



Curriculum vitae Europass

Informații personale

Nume / Prenume **RĂU ILEANA**
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E-mail(uri) i_rau@chim.upb.ro
Naționalitate(-tăți) română
Data nașterii 21 decembrie 1968
Sex feminin

Mobil: 0723565673

Locul de muncă vizat

Expert elaborare / tutoriat modul de interes general "Îmbunătățirea capacităților de publicare științifică"

Experiența profesională

- 22 aug. 1994 – 1 oct. 1996 – inginer chimist,
S.C. PROCELIA S.A. Brașov,
Secția Cercetare, Laborator Analize Fizico Chimice
- 1 oct. 1996 – 1 oct. 1997 – doctorand cu frecvență,
Catedra de Chimie Fizică Aplicată și Electrochimie
Facultatea de Chimie Industrială,
Universitatea POLITEHNICA București.
- 1 oct. 1997 – 1 mar. 1998 – asistent suplinitor,
Catedra de Chimie Fizică Aplicată și Electrochimie
Facultatea de Chimie Industrială,
Universitatea POLITEHNICA București.
- 1 mar. 1998 – 1 oct. 2001 – asistent titular
Catedra de Chimie Fizică Aplicată și Electrochimie
Facultatea de Chimie Industrială,
Universitatea POLITEHNICA București.
- 1 oct. 2001 – 1 oct. 2006 – Șef Lucrări
Catedra de Chimie Fizică Aplicată și Electrochimie
Facultatea de Chimie Industrială,
Universitatea POLITEHNICA București.
- 1 oct. 2006 – 1 oct. 2009 – Șef Lucrări
Catedra de Chimie Generală
Facultatea de Chimie Aplicată și Știința Materialelor,
Universitatea POLITEHNICA București.
- 1 oct. 2009 – 1 oct. 2014 – Conferențiar
Catedra de Chimie Generală
Facultatea de Chimie Aplicată și Știința Materialelor,
Universitatea POLITEHNICA București.
- 1 oct. 2014 – Prezent – Profesor, Conducător de Doctorat
Catedra de Chimie Generală
Facultatea de Chimie Aplicată și Știința Materialelor,
Universitatea POLITEHNICA București.

Educație și formare

- Universitatea POLITEHNICA București, Facultatea de Chimie Industrială, Secția Inginerie Chimică, 1989 – 1994, media anilor de studii: 9,26; media de licență: 10; media de absolvire: 9,63; titlul obținut: inginer
- Studii Aprofundate, Universitatea POLITEHNICA București, Specializarea: "Termodinamică și Electrochimie Aplicate", 1994 – 1995, media de absolvire: 10,00
- Titluri obținute:
 - Doctor în Chimie, Universitatea POLITEHNICA de București, 2002
 - Doctor Habilitat (HDR - Habilité de Diriger des Recherches) în fizică, Universitatea din Angers, 2007;
 - Doctor Habilitat în Inginerie Chimică, Universitatea POLITEHNICA din București, 2013
- Specializări
 - 27.03 – 31.03.1995 – Stagiul de pregătire: "Sistemele calității în laboratoarele de încercări", RELAR, București;
 - 14.09 – 15.09.2000 – Participare la Seminarul cu tema: "Noile prevederi ale standardului ISO 17025. Aplicarea acestuia în activitatea de acreditare a laboratoarelor de încercări/verificări", RENAR, București;
 - 2.09 – 6.09.2002 – Participare la Școala de Vară: Nanostructures in Technology and Biomedicine, Jesi, Italia;
 - 17.03 – 18.03.2003 – Participare la Seminarul cu tema: Principiile și Aplicațiile Metrologiei în Chimie, organizat la București de către Comisia Europeană – Joint Research Centre Institute for Reference Materials and Measurements, Geel, Belgia.
 - 15.03 – 22.04.2010 curs de FORMATOR cod COR 241205
- Stagii de cercetare
 - Universitatea AUTONOMA de Barcelona, Spania – ian. – apr. 1999;- ian. – aug. 2000.
 - CEA (Commissariat à l'Énergie Atomique) – Saclay, Franța; **Postdoc - Contract CEA – DRI** : Febr. 2004 – Febr. 2005,
 - CEA (Commissariat à l'Énergie Atomique) – Saclay, Franța; **Postdoc – (Contract european FP 6)**: Febr. 2005 – Febr. 2006, CEA – Saclay, France
 - Université d'Angers, Laboratoire POMA, Franța ; Postdoc – (Contract european FP 6): Febr. 2006 – Febr. 2007

Aptitudini și competențe personale

Limba(i) străină(e) cunoscută(e)

Autoevaluare

Nivel european (*)

Limba

Limba

Limba

Înțelegere				Vorbire				Scriere	
Ascultare		Citire		Participare la conversație		Discurs oral		Exprimare scrisă	
C1	Engleză	C2	Engleză	C1	Engleză	C1	Engleză	C2	Engleză
C2	Franceză	C2	Franceză	C2	Franceză	C2	Franceză	C1	Franceză
C1	Spaniolă	C2	Spaniolă	B1	Spaniolă	B1	Spaniolă	B2	Spaniolă

(*) [Nivelul Cadrului European Comun de Referință Pentru Limbi Străine](#)

- Predare curs disciplina Tehnici Cromatografice asistate de calculator.
- Predare curs disciplina Chimie Generală pentru studenții Facultăților de Electronică, Telecomunicații și Tehnologia Informației și Ingineria și Managementul Sistemelor Tehnologice
- Predare curs General Chemistry (limba engleză) pentru studenții Facultății de Electronică, Telecomunicații și Tehnologia Informației
- Predare curs Chimie Generale (limba franceză) pentru studenții Facultății de Inginerie în Limbi Străine
- Predare curs General Chemistry (limba engleză) pentru studenții Facultății de Inginerie în Limbi Străine
- Predare curs disciplina Datarea și expertizarea operelor de artă și a obiectelor de patrimoniu, Master Expertizarea produselor chimice, alimentare și a materialelor, Facultatea de Chimie Aplicată și Știința Materialelor
- Predare curs disciplina Inginerie Chimică pentru Electronica Auto, Master interdisciplinar, Tehnologii Avansate în Electronica Auto, Facultatea de Electronică și Tehnologia Informației
- Predare curs disciplina Estetică și Ergonomie, Master Expertizarea produselor chimice, alimentare și a materialelor, Facultatea de Chimie Aplicată și Știința Materialelor
- Conducere de seminarii și lucrări de laborator la disciplina de Chimie-Fizică;
- Conducere de seminarii și lucrări de laborator la disciplina de Biochimie-Fizică;
- Conducere de lucrări de laborator la disciplina Chimie Generală pentru studenții Facultăților de Electronică, Telecomunicații și Tehnologia Informației, Inginerie Aerospațială, Inginerie Electrică
- Conducere de seminarii de Chimie Generale (franceză)
- Conducere de seminarii de General Chemistry (engleză)
- Conducere lucrări de laborator disciplina Metode Spectrale Avansate, an VI Master Biocombustibili și Biotehnologii
- Conducere de lucrări de laborator disciplina Inginerie Chimică pentru Electronica Auto (Master Tehnologii Avansate în Electronica Auto – Facultatea de Electronică, Telecomunicații și Tehnologia Informației)
- Conducere de lucrări de laborator disciplina Datarea și expertizarea operelor de artă și a obiectelor de patrimoniu (Master Expertizarea produselor chimice, alimentare și a materialelor – Facultatea de Chimie Aplicată și Știința Materialelor)
- Indrumător de proiect de diplomă pentru studenți, anul III-Colegiu, secția TLMAC, anul V – secția Ingineria Mediului, anul VI – secția Termodinamică și Electrochimie Aplicate.
- Indrumător stagii de cercetare pentru studenți francezi din Universitatea Poitiers, Limoges și Bordeaux, studenți care au efectuat aceste stagii la Universitatea POLITEHNICA din București
- Indrumător stagii de cercetare pentru doi doctoranzi la Universitatea din Angers, Franța (în anul 2006)
- Membru în 4 comisii de concurs pentru post de Conferențiar sau Profesor la Universitatea Transilvania București (febr. 2013, febr. 2015)
- Membru într-o comisie de concurs pentru post de Șef Lucrări la Universitatea POLITEHNICA București (sept. 2013)
- Membru într-o comisie de concurs pentru post de Asistent la Universitatea POLITEHNICA București (sept. 2014)
- Membru în comisii de examene de diploma pentru anul III-Colegiu, secția TLMAC
- Membru în comisia de admitere (comisia de interviu)
- Membru în comisii de examinare pentru examene și referate de doctorat începând cu anul 2007
- Expert termen lung în proiectul POSDRU/87/1.3/S/61839: Privim către viitor - Formarea profesională a cadrelor didactice pentru utilizarea resurselor informatice moderne în predarea eficientă a chimiei – e-Chimie (2010 – 2013)
- Expert termen scurt în proiectul POSDRU/159/1.5/S/132397: Excelență în cercetare prin burse doctorale și postdoctorale (ExcelDOC) (2015)

