Curriculum Vitae

## INFORMAŢII PERSONALE

# Raluca-Ioana van Staden



http://www.patlab.ro

| Naţionalitatea: Romana

Nume inaintea casatoriei: Stefan

## EXPERIENŢA PROFESIONALĂ

**Din 1.03.2007 -**

Profesor, CSI, Sef al Laboratorului de Electrochimie si PATLAB, Institutul National de Cercetare pentru Electrochimie si Materie Condensata.

Cercetare, Director si coordonator de proiecte nationale si internationale, managementul laboratorului, indrumator pentru tineri cercetatori – masteranzi, doctoranzi

**03.2015-07.2016**

Director Stiintific al Institutului National de Cercetare pentru Electrochimie si Materie Condensata

**Din 15.12.2013 -**

Profesor – conducator de doctorat la Universitatea Politehnica din Bucuresti

Conducator stiintific pentru doctoranzi.

**1 Ian 06 - 31 Aug 06**

Profesor de Chimie Analitica si Bioanaliza

Universitatea din Pretoria, Pretoria (Africa de Sud)

Educatie - conducator stiintific pentru master, doctorat, postdoc. Coordonator de curs, predare cursuri si laboratoare anii I-IV de studiu. Cercetare - coordonatoarea grupului de cercetare in bioanaliza si enantioanaliza in domeniile clinic si farmaceutic. Management - membra a Comitetului de Cercetare al Catedrei de Chimie. Mentor pentru tinerii cercetatori din catedra, in programe oferite de universitate si Royal Society of Chemistry.

**1 Feb 98 - 31 Dec 00**

Postdoc

Universitatea din Pretoria , Pretoria (Africa de Sud)

Educatie - predare de cursuri la anii II si IV, conducator stiintific de master si doctorat, membru in comisii de doctorat. Cercetare - in domeniul analizei farmaceutice, biomedicale si sisteme in flux.

**1 Oct 92 - 31 Ian 98**

Preparator si asistent universitar

Universitatea din Bucuresti , Bucuresti (România)

Educatie - curs anul IV, laboratoare anii I-IV, coordonare lucrari de licenta si master. Cercetare - in domeniile analizei clinice si farmaceutice.

## EDUCAŢIE ŞI FORMARE

**1 Oct 87 - 1 Iul 92**

**Diploma de Chimist - sef de promotie**

Universitatea din Bucuresti, Bucuresti (România)

Chimie, specializarea chimie analitica. Sefa de promotie, Facultatea de Chimie, Specializarea – Chimie.

**1 Mar 95 - 27 Mar 97**

**Doctor in Chimie**

Universitatea din Bucuresti, Bucuresti (România)

Chimie, specializarea Chimie analitica

**1 Oct 91 - 1 Iul 96**

**Licentiat in pian si educatie muzicala**

Universitatea Nationala de Muzica din Bucuresti, Bucuresti (România)

Pian si educatie muzicala

**1 Oct 96 - 1 Iul 97**

**Master in limbaj si stil compozitional**

Universitatea Nationala de Muzica din Bucuresti, Bucuresti (România)

Compozitie muzicala

**29 Iul 2013**

**Dr Habilitas in Chimie /al doilea doctorat. Drept de conducere a tezelor de doctorat (Universitatea Politehnica din Bucuresti).**

Universitatea Politehnica din Bucuresti

## COMPETENTE PERSONALE

**Limba(i) maternă(e)**

Română

**Alte limbi străine cunoscute**

| | INTELEGERE | | VORBIRE | | SCRIERE |
|---|---|---|---|---|---|
| | Ascultare | Citire | Participare la conversaţie | Discurs oral | |
| Engleză | C2 | C2 | C2 | C2 | C2 |
| Afrikaans | B1 | B1 | B1 | B1 | B1 |

Niveluri: A1/2: Utilizator elementar - B1/2: Utilizator independent - C1/2: Utilizator experimentat
Cadrul european comun de referinţă pentru limbi străine

**Competenţe de comunicare**

Buna experienta in comunicarea stiintei.

**Competenţe organizaţionale/manageriale**

Sunt manager a unei echipe de cercetare din 2001. La universitatea din Pretoria am avut 15 studenti in echipa (din toate nivelele de studii), acum am 7 studenti la nivel de licenta, master, doctorat. Sunt managerul laboratorului in care lucrez. Am fost secretara Comisiei V1 Aspecte generale ale chimie analitice din cadrul IUPAC in perioada 1999-2001. Fac parte din comitetul executiv al Diviziei de Senzori din cadrul ECS, USA. Sunt Presedinta Grupului de Studiu de Bioanaliza din cadrul Diviziei de Chimie Analitica a EUCHEMs. **Sunt Presedinta Grupului de studiu Bioanaliza din cadrul Diziviei de Chimie Analitica a EUCHEMs. Sunt Presedinta Filialei Internationale din Romania a Societatii Americane de Chimie.**

Conduc proiecte de cercetare nationale si internationale.

| | |
|---|---|
| Competenţe dobândite la locul de muncă | Am facut parte din Comitetul de cercetare al Catedrei de Chimie din cadrul Universitatii din Pretoria. Fac parte din Comitetul stiintific al Institutului de Cercetare pentru Electrochimie si Materie Condensata. |
| Competenţe informatice | MSWord, Corel si Sigma Plot. |

**ANEXE**

1. PUBLICATII -
2. PARTICIPARI LA CONFERINTE
3. CONDUCATOR STIINTIFIC
4. MEMBRU IN BIROURI NATIONALE/INTERNATIONALE
5. MEMBRU AL COLECTIVELOR DE REDACTIE
6. VIZITE LA UNIVERSITATI CA PROFESOR/CERCETATOR
7. MANAGEMENT SI ADMINISTRATIE
8. REFERENT
9. PREMII
10. ALTE ACTIVITATI PROFESIONALE
11. PROIECTE DE CERCETARE
12. ACTIVITATE DIDACTICA

## 1. Publicatii – PESTE 380 LUCRARI IN REVISTE ISI

1.1. Lucrari publicate in reviste ISI (h=27, 3723 citari, conform SCOPUS ; h=25, 3232 citari, conform Web of Science, h=34, 5195 citari conform Google Scholar)

**Selectie :**

304. Chiral single-walled carbon nanotubes – as chiral selectors in multimode enantioselective sensors
R.I. Stefan-van Staden, I.R. Comnea
Chirality, 33(1), 51-58, 2021

305. No Association between 25-Hydroxyvitamin D and Insulin Resistance or Thyroid Hormone Concentrations in a Romanian Observational Study.
RA Stoica, C Guja, A Pantea-Stoian, RI Stefan-van Staden, I Popa-Tudor, SD Stefan, R Ancuceanu, C Serafinceanu, C Ionescu Tîrgoviste,
Medicina, 2021, 57(25) 57010025

