

Curriculum Vitae

PERSONAL INFORMATION	Tigoianu Ionut Radu
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Place of birth: Iasi, Romania Marital status: Married	
Sex: Male Date of birth: 06/03/1981 Nationality: Romanian	

WORK EXPERIENCE

Current occupation

- Researcher assistant, Laboratory of Physical Chemistry of Polymers, "Petru Poni" Institute of Macromolecular Chemistry (ICMPP), Iasi.

Qualifications

- Experimental techniques: absorption and emission spectroscopy.
- Characterization of some monomers and polymers by spectral methods, especially using electronic absorption spectroscopy and fluorescence spectroscopy.
- Intermolecular interactions in solution of some organic compounds by ultraviolet- visible absorption spectroscopy and fluorescence spectra.

2006 - Assistant III, "Petru Poni" Institute of Macromolecular Chemistry (ICMPP), Iasi.

2008 - Participation at Course of Fluorescence Spectroscopy, Berlin, Germany.

2012 - Participation in a research stage at University of Graz, Austria (Institute of Chemistry, Institute of Physics) and JOANNEUM RESEARCH Forschungsgesellschaft mbH, MATERIALS-Sensor Systems, Institute for Surface Technologies and Photonics under supervision of Professor Dr. Volker Ribitsch.

2013- Participation in a research stage at University of Graz, Austria (Institute of Chemistry, Institute of Physics) under supervision of Professor Dr. Volker Ribitsch.

2015 - Postdoctoral researcher in the field of Ultrafast Spectroscopy at EPFL, SB, ISIC, LSU in the program SCIEX-NMSch, Lausanne, Switzerland.

2018 - Participation in a research stage at Complutense University of Madrid, Spain, New sensors for the detection of heavy metals in industrial waters. Characterization and investigation of some fluorescence quenching processes, under supervision of Prof. Dr. Guillermo Orellana.

2019- Participation in a research stage at **ELVESYS, Microfluidic Innovation Center**, Paris, France.

2019 - Participation in a research stage at University of Coimbra, Portugal, under supervision of Prof. Dr. Carlos Serpa.

EDUCATION AND TRAINING

1996 - Training Centre for Informatics, Cultural Foundation "Romanian Renaissance", Initiation course/advancement in use of PC, Iasi.

1997 - Industrial School Group "Tehnoton" department: Informatics, Iasi.

2002 - Student in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Physics, Iasi, and License with title: Optical systems centered. Applications.

2006 - Summer School "Physico-Chimie de l'Atmosphere: des experiences de Laboratoire aux campagnes de terrain", Iasi.

2006 - Master in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Polymer Physics, Spectroscopy and Plasma Physics, Iasi, Dissertation with title: Study of intermolecular interactions in simple liquids by spectral methods.

2008 - Certificate: 6th European Course on Principles and Applications of Time-resolved Fluorescence Spectroscopy, Berlin, Germany.

2008 - PhD in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Polymer Physics, Spectroscopy and Plasma Physics, Iasi, PhD thesis with title: Contributions to the characterization of the excited molecular states by electron spectroscopy.

PERSONAL SKILLS

Communication skills

- good communication skill gained through my experience as to participate at different conferences, presentations, etc.

Organisational / managerial skills

- Leadership (responsible for inventory at my Institution).

- I organized several gatherings of employees in my Institution.

- Also, I lectured students on Absorption and Emission Spectroscopy and research methodology.

Job-related skills

- administrative duties (responsible to my laboratory for purchasing chemicals, fixed and mobile objects, etc.).

Computer skills

- good command of Microsoft Office tools and internet.

ADDITIONAL INFORMATION

Projects

8 research contracts:

- Grant CNCSIS no. 923/2006.

- Grant CERES, 2006 no. 2-CEEX 06-D11-106.

- Grant CEEX, no. 89/2006.

- Grant CNCSIS no. 55GR/2006.

- Program partnership in the field priority, no. 12-109-2/29.09.2008.