Îndrumare studenți (ultimii 7 ani)

- **Îndrumare doctoranzi (Conducere doctorat) – 10 doctoranzi în stagiul**
- **Doi doctorazi** îndrumați în timpul stagiului la Universitatea din Angers - 2006 (Robert Czaplicki și Jerome Luc)
- **9 studenți francezi** de la IUT Poitiers, Franța ce au venit pentru stagiul de cercetare în vederea realizării lucrării de diplomă (1 – 2007, 1 – 2008, 1 – 2009, 2 – 2010, 4 – 2011, 3 – 2012, 3 – 2013)
- **Un student francez** de la IUT Limoges, ce a venit pentru stagiul de cercetare în vederea realizării lucrării de diplomă (Matthieu Chafer – 2009)
- **Trei studenți an VI** pentru lucrarea de disertație (Amandine Boumard – Universitatea din Angers, Franța și Mirela Moldoveanu – UPB, România – 2008, Nicoleta Radu – UPB, 2009)
- Membru în comisia de îndrumare a peste 30 doctoranzi

Competențe și aptitudini organizatorice

- **Membru în 15 comisii de doctorat** (2 în Maroc, 2 în Franța, 9 în România)
- **Membru în Biroul de Conducere al Departamentului de Chimie Generală**
- **Membru în Consiliul Facultății de Chimie Aplicată și Știința Materialelor**
- **Expert evaluator european FP7 pentru panelurile PEOPLE Marie Curie: IEF, OIF, IIF Fellowships, ITN, IRSES** începând cu anul 2007
- **Evaluator Programul național PN II** începând cu anul 2007
- **Membru în Comitetul Științific** pentru ICTON MW'07 (International Conference on Transparent Optical Network Sousse, Tunisia, 6 – 8 Decembrie 2007; 2nd ICTON MW'08 (International Conference on Transparent Optical Network) Marrakesh, Maroc, Decembrie 2008
- **Membru în Comitetul Internațional de Program** pentru 8th ICFPAM (International Conference on Polymers and Advanced Materials), Cancun, April, 2005, 9th ICFPAM (International Conference on Polymers and Advanced Materials), Cracovia, Polonia, July, 2007; 10th ICFPAM (International Conference on Polymers and Advanced Materials), Santiago de Chile, Chile, Sept – Oct, 2009, pentru SPIE Optics & Photonics, Nanoscience and Engineering, Nanobionics, San Diego, SUA, 26 – 30 August, 2007; SPIE - Photonic West Conference, Organic Photonic Materials and Devices, San Jose, SUA, Ianuarie, 2008, 2009, 2010, 2011, 2012, 2013, 2014; 2015, 2016 SPIE Optics & Photonics/Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications II, San Diego, SUA, 10 – 14 August, 2008; 7th ICEPOM (International Conference on Electronic Process in Organic Materials, Lvov, Ucraina, 26 – 30 mai 2008 SPIE Europe Security + Defence/Optical Materials in Defence Systems Technology 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
- **Membru în Comitetul Tehnic de Organizare NanoScience + Engineering, San Diego 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016**
- **Membru în comitetul de organizare** pentru 7th International Conference on Polymers and Advanced Materials (ICFPAM), Emerging and Transferring New Technologies, Bucharest, 10 – 15 June 2003 (secretar) și pentru 10th ERPOS (International Conference on Electrical and Related Properties of Organic Solids and Polymers), Cargese, France, 10 – 15 July, 2005
- **Co-chair** – 11th ICFPAM, Pretoria, Africa de Sud, mai 2011, 12th ICFPAM, Auckland, Noua Zeelandă, dec. 2013, 13th ICFPAM, Marrakesh, Maroc, aprilie 2015, 14th ICFPAM, Daejeon, Korea, noiembrie 2016
- **Co-chair** – 1st, 2nd și 3rd International Workshop on Nano and Bio-Photonics, St. Germain au Mont d'or, Franța, oct 2011, Biarritz, Franța, nov. 2013, Cabourg, dec. 2015
- **Promotor, organizator și Chair** al First, Second, Third, Forth and Fifth International Workshop on Advanced Nano- and Biomaterials and Their Device Applications, organized jointly with First French-Romanian Topical Meeting on Nano and Biomaterials - Poiana Brasov, sept. 2008, Sibiu, 16 – 20 sept. 2010, Timișoara, sept. 2012, Iasi, sept. 2014 și Constanta, sept. 2016
- **Chair** al Comitetului de Program SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications, San Diego, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016

Competențe și aptitudini tehnice

- întocmirea manualului de calitate pentru laboratoarele de încercări ale S.C. PROCELIA S.A. Brașov și Centrului Național de Consultanță pentru Protecția Mediului în Industria Chimică și Petrochimică (CNC);
- Responsabil cu Calitatea 2000 – 2004 Universitatea POLITEHNICA București, Centrul Național de Consultanță pentru Protecția Mediului
- întocmirea de proceduri de lucru pentru diferite analize fizico-chimice efectuate în cadrul laboratoarelor de încercare ale S.C. PROCELIA S.A. Brașov și C.N.C. în vederea obținerii acreditării;
- organizare laborator pentru proba practica din cadrul Concursului Național de Chimie CD Nenițescu – disciplina Chimie – Fizică (2001, 2002, 2003)
- organizare laborator didactic de Chimie Fizică an III, secția Biochimie Fizică.
- organizare laborator didactic de Metode Spectrale Avansate pentru an VI – Master Biocombustibili și Biotehnologii
- organizare laborator de cercetare: Laser – pentru caracterizarea materialelor cu proprietăți optice
- organizare laborator didactic pentru disciplina Datarea și expertizarea operelor de artă și a obiectelor de patrimoniu

Alte competențe și aptitudini

- **Fellow** al organizației internaționale SPIE, 2011
- **Laureat al premiului European Descartes**, 2007, membru în echipa franceză
- **Recenzii științifice** pentru articole din revistele: Molecular Crystal Liquid Crystal, Optical Materials, Nonlinear Optics & Quantum Optics, Journal of Materials Research Innovations, SPIE Proceedings, Optical Engineering, Journal of Energetic Materials, Physical Organic Chemistry.
- **Membru SPIE** (The International Society for Optical Engineering),
- **Membru AFONL** (Asociația Franco – Americano – Japoneză pentru promovarea opticii nonlineare),
- **Membru SRCh** (Societatea Română de Chimie)
- **Topical Editor** al revistei ISI Applied Optics (OSA)
- Membru în **colectivul editorial** al revistei Nonlinear Optics&Quantum Optics
- Recunoașterea activității de cercetare la Universitatea POLITEHNICA București prin **nominalizarea** în revista Laser Focus World (septembrie 2008) de către Dr. James Grote.
- Peste **115 articole ISI** și indexate în baze de date
- **Responsabil/director de proiect** pentru 10 **proiecte naționale și 4 internaționale**
- **Citari : 879; h index 15** (scopus 15.04.2016)