306. Electroanalysis of interleukins 1β, 6, and 12 in biological samples using a needle stochastic sensor based on nanodiamond paste
RM Ilie-Mihai, SS Gheorghe, RI Stefan-van Staden, A Bratei
Electroanalysis, 33(1), 6-10, 2021

307. Sulphur Doped Graphenes – as New Materials for the Design of 3D-Needle Stochastic Sensors
RM Ilie-Mihai, RI Stefan-van Staden, A Lungu-Moscalu, S Gurzu, F Pogacean, SM Pruneanu
J Electrochem Soc, 168(3), 037509, 2021

308. Disposable Stochastic Sensor Based on Deposition of a Nanolayer of Silver on Silk for Molecular Recognition of Specific Biomarkers
RI Stefan-van Staden, SS Gheorghe, RM Ilie-Mihai, M Badulescu
J Electrochem Soc , 168(3), 037515, 2021

309. Characterization of low-cost, robust, graphene-based amperometric dot microsensors for the determination of dopamine
van Staden, RI Stefan-van Staden
Anal Lett, 54(18), 2921-2928, 2021

310. 3D Stochastic microsensors for molecular recognition and determination of heregulin-α in biological samples
RI Stefan-van Staden, C Cioates Negut, SS Gheorghe, A. Ciorita
Anal Bioanal Chem, 413(13), 3487-3492, 2021

311. Recent developments in electrochemical sensors for the determination of polycyclic aromatic hydrocarbons (PAHs) from water samples
IR Stancu, JF van Staden, RI Stefan-van Staden
J Electrochem Soc., 168(4), 047504, 2021

312. Some people and places important in the history of analytical chemistry in Romania
RI Stefan-van Staden, V. David, D. Thorburn Burns
Revista de Chimie, 72(2), 147-155, 2021

313. Determination of dopamine in whole blood samples using a new electrochemical sensor based on graphene
SS Gheorghe, RM Ilie-Mihai, RI Stefan-van Staden
U.P.B. Sci. Bull., 83(4), 145-150, 2021

314. Application of a tetraamino cobalt(II) phthalocyanine modified screen printed carbon electrode for the sensitive electrochemical determination of L-dopa in pharmaceutical and biological samples
R State, JF van Staden, C Stefanov, RI Stefan-van Staden
Electroanalysis, 33(7), 1778-1788, 2021

315. Recent trends in supramolecular recognition using electrochemical sensors.
C Cioates Negut, RI Stefan-van Staden
J Electrochem Soc., 168 (6), 067517, 2021

316. Nitrogen, sulfur co-doped graphene as efficient electrode material for L-cysteine detection
C. Varodi, F. Pogăcean, A. Ciorită, O. Pană, B. Cozar, T. Radu, M. Coroș, R.I. Ștefan-van Staden, S. Pruneanu
Chemosensors, 9(6), 146, 2021.

317. Stochastic biosensors based on N and S-doped graphene for the enantioanalysis of aspartic acid in biological samples
RI Stefan-van Staden, DC Gheorghe, RM Ilie-Mihai, L Barbu-Tudoran, SM Pruneanu
RSC Adv., 11, 23301-23309, 2021

318. Subclinical hypothyroidism has no association with insulin resistance indices in adult females: A case-control study
RA Stoica, R Ancuceanu, SD Stefan, A Pantea Stoian, C Guja, RI Stefan-van Staden, I Popa-Tudor, C Serafinceanu, C Ionescu-Tirgoviste
Experimental Therapeutics Medicine, 22, 1033, 2021

319. Simultaneous determination of levodopa and dopamine from biological samples using 3D printed stochastic microsensors
C Cioates Negut, Sorin Sebastian Gheorghe, RI Stefan-van Staden, JF van Staden
J Pharm Biomed Anal, 205, 114292, 2021

320. Fast screening method based on disposable stochastic sensor for sensitive detection of heregulin-α in biological samples

RI Stefan-van Staden, SS Gheorghe, C Cioates Negut, M Badulescu
Life, 11, 894, 2021

321. Fast screening method of biological samples based on needle stochastic sensors for early detection of gastric cancer
RM Ilie-Mihai, DC Gheorghe, RI Stefan-van Staden, A Lungu-Moscalu, SM Pruneanu, JF van Staden
Rev de Chimie, 72(4), 22-34, 2021

322. Hydrothermal synthesis of nitrogen, boron co-doped graphene with enhanced electro-catalytic activity for cymoxanil detection
C Varodi, F Pogăcean, M Coros, L Magerusan, RI Stefan van Staden, S Pruneanu
Sensors, 21, 6630, 2021 https://doi.org/10.3390/s21196630

323. Mussel Shells - a Valuable Calcium Resource for Pharmaceutical Industry
M Mititelu, G Stanciu, D Drăgănescu, AC Ioniță, SM Neacșu, M Dinu, RI Stefan-van Staden, E Moroșan
Marine Drugs, 20(1), 25, 2022

324. Disposable stochastic sensors obtained using nanolayer deposition of copper, graphene, and copper-graphene composite on silk, for biomedical analysis
C Cioates Negut, RI Stefan-van Staden, M Badulescu, B Bita
Anal Bioanal Chem, 414(5), 1797–1807, 2022

325. Review. Recent trends on the electrochemical sensors used for the determination of tartrazine and Sunset Yellow FCF from food and beverage products
R Georgescu State, JF van Staden, RI Stefan-van Staden
J Electrochem Soc., 169, 017509, 2022

326. Enantioanalysis of aspartic acid using 3D stochastic sensors
IM Bogea, RI Stefan-van Staden, DC Gheorghe, RM Ilie-Mihai
Anal.Lett, 55(1), 85-92, 2022

327. Stochastic microsensors based on carbon nanotubes decorated with Cu and Au nanoparticles, for molecular recognition of isocitrate dehydrogenases 1 and 2 in biological samples
RI Stefan-van Staden, C Cioates Negut, SS Gheorghe, P Sfirloaga
Nanomaterials, 12(3), 460, 2022

328. 2D Disposable Stochastic Sensors for Molecular Recognition and Quantification of Maspin in Biological Samples
RI Stefan-van Staden, RM Ilie-Mihai, DC Gheorghe, IM Bogea, M Badulescu
Microchimica Acta, 189, 101, 2022

329. Stochastic Sensors for the Enantioselective Determination of Serine in Blood for the Early Diagnosis of Breast Cancer
OR Musat, RI Stefan-van Staden
Anal. Lett., 55(13), 2124-2131, 2022

330. Stochastic microsensors based on modified graphene for pattern recognition of maspin in biological samples
RI Stefan-van Staden, IM Bogea, RM Ilie-Mihai, DC Gheorghe, M Coros, SM Pruneanu
Anal Bioanal Chem, 414(12), 3667-3673, 2022

331. Facile detection of naphthalene with a 5,10,15,20-tetrakis(4-methoxyphenyl)-21H,23H-porphine nickel (II)/N-(1-Naphthyl) ethylenediamine dihydrochloride renewable graphene oxide paste electrode
IR Comnea-Stancu, JF van Staden, RI Stefan-van Staden
J Electrochem Soc, 169, 037527, 2022

