



## PERSONAL INFORMATION



2022 JANUARY

**Dr. Liviu Cosmin COTEȚ**  
**University Lecturer PhD**
**“BABEȘ-BOLYAI” UNIVERSITY**  
**Faculty of Chemistry and Chemical Engineering**

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 40-264-593833



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Sex M | Date of birth 09/02/1977 | Nationality Romanian

 RESEARCH FIELD OF  
 INTEREST

The material science of the synthesis and investigation of carbon nanomaterials such as: **graphene materials** (graphene, graphene oxides as 2D components in suspensions, films, membranes and/or composites) and **3D nanoporous materials** (e.g. undoped and metal doped carbon aerogels, xerogels and cryogels obtained by sol-gel processes) to be proper for applications (sensing, catalysis, fire retardant, energy, adsorbent material, composite formation, restoration-conservation fields, etc.).

<https://scholar.google.com/citations?user=zIRwwbQAAAAJ&hl=en&oi=sra>  
<https://www.scopus.com/authid/detail.uri?authorId=14027890700> ;  
<https://orcid.org/0000-0001-5306-2414>  
<https://www.brainmap.ro/liviu-cosmin-cotet>

-Researcher ID: AAO-8773-2021(G-6268-2012)  
 -UEFISCDI ID (UEF-iD): U-1700-030E-5853

 RESEARCH ACTIVITY  
 INFORMATION

## TEACHING FIELD

Chemical technology, Carbochemistry, Characterization methods, etc.

## WORK EXPERIENCE

From 2021 March – to present

**Lecturer PhD**

Department of Chemical Engineering, Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, ROMANIA

- Teaching and Specific research activities as a member of the project research team

Business or sector Education and Science Research

2009 March – 2021 March

**Scientific researcher III PhD**

Department of Chemical Engineering, Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, ROMANIA

- Specific research activities as leader or member of the project research team

Business or sector Scientific Research

2013 Nov.-2014 Nov.

**GTC-UBB-2013 (Grant Young Researcher-BBU) research fellow**

Department of Chemical Engineering, Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, ROMANIA

- Specific research activities as project leader

Business or sector Scientific Research

- 2010 Nov. – 2012 Nov. **Postdoc POSDRU /89/1.5/S/60189 research fellow**  
 Department of Chemical Engineering, Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, ROMANIA
- Research activity as POSTDRU postdoc researcher
- Business or sector** Scientific Research
- 2011 May-June,  
 2012 Febr.-March  
 (4 months) **Visitor researcher as POSDRU postdoc fellow**  
 Institut de Ciencia de Materials de Barcelona (ICMAB-CNCSIS; [www.icmab.es](http://www.icmab.es)), Bellaterra, E-08193, Spain
- Research-documentation stages funded by Postdoc /89/1.5/S/60189 program
- Business or sector** Scientific Research
- 2007 Dec. - 2008 Oct.,  
 2009 Dec. - 2010 Jan.  
 (12 months) **Postdoc research fellow of European Union's "Marie Curie" program**  
 Department of Chemical Engineering, Rovira i Virgili University, 26, Paisos Catalans, 43007, Tarragona, Spain
- Research activity as Marie Curie Open Tok postdoc researcher
- Business or sector** Scientific Research
- 2007 Sep. -2008 March **Researcher**  
 Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, )
- Specific research activities as a member of the project research team
- Business or sector** Scientific Research
- 2003 Oct. - 2004 July  
 (10 months) **PhD fellowship student of European Union's "Marie Curie" FP6-PHD-training site program (HPMT-CT-2000-00006-program)**  
 Institut de Ciencia de Materials de Barcelona (ICMAB-CNCSIS; [www.icmab.es](http://www.icmab.es)), Bellaterra, E-08193, Spain
- Research activities as European Union's "Marie Curie" Early Stage doctoral fellow
- Business or sector** Scientific Research
- 2002 Oct. -2007 Dec. **PhD student**  
 Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, ROMANIA
- Specific research activity. Doctoral School Graduated. Educational activities with the students
- Business or sector** Education and Scientific Research