15.04.2016

Prof. Habil. Dr. Ing. ILEANA RĂU

Listă de lucrări

Articole relevante

1. **Ileana Rău**, A. Gonzalo, M. Valiente, *Arsenic (V) adsorption immobilized iron mediation. Modeling of the adsorption process and influence of interfering anions*, React. & Functional Polymers, **54**, (2003), p. 85 – 94, WOS:000180657300009
2. **Ileana Rau**, P. Armatys, P.A. Chollet, F. Kajzar, C. Andraud, Y. Bretonnière, *Aggregation: A new mechanism of relaxation of polar order in electro – optic polymers*, Chem. Phys. Lett., **442** (2007), p. 329 – 333, WOS:000248382300031
3. **Ileana Rau**, “*On the Mechanisms of Relaxation in Electro-Optic Polymers*”, Mol. Cryst. Liq. Cryst, **485**, (2008), p. 114/[862] – 124/[872], WOS:000256185900014
4. D. Turcanu-Carutiu, **Ileana Rau**, A. Meghea, “*Spectral and Chromatic Analysis in Art Work Authentication*” Mol. Cryst. Liq. Cryst, **484**, (2008), p. 213/[579] – 237/[603], WOS:000256185800021
5. **Ileana Rau**, F. Kajzar, A. Humeau, J. Luc, B. Sahraoui, G. Boudebs, *Comparison of Z-scan and THG derived nonlinear index of refraction in selected organic solvents*, JOSA B, **25** (10), (2008), p. 1738 – 1747, WOS:000260506400025
6. M. Moldoveanu, A. Meghea, R. Popescu, J. G. Grote, F. Kajzar, **Ileana Rău**, *On the Stability and Degradation of DNA Based Thin Films*, Mol. Cryst. Liq. Cryst., **523**, (2010) p. 182/[754]–190/[762], WOS:000278163400016
7. **Ileana Rau**, A. Tane, R. Zgarian, A. Meghea, J. G. Grote, F. Kajzar, *Stability of Selected Chromophores in Biopolymer Matrix*, Mol. Cryst. Liq. Cryst., **554:1**, (2012), p. 43 – 55, WOS:000302299300006
8. I. Iosub, F. Kajzar, M. Makowska-Janusik, A. Meghea, A. Tane, **Ileana Rau**, *Electronic structure and optical properties of some anthocyanins extracted from grapes*, Optical Materials, **34** (10), (2012) p. 1644 – 1650, WOS:000306618900006
9. **Ileana Rau**, J. G. Grote, F. Kajzar, A. Pawlicka, *DNA - novel nanomaterial for applications in photonics and in electronics*, Compte Rendu de Physique, **13**, (2012), p. 853 – 864, <http://dx.doi.org/10.1016/j.crhy.2012.09.005>, WOS:000311986300007
10. **Ileana Rau**, A. Szukalski, L. Sznitko, K. Palewska, A. Miniewicz, S. Bartkiewicz, B. Sahraoui, F. Kajzar, J. Mysliwiec *Amplified spontaneous emission of rhodamine 6G embedded in pure deoxyribonucleic acid*, Applied Physics Letters, **101** (17), (2012), article ID 019245APL, WOS:000310726200013

Teze de abilitare

- H1.Preparation and Characterization of Organic Thin Films for Optoelectronics Applications – HDR (Habilite de diriger des Recherches), **domain Physique**, Februarie 2007, Angers, Franța certificate No 8439925, ANGERS/201120606533
- H2.Habilitation Thesis for directing Researches in Chemical Engineering, October 2013, Bucharest, Romania

Teza de doctorat

- T1. "Modeling of Adsorption Process from Water Sources on Iron Adsorbant Materials"
January 2002 - **Doctor in Chemistry**, diploma Series C, Nr. 0002956, Ordin MEC
3570/19.04.2002

Brevete de invenție:

- B1. A. Meghea, N. Radu, E. Marica, **Ileana Rău**, L. Sandru, "New fertilizers based on microbial mass" : Brevet nr. RO 121557
B2. **Ileana Rău**, F. Kajzar, A. Meghea, A. Marin, "Optically Tunable Interferometer",
registered with nr. A00730/16.11.2012, Nr. 128436/30.04.2015 - Brevet premiat cu
diploma de excelență și Medalia de aur la Salonul Internațional de Inventica PRO
INVENT, ed. XII, 2014, Cluj-Napoca Romania

Cărți publicate

- Ca1. **Ileana Rău**, S. A. Popescu, *General Chemistry*, Editura Printech, ISBN 978-606-521-240-4, 112 pag., 2009 – student book
Cb1. **Ileana Rău** și Francois Kajzar, *Multiphoton Processes in Organic Materials and their Application*, Edition des archives contemporaines, France ISBN 9782813000514 and
Old City Publishing, Philadelphia, SUA, ISBN 978-1-933153-15-5 , 399 pag., 2012 –
monograph
Cb2. **Ileana Rău**, *Novel Materials for light intensity modulation*, Editura Printech, ISBN
978-606-521-242-8, 113 pag., 2009 – monograph

Alte material publicate

- I1. M. Guțul-Văluță, M. Muntean, M. Dinculescu, **Ileana Rău**, "*Proprietățile fizico-chimice și caracteristicile atomilor, substanțelor simple și compuse, corelate cu poziția elementelor în sistemul periodic. Noțiuni teoretice. Exerciții și probleme*",
Litografia UPB, București, 1997 (110 pag.). – student book
I2. M. Guțul-Văluță, **Ileana Rău**, I. Jitaru, C. Matei, M. Muntean, A. Suciu, "*Legătura chimică*" Partea I, "*Teoria electronică clasică asupra legăturii chimice. Exerciții și probleme*",
Litografia UPB, 1998, (115 pag.) student book
I3. **Ileana Rău** (în grup de autori), "*Probleme teoretice și practice*", Concursul
Național de Chimie pentru elevi, "Costin D. Nenițescu" București, Ed. Flomarco,
2002, ISBN 973-96735-4-3 - student book.

Capitole de cărți

- D1. F. Kajzar, **Ileana Rau**, "*Nonlinear Optics - Materials: Organic Nonlinear Materials*",
chapter in Encyclopedia of Modern Optics, edited by Robert D. Guenther, Duncan G.
Steel and Leopold Bayvel, Elsevier, Oxford, 2004. ISBN 0-12-227600-0, pp. 42 – 60
D2. **Ileana Rău**, F. Kajzar, "*Nonlinear Spectroscopy in organic media*", **chapter** in
Multiphoton Processes in Organic Materials and their Application, Edition des archives
contemporaines, France ISBN 9782813000514 and Old City Publishing, Philadelphia,
SUA, ISBN 978-1-933153-15-5, 2012, pp. 3 – 78

