CURRICULUM VITAE

1. Nume: Airinei
2. Prenume: Anton
3. Data şi locul naşterii: 9.01.1946, com. Zamostea, jud. Suceava
4. Adresa: str. Conductelor, nr. 7, bloc F6, sc. B, ap. 6, Iasi
5. E-mail: airineia@icmpp.ro
6. Nationalitate: romana
7. Studii:

Instituţia	Universitatea „Al. I. Cuza" Iasi - Facultatea de Fizica, sectia spectroscopie	Universitatea „Al. I. Cuza" Iasi - Doctorat	Liceul Siret, jud. Suceava
Perioada:	oct. 1963 - iunie 1968	1995	1959-1963
Grade sau diplome obţinute	Licenta in fizica	Doctor in fizica	

8. Titlul ştiinţific: Dr.
9. Experienţa profesională:

Perioada:	sept. 1968 - prezent			
Locul:	Iasi			
Instituţia:	Institutul de Chimie Macromoleculara „Petru Poni"			
Funcţia:	cercetator stiintific stagiar - 1968-1973 cercetator stiintific - 1973 - 1990 cercetator stiintific gr. III - 1990-1996 cercetator stiintific gr. II - 1996-2000 cercetator stiintific gr. I - 2000-prezent Responsabil inventii si marci pe institut, 1980-1992 Director adjunct stiintific - 2000 – 2014; 2020-prezent Director – 2014-2020			
Descriere:	Spectroscopie de absorbtie, caracterizarea structurala a monomerilor si polimerilor, polimeri fotosensibili, polimeri de coordinatie, materiale compozite, nanoparticule			

10. Locul de muncă actual şi funcţia: Institutul de Chimie Macromoleculara „Petru Poni" Iasi; cercetator stiintific gr. I
11. Brevete de invenţii: 13
12. Activitate stiintifica: S-au publicat 278 lucrari stiintifice in reviste de specialitate din strainatate si din tara, 9 capitole in carti, 32 lucrari in volume ale unor manifestari stiintifice, 13 brevete de inventie, participari la diferite manifestari stiintifice din tara si strainatate cu peste 400 comunicari.
Domenii principale de activitate:
- Polimeri conjugati azoaromatici sub forma de filme subtiri obtinuti prin fotoliza sau termoliza unor diazide aromatice (4,4'-diazidobifenil, 4,4'-diazidostilben, diazidonaftalen). Fotoliza in solutie a unor azide aromatice si cinetica procesului. Proprietati optice.

- Comportarea la iradiere UV a unor polimeri (policlorura de vinil, poliuretani ionici, polisulfone, politioeterimide, etc.) care contin grupe cromofore azoaromatice si/sau cinamat, nitroaromatice legate covalent sau electrostatic la lantul polimer sau a unor polimeri in care au fost incorporate unitati cromofore de tip azobenzenic. Mecanismul de izomerizare a grupelor azobenzenice a fost stabilit pe baza de calcule cuantomecanice utilizand metode (TD)DFT.
- Stabilitatea termica a polimerilor: Cauzele structurale ale instabilitatii termice a policlorurii de vinil, studii pe macromodele, determinarea parametrilor cinetici ai reactiei de dehidroclorurare a policlorurii de vinil.
- Caracterizarea monomerilor si polimerilor prin metode spectrale si indeosebi cu ajutorul spectroscopiei de absorbtie in ultraviolet si vizibil, spectroscopiei de fluorescenta.
- Interactiuni intermoleculare in solutie/amestecuri de solventi ale unor compusi organici evidentiate prin spectre electronice de absorbtie, spectre de fluorescenta. Efectele solventului asupra spectrelor de absobtie au fost tratate pe baza unor ecuatii multiparametrice deteminindu-se astfel contributia parametrilor de solvent in aceste interactiuni.
- Materiale compozite pe baza de EPDM in care au fost incorporate fibre naturale (in, canepa) nanosilice, nanoargile, PP, PEHD. S-au analizat proprietatile structurale, mecanice, termice, morfologice, dielectrice, precum si efectul iradierii cu electroni accelerati asupra acestora.
- Nanostructuri pe baza de oxizi ai metalelor tranzitionale: S-au obtinut nanoparticule de oxid de ceriu, oxid de zinc, oxid de cupru prin metode chimice sau utilizand extracte din plante. De asemenea, s-au studiat si nanostructuri de oxid de zinc, bioxid de titan, oxid de staniu dopate cu ceriu, argint, cupru, nuchel, metale rare, oxid de molibden. Pentru aceste materiale s-au analizat proprietatile structurale, optice, morfologice, dielectrice, antioxidante, antibacteriene sau fotocatalitice.