## EDUCATION AND TRAINING

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- 2012 May- 2012 July **Project Manager**  
 Institute of Economic and Social Formation, Cluj-Napoca (I.F.E.S Cluj, ROMANIA)
- Project manager signatures for access and manage of National and UE projects
- 2002 Oct. – 2007 Dec. **Doctor in Chemistry**  
 Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, (Romania)
- Doctoral School: 1. General research methods and methodology of scientific paper elaboration; 2. Analytical Spectrometry; 3. Supramolecular Electrochemistry; 4. Systems Theory ; 5. Determination of the reaction mechanisms
- 2002 Oct. -2003 July. **M.Sc. in Physics**  
 Faculty of Physics, Babes-Bolyai University, (Romania)
- Graduated of Science and Technology of the Advanced Materials (Master Curs)
- 2000 Oct. - 2001 July **M.Sc. in Chemistry**  
 Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, (Romania)
- Graduated of Catalysis and Biocatalysis, (Master Curs)

1996 Oct. - 2000 July **B.Sc. in Chemistry - Physics**  
 Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, (Romania)

- University courses program of Physical Chemistry Section;
- Certificate of Teaching Competence;
- Certificates of English Language Proficiency.

1991 Sep. -1995 July. **Baccalaureate Degree in Chemistry-Physics**  
 Mihai Eminescu High School, Baia Mare, (Romania)

- Following secondary school program of specialization Physics-Chemistry

**PERSONAL SKILLS**

Mother tongue(s) Replace with mother tongue(s)

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
Replace with name of language certificate. Enter level if known.					
Spanish	B2	B2	B2	B2	B2
Replace with name of language certificate. Enter level if known.					

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
 Common European Framework of Reference for Languages

Communication skills good communication skills gained through my experience in teaching and member or manager projects

Organisational / managerial skills Manager/coordinator of 5 research projects (gained by competition)

Job-related skills ▪ good command of quality control processes (currently responsible for quality audit)

Computer skills ▪ good command of Microsoft Office™ tools

Other skills ▪

**ADDITIONAL INFORMATION**

**Publications:** More than 40 ISI papers and about 10 not ISI

**Projects:** Manager/coordinator of 5 research projects (gained by competition)  
 More than 20 research project as team member

**Conferences:** More than 40.

**BOOK CHAPTERS (2)**

1. L.C. Cotet, A. Maicaneanu, V. Danciu „Mesoporous Carbon Aerogels. Synthesis, characterisation and environmental applications” in “Comprehensive Guide for Mesoporous Materials”, Volume 1: Synthesis and Characterization, Pub. Date: 2015 - 1st Quarter Pages: 7x10 - (NBC-C), ISBN: 978-1-63463-958-3, Nova Science Publishers, Inc., 2014, NY, 11788-3619.
2. L.C. Cotet, C.I. Fort, L.C. Pop, M. Baia, L. Baia, “Insights Into Graphene-Based Materials as Counter Electrodes for Dye-Sensitized Solar Cells” in “Dye-Sensitized Solar Cells. Mathematical modeling, and Materials design and optimization”, Pub. Date: 2019, Edited by M. Soroush, K.K.S. Lau, ISBN: 978-0-12-814541-8, pag. 341-397, Academic Press, Elsevier.