Articole ISI și indexate

- Ris 1. **Ileana Rău**, A. Gonzalo, M. Valiente, *Arsenic removal from Aqueous Solutions by Iron (III) Loaded Chelating Resin*, Journal of Radioanalytical and Nuclear Chemistry, **246**, (3), (2000), p. 597-600; cotata ISI, FI (2013) = 1,415, WOS:000165958400018
- Ris 2. I. Peleanu, M. Zaharescu, **Ileana Rău**, M. Crișan, A. Meghea, A. Jitianu, *Composite SiO₂-Iron Oxides Materials for Magnetically Intensified Adsorption*, Journal of Radioanalytical and Nuclear Chemistry, **246**, (3), (2000), p. 557-563; cotata ISI, FI (2013) = 1,415, WOS:000165958400011
- Ris 3. M. Zaharescu, M. Crișan, A. Jitianu, D. Crișan, A. Meghea, **Ileana Rău**, *SiO₂-Oxides Composites Obtained by Sol-Gel Method*, J. of Sol-Gel Sciences and Technologies, **19**, (2000), p. 631-635. cotata ISI, FI (2013) = 1,547, WOS:000166544900121
- Ris 4. I. Peleanu, M. Zaharescu, **Ileana Rău**, M. Crisan, A. Jitianu, A. Meghea, *Nanocomposite Materials for As(V) Removal by Magnetical Intensified Adsorption*, Separation Science and Technology, **37**, (16), (2002), p. 3693 – 3701; cotata ISI, FI (2013) = 3,065, WOS:000179889200007
- Ris 5. M. Preda, A. Meghea, A. Melinescu, **Ileana Rău**, *Ceramic pigments base don TiO₂ and transitional cations as chromophore species*, Revista Romana de Materiale, **XXXII**, (3), (2002), p. 163 – 167; cotata ISI, FI (2013/2014) = 0,538
- Ris 6. A. Jitianu, M. Crișan, A. Meghea, **Ileana Rău**, M. Zaharescu, *Influence of silica based matrix on the formation of iron oxide nanoparticles in the Fe₂O₃ system, obtained by sol – gel method*, J. Mater. Chem., **12** (5), (2002), p.1401 – 1407; cotata ISI, FI (2013) = 6,626, WOS:000175143000032
- Ris 7. **Ileana Rău**, A. Gonzalo, M. Valiente, *Arsenic (V) adsorption immobilized iron mediation. Modeling of the adsorption process and influence of interfering anions*, React. & Functional Polymers, **54**, (2003), p. 85 – 94; cotata ISI, FI (2013/2014) = 2,822, WOS:000180657300009
- Ris 8. **Ileana Rău**, A. Meghea, I. Peleanu, A. Gonzalo, M. Valiente, M. Zaharescu, *Modelling the arsenic (V) and (III) adsorption*, Czechoslovak J of Physics, **53** (2003) Suppl.A, p.A549 – A556; cotata ISI, FI (2012) = 0,420, WOS:000184406200021
- Ris 9. I. Demetrescu, B. Popescu, D. Ionita, **Ileana Rau**, R. Gavrilă, *Electrochemical behaviour of Ti and TiAlV in Tani-Zucchi Artificial Saliva*, Mol. Cryst. Liq. Cryst., **418** (2004), p. 271 – 285; cotata ISI, FI (2013/2014) = 0,491, WOS:000224980600022
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- Vis 32. Antoni C. Mitus, Grzegorz Pawlik, Jaroslaw Mysliwiec, Lech Sznitko, Konrad Cyprych, Adam Szukalski, François Kajzar, Ileana Rau, *Random lasing in dye doped bio-organic based systems: recent experiments and stochastic approach*, Proc. of SPIE Vol. **9171**, (2014), indexata ISI, ISBN 9781628411980, art. no. 91710H, doi 10.1117/12.2062574
- Vis 33. Fahima Ouchen, Eliot Gomez, Donna Joyce, Adrienne Williams, Steve Kim, Emily Heckman, Lewis Johnson, Perry Yaney, Air Force Research Lab. Narayanan Venkat, Andrew Steckl, François Kajzar, Ileana Rau, Univ. Agnieszka Pawlicka, Paras Prasad, James Grote, *Latest advances in biomaterials: from deoxyribonucleic acid to nucleobases*, Proc. of SPIE Vol. **8983**, (2014), indexata ISI, ISBN 9780819498960, art. no. 89831A, doi 10.1117/12.2041321
- Vis 34. V. V. Jerca, F. A. Jerca, **Ileana Rau**, F. Kajzar, D. S. Vasilescu, D. M. Vuluga, *Investigations of molecular nonlinear optical polarizabilities of azobenzenes substituted with strong acceptor groups*, Proc. of SPIE Vol. **9171**, (2014), indexata ISI, ISBN 9781628411980, art. no. 88170Z, doi 10.1117/12.2073075
- Vis 35. A. Pawlicka, A. Firmino, F. Sentanin, R. C. Sabadini, D. E. Q. Jimenez, C. C. Jayme, M. Mindroiu, R. G. Zgarian, G. T. Tihan, **Ileana Rau**, M. M. Silva, A. F. Nogueira, J. Kanicki, F. Kajzar, *Bio-inspired materials for electrochemical devices*, Proceedings of SPIE Vol. **9652** (2015), indexata ISI, ISBN 9781628418620, art. no. 96520U, doi 10.1117/12.2196924
- Vis 36. A. C. Mitus, P. Stopa, W. Zaklukiewicz, G. Pawlik, J. Mysliwiec, F. Kajzar, **Ileana Rau**, *Towards modeling of random lasing in dye doped bio-organic based systems: ray-tracing and cellular automaton analysis*, Proceedings of SPIE Vol. 9557 (2015), indexata ISI, ISBN 9781628417234, art. no. 95570H, doi 10.1117/12.2189994.
- Vis 37. V. V. Jerca, F. A. Jerca, **Ileana Rau**, F. Kajzar, D. S. Vasilescu, D. M. Vuluga, "Photoresponsive behavior of azobenzene hybrid materials", in Nanobiosystems: Processing, Characterization, and Applications VIII, Norihisa Kobayashi; Fahima Ouchen; Ileana Rau, Editors, Proceedings of SPIE Vol. 9557 (2015), indexata ISI, ISBN 9781628417234, art. no. 95570P, doi 10.1117/12.2196161.

b) National Proceedings

- Vn 1. A. Meghea, M. Bedo, **Ileana Rău**, M. Popescu “*Evaluarea cantitativă a culorii finisajelor pe bază de var hidratat colorat*”, Lucrările Conferinței de Chimie și Inginerie Chimică, București, 20 - 21 oct. 1995, vol IV, partea I, p. 349 - 354.
- Vn 2. A. Meghea, **Ileana Rău**, E. Moldoveanu, M. Popescu, “*Varuri colorate cu pigmenți organici*”, Lucrările celei de a XXI-a Sesiuni de Comunicări Științifice, Călimănești - Căciulata, 25 - 27 oct. 1995, vol I, p. 323 - 328.
- Vn 3. A. Meghea, **Ileana Rău**, E. Moldoveanu, L. Meliță, “*Caracterizarea cromatică a unor varuri colorate*”, Analele Universității din Craiova, Lucrări Științifice - Simpozion de Chimie și Tehnologie Chimică, Craiova, 10 - 11 nov. 1995, vol. 1, p.14 - 19.
- Vn 4. **Ileana Rău**, A. Meghea, L. Meliță, M. Bedo, “*Caracterizarea cromatică a unor cimenturi colorate*”, Lucrările celei de a VII-a Conferințe de Știința și Ingineria Materialelor - CONSILOX, Constanța, 11 - 13 sept. 1996, vol II, p. 46 - 50.
- Vn 5. E. Moldoveanu, **Ileana Rău**, V. Ilieș, E. Garofil, “*Agenți de întărire pentru var și mortare de var*”, Lucrările celei de a VII-a Conferințe de Știința și Ingineria Materialelor - CONSILOX, Constanța, 11 - 13 sept. 1996, vol II, p. 169 - 173.
- Vn 6. **Ileana Rău**, A. Meghea, M. Guțul, “*Mecanismul transformărilor în soluție la precipitarea unor combinații complexe ale cuprului cu hidrazina și acizi carboxilici*”, Lucrările Conferinței de Chimie și Inginerie Chimică, București, 16 - 18 oct. 1997, vol V, p. 3 - 55 ÷ 3 - 60.
- Vn 7. A. Meghea, **Ileana Rău**, C. Moțiu, C. Chirnoagă, “*Folosirea spectroscopiei RES pentru detectarea poluării solurilor*” Lucrările Conferinței de Chimie și Inginerie Chimică, București, 16 - 18 oct. 1997, vol II, p. 7 - 14 ÷ 7 -17.
- Vn 8. A. Meghea, **Ileana Rău**, C. Moțiu, C. Chirnoagă, “*Caracterizarea cromatică a poluării solurilor*” Lucrările Conferinței de Chimie și Inginerie Chimică, București, 16 - 18 oct. 1997, vol II, p. 7 - 18 ÷ 7 -23.
- Vn 9. **Ileana Rău**, A. Gonzalo, J.A.Munoz, M. Zaharescu, A. Meghea, M. Valiente, “*Influence of Arsenic Speciation During the Adsorption on Different Materials*”, 12th Romanian International Conference on Chemistry and Chemical Engineering, București 13 – 15 Sept. 2001, p. 213 – 218