13. Membru al asociaţiilor profesionale: Societatea Romana de Chimie

14. Limbi straine cunoscute: engleza, franceza

15. Specializări :

- Institutul de Polimeri din Lodz al Academiei Poloneze de Stiinte, 1972, 3 luni. Caracterizarea polimerilor prin difuzia luminii laser la unghiuri mici;
- Institutul de Polimeri din Bratislava, Cehoslovacia, 1982, schimb interacademic, Caracterizarea compozitelor macromoleculare;
- Universitatea din Torino, Universitatea din Florenta, Italia, 1989, Metode de obtinere si caracterizare a compusilor organo-metalici.

16. Activitati didactice: Asistent asociat, Disciplina fizica polimerilor, Facultatea de Textile-Pielarie, Universitatea Tehnica „Gh. Asachi" din Iasi, 1979-1994.

17. Alte menţiuni: Premiul Academiei Romane „Gheorghe Spacu" pe anul 1977.

Data: 28.06.2023

Lista de lucrari (selectiva)

1. Optical properties of some new azo photoizomerizable bismaleimide derivatives
   A. Airinei, N. Fifere, M. Homocianu, C. Gaina, V. Gaina, B. C. Simionescu
   International Journal of Molecular Sciences, 12, 6176-6193 (2011)
2. Morphological structure and surface properties of maleated ethylene propylene diene monomer/organoclay nanocomposites
   M. Homocianu, A. Airinei, D. M. Stelescu, D. Timpu, A. Ioanid
   Polymer Composites, 33, 379-387 (2012)
3. Structural characteristics of some high density polyethylene/EPDM blends
   D. M. Stelescu, A. Airinei, M. Homocianu, N. Fifere, D. Timpu, M. Aflori
   Polymer Testing, 32, 187-196 (2013)
4. Investigations of the preferential solvation on some poly(siloxane-azomethine)s containing dihydroxyanthraquinone units
   A. Airinei, M. Homocianu, A. Vlad, M. Cazacu
   Journal of Molecular Liquids, 186, 171-178 (2013)
5. New copoly(ether sulfone)s containing azobenzene crown-ether and fluorene moieties
   M. Iftime, R. Ardeleanu, N. Fifere, A. Airinei, V. Cozan, M. Bruma
   Dyes and Pigments, 106, 111-120 (2014)
6. On the mechanism of electrical conduction in thin films of some polysulfone-poly(alkylene oxide)-poly(dimethylsiloxane) block copolymers
   G. G. Rusu, A. Airinei, V. Hamciuc, A. P. Rambu, I. Caplanus, G. I. Rusu
   Superlattices and Microstructures, 65, 91-105 (2014)
7. Metal-polymer nanocomposites based on Ni nanoparticles and polythiophene obtained by electrochemical method
   P. Pascariu, A. Airinei, M. Grigoras, L. Vacareanu, F. Iacomi
   Applied Surface Science, 352, 95-102 (2015)
8. Photophysical and surface characteristics of electrospun polysulfone/nickel fibers
   P. Pascariu Dorneanu, A. Airinei, M. Homocianu, N. Olaru
   Materials Research Bulletin, 64, 306-311 (2015)
9. Microstructure, electrical and humidity sensor properties of electrospun NiO-SnO_2 nanofibers
   P. Pascariu, A. Airinei, N. Olaru, I. Petrila, V. Nica, L. Sacarescu, F. Tudorache
   Sensors and Actuators B: Chemical, 222, 1024-1031 (2016)
10. Preparation and characterization of some electrospun polysulfone nanocomposites reinforced with Ni doped SnO_2 nanoparticles
    P. Pascariu-Dorneanu, A. Airinei, N. Olaru, N. Fifere, C. Doroftei, F. Iacomi
    European Polymer Journal, 91, 326-336 (2017)
11. Solvatochromic analysis and DFT computational study of an azomaleimide derivative
    A. Airinei, D. L. Isac, M. Homocianu, C. Cojocaru, C. Hulubei
    Journal of Molecular Liquids, 240, 476-485 (2017)
12. Photocatalytic degradation of Rhodamine B dye using ZnO-SnO_2 electrospun ceramic nanofibers
    P. Pascariu, A. Airinei, N. Olaru, L. Olaru, V. Nica
    Ceramics International, 42, 6775-6781 (2016)