332. Recent Electrochemical Methods Proposed for the Detection of Hepatitis C Virus. A Minireview
RM Ilie-Mihai, R.I. Stefan-van Staden, J.F. van Staden, H.Y. Aboul-Enein
Revista de Chimie, 73(2), 1-16, 2022

333. Progress in electroanalysis of p53, CEA and CA19-9. A minireview.
RM Ilie-Mihai, RI Stefan-van Staden, JF van Staden
J Electrochem Soc., 169 (3), 037518, 2022

334. Fast screening method for early diagnostic of gastric cancer based on utilization of a chitosan – S-doped graphene - based needle stochastic sensors
RM Ilie-Mihai, DC Gheorghe, RI Stefan-van Staden, A Lungu-Moscalu, JF van Staden
J Pharm Biomed Anal, 214, 114725, 2022

335. Challenges in Biomedical Analysis - From Classical Sensors to Stochastic Sensors
RI Stefan-van Staden
ECS Sensors Plus, 1, 011603, 2022

336. In-House Validated Map of Lymph Node Stations in a Prospective Cohort of Colorectal Cancer: A Tool for a Better Preoperative Staging
P. Simu, I. Jung, L. Banias, Z.Z. Fulop, T. Bara, I. Simu, S. Andone, RI Stefan-van Staden, C.B. Satala, I. Halmaciu, S. Gurzu
J Oncology, Article ID 1788004, 10 pages, 2022

337. Disposable stochastic sensors for fast analysis of ibuprofen, ketoprofen, and flurbiprofen in their topical pharmaceutical formulations
BM Țuchiu, RI Stefan-van Staden, M Bădulescu, JF van Staden
J.Pharm.Biomed.Anal., 215, 114758, 2022.

338. Interleukin-8, CXCL10, CXCL11 and their role in insulin resistance in adult females with subclinical hypothyroidism and prediabetes
RA Stoica, N Drăgana, R Ancuceanu, OI Geicu, C Guja, A Pantea-Stoian, DC Gheorghe, RI Stefan-van Staden, C Serafinceanu, A Costache, C Ionescu-Tîrgoviște

Journal of Clinical and Translational Endocrinology, 28, 100299, 2022.

339. NS Decorated Graphenes Modified with 2,3,7,8,12,13,17,18-Octaethyl-21H,23H-Porphine Manganese (III) Chloride Based 3D Needle Stochastic Sensors for Enantioanalysis of Arginine - a Key Factor in the Metabolomics and Early Detection of Gastric Cancer
RI Stefan-van Staden, MI Bogea, RM Ilie-Mihai, DC Gheorghe, HY Aboul-Enein, M Coros, SM Pruneanu
Anal. Bioanal.Chem., 414(22), 6521–6530, 2022

340. Determination of D-serine from whole blood samples using an electrochemical sensor based on zinc (II)-5(4-carboxylphenyl)-10,15,20-tris(4phenoxyphenyl)porphyrine
OR Musat, RM Ilie-Mihai, RI Stefan-van Staden
Sci Bull UPB, 84(4), 139-148, 2022

341. Determination of p53 from whole blood samples using an electrochemical sensor based on graphene decorated with N and S
IM Bogea, RM Ilie-Mihai, RI Stefan-van Staden
Sci Bull UPB, 84(3), 121-130, 2022

342. Nanographene based electrochemical sensors for ultrasensitive determination of sorbic acid from bread and mayonnaise
RI Stefan-van Staden, AR Niculae, JF van Staden, P Sfirloaga, R State
Anal Bioanal Chem, 414(23), 6813–6824, 2022

343. Mini-Review−Electrochemical sensors used for the determination of some antifungal azoles
BM Tuchiu, RI Stefan-van Staden, J (Koos) F van Staden
ECS Sensors Plus, 1(3), 030601, 2022

344. Sulfur-doped graphene based electrochemical sensors for fast and sensitive determination of (R)-(+)-Limonene from beverages
AR Niculae, RI Stefan-van Staden, JF van Staden, R Georgescu State
Sensors, 22(15), 5851 https://doi.org/10.3390/s22155851, 2022

345. Ultrafast screening of whole blood for early prediction of diabetes by fractalkine detection
RI Stefan-van Staden, DC Gheorghe, RA Stoica
Sensors & Diagnostics, 1(5), 977-982, 2022

346. Highly sensitive electrochemical detection of azithromycin with graphene-modified electrode
F Pogăcean, C Varodi, L Măgeruşan, RI Stefan-van Staden, S Pruneanu
Sensors, 22(16), 6181, 2022 https://doi.org/10.3390/s22166181

347. Carbon Nanopowder Based Stochastic Sensor for Ultrasensitive assay of CA 15-3, CEA and HER2 in whole blood
RI Stefan-van Staden, OR Musat, DC Gheorghe, RM Ilie-Mihai, JKF van Staden
Nanomaterials, 12, 3111, 2022. https://doi.org/10.3390/

348. V-set and immunoglobulin domain containing 1 (VSIG1) as an emerging target for epithelial–mesenchymal transition of gastric cancer
CB Satală, I Jung, Z. Kovacs, RI Stefan-van Staden, T Bara, C Molnar, AI Patrichi, S. Gurzu
Scientific Reports, 12, 16241, 2022

349. Simultaneous analysis of MLH1, MSH2, MSH6, PMS2 and KRAS in patients with gastric and colon cancer using stochastic sensors
RI Stefan-van Staden, DC Gheorghe, F Pogacean, S Pruneanu
Chemosensors, 10(10), 380, 2022 https://doi.org/10.3390/chemosensors10100380

350. Ultrasensitive assay of HER-1, HER-2, and heregulin-α in whole blood
RI Stefan-van Staden, OR Musat, DC Gheorghe, RM Ilie-Mihai
Talanta Open, 6, 100151, 2022

351. N-methylfulleropyrrolidine based multimode sensor for determination of butoconazole nitrate
BM Țuchiu, RI Stefan-van Staden, JF van Staden, HY Aboul-Enein
ACS Omega, 7(46), 42537−42544, 2022

352. Molecular Recognition and Quantification of MLH1, MSH2, MSH6, PMS2 and KRAS in biological samples
RI Stefan-van Staden Staden, RM Ilie-Mihai, M Coros, SM Pruneanu
ECS Sensors Plus, 1, 031606, 2022

353. Molecular recognition and quantification of HER-3, HER-4 and HRG-α in whole blood and tissue samples using stochastic sensors
DC Gheorghe, Raluca-Ioana Stefan-van Staden
Micromachine, 13(10), 1749, 2022. https://doi.org/10.3390/mi13101749

354. An Approach to the Simultaneous Determination of a Panel of Five Biomarkers for the Early Detection of Brain Cancer Using the Stochastic Method
C Cioates Negut, RI Stefan-van Staden, P Sfirloaga
Chemistry, 4(4), 1382–1394, 2022. https://doi.org/10.3390/chemistry4040090