Guest Editor

- E 1. “Molecular Crystals and Liquid Crystals”, Proceedings of the 7th International Conference on Frontiers and Advanced Materials, ICFPAM 2003, **415 – 418**, 2004;
- E 2. “Molecular Crystals and Liquid Crystals”, Proceedings of the 8th International Conference on Frontiers and Advanced Materials, ICFPAM 2005, **446 – 448**, 2006;
- E 3. “Nonlinear Optics, Quantum Optics”, Proceedings of the 3rd International Conference on Photoresponsive Organics and Polymers (3rd ICPOP) and the 2nd French – Korean Symposium on Photonic Materials and Devices (2nd KF – PMD), **35** (1 – 3), 2006;
- E 4. “Nonlinear Optics, Quantum Optics”, Proceedings of the 10th ERPOS (International Conference on Electrical and Related Properties of Organic Solids and Polymers), 2007,
- E 5. “Molecular Crystals and Liquid Crystals”, Proceedings of the 9th International Conference on Frontiers and Advanced Materials, ICFPAM 2007, **483 – 486**, 2008,
- E 6. “Nonlinear Optics, Quantum Optics”, **38**, (2), 2008,

- E 7. “Nonlinear Optics, Quantum Optics”, Proceedings of First International Workshop on Advanced Nano- and Biomaterials and Their Device Applications Organized jointly with French-Romanian Topical Meeting on Nano and Biomaterials 2008, **38** (3-4) - **39**, (1), 2009
- E 8. “Nonlinear Optics, Quantum Optics”, Special issue, Materials and Devices for Nonlinear Optics, **40** (1-4), 2010
- E 9. “Molecular Crystals and Liquid Crystals”, Proceedings of the 10th International Conference on Frontiers and Advanced Materials, ICFPAM 2009, **520 – 523**, 2010.
- E 10. Nanobiosystems: Processing, Characterization, and Applications II (Proceedings Volume) Proceedings of SPIE Volume: 7403, Editor(s): Norihisa Kobayashi; Fahima Ouchen; Ileana Rau Date: 20 August 2010, ISBN: 9780819476937
- E 11. Nanobiosystems: Processing, Characterization, and Applications III (Proceedings Volume) Proceedings of SPIE Volume: 7765, Editor(s): Norihisa Kobayashi; Fahima Ouchen; Ileana Rau Date: 20 August 2010, ISBN: 9780819482617
- E 12. “Nonlinear Optics, Quantum Optics”, Eds. Ileana Rău and F. Kajzar, Special issue, Biomaterials, **42** (3-4), 2011
- E 13. Nanobiosystems: Processing, Characterization, and Applications IV (Proceedings Volume) Proceedings of SPIE Volume: 8103, Editor(s): Norihisa Kobayashi; Fahima Ouchen; Ileana Rau Date: 2 Sept. 2011, ISBN: 9780819487131
- E 14. “Nonlinear Optics, Quantum Optics”, Proceedings of Second International Workshop on Advanced Nano- and Biomaterials and Their Device Applications Organized jointly with French-Romanian Topical Meeting on Nano and Biomaterials 2010, **44** (2-3), 2012
- E 15. “Molecular Crystals and Liquid Crystals”, Proceedings of the 11th International Conference on Frontiers and Advanced Materials, ICFPAM 2011, **554 – 556**, 2012, WOS:000302299300001
- E 16. Nanobiosystems: Processing, Characterization, and Applications V (Proceedings Volume) Proceedings of SPIE Volume: 8464, Editor(s): Norihisa Kobayashi; Fahima Ouchen; Ileana Rau Date: 27 Sept. 2012, ISBN: 9780819491817
- E 17. Nanobiosystems: Processing, Characterization, and Applications V (Proceedings Volume) Proceedings of SPIE Volume: 8817, Editor(s): Norihisa Kobayashi; Fahima Ouchen; Ileana Rau Date: 8 Oct. 2013, ISBN: 9780819496676

Invited and plenary/keynote lectures

- E 18. **Ileana Rau**, S. Bartkiewicz, A. Miniewicz, B. Sahraoui, F. Kajzar, “*Photochromism in thin films containing azodyes*”, 6th International Conference on Transparent Optical Networks Wroclaw, Poland, July 4 - 8, 2004, **invited lecture**, WOS:000224408100066
- E 19. **Ileana Rau**, P.-A. Chollet, F. Kajzar, R. Zamboni, “*Oriented conjugated polymer thin films for all optical switching applications*”, Photonics West 2005 - Organic Photonic Materials and Devices VII, San Jose, SUA, 24 – 26 Jan. 2005, **invited lecture**, WOS:000229436200029
- E 20. **Ileana Rau**, R. Centore, A. Carella, P. Armatys, P. – A. Chollet, F. Kajzar, “*New Polyurethane Based Push – Pull Functionalised Polymers for NLO Applications*” 7th International Conference on Transparent Optical Networks Barcelona, Spain, July 3 - 7, 2005, **invited lecture**, WOS:000234111600063

- E 21. **Ileana Rau**, P. Armatys, P.-A. Chollet, Francois Kajzar, Roberto Zamboni, “*Conjugated Polymers Oriented Organic Thin Films For Nonlinear Optics*” 8th International Conference on Frontiers and Advanced Materials, ICFPAM 2005, Cancun, Mexico, 22 – 27 aprilie 2005, **invited lecture**
- E 22. **Ileana Rau**, A.-J. Attias, P. Armatys, P. – A. Chollet, F. Kajzar, “New Polystyrene based polymers functionalised with DR#1 molecules for quadratic NLO”, WORKSHOP RICCE 14, Advanced Procedures for Environmental & Health Relation in the Frame of Sustainable Development, September 23, 2005, Bucuresti, Romania, **invited lecture**
- E 23. **Ileana Rau**, P.-A. Chollet, P. Armatys, F. Kajzar, R. Centore, A. Carella, A. J. Attias, “*Novel functionalized polymers for applications in quadratic nonlinear optics*”, Photonics West 2006 - Organic Photonic Materials and Devices VIII, San Jose, SUA, 21 – 26 Jan. 2006, **invited lecture**
- E 24. **Ileana Rau**, R. Czaplicki, B. Sahraoui, F. Kajzar, D. A. Leigh, J. Berna – Canovas, “*Linear and nonlinear optical properties of selected rotaxanes*”, Photonic North, Quebec, Canada, 4 – 9 June 2006, **invited lecture**
- E 25. F. Kajzar, **Ileana Rau**, P. Armatys, P.-A. Chollet, C. Andraud, Y. Bretonnière, “*New insights into the relaxation of polar order in electro-optic polymers*”, The European Conference on Organised Films, Riga, Latvia, ECOF-10, 21-24 August 2006, **invited lecture**
- E 26. F. Kajzar, R. Czaplicki, O. Krupka, **Ileana Rau**, B. Sahraoui, J. Berna – Canovas, D. A. Leigh, “*Nonlinear optical properties of selected rotaxanes*”, Optics Remote Sensing, An SPIE Europe Event, Stockholm, Sweden, 11 - 14 September 2006, **invited lecture**, WOS:000324588600013
- E 27. B. Sahraoui , O. Krupka , A. El-Ghayoury , **Ileana Rau**, B. Savu, G. A. Stanciu, F. Kajzar , “*Nonlinear optical properties of functionalised DNA thin films*”, The 14th International Conferences on Advanced Laser Technologies, 14th ALT, Brasov, Roumanie, 8 – 12 Sept., 2006, **invited lecture**
- E 28. **Ileana Rau**, R. Czaplicki, A. Hameau, B. Sahraoui, G. Boudebs, O. Krupka, D. A. Leigh, J. Berna – Canovas, F. Kajzar, “*Third order nonlinear optical properties of selected rotaxanes*”, 6th International Conference Electronic Process in Organic Materials, ICEPOM – 6, Gurzuf (Great Yalta), Crimea, Ukraine, 25 – 29 Sept., 2006, **invited lecture**
- E 29. **Ileana Rau**, R. Czaplicki, A. Hameau, B. Sahraoui, G. Boudebs, O. Krupka, D. A. Leigh, J. Berna – Canovas, F. Kajzar, “*On the Importance of Rotational Contributions to Cubic Susceptibility in Catenanes and Rotaxanes*”, Photonics West 2007 - Organic Photonic Materials and Devices IX, San Jose, SUA, 20 – 25 Jan. 2007, **invited lecture**
- E 30. R. Zamboni, S. Caria, E. Da Como, M. Muccini, M. Murgia, **Ileana Rau**, F. Kajzar, G. Barbarella, L. Favaretto, “*Highly efficient organic thin films for second order nonlinear optics*”, Photonics West 2007 - Organic Photonic Materials and Devices IX, San Jose, SUA, 20 – 25 Jan. 2007, **invited lecture**
- E 31. **Ileana Rau**, “*New Approach of UPB - CNC Concerning DNA Based Films for Optoelectronic Applications*”, Air Force Research Laboratory International Workshop on Biotronics, Hawaii, SUA, 29 April – 4 May, 2007