## PATENTS (5)

1. Obtained from Spanish Patent Office: ES2472368 B1/ 30.06.2014  
 Title: „AMORPHOUS POROUS CARBON MATRIX AND Bi NANOPARTICLES COMPOSED MATERIAL OBTAINED BY A SOL-GEL PROCESS, SYNTHESIS WAY AND APPLICATIONS”, (MATERIAL COMPUESTO QUE COMPRENDE UNA MATRIZ POROSA DE CARBÓN AMORFO Y NANOPARTÍCULAS DE Bi OBTENIBLE MEDIANTE UN PROCEDIMIENTO SOL-GEL, PROCEDIMIENTO DE OBTENCIÓN Y SU USO).  
 Authors: C. Fernández Sánchez, M. Gich Garcia, A. Roig Serra, L.C. Cotet,  
 Owner: Concejo Superior de Investigacion Cientifico (CSIC-Spain).
2. Obtained from Romanian Patent Office (OSIM): No. RO128808 (B1)/2018-05-30,  
 Title: „OBTAINING PROCESS OF RESORCINOL-FORMALDEHIDE XEROGEL / CERAMIC AND CARBON XEROGEL / CERAMIC COMPOSITES”.  
 Authors: L.C. Cotet, C.I. Fort, V. Danciu; Owner: Babes-Bolyai University (Romania).  
[https://ro.espacenet.com/publicationDetails/biblio?I1=2&ND=3&adjacent=true&locale=ro\\_RO&FT=D&date=20130930&CC=RO&NR=128808A2&KC=A2](https://ro.espacenet.com/publicationDetails/biblio?I1=2&ND=3&adjacent=true&locale=ro_RO&FT=D&date=20130930&CC=RO&NR=128808A2&KC=A2)
3. Obtained from Romanian Patent Office (OSIM): No. RO131216 (B1)/2018-02-28,  
 Title: „CHEMICAL EXFOLIATION OBTAINING PROCESS OF LARGE AREA GRAPHENE BASED MATERIALS (GRAPHENE OXIDE AND REDUCED GRAPHENE OXIDE)”,  
 (Romanian title: PROCEDEU DE OBTINERE PRIN EXFOLIERE CHIMICĂ A UNOR MATERIALE PE BAZA DE GRAFEN (OXID DE GRAFEN SI OXID DE GRAFEN REDUS) DE SUPRAFETE FOARTE MARI)  
 Authors: L.C. Cotet, L.G. Baia, V. Danciu; Owner: Babes-Bolyai University (Romania).  
[https://ro.espacenet.com/publicationDetails/biblio?I1=1&ND=3&adjacent=true&locale=ro\\_RO&FT=D&date=20160630&CC=RO&NR=131216A2&KC=A2](https://ro.espacenet.com/publicationDetails/biblio?I1=1&ND=3&adjacent=true&locale=ro_RO&FT=D&date=20160630&CC=RO&NR=131216A2&KC=A2)
4. Obtained from Romanian Patent Office (OSIM): No. RO133255B1/27.11.2020,  
 Title: „MATERIAL COMPOSITE OBTAINING PROCESS OF NANOPOROUS CARBON/GRAPHENE/BISMUTH AND IRON NANOPARTICLES/TITANIUM DIOXIDE WITH ANALYTICAL AND PHOTODEGRADATION PROPERTIES”  
 Authors: L.C. Cotet, L.G. Baia, C.I. Fort, L.C. Pop, M. Rusu; Owner: Babes-Bolyai University (Romania).  
[https://ro.espacenet.com/publicationDetails/biblio?I1=0&ND=3&adjacent=true&locale=ro\\_RO&FT=D&date=20190430&CC=RO&NR=133255A2&KC=A2](https://ro.espacenet.com/publicationDetails/biblio?I1=0&ND=3&adjacent=true&locale=ro_RO&FT=D&date=20190430&CC=RO&NR=133255A2&KC=A2)
5. Emitted by The International Bureau of WIPO (Geneva, Switzerland):  
 WO 2019/234284 A1; ES-2734729 B2.  
 Title: “Procedure for Obtaining a Flexible Electrode” (PROCEDIMIENTO DE OBTENCIÓN DE UN ELECTRODO FLEXIBLE)  
 Authors: A. Perez Del Pino, A.Y. Chuquitarqui Valladares, L.C. Cotet.; Owners: CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC, Spain) (67%) and BABES-BOLYAI UNIVERSITY (33%, Romania).

## Honours and awards (11)

### -2018:

1. **GOLD MEDAL** at PROINVENT 2018, Cluj-Napoca, Romania  
 for Patent No. 1037524/23.10.2017, Title: „OBTAINING PROCESS OF RESORCINOL-FORMALDEHIDE XEROGEL / CERAMIC AND CARBON XEROGEL / CERAMIC COMPOSITES”. Authors: L.C. Cotet, C.I. Fort, V. Danciu. Owner: Babes-Bolyai University (Romania).
2. Special Award for Environmental Protection of National Institute of Research and Development in Environmental Protection at PROINVENT 2018, Cluj-Napoca, Romania.
3. **SILVER MEDAL** at EUROINVENT 2018, Iasi, Romania  
 for Patent No. 1037524/23.10.2017, Title: „OBTAINING PROCESS OF RESORCINOL-FORMALDEHIDE XEROGEL / CERAMIC AND CARBON XEROGEL / CERAMIC COMPOSITES”. Authors: L.C. Cotet, C.I. Fort, V. Danciu. Owner: Babes-Bolyai University (Romania).
4. **BRONZE MEDAL** at EUROINVENT 2018, Iasi, Romania  
 for Patent No. 1034154/29.09.2017, Title: „CHEMICAL EXFOLIATION OBTAINING PROCESS OF LARGE AREA GRAPHENE BASED MATERIALS (GRAPHENE OXIDE AND REDUCED GRAPHENE OXIDE)”, Authors: L.C. Cotet, L.G. Baia, V. Danciu, Owner: Babes-Bolyai University (Romania).
5. Excellence Diploma and Special Prize of Banat’s University Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from Timisoara at EUROINVENT 2018, Iasi, Romania.