355. Mini-review: Electrochemical sensors used for the determination of water- and fat-soluble vitamins: B, D, K
DC Gheorghe, RI Stefan-van Staden, JF van Staden
Crit. Rev. Anal. Chem., 00, 000, 2023

356. Recent trends in ibuprofen and ketoprofen electrochemical quantification – a review
BM Țuchiu, RI Stefan-van Staden, JF van Staden

Crit Rev Anal Chem, 00, 000, 2023

357. Minireview: current trends, and future challenges for the determination of patulin in food products
C Cioates Negut, RI Stefan-van Staden, JF van Staden
Anal Lett, 56(1), 25-41, 2023

358. Review- recent developments in electrochemical detection of atrazine
IR Comnea-Stancu, JF van Staden, RI Stefan-van Staden
Anal Lett, 00, 000, 2023

359. Simultaneous molecular recognition of IL-2, IL-4, and TNF-α in biological samples
C Cioates Negut, RI Stefan-van Staden, P Sfirloaga
Electroanalysis, 00, 000, 2023

360. Simultaneous detection of anthracene and phenanthrene using a poly-Alizarin Red S/carbon paste electrode
IR Comnea-Stancu, JF van Staden, RI Stefan-van Staden, RN State
Chemosphere, 310, 136909, 2023

361. Effect of cooking and preserving on the heavy metals content of seafood, tuna and poultry
IA Chera-Anghel, RI Stefan-van Staden
Food Chem, 407, 135158, 2023

362. Gold nanoparticles/nanographene-based 3D sensors integrated in mini-platforms for thiamine detection
DC Gheorghe, JF van Staden, RI Stefan-van Staden, P. Sfirloaga
Sensors, 23(1), 344, 2023. https://doi.org/10.3390/s23010344

363. Portable device based on the utilization of a 2D disposable paper stochastic sensor for fast ultrasensitive screening of food samples for bisphenols
RI Stefan-van Staden, IA Chera-Anghel, JF van Staden, DC Gheorghe, M Badulescu
Sensors, 23(1), 314, 2023. https://doi.org/10.3390/s23010314, 2023

**1.2. Carti si capitole in carti, peste 15, din care:**

1. *"Quality and Reliability in Analytical Chemistry"*
H.Y. Aboul-Enein, **R.I. Stefan** and G.E. Baiulescu
**CRC Press**, Boca Raton, Florida, USA, 28 September 2000.

2. *"Electrochemical Sensors in Bioanalysis"*
**R.I. Stefan**, J.F. van Staden and H.Y. Aboul-Enein
**Marcel Dekker Inc.**, New York, USA, 2001.

3. *"Laboratory Auditing for Quality and Regulatory Compliance"*
D.C. Springer, **R.I. Stefan** and J.F. van Staden
**Taylor and Francis**, New York, USA, 2005.

4. *"Recent developments of chemiluminescence sensors"* (Chapter 20)
X.R. Zhang, A.M. Garcia-Campana, W.R.G. Bayens, **R.I. Stefan**,
H.Y. Aboul-Enein and J.F. van Staden
**in CHEMILUMINESCENCE IN ANALYTICAL CHEMISTRY.**
A.M. Garcia-Campana and W.R.G. Baeyens (Editors)
**Marcel Dekker, Inc.**, New York. USA, 2001.

5. *"Sequential Injection Analysis in HPLC"* (Chapter) in
**ENCYCLOPEDIA OF CHROMATOGRAPHY**
**R.I. Stefan**, H.Y. Aboul-Enein and J.F. van Staden
Jack Cazes (Editor)
Marcel Dekker, Inc.**, New York. USA, 2001.**

6. "*Enantioselective Electrochemical Sensors"* (Chapter) in
**SENSORS UPDATE, Volume 10**
**R.I. Stefan**, H.Y. Aboul-Enein and J.F. van Staden
H. Baltes, G.K. Fedder, G. Korvink (Editors)

Wiley-VCH **,Weinheim , Germany, 2001.**

7. *"Biosensors Technology"* (Chapter 21) in
**EWEING'S ANALYTICAL INSTRUMENTATION HANDBOOK**
**R.I. Stefan**, H.Y. Aboul-Enein and J.F. van Staden
Jack Cazes (Editor)
Marcel Dekker, Inc.**, New York. USA, 2004.**

8. "*Enantioselective Biosensors*"
(Chapter 13) in
**CHIRAL SEPARATION TECHNIQUES. A PRACTICAL APPROACH.**
**R.I. Stefan**, J.F. van Staden and H.Y. Aboul-Enein
G. Subramanian (Editor)
Wiley-VCH ,Weinheim , Germany, 2006.

9. "*Enantioselective, Potentiometric Membrane Electrodes. Design, mechanism of potential development and applications for pharmaceutical and biomedical analysis"* (Chapter 3) in
**ELECTROCHEMICAL SENSOR ANALYSIS**
**R.I. Stefan-van Staden**
S. Alegret, A Merkoci (Editors)
Elsevier, 2007.

10. "*Enantioanalysis of S-Captopril using an enantioselective, potentiometric membrane electrode*" (Procedure 3) in
**ELECTROCHEMICAL SENSOR ANALYSIS**
**R.I. Stefan-van Staden**, J.F. van Staden and H.Y. Aboul-Enein
S Alegret, A Merkoci (Eds)
Elsevier, Amsterdam, The Netherlands, (ISBN: 978-0-444-53053) 2007.

11. "*Electrochemical biosensors based on screen-printed electrodes. Applications for environmental and food analysis"* (Chapter) in
**RECENT ADVANCES IN ANALYTICAL ELECTROCHEMISTRY**
M. Tudorache, C. Bala and **R.I. Stefan**
K.I. Ozoemena (Editor)
Research Signpost, (978-81-7895-274-1) 2007.

12. "*Mechanism of potential development for potentiometric sensors, based on modeling of interaction between electrochemically active compounds from the membrane and analyte"* (Chapter) in
**CHEMICAL SENSORS: SIMULATION AND MODELING**
**R.I. Stefan-van Staden**
G. Korotcenkov (Editor)
Momentum Press, LLC, 2013.

13. "*Electrochemical Sensors Based on Nanostructured Materials"* (Chapter) in
**HANDBOOK OF NANOELECTROCHEMISTRY. ELECTROCHEMICAL SYNTHESIS METHODS, PROPERTIES AND CHARACTERIZATION TECHNIQUES**
I. Moldoveanu, **R.I. Stefan-van Staden,** J.F. van Staden
Mahmood Aliofkhazraei, Abdel Salam Hamdy Makhlouf (Editors)
Springer International Publishing Switzerland, 2015. (ISBN: 978-3-319-15207-3)

14. New Trends in Enantioanalysis of Pharmaceutical Compounds using Electrochemical Sensors (Chapter) in
**Recent Advances in Analytical Techniques Vol. 2. Novel Developments in Pharmaceutical and Biomedical Analysis RI Stefan-van Staden**
Atta-ur-Rahman, Sibel A. Ozkan, Rida Ahmed(Eds.)
Bentham, 2018 (ISSN: 2542-5617) (Print)

15. Single-walled carbon nanotubes based sensors for biomedical analysis (Chapter 7) in
**Advances in Chemistry Research, Volume 74**
C. Cioates Negut and **R.-I. Stefan-van Staden**
James C. Taylor (Ed.)

