

CURRICULUM VITAE

1. Nume: Airinei
2. Prenume: Anton
3. Data și locul nașterii: 9.01.1946, com. Zamostea, jud. Suceava
4. Cetățenie: romana
5. Stare civilă: necasatorit
6. Studii:

<u>Instituția</u>	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 obținute	Licenta in fizica	Doctor in fizica	

7. Titlul științific: Dr.

8. Experiența profesională:

Perioada:	sept. 1968 – febr. 2018			
Locul:	Iasi			
Instituția:	Institutul de Chimie Macromoleculara „Petru Poni”			
Funcția:	cercetator științific stagiar - 1968-1973 cercetator științific - 1973 - 1990 cercetator științific gr. III - 1990-1996 cercetator științific gr. II - 1996-2000 cercetator științific gr. I - 2000-2019 Responsabil inventii si marci pe institut, 1980-1992 Director adjunct științific - 2000 – 2014 Director – 2014 - prezent			
Descriere:	Spectroscopie de absorbtie, caracterizarea structurala a monomerilor si polimerilor, polimeri fotosensibili, polimeri de coordinație, materiale nanostructurate			

9. Locul de muncă actual și funcția: Institutul de Chimie Macromoleculara „Petru Poni” Iasi; cercetator științific gr. I

10. Vechime la locul de muncă actual: 48 ani

11. Brevete de invenții: 13

12. Activitate științifică: S-au publicat peste 290 lucrari științifice in reviste de specialitate din strainatate si din tara, in volume ale unor manifestari științifice, 13 brevete de invenție, participari la diferite manifestari științifice din tara si strainatate cu peste 385 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. S-a urmarit cinetica procesului de izomerizare trans-cis-trans a cromoforilor azoaromatici sau efectul de fotodecolorare, atat in solutie cit si in film, influenta matricii polimere asupra procesului de izomerizare.
- 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 spectroscopie de fluorescenta.
- Polimeri chelati din complexi bisfenolici sau azometinici si cloruri acide aromatice, polisulfone modificate cu complexi bisfenolici: Caracteristici spectrale, electrice, optice, termice, magnetice.
- Interactiuni intermoleculare in solutie ale unor compusi organici evidentiati prin spectre electronice de absorbtie, spectre de fluorescenta.
- Materiale compozite pe baza de EPDM. Amestecuri EPDM/polipropilena sau polietilena de densitate inalta.
- Compozite polimer/nanoparticole de oxizi metalici

13. Membru al asociatiilor profesionale: Societatea Romana de Chimie

14. Limbi straine cunoscute: engleza, franceza

15. Alte competente: cunostinte operare PC - Word, Excel, Internet

16. 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.

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

18. Alte mențiuni: Premiul Academiei Romane „Gheorghe Spacu” pe anul 1977 pentru ciclul de lucrari „Reactii ale liganzilor coordinati”, autori: N. Voiculescu, I. Popescu, A. Airinei, L. Dominte, N. Luchian

Data: 15.11.2019

Lista de lucrari (selectiva)