- E 32. **Ileana Rău**, “*Preparation and characterization of organic thin films for optoelectronics applications*” 9th International Conference on Frontiers and Advanced Materials, ICFPAM 2007, Krakow, Poland, 8 – 12 July 2007, **invited lecture**
- E 33. A.C. Mitus, G. Pawlik, **Ileana Rău**, F. Kajzar, C. Andraud, “*Monte Carlo Simulations of a New Mechanism of Relaxation in Guest – Host systems*”, 9th International Conference on Frontiers and Advanced Materials, ICFPAM 2007, Krakow, Poland, 8 – 12 July 2007, **invited lecture**
- E 34. B. Sahraoui, A. Migalska-Zalas, **Ileana Rău**, R. Czaplicki, J. Luc, “*Design and Synthesis of a New series of Alkynyl Ruthenium Chromophores for Nonlinear Optical Applications*”, 9th International Conference on Frontiers and Advanced Materials, ICFPAM 2007, Krakow, Poland, 8 – 12 July 2007, **invited lecture**
- E 35. **Ileana Rău**, “*Microemulsion New Method for DNA Functionalization*”, Nano – Bio – Photonics: Converging Science and Technologies, Focal Aspects and Perspectives, Rome, Italy, September 14, 2007, **invited lecture**
- E 36. **Ileana Rău**, F. Kajzar, P. Armatys, J. Niziol, P.-A. Chollet, “*Engineering and performances of pi conjugated polymers for all optical switching applications*” SPIE Europe Optics & Photonics in Security and Defense, Optical Materials in Defense Systems Technology, Florence, Italy, 17 – 20 September, 2007, **invited lecture**
- E 37. **Ileana Rau**, “*Relaxation study on organic thin films for optoelectronics applications*”, Photonics West 2008 - Organic Photonic Materials and Devices X, San Jose, SUA, 19 – 24 Jan. 2008, **invited lecture**
- E 38. **Ileana Rau**, R. Popescu, G. Tihan, I. Demetrescu, A. Meghea, J. G. Grote, F. Kajzar, “*Degradation kinetics of biopolymers based thin films*”, 2nd International Conference on Functional Materials and Devices, 2008 (ICFMD-2008), Kuala Lumpur, Malaysia, Malaysia, 16 – 19 June 2008, **invited lecture**
- E 39. **Ileana Rau**, R. Popescu, G. Tihan, I. Demetrescu, A. Meghea, J. G. Grote, F. Kajzar, “*Biopolymer Thin Films: Processing, Properties and Stability*”, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications, San Diego, USA, 10 – 14 August, 2008, **invited lecture**
- E 40. **Ileana Rau**, R. Popescu, G. Tihan, A. Boumard, A. Mesmin, A. Meghea, J. G. Grote, F. Kajzar, “*Biopolymers - Novel Materials for Application in Photonics*”, The 6th International Conference “Advanced Optical Materials and Devices”, Riga, Latvia, 24-27 August 2008, **plenary lecture**
- E 41. A.C. Mitus, G. Pawlik, **Ileana Rău**, F. Kajzar, “*Monte Carlo simulation of chromophore orientation kinetics in polymer matrices*”, First International Workshop on Advanced Nano- and Biomaterials and Their Device Applications, Poiana Braşov, Romania, 17 – 20 septembrie, 2008, **invited lecture**
- E 42. **Ileana Rau**, R. Popescu, G. Tihan, A. Boumard, A. Mesmin, V. Trandafir, I. Demetrescu, A. Meghea, J. G. Grote, F. Kajzar, “*Stability of DNA and collagen-based thin films*”, Photonics West 2008 - Organic Photonic Materials and Devices XI, San Jose, SUA, 24 – 29 Jan. 2009, **invited lecture**
- E 43. **Ileana Rau**, “*Photo-, thermal- and chemical stability of pure and functionalized DNA and collagen films*”, International Symposium on Materials and Devices for Nonlinear Optics, ISOPL’5, Porquerolles, Franta, 26 June-1 July 2009, **invited lecture**

- E 44. **Ileana Rau**, R. Popescu, M. Moldoveanu, A. Meghea, J. G. Grote, F. Kajzar, *On the Stability and Degradation of DNA and Collagen Based Thin Films*, X ICFPAM Santiago de Chile, Chile sept. 2009, **invited lecture**, WOS:000278163400016
- E 45. A.C. Mitus, G. Pawlik, **Ileana Rau**, Francois Kajzar, *Pre-Poling History Paradigm for Poled Guest-Host Systems: Experiment and Monte Carlo Studies*, X ICFPAM Santiago de Chile, Chile sept. 2009, **plenary lecture**
- E 46. **Ileana Rau**, R. Popescu, M. Moldoveanu, A. Meghea, J. G. Grote, F. Kajzar, *"Degradation of Biopolymer-Based Thin Films"*, Photonics West 2010 - Organic Photonic Materials and Devices XI, San Francisco, SUA, 24 – 29 Jan. 2010, **invited lecture**
- E 47. **Ileana Rau**, *Degradation of Biopolymer-Based Thin Films*, 2010 International Workshop on Biotronics, San Juan, Puerto Rico, March 29, 2010 – April 2, 2010, **invited lecture**
- E 48. **Ileana Rau**, *On the stability DNA-based thin films*, The 6th International Colloquium "Mathematics and physics in engineering, numerical physics and complexity" (MENP - 6) joint with The 2nd international colloquium "Physics of Materials" (PM-2), 8 oct. 2010, Bucuresti, Romania, **invited lecture**
- E 49. F. Kajzar, O. Krupka, A. Mitus, G. Pawlik, **Ileana Rau**, *Concentration variation of quadratic NLO susceptibility in PMMA-DR1 side chain polymer* Photonics West 2011 - Organic Photonic Materials and Devices XII, San Francisco, SUA, 22 – 27 Jan. 2011, **invited lecture**, WOS:000278163300020
- E 50. **Ileana Rău**, *DNA based materials Processing, characterisation, stability and applications* XI ICFPAM, Pretoria, Africa de Sud, 22 – 27 mai 2011 **Keynote Lecture**
- E 51. **Ileana Rău**, R. Zgărian, A. Țane, A. Meghea, F. Kajzar, *DNA based materials with enhanced fluorescent properties*, International Workshop on Nano and Bio-Photonics (IWNBP), St. Germain au Mont d'Or, Franta, 23 – 28 octombire 2011, **invited lecture**
- E 52. **Ileana Rău**, *DNA Based Materials. Processing, Characterisation and Stability*, International Conference on PhotonicsPolymers / ICAPP-2011, Yokohama, Japonia, 1 – decembrie 2011, **invited lecture**
- E 53. J. Mysliwiec, M. Czajkowski, S. Bartkiewicz, A. Miniewicz, K. Zygodlo, Z. Galewski, **Ileana Rau**, F. Kajzar, B. Sahraoui, *Photonic applications of photochromic molecules* Photonics West 2012 - Organic Photonic Materials and Devices XIV, San Francisco, SUA, 21 – 26 Jan. 2012, **invited lecture**, WOS:000302548700008
- E 54. **Ileana Rau**, A. Meghea, A. M. Manea, A. Tane, *Doping and characterization of nonlinear optical properties of DNA complexes with NLO chromophores*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications V, San Diego, USA, August, 2012, **invited lecture**
- E 55. **Ileana Rau**, I. Iosub, F. Kajzar, M. Makowska-Janusik, J. Dlugosz, A. Meghea, A. Tane, R. Zgarian, *On electronic structure and optical properties of anthocyanidines extracted from grapes*, SPIE Europe Optics & Photonics in Security and Defense, Optical Materials in Defense Systems Technology, Edinburgh, United Kingdom, September, 2012, **invited lecture**
- E 56. **Ileana Rău**, *DNA complexes with NLO chromophors for biophotonics*, International Conference on Advanced Materials for Photonics, Sensing and Energy Conversion Applications, El Jadida, Maroc, Dec. 2012 – **plenary lecture**