Nova, Science and Technology, 2022 (ISBN: 979-8-88697-212-2)

16. Functionalized Chitosan and Biomedical Devices (Chapter 5) in
**Chitosan Nanocomposites-Bionanomechanical Applications**
D.C. Gheorghe, R.M. Ilie-Mihai, C. Cioates Negut, R.I. Stefan-van Staden
Sarat Kumar Swain (Ed.)
Springer Nature, Singapore, 2023

17. Graphene-based nanocomposites for $H_2O_2$ sensing (Chapter 10) in
**Graphene-based nanocomposite sensors**
R Georgescu State, IR Comnea-Stancu, RI Stefan-van Staden, JF van Staden
Royal Society of Chemistry, 2023.

18. Graphene-based Nanocomposites for Hormone Detection (Chapter 19) in
**Graphene-based nanocomposite sensors**
RM Ilie-Mihai, DC Gheorghe, RI Stefan-van Staden
Royal Society of Chemistry, 2023.

**1.3 Brevete**

1. Procedeu de realizare a senzorilor stocastici pe baza de porfirine si pasta de diamant sau grafit pentru determinarea acidului ascorbic la nivel molecular
Raluca-Ioana van Staden, Eugenia Lenuta Fagadar-Cosma
Nr 123101/Octombrie 2010.

2. STOC-µSENS-CMD
Raluca-Ioana van Staden, Jacobus Frederick van Staden
Nr 125050/Decembrie 2010.

3. DOT senzor enantioselectiv si procedeu de realizare a acestuia
Raluca-Ioana van Staden, Jacobus Frederick van Staden
Nr 126158/Iulie 2016.

4. Disposable multimode minicell
Raluca-Ioana van Staden, Jacobus Frederick van Staden
Nr. RO131898B1/2021.

## 2. Participari la conferinte

| | |
|---|---|
| Lucrari invitate: | peste 50 |
| Prezentari orale trimise: | peste 200 |
| Postere trimises: | peste 300 |

Presedinte de sectiune pentru maim ult de 20 de sesiuni:

Presedinte de sesiune:

- KAC'2001, 7th International Symposium on Kinetics in Analytical Chemistry, Bucharest, Romania. 21-23 September 2001.
- 37th SACI Convention. Chemistry for a better life. Pretoria, South Africa. 4 - 9 July 2004.
- 13 IMCS'2010. 13th International Meeting on Chemical Sensors. Perth, Australia. 11-14 July 2010.
- 222nd Meeting of ECS, PRIME 2012 PACIFIC RIM MEETING ON ELECTROCHEMICAL AND SOLID-STATE SCIENCE, Honolulu, Hawai, USA. 7 - 12 October 2012.
- 223rd Meeting of ECS, Toronto, Canada, May 2013.
- 225th Meeting of ECS, Orlando, USA, May 2014.
- 227th Meeting Chicago, USA, May 2015.
- 228th Meeting Phoenix, USA, October 2015.
- 229th Meeting of ECS, San Diego, USA, May-June 2016
- 234th Meeting of ECS, Cancun, Mexic, October 2018
- 235th Meeting of ECS, Dallas, USA, May-June 2019

### 3. Indrumator stiintific pentru BSc, Master, Doctorat, Postdoc

#### 3.1. Studenti care au terminat studiile.

| Numele studentului | Titlul/Titlul tezei/data obtinerii titlului/universitatea | Indrumator | Co-indrumator | Durata studiului (ani) |
|---|---|---|---|---|
| A Alecu | BSc/Utilization of ion-selective, membrane electrodes in pharmaceutical anaysis/1995 | RI Stefan | GE Baiulescu | 2 |
| FD Munteanu | BSc/Lauryl sulfate as new ligand in the design of ion-selective, membrane electrodes/1996 | RI Stefan | GE Baiulescu | 2 |
| C Radoi | BSc/Determination of Vitamin C in fruits using HPLC/1996 | RI Stefan | - | 2 |
| G Mangiurea | BSc/Determination of antiarrhythmic drugs using ion-selective membrane electrodes/1997 | RI Stefan | - | 2 |
| J Mangiurea | BSc/In vitro dissolution tests of pharmaceutical products using ion-selective membrane electrodes/1997 | RI Stefan | - | 2 |
| M Diaconu | BSc/Determination of antidepressive drugs using ion-selective, membrane electrodes/1997 | RI Stefan | - | 2 |
| A Alecu | MSc/Ion-selective membrane electrodes: membrane potential development/1996 | RI Stefan | GE Baiulescu | 1 |
| K Naidoo | MSc/Electrochemical behaviour of boron-doped diamond electrodes/2001 | RI Stefan | JF van Staden | 2/ Distinction |
| MG Mashamba | MSc/Process potentiometric sequential injection titrations/2002 | JF van Staden | RI Stefan | 2 |
| RG Bokretsion | MSc/On-line process control in pharmaceutical industry/2003 | RI Stefan | JF van Staden | 1/Distinction |
| SG Bairu | MSc/Diamond paste based electrodes for inorganic analysis/2003 | RI Stefan | JF van Staden | 1/Distinction |
| ZO Tesfaldet | MSc/Sequential injection analysis of cations in pharmaceutical products/2005 | JF van Staden | RI Stefan | 2/Distinction |
| TR Mashile | MSc/Enantioanalysis of pharmaceutical compounds/2006 | RI Stefan | - | 1/Distinction |
| L Holo | MSc/Enantioselective, potentiometric membrane electrodes for enantioanalysis of amino acids of clinical and pharmaceutical importance/2006 | RI Stefan | - | 1/Distinction |
| LA Gugoasa | MSc/Biosensors based on DNA for the assay of neurotransmitters/2012 | A Ciucu | RI van Staden | 2 |
| RM Nejem | PhD/ Enantioselective sensors and biosensors for clinical analysis/2004 | RI Stefan | - | 3/Excellent |
| I Moldoveanu | PhD/Screenng systems for early detection of cancer and hepatitis/2015 | RI van Staden | - | 3/Excellent |
| LA Gugoasa | PhD/Multimode screening systems for obesity/2015 | RI van Staden | - | 3/Excellent |
| Ionela Raluca Comnea | PhD/Screening systems for early detection of lung cancer | RI van Staden | - | 3/Excellent |
| Ahmed Jassim Muklive Al-Ogaidi | PhD/Fast detection of colon cancer biomarkers | RI van Staden | - | 3/Excellent |
| Amalia Gabriela Diaconeasa | PhD/Detection of specific biomarkers for ageing related illnesses | RI van Staden | - | 3/Excellent |
| Grigorina Mitrofan | PhD/Investigation of thyroid function and its associated pathologies using stochastic sensing | RI van Staden | - | 3/Excellent |
| KI Ozoemena | Postdoc (Claude Harris Leon Foundation fellowship)/Design and construction of novel ion and enantioselective membranes for the development of high performance electrochemical sensors | RI Stefan | - | 1 |
| AA Rat'ko | Postdoc/Studies on the behaviour of enantioselective, potentiometric membrane electrodes | RI Stefan | - | 2 |
| B Lal | Postdoc/Enantioselective, potentiometric membrane electrodes based on fullerens | RI Stefan | - | 2 |
| K Sharma | Postdoc/Computational studies of molecular interactions | RI Stefan | - | 1 |

