, R. Macarie, I. Calinescu, H. Iovu, E. Cirstea (Manaila), C. Oproiu, N. Iacob, Proceedings of 13th International Conference on Chemistry and Chemical Engineering, Bucharest, Romania, 16-20 September, **2003**, Vol. 1, ISBN 973-652-823-5, Section 7, pp. 31-38;

Curriculum Vitae – Annex 3

List of patents

1. Martin Diana, Neagu Monica, Matei Constantin, Constantin Carolina, Iacob Nicusor, Ighigeanu Daniel, Manaila Elena, Craciun Gabriela, *“Instalatie si procedeu de iradiere cu microunde a unui material biologic simultan cu investigarea acestuia sub un microscop inversat cu modul de fluorescenta”*, A/00351 din 21.04.2010