

## Curriculum Vitae

### CONTACT INFORMATION

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### EDUCATION

- 1981-1985: High school *Gheorghe Lazar*, Bucharest.
- 1985-1989: Faculty of Technological Chemistry – Polytechnic Institute of Bucharest, Romania – section Chemistry, licence.
- 1989-1990: Faculty of Chemistry, University of Bucharest, Romania, master degree
- 1991-1992 Université de Sciences et Technologies de Lille I, France, *Diplôme d'Etudes Approfondies*
- 1992-1995: Université de Sciences et Technologies de Lille I, France, Ph. D. in Chemistry – mention *très honorable*.

### ACADEMIC CAREER HISTORY

- High school *Industrie Usoara* Bucharest, chemistry teacher: sept. 1990 – ian. 1991.
  - University of Bucharest, Faculty of Chemistry, Department of Analytical Chemistry
    - o 1991– 1993: Junior Teaching Assistant;
    - o 1993 – 1998: Assistant Lecturer;
    - o 1998 – 2002: Assistant Professor;
    - o 2002 – 2006: Associate Professor;
    - o 2006 – present days: Professor.
- Since 2007: Habilitation to conduct Ph.D. thesis.

### HONORS/AWARDS/FELLOWSHIPS/GRANTS:

- 1991 - winner of a French Government fellowships for MA and Ph.D. studies during 1991-1995.
- *Honorary diploma* – awarded by Romanian Chemical Society on the occasion of its 90<sup>th</sup> anniversary, (December, 2009).

### INTERNATIONAL COLLABORATIONS

#### Visiting positions

- 01.02 – 01.03. 2001- *Maître de Conference* – Université du Littoral, Dunkerque, France,
- 01.06 – 30.06. 2006. *Professeur invité* – Université du Littoral, Dunkerque, France.

#### Joint research projects

- 1991-1995: *Systèmes hydroquinoniques à propriétés antioxydants et inhibiteurs potentiels de la voie des lipoxygénases*, Université de Sciences et

Technologies de Lille I Programme Pays d'Europe Centrale et Orientale - 91/9100694 – 1991

- 1997-1999: Materials and processes in life control quality optimisation; joint research project type *Socrates* (universities from France, Belgium and Germany involved).
- 2001–2006: L'extraction et dosage des substances à étiqueter dans les matrices cosmétiques joint research project with YSL Beauté and Université du Littoral, Dunkerque France
- 2005-2007 The prediction of protein degradation characteristics of ruminant feedstuffs by the means of near infrared reflectance (NIRS) or on the basis of fibre bound protein joint research project between Republic of Slovenia – and Romania.
- 2012-2014 Co-ordinator of a Romania-Turkey joint research project entitled *An assessment of the anthropogenic factors upon the quality and the health benefits of tea and herbal teas*. Turkish partner: Prof. Hüveyda Başağa, Sabanci University, Istanbul.

### TEACHING EXPERIENCE

Courses: Analytical Chemistry (Qualitative and Quantitative Analysis), Instrumental Analysis, Methods for structure elucidation of organic analytical reagents (NMR, MS, FT-IR, Raman, UV-VIS), Analytical methods in environmental quality control; History of Chemistry; Statistical methods – an introductory course; Methods for art authentication.

#### Supervising activity

- 2 Ph. D. thesis;
- 50 B.Sc thesis and 28 M.Sc thesis;
- Research stages supervisor (3 months):
  - students from the University of Perpignan – France (2010-2012, each year 1 student);
  - ERASMUS student from University of Sassari, Italy (2019).

### RESEARCH EXPERIENCE

#### *Analytical chemistry:*

- analytical separation sciences: chromatographic methods (HPLC, LC-MS, GC-MS, HPIC); ion-exchange chromatography;
- spectrometric methods (UV-VIS, FT-IR, NMR, MS);
- disintegration and dissolution tests;
- electroanalytical methods: voltammetric, potentiometric; KF titration;
- environmental chemistry: organic pollutants monitoring, water analysis;
- pharmaceutical analysis;
- plant and soil chemistry.

#### *Current research:*

- development of liquid chromatography methods using mixed-mode stationary phases;
- determination of volatile compounds of some living plants by GC-MS and their antioxidant activity;

- set up new chromatographic methods for environmental monitoring (priority organic pollutants and ionic species) using ionic liquids as mobile phase or samples modifiers;
- development of new methods for water decontamination using modified ion-exchange resin or non-conventional materials.

#### PUBLICATIONS

- Scientific publications with peer-review: 81
- Scientific books: 4;
- High -school chemistry book (co-author): 9
- Patents: 2-national, 1-international
- *H*-index: 14 (Scopus)

#### PROFESSIONAL SERVICE:

##### **Academic Management**

- 2004 – 2019 Member of Academic Council of the Faculty of Chemistry, University of Bucharest;
- 2008-2012 – Cancellor, Faculty of Chemistry, University of Bucharest;
- 2011 – 2015 Member of the Senate of the University of Bucharest.

##### **Member of Editorial board**

- *Environmental Monitoring and Assessment* (Springer);
- *Revista de Chimie (Bucuresti)*;
- *Medicinal Chemistry : An Indian Journal* (Trade Science Inc.);
- *Chemistry : An Indian Journal* (Trade Science Inc.);
- *BioChemistry : An Indian Journal* (Trade Science Inc.).
- *The Open Chemical and Biomedical Methods Journal*.
- Executive Editor: *Analele Universitatii din Bucuresti*

##### **Activities for scientific community**

- President *Raluca Ripan* National Chemistry Competition (for Gymnasium 7<sup>th</sup> grade children), Bucharest 2018;
- Tutor involving in training high school students participating in various levels of Chemistry Competitions (involving both theoretical and practical activities) since 2016;
- Vice-president of the national conquest “*Chemistry – Friend or Enemy?!?*” dedicated to the high-school students, 2008-2011.
- Trainer of analytical chemistry (both theoretical and practical components) for high-school students of Romanian team participating at *International Chemistry Olympiad*, 1990-2005.

#### PROFESSIONAL AFFILIATIONS

- Romanian Chemical Society; General Secretary 2011-2015.
- Society of Analytical Chemistry *Romania*;
- EURACHEM Romania;

15.09.2021

Irinel Adriana Badea