| | | | | |
|---|---|---|---|---|
| B Calenic | Postdoc/Tissue engineered oral mucosa developed from keratinocyte stem cells using specific substrate topographies | RI van Staden | - | 2 |
| Ruxandra Ilie | PhD/Detection of biomarkers specific to gastric cancer | RI van Staden | - | 3/Summa Cum Laude |
| Ioana Popa | PhD/Detection of biomarkers associated to early onset of diabetes | RI van Staden | - | 3/Summa Cum Laude |
| Mariana Mincu | PhD/Stochastic sensors for environmental monitoring | RI van Staden | - | 2/Summa Cum Laude |
| Alexandrina Lungu | PhD/Modern analytical methods for environmental analysis | RI van Staden | - | 3/Summa Cum Laude |
| Sebastian Gheorghe | PhD/Detection of biomarkers specific to brain cancer | RI van Staden | - | 3/Summa Cum Laude |
| Mihaela Iuliana Bogea | PhD/Detection of gastric cancer | RI van Staden | - | 3/Summa Cum Laude |

### 3.2. Studenti doctoranzi la Universitatea Politehnica din Bucuresti

| Numele studentului | Titlul/Titlul tezei | Date of start |
|---|---|---|
| Oana Raluca Musat | PhD/Innovative methods for diagnosing breast cancer | October 2019 |
| Irina Alina Anghel-Chera | PhD/Modern methods of determination of influence of pollutants on human body | October 2019 |
| Alexandru Adrian Bratei | PhD/A modern approach of pathology and clinical analysis | October 2020 |
| Bianca Maria Tuchiu | PhD/A modern approach of pharmaceutical analysis | October 2020 |
| Damaris Cristina Gheorghe | PhD/Inovative methods in clinical analysis | Ctober 2021 |
| Andreea Elena Sandu (m. Dorneanu) | PhD/Inovative methods for determination of substances from marine sources used in therapeutics | October 2021 |
| Andreea Dragoi (m. Branza) | PhD/Modern methods of analysis of marine extracts used in cosmetic and pharmaceutical productts | October 2021 |
| Rasit Ergun Yukmel | PhD/Development of new instrumentation for the screening of biological, food, and environmental samples | October 2021 |
| Popa Maria-Lavinia | PhD/Quality control and testing of the protection equipments | October 2021 |
| Andreea-Roxana Niculae | PhD/Fast screening tests oof food for increasing the security of food | October 2021 |
| Catalina Cioates-Negut | Postdoc/Screening methods for diagnosis of brain cancer | August 2020 |

### 4. Membru in Societati nationale si internationale

- **Reprezentant al Romaniei in Divizia de Chimie Analitica, EUCHEMs**
- **Membra a Academiei Romano-Americane de Stiinte si Arte**
- **Leader al Bioanalytical Study Group din cadrul Diviziei de Chimie Analitica, EUCHEMs**
- **Electrochemistry Society, USA – membru, membru al Comitetului Executiv si Member-at-Large in Divizia de Senzori, din Octombrie 2012**
- **Presedinta a Filialei Internationale din Romania a Societatii Americane de Chimie (Romania Chapter of American Chemical Society)**
- **2020 Fellow al Societatii Americane de Chimie**
- **Societatea SIGMA XI, The scientific research honor society - membru**
- Societatea de Chimie din Romania - membru
- International Society of Electrochemistry - membru
- International Society of Bioelectrochemistry - membru
- The South African Chemical Institute - membru

- American Chemical Society - membru
- The Israeli Metrological Society - membru
- **IUPAC – Fellow.**
- **Secretara, Comisia V.1, Aspecte generale ale chimiei analitice, IUPAC 1999-2001**.
- Phoenix – Romanian Association of University Chemists – - membru fondator.
- Romanian Society of Analytical Chemistry - fost membru.

**Rol in Comitete Stiintifice:**

- Comitet stiintific al The XIII$^{th}$ National Conference on Analytical Chemistry, Craiova, Romania, 1996.
- Comitet stiintific al Chemometrics Workshop, Timisoara, Romania, 1997.
- Comitet stiintific al The XIV$^{th}$ National Conference on Analytical Chemistry, Piatra Neamt, Romania, 1998.
- Co-secretara, 7$^{th}$ International Conference on Kinetics in Analytical Chemistry, Bucharest, Romania, 2001.
- Co-secretara, ICFIA'2003, Merida, Venezuela, 2003.
- Membra a comitetului de program al 10$^{th}$ International Meeting on Chemical Sensors, July 11-14, 2004. Tsukuba, Japan.
- Chair si membra a comitetului stiintific – SENSOR DEVICES 2010, Venetia, Italia, iulie 2010; SENSOR DEVICE 2011, Nice, France, august 2011; SENSOR DEVICES 2012, Roma, Italia, august 2012; SENSOR DEVICES 2013, Barcelona, Spain.
- Chairman, RO'ICAC 2012, 1$^{st}$ International Conference on Analytical Chemistry, Targoviste, Romania, 2012.
- Chairman, RO'ICAC 2014, 2$^{nd}$ International Conference on Analytical Chemistry, Targoviste, Romania, 2014.
- Chairman, RO'ICAC 2016, 3$^{rd}$ International Conference on Analytical Chemistry, Iasi, Romania, 2016.
- Chairman, RO'ICAC 2018, 4$^{th}$ International Conference on Analytical Chemistry, Bucuresti, Romania, 2018.
- Membra in Advisory Board, Euroanalysis 2022, Olanda