- E 57. **Ileana Rau**, Ana-Maria Manea, Roxana Zgarian, Alexandrina Tane, Aurelia Meghea, Francois Kajzar, **Functionalization and linear as well nonlinear optical properties characterization of DNA biopolymer based complexes**, *Photonic applications of photochromic molecules* Photonics West 2013 - Organic Photonic Materials and Devices XV, San Francisco, SUA, 4 – 6 February, 2013, **invited lecture**
- E 58. A. C. Mitus, G. Pawlik, W. Radosz, J. Mysliwiec, A. Miniewicz, F. Kajzar, **Ileana Rau**, *Grating inscription in DR1: DNA-CTMA thin film: simple models and experiment*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications VI, San Diego, USA, August, 2013, **invited lecture**
- E 59. **Ileana Rau**, *Deoxyribonucleic acid (DNA): a new nanomaterial for applications in electronics and in photonics*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications VI, San Diego, USA, August, 2013, **invited lecture**
- E 60. **Ileana Rau**, A. Meghea, A. Tane, F. Kajzar, R. Zgarian, G. Tihan, *Matrix influence on photoluminescence of organic dyes in solid medium*, SPIE Europe Optics & Photonics in Security and Defense, Optical Materials in Defense Systems Technology, Optical Materials and Biomaterials in Security and Defence Systems Technology X, Dresden, Germany, 23 – 26 Sept. 2013, **invited lecture**
- E 61. **Ileana Rau**, *DNA based materials for biophotonics applications*, Workshop on Organic Electronics and Nanophotonics – WOREN, Zlotckie, Polonia, 17 – 21 February 2013, **invited lecture**
- E 62. **Ileana Rău**, M. Mîndroiu, G. Tihan, M.L. Mircea, H. C. Leite de Oliveira, A. Pawlicka, F. Kajzar, *Application of deoxyribonucleic acid (DNA) in electronics and in photonics*, International Workshop on Nano and Bio-Photonics (IWNBP), French-Korean Meeting on Functional Material for Organic Optics, Electronics, and Devices (FUNMOOD), Biarritz, France, 3-8 November 2013, **invited lecture**
- E 63. A. C. Mitus, G. Pawlik, W. Radosz, J. Mysliwiec, A. Miniewicz, F. Kajzar, **Ileana Rau**, *Grating inscription in DR1: DNA-CTMA thin films: experiment, MONTE CARLO simulation and theory*, RICCCCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 64. J. Mysliwiec, K. Cyprych, L. Sznitko, A. Miniewicz, F. Kajzar, **Ileana Rau**, *Dye doped biopolymeric matrix as a medium for lasing and random lasing*, RICCCCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 65. **Ileana Rău**, A. Tane, A. Meghea, F. Kajzar, A. Petriș, T. Bazaru, V. I. Vlad, *Biomaterials with enhanced properties for electro-optics applications*, International Conference of Physical Chemistry – ROMPHYSICHEM, Bucharest, Romania, 11 – 13 September 2013, **invited lecture**
- E 66. **Ileana Rău**, G. Tihan, M. Mindroiu, R. Zgarian, F. Kajzar, H. Cunha Leite de Oliveira, A. Pawlicka, *DNA based materials for application in electro-optics*, XII ICFPAM, Auckland, New Zealand, 8 – 13 December, 2013, **invited lecture**
- E 67. **Ileana Rau**, G. Tihan, M. Mandroiu, R. Zgarian, F. Kajzar, *Biopolymer conformations and dopant aggregation in DNA-based complexes for photonics application*, Photonics West 2014 - Organic Photonic Materials and Devices XVI, San Francisco, SUA, February, 2014, **invited lecture**
- E 68. R. Grykien, B. Luszczynska, I. Glowacki, J. Ulanski, **Ileana Rau**, R. Zgarian, F. Kajzar, *On deoxyribonucleic acid (DNA) based BIOLEDs* Photonics West 2014 -

Organic Photonic Materials and Devices XVI, San Francisco, SUA, February, 2014, **invited lecture**

- E 69. **Ileana Rau**, G. Tihan, M. Mindroiu, R. Zgarian, F. Kajzar, L. Marinho Nobrega de Assis, F. Sentanin, A. Pawlicka, *Electrochemical properties of some DNA based materials*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications VII, San Diego, USA, August, 2014, **invited lecture**
- E 70. F. Kajzar, A.-M. Manea, V. I. Vlad, A. Petris, T. Bazaru Rujoiu, A. Tane, **Ileana Rau**, *Nonlinear optical properties of chromophore functionalized DNA-surfactant complexes*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications VII, San Diego, USA, August, 2014, **invited lecture**
- E 71. A. C. Mitus, G. Pawlik, J. Mysliwiec, L. Sznitko, K. Cyprych, A. Szukalski, A. Miniewicz, F. Kajzar, **Ileana Rau**, *Random lasing in dye doped bio-organic based systems: experimental and stochastic approach*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications VII, San Diego, USA, August, 2014, **invited lecture**
- E 72. **Ileana Rau**, A.-M. Manea, V. I. Vlad, A. Petris, T. Bazaru Rujoiu, A. Tane, F. Kajzar, *Functionalization and photo-physical properties of DNA-surfactant complexes*, Fourth International Workshop on Advanced, Nano- and Biomaterials and Their Applications joint with Fourth French-Romanian Topical Meeting on Nano and Biomaterials, 17 - 21 September 2014, Iași, Romania, **invited lecture**
- E 73. J. Mysliwiec, L. Sznitko, K. Cyprych, A. Szukalski, A. Miniewicz, A. C. Mitus, G. Pawlik, F. Kajzar, **Ileana Rau** *Mechanisms of light amplification in organic hybrid systems*, Fourth International Workshop on Advanced, Nano- and Biomaterials and Their Applications joint with Fourth French-Romanian Topical Meeting on Nano and Biomaterials, 17 - 21 September 2014, Iași, Romania, **invited lecture**
- E 74. A. Meghea, F. Kajzar, A.-M. Manea, M. Gonța, **Ileana Rău**, *All-bio nanomaterials based on DNA and natural chromophors for electronic applications*, Fourth International Workshop on Advanced, Nano- and Biomaterials and Their Applications joint with Fourth French-Romanian Topical Meeting on Nano and Biomaterials, 17 - 21 September 2014, Iași, Romania, **invited lecture**
- E 75. M. Gonța, G. Duca, A. Gonța, **Ileana Rău**, A. Meghea, Cr. Savga, *Study the process of inhibition of cancerogen N-nitroso compounds by dihydroxyfumaric acid - DNA co-polymer*, Fourth International Workshop on Advanced, Nano- and Biomaterials and Their Applications joint with Fourth French-Romanian Topical Meeting on Nano and Biomaterials, 17 - 21 September 2014, Iași, Romania, **invited lecture**
- E 76. J. Mysliwiec, L. Sznitko, K. Cyprych, A. Szukalski, A. Miniewicz, G. Pawlik, A. C. Mitus, F. Kajzar, **Ileana Rau**, *Biopolymeric lasers*, SPIE Europe Optics & Photonics in Security and Defense, Optical Materials in Defense Systems Technology, Optical Materials and Biomaterials in Security and Defence Systems Technology XI, Amsterdam, Olanda, Sept. 2014, **keynote lecture**
- E 77. A.-M. Manea, **Ileana Rau**, F. Kajzar, *Linear and NLO properties of DNA-CTMA-SBE complexes*, SPIE Europe Optics & Photonics in Security and Defense, Optical Materials in Defense Systems Technology, Optical Materials and Biomaterials in

