



Universitatea POLITEHNICA din București
Facultatea de Chimie Aplicată și Știința Materialelor



Nume **DIACU Elena**

Funcție **Profesor**

Departamentul: Departamentul de Chimie Analitica si Ingineria
Mediului

Grupul de cercetare (daca este cazul):

Contact

Local "Polizu"

Str. Gh. Polizu 1-7, S1, 011061 București, ROMANIA

Cladire: L

Camera: 112

Tel.: 00 40 21 4023888

Fax: -

E-mail: elena_diacu@yahoo.co.uk

Date biografice

Perioada	Pozitie ocupata
1975-1980	- cercetător științific –Institutul de Igiena si Sanatate Publica Veterinara Bucuresti, București Facultatea de Chimie Aplicata si Stiinta Materialelor UPB
1980-1990	- asistent univ. Facultatea de Chimie Aplicata si Stiinta Materialelor UPB
1990-1992	- șef lucrări Facultatea de Chimie Aplicata si Stiinta Materialelor UPB
1992-1996	- conferențiar Facultatea de Chimie Aplicata si Stiinta Materialelor UPB
1996-prezen t	- professor Facultatea de Chimie Aplicata si Stiinta Materialelor UPB
2004-prezen t	- conducator doctorat " Scoala Doctorala Chimie Aplicata si Stiinta Materialelor "

Cercetare

Domenii de cercetare

Chimie Analitică, Analiză Instrumentală, Metode si Tehnici Analitice Avansate, Chimia si Ingineria Mediului Inconjurator, Metode Electrochimice, Metode Spectrale de analiza, Metode Cromatografice, Chimie Supramoleculara, Aplicații ale complecșilor de incluziune.

Proiecte cercetare (selectie)

- Contract de cercetare stiintifica **1991-1993** "*Metode electrochimice ultrasensibile cu aplicatii in analiza de urme*", Ministerul Invățamântului și Stiintei, Nr. 51-91-02.



- Grant-Ministerul Cercetării și al Tehnologiei **1997-2001**, “Metode electrochimice aplicate în analiza de urme a compusilor de interes biotehnologic”, Nr. 376/1997.
- Grant CNCSIS **2000-2001**, “Aplicarea metodelor voltametrice in analiza și controlul unor produse de interes farmaceutic de tip tiolic”, Tema nr.69, Cod CNCSIS 1220/2000.
- Grant CNCSIS **2003-2005**, “Tehnologii membranare in separarea enantioselectiva a unor compusii biologici optic activi”, Tema Nr. 23 Cod CNCSIS 49/2003.
- Grant: CEEEX-Modulul IV P-Conform, **2006-2008**, “Laborator pentru controlul calitatii si identificarea falsificarii mierii – APILAB”, Nr.193 /2006.
- Grant: Programul PARTENERIATE IN DOMENIILE PRIORITARE, **2007-2011**, “Receptori moleculari redox pentru senzori electrochimici, acronym REMORESE, Nr. 71-067/2007.
- Grant: Programul PARTENERIATE IN DOMENIILE PRIORITARE, **2014-2016**, “Senzori pentru metale bazati pe electrozi modificati cu azulene pentru controlul calitatii apei”, acronym SEMEMA, Nr.236/2014.

Activitate academica

Activitate didactică (in prezent)

Program Studii	Specializare/Facultate	Cod	Titlu disciplina	Tip activitate
Licenta	CASM	UPB.11.F.02.O.012	Analiza Instrumentala	Curs Laborator
	CASM	UPB.11.S.05.O.206	Metode spectrofotometrice de analiză a alimentelor	Curs Laborator
Master	CASM	UPB 11.01.O.11.12	Tehnici si sisteme de evaluare a calitatii produselor	Curs Laborator

Alte activitati didactice (in trecut)