1. Responsive behavior of 4-(N-maleimide)-azobenzene in polymers with aromatic main chain or side chain linked units
A. Airinei, E. Rusu, V. Barboiu
J. Braz. Chem. Soc., 21, 489-495 (2010)
2. Changes induced by solvent polarity in electronic absorption spectra of some azo disperse dyes
A. Airinei, M. Homocianu, D. O. Dorohoi
Journal of Molecular Liquids, 157, 13-17 (2010)
3. On the electrical and optical properties of some poly(azomethine sulfone)s in thin films
M. Rusu, A. Airinei, G. G. Rusu, L. Marin, V. Cozan, P. Rambu, I. Caplanus, G. I. Rusu
Journal of Macromolecular Science, Part B: Physics, 50, 1285-1297 (2011)
4. Solvatochromic effects in the UV/VIS absorption spectra of some pyridinium ylides
M. Homocianu, A. Airinei, D. O. Dorohoi, I. Olariu, N. Fifere
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 82, 355-359 (2011)
5. Optical properties of some new azo photoisomerizable bismaleimide derivatives
A. Airinei, N. Fifere, M. Homocianu, C. Gaina, V. Gaina, B. C. Simionescu
International Journal of Molecular Sciences, 12, 6176-6193 (2011)
6. Fluorescence quenching of anthracene by nitroaromatic compounds
A. Airinei, R. I. Tigoianu, E. Rusu, D. O. Dorohoi
Digest Journal of Nanomaterials and Biostructures, 6, 1265-1272 (2011)
7. 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)
8. Telechelic or side-functionalized diorganosiloxanes with ferrocenylimine groups
A. Vlad, M. Cazacu, C. Turta, R. I. Tigoianu, A. Airinei, A. Arvinte
Synthetic Metals, 161, 2659-2668 (2012)
9. Effect of trans-cis photoisomerization of azobismaleimide derivatives on the emission intensity of an arylenevinylene fluorophore
N. Fifere, A. Airinei, C. Gaina, V. Gaina, M. Grigoras, B. C. Simionescu
Revue Roumaine de Chimie, 57, 609-614 (2012)
10. New thermoplastic ionic elastomers based on MA-g-EPDM with advanced characteristics
A. Airinei, M. Homocianu, D. Timpu, D. M. Stelescu
Thermoplastic Elastomers, A. Z. El-Sonbati, Ed., Intech, Rijeka, Croatia, 371-398 (2012)
11. 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)
12. 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)
13. Fluorescence modulation and photochromism in azobismaleimide derivatives
N. Fifere, A. Airinei, C. Gaina, V. Gaina, M. Grigoras
Journal of Fluorescence, 24, 345-353 (2014)
 14. Photophysical behavior of some aromatic poly(1,3,4-oxadiazole-ether)s derivatives
A. M. Ipate, M. Homocianu, C. Hamciuc, A. Airinei, M. Bruma
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 123, 167-175 (2014)
 15. 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)
 16. Preparation and characterization of NiO, ZnO and NiO-ZnO composite nanofibers by electrospinning method
P. Pascariu Dorneanu, A. Airinei, N. Olaru, M. Homocianu, V. Nica, F. Doroftei
Materials Chemistry and Physics, 148, 1029-1035 (2014)
 17. About intermolecular interactions in binary and ternary solutions of some azobenzene derivatives
L. M. Ivan, V. Closca, M. Burlea, E. Rusu, A. Airinei, D. O. Dorohoi
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 136(Part C), 2008-2014 (2015)
 18. Solvent effects on the photophysical properties of poly[1,4-dihydroxyanthraquinone-imine-1,3-bis(phenylene-ester-methylene)tetramethyldisiloxane]
P. Pascariu Dorneanu, M. Homocianu, I. R. Tigoianu, A. Airinei, M. Zaltariov, M. Cazacu
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 134, 218-224 (2015)
 19. Environment effects on the spectral properties of some fluorinated poly(oxadiazole ether)s in binary solvent mixtures
M. Homocianu, A. M. Ipate, C. Hamciuc, A. Airinei
Journal of Luminescence, 157, 315-320 (2015)
 20. 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)
 21. Metal-polymer nanocomposites based on Ni nanoparticles and polythiophene obtained by electrochemical method
P. Pascariu, A. Airinei, M. Grigoras, L. Vacareanu, F. Iacomì
Applied Surface Science, 352, 95-102 (2015)
 22. Photophysical properties of some poly(siloxane-azomethine)s
I. R. Tigoianu, A. Airinei, V. Ribitsch, C. Gruber, N. Fifere, A. Vlad, M. Cazacu
High Performance Polymers, 27, 539-545 (2015)
 23. Relaxation behavior of flax-reinforced ethylene-propylene-diene rubber
M. Cristea, A. Airinei, D. Ionita, M. D. Stelescu
High Performance Polymers, 27, 676-682 (2015)
 24. Microstructure, electrical and humidity sensor properties of electrospun NiO-SnO₂ nanofibers
P. Pascariu, A. Airinei, N. Olaru, I. Petrila, V. Nica, L. Sacarescu, F. Tudorache