13. Property correlations for composites based on ethylene propylene diene rubber reinforced with flax fibers
M. D. Stelescu, A. Airinei, E. Manaila, G. Craciun, N. Fifere, C. Varganici
Polymer Testing, 59, 75-83 (2017)
14. Synthesis, characterization and photoresponsive behavior of some polysulfones containing azobenzene moieties in the main chain
R. Ardeleanu, N. Fifere, V. Barboiu, L. Sacarescu, A. Airinei
Journal of Molecular Liquids, 229, 362-370 (2017)
15. Intra-/inter molecular interactions – identification and evaluation by optical spectral data in solution
M. Homocianu, A. Airinei
Journal of Molecular Liquids, 225, 869-876 (2017)
16. Steady state and time resolved fluorescence studies of new indolizine derivatives with phenanthroline skeleton
A. Airinei, R. Tigoianu, R. Danac, C. Al Matarneh, D. L. Isac
Journal of Luminescence, 199, 6-12 (2018)
17. Preparation and characterization of Ni, Co doped ZnO nanoparticles for photocatalytic applications
P. Pascariu, I. V. Tudose, M. Suchea, E. Koudoumas, N. Fifere, A. Airinei
Applied Surface Science, 448, 481-488 (2018)
18. New insights into structural and magnetic properties of Ce doped ZnO nanoparticles
N. Fifere, A. Airinei, D. Timpu, A. Rotaru, L. Sacarescu, L. Ursu
Journal of Alloys and Compounds, 757, 60-69 (2018)
19. Exploring the effect of electron beam irradiation on the properties of some EPDM-flax fiber composites
M. D. Stelescu, A. Airinei, E. Manaila, N. Fifere, G. Craciun, C. Varganici, F. Doroftei
Polymer Composites, 40, 315-327 (2019)
20. On the charge-transfer excitations in azobenzene maleimide compounds: A theoretical study
D. L. Isac, A. Airinei, D. Maftei, I. Humelnicu, F. Mocci, A. Laaksonen, M. Pinteala
Journal of Physical Chemistry A, 123, 5525-5536 (2019)
21. Photochromic properties of some azomaleimide derivatives and DFT quantum chemical study of thermal cis-trans isomerization pathways
D. L. Isac, A. Airinei, M. Homocianu, N. Fifere, C. Cojocaru, C. Hulubei
Journal of Photochemistry and Photobiology A: Chemistry, 390, Article 112300/1-8 (2020)
22. Synthesis, photophysical properties and solvatochromic analysis of some naphthalene-1,8-dicarboxylic acid derivatives
A. Nicolescu, A. Airinei, E. Georgescu, F. Georgescu, R. Tigoianu, F. Oancea, C. Deleanu
Journal of Molecular Liquids, 303, Article 112626/1-10 (2020)
23. Synthesis and solvent dependent fluorescence of some piperidine-substituted naphthalimide derivatives and consequences for water sensing
R. Tigoianu, A. Airinei, E. Georgescu, A. Nicolescu, F. Georgescu, D. L. Isac, C. Deleanu, F. Oancea
International Journal of Molecular Sciences, 23, Article 2760/1-21 (2022)

24. Copper oxide nanostructures: Preparation, structural, dielectric and catalytic properties
C. Gherasim, P. Pascariu, M. Asandulesa, M. Dobromir, F. Doroftei, N. Fifere, A. Dascalu, A. Airinei
Ceramics International, 48, 25556-25568 (2022)

25. Computational and experimental investigation of photoresponsive behavior of 4,4'-dihydroxyazobenzene diglycidyl ether
A. Airinei, D. L. Isac, N. Fifere, D. Maftei, E. Rusu
Results in Chemistry, 5, Article 100709/1-11 (2023)

26. Solvent effects and metal recognition in several azulenyl-vinyl-oxazolones
M. Homocianu, A. Airinei, O. T. Matica, M. Cristea, E. M. Ungureanu
Symmetry, 15, Article 327/1-11 (2023)

25. Phytomediated-assisted preparation of cerium oxide nanoparticles using plant extracts and assessment of their structural and optical properties
N. Fifere, A. Airinei, F. Doroftei, T. S. Ardeleanu, M. Dobromir, D. Timpu, E. L. Ursu
International Journal of Molecular Sciences, 24, Article 8917/1-21 (2023)

26. Metal oxide nanostructures (MONs) photocatalysts for ciprofloxacin degradation
P. Pascariu, C. Gherasim, A. Airinei
International Journal of Molecular Sciences, 24, Article 9564/1-20 (2023)