- Program SCIEX-NMSch, Lausanne, Switzerland, 2015.

- Program PN-III-P1-1.1-MC-2018-1243.

- Program PN-III-P1-1.1-MC-2019-0285.

Awards

- various awards and diplomas obtained in the faculty and at different manifestation scientific.

Conferences

- over 50 participations in international and national conferences.

Selection of publications

- Solvent influence on the electronic absorption spectra of anthracene, Rev. Chim.-Bucharest, 2009, 60(1), 42-44.

- Solvent influence on the electronic fluorescence spectra of anthracene, Rev. Chim.-Bucharest, 2010, 61(5), 491-494.

- Synthesis and micellization of polydimethylsiloxane-carboxy-terminated poly(ethylene oxide) graft copolymer in aqueous and organic media and its application for the synthesis of core-shell magnetite particles, e-Polymers, no. 093, 2010, 1-19.

- Fluorescence quenching of anthracene by nitroaromatic compounds, Digest Journal of Nanomater-

ials and Biostructures, 2011, 6(3), 1265-1272.

-Quenching of tryptophan and 4,4'-diaminostilbene fluorescence by dinitrophenyl ethers: Use of 1-allyloxy-2,4-dinitrobenzene, as a quencher, Romanian Biotechnological Letters, 2011, 16(Suppl. 1), 130-140.

-Telechelic or side-functionalized diorganosiloxanes with ferrocenylimine groups, Synthetic Metals, 2012, 161(23-24), 2659-2668.

-Synthesis and optoelectronic characterization of some triphenylamine-based compounds containing strong acceptor substituents, Journal of Luminescence, 2014, 153, 5-11.

-Photophysical properties of some poly(siloxane-azomethine)s, High Performance Polymers, 2015, 27(5), 539-545.

-Solvent effects on the photophysical properties of poly[1,4-dihydroxyanthraquinoneimine-1,3-bis(phenylene-ester-methylene)tetramethyldisiloxane], Spectrochimica Acta-Part A: Molecular and Biomolecular Spectroscopy, 2015, 134, 218-224.

-Steady state and time resolved fluorescence studies of new indolizine derivatives with phenanthroline skeleton, Journal of Luminescence, 199, pp. 6- 12, 2018.

-Photochromic cycle of two N-salicylidene-p-X-anilines revealed by the dynamics over 10 orders of magnitude, Journal of Molecular Liquids, 283, 617-629, 2019.

Theses

1. PhD thesis with title: Contributions to the characterization of the excited molecular states by electron spectroscopy, PhD in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Polymer Physics, Spectroscopy and Plasma Physics, Iasi- September 2011.

2. Dissertation with title: Study of intermolecular interactions in simple liquids by spectral methods, Master in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Polymer Physics, Spectroscopy and Plasma Physics, Iasi- June 2008.

3. License with title: Optical systems centered. Applications, Student in Physics, "Al. Ioan Cuza" University, Faculty of Physics, Department of Physics, Iasi- June 2006.

Selection from invited talks and conference contributions

I. R. Tigoianu, Study of the processes of fluorescence quenching, LSU Winter Meeting Arolla, March 13-15, 2015, Switzerland.

I. R. Tigoianu, Seminars and progress reports organized by laboratory LSU, EPFL, 20.02.2015, Lausanne, Switzerland.

Oral presentations

- I. R. Tigoianu, D. Dorohoi: Interactiuni intermoleculare în lichide: Sectiunea Metodico- Stiintifica, Editia a-XVI-a, 20- 21 ianuarie 2007, Simpozionul Interjudetean "Stefan Procopiu", Piatra Neamt, România.

- I. R. Tigoianu, M. Lupu, C. Hulubei, A. Airinei: Influenta parametrilor de mediu asupra proprietatilor optice ale unor derivati maleimidici: Zilele Academice Iesene, a XXI-a sesiune de comunicari stiintifice a Institutului de Chimie Macromoleculara "Petru Poni", PROGRESSE ÎN STIINTA COMPUSILOR ORGANICI SI MACROMOLECULARI, 26- 29 septembrie 2007, Iasi, România.