### -2020:

6. **GOLD MEDAL** at PROINVENT 2020, Cluj-Napoca, Romania for Patent No. 131216/28.02.2018, Title: „CHEMICAL EXFOLIATION OBTAINING PROCESS OF LARGE AREA GRAPHENE BASED MATERIALS (GRAPHENE OXIDE AND REDUCED GRAPHENE OXIDE)”, Authors: L.C. Cotet, L.G. Baia, V. Danciu, Owner: Babes-Bolyai University (Romania).
7. **GOLD MEDAL** at PROINVENT 2020, Cluj-Napoca, Romania for Patent WO 2019/234284 A1; ES-2734729 B2. Title: “Procedure for Obtaining a Flexible Electrode”, Authors: A. Perez Del Pino, A.Y. Chuquitarqui Valladares, L.C. Cotet. Owners: CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC, Spain) (67%) and BABES-BOLYAI UNIVERSITY (33%, Romania).
8. **GOLD MEDAL** at PROINVENT 2020, Cluj-Napoca, Romania for Patent No. RO133255B1/27.11.2020, Title: „MATERIAL COMPOSITE OBTAINING PROCESS OF NANOPOROUS CARBON/GRAPHENE/BISMUTH AND IRON NANOPARTICLES/TITANIUM DIOXIDE WITH ANALYTICAL AND PHOTODEGRADATION PROPERTIES”, Authors: L.C. Cotet, L.G. Baia, C.I. Fort, L.C. Pop, M. Rusu. Owner: Babes-Bolyai University (Romania).

### -2021:

9. **GOLD MEDAL** at INVENTICA 2021, Iasi, Romania for Patent WO 2019/234284 A1; ES-2734729 B2. Title: “Procedure for Obtaining a Flexible Electrode”, Authors: A. Perez Del Pino, A.Y. Chuquitarqui Valladares, L.C. Cotet. Owners: CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC, Spain) (67%) and BABES-BOLYAI UNIVERSITY (33%, Romania).
10. **GOLD MEDAL** at INVENTICA 2021, Iasi, Romania for Patent No. RO133255B1/27.11.2020, Title: „MATERIAL COMPOSITE OBTAINING PROCESS OF NANOPOROUS CARBON/GRAPHENE/BISMUTH AND IRON NANOPARTICLES/TITANIUM DIOXIDE WITH ANALYTICAL AND PHOTODEGRADATION PROPERTIES”, Authors: L.C. Cotet, L.G. Baia, C.I. Fort, L.C. Pop, M. Rusu. Owner: Babes-Bolyai University (Romania).

11. **GOLD MEDAL** at TEKNOFEST, Turk Patent ISIF 2021, Turkey for Patent WO 2019/234284 A1; ES-2734729 B2. Title: "Procedure for Obtaining a Flexible Electrode", Authors: A. Perez Del Pino, A.Y. Chuquitarqui Valladares, L.C. Cotet. Owners: CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC, Spain) (67%) and BABES-BOLYAI UNIVERSITY (33%, Romania).

#### GRANTS AND PROJECTS

1. Composite materials with graphene oxide to improve the performance of the building and installation elements against fire action in order to ensure the protection of life in case of fire, PN-III-P1-1.2-PCCDI-2017-0350, 2018-2021; about 175000 Euro/sub-project; about 980000 Euro/Project - **main coordinator of sub-project**. <http://go4life.granturi.ubbcluj.ro/>
2. Reinforcement and / or protection products based on graphene nanomaterials and TiO<sub>2</sub> used in the restoration of artistic stone components and history mortars (based on lime), UBB-TeMATIC-Art, ID P\_40\_374, nr. 34375/09.08.2017, 2017-2022.- **main coordinator of sub-project**, <http://tematicart.granturi.ubbcluj.ro/>
3. Electrode materials based on carbon porous structures, Bi-Fe and/or TiO<sub>2</sub>, with analytical applications, PN-II-RU-TE-2014-4-1194 (Romanian Young Research Team Grant), 2015-2017, about 120000 euro, -**general manager**. <http://www.chem.ubbcluj.ro/~ccosmin/TE2015/>
4. Synthesis and characterization of Bi impregnated C xerogels with application in new sensor electrodes for heavy metal detection, GTC-UBB-2013, 2013-2014, **general manager**.
5. Nanostructured materials based on polymeric and carbon xerogels / aerogels for environmental and gas separation application, POSDRU 89/1.5/S/60189 /2010, 2010-2013, general manager.