- Sensors and Actuators B: Chemical, 222, 1024-1031 (2016)
25. Structural, optical and magnetic properties of Ni doped SnO₂ nanoparticles
P. Pascariu (Dorneanu), A. Airinei, M. Grigoras, N. Fifere, L. Sacarescu, N. Lupu, L. Stoleriu
Journal of Alloys and Compounds, 668, 65-72 (2016)
 26. Photocatalytic degradation of Rhodamine B dye using ZnO-SnO₂ electrospun ceramic nanofibers
P. Pascariu, A. Airinei, N. Olaru, L. Olaru, V. Nica
Ceramics International, 42, 6775-6781 (2016)
 27. Preparation and characterization of some electrospun polysulfone nanocomposites reinforced with Ni doped SnO₂ nanoparticles
P. Pascariu-Dorneanu, A. Airinei, N. Olaru, N. Fifere, C. Doroftei, F. Iacomì
European Polymer Journal, 91, 326-336 (2017)
 28. 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)
 29. 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)
 30. 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)
 31. 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)
 32. Effects of solvating media of some phenylquinoxaline derivatives on their photophysical properties. Mixed solvent systems and acidic media
M. Homocianu, A. M. Ipate, D. Homocianu, A. Airinei, C. Hamciuc
Journal of Molecular Liquids, 247, 14-21 (2017)
 33. Novel fibrous composites based on electrospun PSF and PVDF ultrathin fibers reinforced with inorganic nanoparticles: Evaluation as oil spill sorbents
P. Pascariu Dorneanu, C. Cojocaru, P. Samoila, N. Olaru, A. Airinei, A. Rotaru
Polymers for Advanced Technologies, 29, 1435-1446 (2018)
 34. 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)
 35. 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)
 36. Insights to the optical, magnetic and dielectrical properties of some novel polysulfone/NiFe₂O₄ composite materials
P. Pascariu, A. Airinei, M. Asandulesa, A. Rotaru

- Polymer International, 67, 1313-1324 (2018)
37. Effects of electron beam irradiation on the mechanical, thermal and surface properties of some EPDM/butyl rubber composites
M. D. Stelescu, A. Airinei, E. Manaila, G. Craciun, N. Fifere, C. Varganici, D. Pamfil, F. Doroftei
Polymers, 10, Article 1206/1-21 (2018)
38. Preparation of La doped ZnO ceramic nanostructures by electrospinning-calcination method: Effect of La³⁺ doping on optical and photocatalytic properties
P. Pascariu, M. Homocianu, C. Cojocaru, P. Samoila, A. Airinei, M. Suchea
Applied Surface Science, 476, 16-37 (2019)
39. Novel rare earth (RE-La, Er, Sm) metal doped photocatalysts for degradation of Congo-Red dye: Synthesis, characterization and kinetic studies
P. Pascariu, C. Cojocariu, N. Olaru, P. Samoila, A. Airinei, L. Sacarescu, D. Timpu
Journal of Environmental Management, 239, 225-234 (2019)
40. 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)
41. Nonlinear optical properties (NLO) and metal ions sensing resonances of a polymer containing 1,3,4-oxadiazole and bisphenol units
M. Homocianu, A. Airinei, C. Hamciuc, A. M. Ipate
Journal of Molecular Liquids, 281, 141-149 (2019)
42. On the charge-transfer excitations in azobenzene maleimide compounds: A theoretical study
D. L. Isac, A. Airinei, D. Maftai, I. Humelnicu, F. Mocci, A. Laaksonen
Journal of Physical Chemistry A, 123, 5525-5536 (2019)
43. Tuning electrical properties of polythiophene/nickel nanocomposites via fabrication
P. Pascariu, D. Vernardou, M. P. Suchea, A. Airinei, L. Ursu, S. Bucur, I. V. Tudose, O. N. Ionescu, E. Koudoumas
Materials and Design, 182, Article 108027/1-9 (2019)