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- E 2. Maria Zaharescu, Maria Crisan, Andrei Jitianu, Dorel Crisan Aurelia Meghea, **Ileana Rău**, “*SiO₂ – Oxides Composites Obtained by Sol – Gel Method*”, Sol - Gel 99 - 10th International Workshop on Glasses Ceramics, Hybrids and Nanocomposite from gels, Yokohama, Japonia, 19 – 24 Sept. 1999
- E 3. Aurelia Meghea, **Ileana Rău**, Maria Preda, “*Frites without Lead for Ceramic Colours*”, 13th Conference on Glass and Ceramics, Varna, Bulgaria, 29 Sept. – 01 Oct. 1999;
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- E 5. **Ileana Rău**, A. Gonzalo, M. Valiente, “*Arsenic Removal from Aqueous Solutions by Iron (III) Loaded Chelating Resin*”, 8th International Conference SIS '99, Stara Lesna – High Tatras, Slovakia, 11 – 16 Sept. 1999;
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- E 10. Andrei Jitianu, Maria Crisan, Maria Zaharescu, **Ileana Rău**, Aurelia Meghea, “*Influence of the silica based matrix on the Fe₂O₃ crystallisation in the SiO₂ – Fe₂O₃ system, obtained by sol – gel method*”, Particles 2001, Orlando, FL, USA, 24 – 27 February 2001
- E 11. **Ileana Rău**, A. Meghea, A. Gonzalo, M. Valiente, I. Peleanu, M. Zaharescu, “*Modelling the Arsenic (V) and (III) Adsorption*”, 14th Radiochemical Conference, Mariánské Lázně, Czech Republic, 14 – 19 April 2002, WOS:000184406200021
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- E 13. A.L. Roy, A.J. Attias, B. Charleux, B. Chung, D. Kreher, M. Save, **Ileana Rau**, F. Kajzar, “*Synthesis of well Defined Nonlinear Optical Polymers by Controlled Radical Polymerization (RAFT Process)*”, International Conference on Polymers and Advanced Materials, POLYMEX 2006, Huatulco, Mexico, 5 – 9 Nov. 2006
- E 14. A. Attias, D. Kreher, M. Save, B. Charleux, C. Bui, J. Buffet, F. Kajzar, **Ileana Rau**, “*Synthesis of well-defined NLO polymers by controlled radical polymerization (RAFT) process I*”, Photonics West 2006 - Organic Photonic Materials and Devices VIII, San Jose, SUA, 21 – 26 Jan. 2006
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- E 26. M. Mihaly, R. Popescu, M. Moldoveanu, A. Meghea, **Ileana Rau** *Biomaterials based on DNA embedded in silica matrix*, SPIE Optics & Photonics, Nanoscience and Engineering, Nanobiosystems: Processing, Characterization, and Applications, San Diego, USA, 2 – 6 August, 2009, WOS:000289839400004
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- E 30. A. M. Manea, **Ileana Rau**, F. Kajzar, A. Meghea, *Functionalized bioderived thin films for application in phototonics*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 31. F. A. Jerca, V. V. Jerca, **Ileana Rau**, A. M. Manea, F. Kajzar, D. M. Vuluga, *Simultaneous two and three photon resonant enhancement of third-order NLO susceptibility in azo-dye polymer film*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013, WOS:000317980600009
- E 32. **Ileana Rău**, M. Mîndroiu, A. Țane, R. Zgârian, G. Tihan, F. Kajzar, A. Meghea, *Advanced biomaterials for photonics and electronics*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 33. R. Grykien, B. Luszczynska, I. Glowacki, J. Ulanski, **Ileana Rau**, R. Zgarian, F. Kajzar, *On deoxyribonucleic acid (DNA) based bioleds*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 34. M. Mîndroiu, G. Tihan, R. Zgârian, **Ileana Rău**, F. Kajzar, H. Cunha Leite de Oliveira *Electrochemical characterisation of some DNA based biomaterials with high potential applications*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 35. T. Tihan, M. Mîndroiu, A. Țane, R. G. Zgârian, F. Kajzar, H. Cunha Leite de Oliveira, **Ileana Rău**, *New DNA based biomaterials for applications in biophotonics*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013
- E 36. R. G. Zgârian, A. Țane, G. Tihan, A. Meghea, F. Kajzar, **Ileana Rau**, *Functionalization and characterization of DNA based materials in view of their application in electrooptics*, RICCE XVIII, Sinaia, Romania, 4 – 7 September, 2013

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- E 37. M. Preda, A. Meghea, A. Melinescu, **Ileana Rău**, “*Pigmenti ceramici pe baza de titanati*”, “Al III – Simpozion National “Glazurare si decorare în ceramica fină” 25 oct. 2002 Alba Iulia
- E 38. **Ileana Rău**, A. Gonzalo, J.A.Munoz, M. Zaharescu, A. Meghea, M. Valiente, “*Influence of Arsenic Speciation During the Adsorption on Different Materials*”, 12th Romanian International Conference on Chemistry and Chemical Engineering, Bucuresti, 13 – 15 Sept. 2001
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- E 41. **Ileana Rău**, A. Gonzalo, I. Peleanu, M. Valiente, A. Meghea, “*Influenta Ionilor SO_4^{2+} asupra Retinerii Arsenului din Apele Reziduale*”, A XXV^a Sesiune de Comunicări Stiintifice, Călimănești, 06 – 08 oct. 1999
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- E 43. M. Zaharescu, M. Crisan, **Ileana Rău**, A. Jitianu, A. Meghea, “*Composite $SiO_2 - iron$ oxides materials for magnetically intensified adsorption*”, A IX^a Conferință de Chimie Fizică, Galati, 23 – 25 sept. 1998;
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- E 50. A. Meghea, **Ileana Rău**, C. Motiu, C. Chirnoagă, “*Folosirea spectroscopiei RES pentru detectarea pluării solului*” Conferinta de Chimie si Inginerie Chimică, Bucuresti, 16-18 oct 1997;
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- Pn 12. Contract UPB – CNCSIS Idei nr. 23/20.08.2008 "Workshop Exploratoriu BIOINGTEH-Noi materiale si tehnologii in biologie si medicina", *Coauthor*
- Pn 13. Contract UPB – MECT nr 71 – 047/14.09.2007 – Program 4 – Parteneriate în domeniile prioritare 2007 – 2013 – "Sisteme fotocatalice complexe pentru epurarea avansată a apelor rezulate din industria textilă" – FOTO - COMPLEX, *Coauthor*
- Pn 14. Contract UPB – MECT nr 91 – 012/14.09.2007 – Program 4 – Parteneriate în domeniile prioritare 2007 – 2013 – "Tehnologii și materiale durabile de conservare și de restaurare a obiectelor de patrimoniu din piele, pentru asigurarea viabilității moștenirii culturale la nivel comunitar" – PEL - RESTAURO, *Coauthor*
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