- M. Lupu, A. Airinei, I. R. Tigoianu, C. Hulubei: Proprietati fotochimice ale unor derivati maleimidici care contin unitati azoaromatice pendante: Zilele Academice Iesene, a XXI-a sesiune de comunicari stiintifice a Institutului de Chimie Macromoleculara "Petru Poni", PROGRESSE ÎN STIINTA COMPUSILOR ORGANICI SI MACROMOLECULARI, 26- 29 septembrie 2007, Iasi, România.

- A. Airinei, D. Stelescu, C. V. Grigoras, D. Timpu, I. R. Tigoianu: Structural characteristics of some ethylene propylene diene monomer-based blends: AL IX-LEA SIMPOZION DE CHIMIA COLOIZILOR SI SUPRAFETELOR, 29- 30 mai 2008, Galati, România.

- I. R. Tigoianu, A. Airinei, M. Grigoras, L. Stafie: Spectre de fluorescanta ale unor oligomeri cu structura arileniminica: A XXX-A CONFERINTA NATIONALA DE CHIMIE, 8- 10 octombrie 2008, Calimanesti- Caciulata, Vâlcea, România.

- I. R. Tigoianu, A. Airinei, M. Grigoras, L. Stafie: Spectre de fluorescanta ale unor oligomeri cu structura arileniminica: A XXX-A CONFERINTA NATIONALA DE CHIMIE, 8- 10 octombrie

2008, Calimanesti- Caciulata, Vâlcea, România.

- Mihaela Avadanei, Ionut Radu Tigoianu and Mirela Fernanda Zaltariov, HYBRID ORGANIC – INORGANIC MATERIALS BASED ON LANTHANIDE COMPLEXES OF SCHIFF BASES WITH SILOXANE UNITS, WITH APPLICATIONS AS PHOTOLUMINESCENT DEVICES, ModTech2018, International Conference Modern Technologies in Industrial Engineering, 2018, Constanta, Romania

Posters

- I. R. Tigoianu, A. Airinei, D. Dorohoi: Solvent influence on the electronic transition of some anthracene derivatives: Multifunctional Materials, p. 5. 30, International Conference on Materials Science and Engineering, Bulletin of Transilvania University of Brasov, BRAMAT February 22- 24 2007, Vol. 4, România.

- I. R. Tigoianu, D. Dorohoi: The small telescope. Applications: P. 63, Section 4, National Conference of Applied Physics, CNFA 8- 9 December 2006, Iasi, România.

- A. Airinei, N. Fifere, C. Zaharia, I. R. Tigoianu: Reversible photochemical properties of azobenzene based polymers: The 5th Conference “ NEW RESEARCH TRENDS IN MATERIAL SCIENCE” ARM- 5, 5- 7 septembrie 2007, Sibiu, România.

- I. R. Tigoianu, R. Horodincea: Dispozitive utilizate în supraveghere: A XXXVI-a Conferinta Nationala “Fizica si Tehnologiile Educationale Moderne”, 18- 19 mai 2007, Iasi, România.

- A. Airinei, I. R. Tigoianu, C. Hulubei: Photophysical properties of some azobenzene containing maleimide copolymers: 8th INTERNATIONAL BALKAN WORKSHOP ON APPLIED PHYSICS, 5- 7 iulie 2007, Constanta, România.

- A. Airinei, I. R. Tigoianu, M. Lupu, M. Grigoras, L. Stafie: Photophysical properties of some naphthalene-based aryleneimine oligomers: XXIIInd IUPAC Symposium on Photochemistry, July 28- August 1, 2008, Gothenburg, Sweden.

- A. Airinei, M. Lupu, I. R. Tigoianu, C. Hulubei: Photochromic behavior of some polymers with incorporated azobenzene moieties: The Polymer Processing Society 24th Annual Meeting, PPS-24, June 15- 19, 2008, Salerno, Italy.