## 5. Membra a birourilor editoriale

- Din 2000 "Preparative Biochemistry & Biotechnology" (Taylor and Francis)
- Din 2003 "Sensor Letters" (American Scientific Publishers)
- Din 2005 "Sensors & Transducers Journal"
- Senior Member al International Advisory Board of "Encyclopedia of Sensors" (American Scientific Publishers, 2004)
- Din 2012 "International Journal on Advances in Systems and Measurements" (IARIA Journals)
- Din 2012 "Journal of Membrane and Separation Technology" (Life Sciences, Global)
- Din 2019 "Egyptian Pharmaceutical Journal" (Wolter Kluwer Health/MedKnow)
- **Guest Editor** – Revista "Sensors" (IF = 3.031) pentru un numar special cu titlul "Graphene-Based Sensors for Pharmaceutical and Biomedical Analysis".
- **Din 2020, "Sensors" (IF=3.031)**
- **Din 2020, Analytical Letters, Taylor & Francis**
- **Editor pentru chimie analitica si bioanaliza: Revista - Coagent Chemistry, Taylor & Francis**
- **Din 2021, "ECS Sensors Plus"**
- **Guest Editor – for "Sensors" for the special issue: "Graphene-Based Sensors for Pharmaceutical and Biomedical Analysis".**
- **Editor for analytical chemistry and bioanalysis: Coagent Chemistry, Taylor & Francis until 2021**
- **Guest Editor – Journal of Oncology 2020/2021**
- **Guest Editor – Frontiers in Oncology 2020/2021**
- **Guest Editor – Life 2021/2022**
- **Guest Editor – Journal of the Electrochemical Society for the issue: Women in Electrochemistry, 2021**
- **Din 2022 – Academic Editor, Journal of Oncology, 2022**

## 6. Vizite la universitati ca profesor/cercetator si colaborari

### 6.1. Vizite la universitati:

- University "Tor Vergata", Rome (Italy), 1996
- Universitatea Yamagata (Japonia), 2015 – Conferinta de presa impreuna cu rectorul universitatii.
- University of Antwerpen (Belgium), 1998
- University of Vienna (Austria), 1999, 2000.

- Universitatea din Bucuresti (Romania), 2000, 2001, 2002, 2004, 2005.
- UC at Berkeley, USA, 2011

**6.2. Colaborari:**

- King Faisal Hospital and Research Centre, Ryad, Saudi Arabia
- University of Yamagata, Japan
- University of Nicosia, Cyprus
- Universitatea din Chisinau, Repriblica Moldova
- Universitatea din Viena, Austria
- Universitatea Tehnica din Viena, Austria
- Universitatea Politehnica din Timisoara
- UMF "Carol Davila"
- UMF "Targu Mures"
- ICECHIM
- Institutul de Chimie al Academiei Romane, Timisoara
- Institutul National de Cercetari Izotopice si Tehnologii Moleculare, Cluj-Napoca

## 7. Management si administratie

- **Secretara a Comisiei V.1 General Aspects of Analytical Chemistry, IUPAC, 1998-2001.**
- **Leader al Bioanalytical Study Group din cadrul Diviziei de Chimie Analitica, EUCHEMs**
- Coordonator de curs/Universitatea din Pretoria CMY 200 – 2002, 2005.
- Organizator in colaborare cu SwissLab a doua seminarii: SPR & Biosensors seminar (26/03/2003, 11/2004) si Corrosion and Battery seminar (27/03/2003).
- Membra a comitetelor de cercetare si social ale Catedrei de Chimie din cadrul Universitatii din Pretoria.
- Organizatoare/initiatoare a Zilei Cercetarii in Cadra de Chimie din cadrul Universitatii din Pretoria, 2005 si 2006
- Sef de Laborator al Laboratorului de Electrochimie si PATLAB Bucuresti, INCEMC, Timisoara, din 2007.
- Director stiintific al INCEMC, Timisoara, 03.2014-07.2015.
- **Electrochemistry Society, USA – membru, membru al Comitetului Executiv si Member-at-Large in Divizia de Senzori, din Octombrie 2012**
- **Presedinta a Romanian Chapter of American Chemical Society**

## 8. Referent

**Referent pentru reviste ISI, cum ar fi:** Talanta, Sensors and Actuators B, Journal of American Chemical Society, Bioelectrochemistry, Chirality, Electrochemical Communications, Journal of Electroanalytical Chemistry, Journal of Solid State Electrochemistry, Electrochimica Acta, Luminescence, Trends in Biotechnology, Process Biochemistry, Analytica Chimica Acta, Analytical and Bioanalytical Chemistry, Analytical Letters, Biosensors & Bioelectronics, Chromatographia, Biomedical Chromatography, Sensors, Journal of Pharmaceutical and Biomedical Analysis, Central European Journal of Chemistry, Central European Journal of Chemistry, The Analyst, Water SA, Applied Surface Sciences, Chemistry and Ecology Reviews, Desalination, International Journal of Physical Sciences, Revista de Chimie (Bucharest), Acta Chimica Slovenica, South African Journal of Chemistry.

**Membru in comisii de doctorat:**

- Universitatea "Politehnica", Bucuresti, Romania
- Universitatea de Medicina si Farmacie "Carol Davila", Bucuresti
- Universitatea din Pretoria, Africa de Sud
- Universitatea Rhodes, Africa de Sud
- Universitatea "Gheorghe Asachi", Iasi, Romania

## 9. Premii si titluri

**Peste 50 premii si titluri nationale si internationale din care:**

1997 - ***Wilhelm Simon award*** - a six month Scholarship, by the ICSC - World Laboratory Lausanne, Switzerland
1999 - ***IUPAC award*** for ***Young Scientist***

2001 **- *Exceptional Young Researcher, University of Pretoria***
2002 - ***President Award, National Research Foundation, South Africa***
**2002** - ***Raikes Medal, South African Chemical Institute***
**2003** - together with Dr KI Ozoemena, ***Claude Harris Leon Foundation award***
**2004 – one of the 5 finalist for the Women in Science award – South Africa**
**2009 –** Premiul II, Sectiunea Cercetare, Gala Premiilor in Educatie, Fundatia Dinu Patriciu
2010 – **Cetatean de onoare al Orasului Campulung-Muscel**
2010 – **Cetatean de onoare al judetului Arges**
2011, 2012 – Placheta Orasului Campulung-Muscel
2010 – Diploma de Excelenta pentru activitatea de inventica, ANCS
2010 – Diploma de Excelenta pentru reprezentarea cu success a Romaniei la Salonul International de Inventii de la Geneva, 2010, ANCS
2012 – Medalia omagiala a salonului PRO INVENT, **Ordinul Stiintific Gogu Constantinescu in grad de Comandor si medalia Gogu Constantinescu pentru rezultate remarcabile obtinute in activitatea de cercetare stiintifica, de promovare a inventicii, precum si pentru contributia la recunoasterea internationala a creativitatii romanesti**.
2012 – Membru de onoare al Asociatiei Bolnavilor de Cancer
2013 – Membru de onoare al Ligii Studentilor Romani din Strainatate
2013 – Premiu She Business pentru inovare
2017 - Premiul Radar de Media pentru Cercetare Stiintifica
**2019 - Medalia Gheorghe Spacu si Premiul Societatii Romane de Chimie pentru inalta recunoastere nationala si internationala**
**2020-ACS FELLOW**

## 10. Alte activitati profesionale

- Expert evaluator si membra in panel pentru **ANCS, UEFISCDI - Romania, National Research Foundation- Africa de Sud, Bulgarian National Research Found, Portugalia, Czech Republic – research projects.**