- I. R. Tigoianu, A. Airinei, C. Hulubei, D. Dorohoi: Electronic transitions in substituted maleimide monomers and solvent effects: 9th INTERNATIONAL BALKAN WORKSHOP ON APPLIED PHYSICS, 7- 9 iulie 2008, Constanta, România.

- I. R. Tigoianu, A. Airinei, M. Lupu, D. Dorohoi, C. Hulubei: Tranzitii electronice pure în maleimide azoaromatice: „Materiale si procese inovative”, Ediatia a V- a, 19- 21 noiembrie 2008, Iasi, România.

- I. R. Tigoianu, A. Airinei, M. Lupu, A. Siemiarczuk, M. Grigoras, L. Stafie: Fluorescence spectra of some naphthalene containing derivatives, International Conference dedicated to the 50th anniversary from the foundation of the Institute of Chemistry of the Academy of Sciences of Moldova, May 26- 28, 2009, Chisinau, Moldova.

- A. Airinei, I. R. Tigoianu, M. Lupu, M. Grigoras, L. Stafie: A photophysical study on some imine and arylenevinylene derivatives containing carbazole groups, XXIV International Conference on Photochemistry, ICP 2009, UCLM 19 to 24 of July 2009, Toledo, Spain.

- I. R. Tigoianu, A. Airinei, M. Lupu, N. Fifere, M. Grigoras and L. Stafie: The fluorescence quenching of some naphthalene-containing derivatives, 10th International Balkan Workshop on Applied Physics, IBWAP 2009, July 6- 8, 2009, Constanta, România.

- I. R. Tigoianu, A. Airinei, M. Zaltariov, M. Cazacu, V. Ribitsch, C. Gruber: Fluorescence quenching of some anthraquinone derivatives. Sensor applications: 13th International Balkan Workshop on Applied Physics, IBWAP 2013, July 4-6, 2013, Constanta, Romania.

- I. R. Tigoianu, A. Airinei, M. Zaltariov, M. Homucianu, P. Dorneanu, N. Fifere, M. Cazacu: Photophysical properties of some anthraquinone derivatives: 14th International Balkan Workshop on Applied Physics, IBWAP 2014, July 2-4, 2014, Constanta, Romania.

- I. R. Tigoianu, M. Chergui: Ultrafast Spectroscopy. Study of the non-radiative process, The 3rd CEEP WORKSHOP ON POLYMER SCIENCE, September 23-26, 2015, Iasi, Romania.

- I. R. Tigoianu, A. Airinei, M. Zaltariov, M. Cazacu and V. Ribitsch: Applications and some

Photophysical Properties of Anthraquinone Derivatives, International Conference on Ultrafast Structural Dynamics, June 10-12, 2015, Zurich, Switzerland

- I. R. Tigoianu, D. Ursu, R. Tigoianu, M. Chergui, Ultrafast Spectroscopy. Thermal Analysis with Femtosecond Laser Pulses, 25th "Symposium of Thermal Analysis and Calorimetry – Eugen Segal", Romanian Academy and National Institute for R&D in Electrical Engineering ICPE-CA, CATCAR25, 15.04.2016, Bucharest, Romania.

Workshop- Infinity II and Mass Spectrometry Seminar and Workshop at EPFL, 09.04.2015, Lausanne, Switzerland.

Course- Laser Hazards, EPFL, 03.03.2015, Lausanne, Switzerland.

Referees:

1. Prof. Dr. Majed Chergui, Laboratoire De Spectroscopie Ultrarapide, École Polytechnique Fédérale De Lausanne, ISIC, FSB, CH-1015 Lausanne, Switzerland

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2. Prof. Dr. Volker Ribitsch, University of Graz, Heinrichstrasse 28A, 8010, Graz, Austria

Email: volker.ribitsch@uni-graz.at