- **de Beers Research Center, Johannesburg, February 2001 -** Invited lecture**.**

- **SACI,** Raikes Medal Lecture**, February 2003.**

- **TEDx Bucuresti 2010; TEDx Eroilor Cluj-Napoca 2011.**

- Conferinte invitate la diferite universitati**, University of Vienna; Wits University; Universitatea din Bucuresti; University of Antwerpen; Universitatea Babes Bolyai, Cluj; Centrul de Senzori si Actuatori,** UC at Berkeley, USA**.**

- Membra in juriu pentru concursul national de fotografie**: SA Science Lens, South Africa; Gala Premiilor in Educatie, Sectiunea Cercetatorul Anului, Fundatia Dinu Patriciu, 2011; Studentul anului - organizat de Liga Studentilor Romani din Strainatate; Bursele L-Oreal Unesco Romania, 2012; membra in juriul pebtru acordarea premiului pentru cel mai bun poster – sectiunea senzori la conferintele Societatii de Electrochimie (SUA); membra in juriul pentru acordarea premiilor pentru cele mai bune lucrari prezentate in cadrul conferintei SmaSys, 2015, Japonia.**

- **Cursuri tinute la invitatia unor societati profesionale: Octombrie 2011 – doua cursuri (domeniul senzori electrochimici pentru analiza clinica si farmaceutica) sustinute la invitatia ACS si ECS la San Francisco, USA; Mai 2012 – curs (in domeniul enantionalizei clinice) sustinut la invitatia ECS la Seattle (USA); Septembrie 2012 – curs (in domeniul calitatii si fiabilitatii in analiza chimica) sustinut la invitatia DAC a EUCHEMs la Belgrad (Serbia) in cadrul conferintei EUROANALYSIS; Mai 2016 – curs (in domeniul micro si nanosenzorilor) sustinut la invitatia ECS (Denver, USA).**

- **Invitata pentru interviuri in direct la SABC Africa, programul 180 degrees si Radio fm 95.9mHz - Johannesburg, 26 July 2004, Africa de Sud.**

- **Invitata pentru interviu la Radio Romania Actualitati, Cultural, TVR, ProTV, Realitatea, Trinitas, B1, Antena, Kanal D, TVRM, Money Channel .**

- **Recitaluri de pian:** Bucuresti, Timisoara, Campulung-Muscel, Piatra Neamt, San Francisco (USA), Linz (Austria).

- Compozitiile muzicale au fost difuzate la Radio Romania Cultural.

## 11. Proiecte de cercetare

### Proiecte nationale:

**Director de proiect:**
- PNII, Parteneriate in domenii prioritare, "Senzori si microsenzori bazati pe porfirine pentru analiza compusilor farmaceutici, a compusilor de importanta clinica si a alimentelor", CNMP, perioada octombrie 2007 – septembrie 2010, 2.000.000lei. – 14 lucrari publicate si doua brevete de inventie premiate la saloanele internationale de inventii si inovatii cu medalii de aur si premii speciale, printre care si Premiul OMPI pentru cea mai buna femeie inventatior la Salonul de inventii si inovatii de la geneva, 2010.
- PNII, Idei, "Microsenzorii stocastici ca noi instrumente de masurare a substantelor de importanta biologica" UEFISCDI, perioada octombrie 2011 – septembrie 2014, 1.250.000lei – 27 lucrari publicate
- PNII, Parteneriate, Senzori multimode pentru analiza biomedicala, UEFISCDI, 2014-2017, 1.000.000lei – 20 lucrari publicate
- PNIII – PCE – 2017-2019 – Diagnosticul precoce al diabetului, 850.000lei – 10 lucrari publicate
- PNIII-PCCF-2018-2022 – Diagnosticarea precoce a cancerului gastric superior, 8.500.000lei – 71 lucrari publicate si un brevet acordat

**Responsabil de proiect:**
- PED 102/2017, 2017-2018, Senzori bazati pe graphene pentru determinarea timpurie a leucemiilor, 300.000lei – 5 lucrari publicate

### Proiecte internationale:

**Director de proiect:**
- "Electrochemical sensors for bioanalysis", grant acordat de Fundatia Nationala de Cercetare din Africa de Sud, perioada 2001-2006, 130 lucrari publicate
- ERC-like project, "Stochastic approach for early diagnosis of cancer", UEFISCDI, perioada iulie 2012 – iunie 2014, 1.500.000lei – 25 lucrari publicate
- Bilateral Romania-Cipru, „Enantioanaliza compusilor de importanta clinica utilizand microsenzorii si cromatografia electrocinetica micelara", mai 2010-aprilie 2012, ANCS – 4 lucrari publicate
- Bilateral Romania-Cipru, „Enantioanaliza compusilor de importanta clinica utilizand lichide ionice, 2014-2015, ANCS – 4 lucrari publicate
- Bilateral Romania-Republica Moldova, „Detectie si inhibare a cancerului la nivel molecular", septembrie 2010-noiembrie 2012, ANCS. – 2 lucrari publicate

**Responsabil de proiect:**
- FP7, DENAMIC, „Developmental neurotoxicity assessment of mixtures in children", EC, 70000Euro – 8 lucrari publicate

## 12. Activitate didactica

**Cursuri/seminarii/laboratoare:**

12.1. Facultatea de Chimie, Universitatea Bucuresti 1992-1998 – Curs de metode de separare si analiza de urme (anul IV, sectia Chimie), laboratoare anii I-V.

12.2. Departamentul de Chimie, Universitatea din Pretoria 2000-2006 – Cursuri, seminarii, laboratoare in domeniile chimie generala si chimie analitica, anul I – chimie, biochimie, inginerie (clase cu 50 – 700studenti); Curs de chimie analitica, anul II (coordonatorul cursurilor de chimie la anul II de studii); Curs de senzori electrochimici si bioanaliza la anul IV (Hons).

12.3. Indrumator pentru lucrarile de diploma si MSc – Facultatea de Chimie, Universitatea din Bucuresti 1992-1998.

12.4. Indrumator pentru MSc si conducator de doctorat – Universitatea din Pretoria 1999-2006.

**12.5. Din decembrie 2013, conducator de doctorat - Universitatea Politehnica din Bucuresti.**

**Sase cursuri internationale de o zi, cu tematica analizei chimice, bioanalizei, senzorilor, biosenzorilor, fiabilitatii in chimia analitica, tinute la invitatia Societatii Americane de Chimie, Societatii de Electrochimie din SUA, Diviziei de Chimie Analitica a EUCHEMs – pentru masteranzi, doctoranzi si tineri cercetatori. Cursurile au fost tinute la San Francisco, Berkeley, San Diego, Seattle, Zagreb (in cadrul conferintei EUROANALYSIS) si Istanbul (in cadrul conferintei EUROANALYSIS).**

**Publicatii:** Caiete de lucrari practice pentru studenti, anii I si II – chimie analitica – publicate de Editura Universitatii din Pretoria.