- **lucrări de laborator la disciplinele**
Chimie Analitica – Analiză Calitativă si Cantitativă
Chimie Analitică și Analiză Instrumentală- Metode Electrochimice, Metode Optice de Analiză, Metode Cromatografice
- **Predare curs la disciplinele**
Analize fizico-chimice și controlul proceselor tehnologice
Analiză Instrumentală- Metode Electrochimice, Metode Optice de Analiză, Metode Cromatografice
Tehnici si sisteme de evaluare a calitatii produselor



Titluri și premii

Doctor in Chimie 1987

Diploma *VIRTUTE ET SAPIENTIA*, 2006

Premii

Membru in Organizatii Profesionale

Societatea de Chimie din Romania

Societatea de Chimie Analitica din Romania

Societatea Nationala de Stiinta si Ingineria Mediului

Alte activități semnificative

Publicații

Nr.total carti, articole, conferinte, brevete

9 cărți, 141 articole, 90 conferințe

Articole publicate în reviste de specialitate ISI (selectie)

1. L. Kim, A.-D. Stancu, Elena Diacu, H.-J.Buschmann, L. Mutihac, "Extraction and transport behaviour of aromatic amino acids by modified cyclodextrin", *Supramolecular Chemistry*, 21, 1-2, (2009), pp. 131–134.
2. Elena Diacu, C. P. Ene, "Simultaneous determination of Tartrazine and Sunset Yellow in Soft Drinks by Liquid Chromatography", *Rev. Chim.*, 60, 8, (2009), pp. 745-749.
3. F. Dumitrache, Elena Diacu, "Study on the Seasonal Variation of Nitrogen Nutrients Content from Ialomita River Hydrographic Basin", *Rev.Chim.*, (2010) 61, 3, pp. 328-332.
4. Elena Diacu, C. P. Ene, "Study of Analytical Parameters of the HPLC Method for Tartrazine and Sunset Yellow Analysis in Soft Drinks", *Rev.Chim.*, (2010), 61, 12, pp.1177-1182.
5. Elena Diacu, L. Mutihac, E. Ruse, M. M. Ceausescu, "Solvent extraction of dopamine by heptakis (2,3,6-tri-O-acetyl)-bcyclodextrin", *J.Incl.Phenom.Macrocycl.Chem.*, (2011) 71, 3-4, pp. 339-342.
6. Elena Diacu, E.-M.Ungureanu, C. P. Ene, A. A.Ivanov, "Voltammetric Studies for Detection and Degradation Assessment of some Synthetic Food Dyestuffs. I. Tartrazine - E 102", *Rev.Chim.*, (2011) (Bucharest), 62, 11, pp.1085-1089.
7. Elena Diacu, E.-M. Ungureanu, M. M. Jurcovan, C. P.Ene, A. A.Ivanov, "Voltammetric Studies for Detection and Degradation Assessment of some Synthetic Food Dyestuffs. II. Sunset Yellow - E-110", *Rev. Chim.* (2012) (Bucharest), 63, 6, pp. 580-583.
8. E. Barsan, Elena Diacu, "Copper Speciation Assessment in Aquatic Ecosystem Affected by Historical Mining Activities", *Rev. Chim.* (2012) (Bucharest), 63, 8, pp.759-763.
9. B. Costel, Elena Diacu, "Coupled Chemical and Biological Treatment of Oil Contaminated Soils", *Rev. Chim.* (2012) (Bucharest), 63, 11, p.1167-1171.



10. P.-B. Pavel, Elena Diacu, C.-H. Barbu, "Cadmium and Lead Distribution in Different Parts of *Miscanthus sinensis* 'giganteus' Cultivated on Polluted Soils at Copșa Mică", *AGRI-FOOD SCIENCES, PROCESSES AND TECHNOLOGIES*-AGRI-FOOD 20, (2012), pp.165-170.
11. P.-B. Pavel, Elena Diacu, C. H. Barbu, "Microwave-Assisted Digestion Procedures for Total Lead and Cadmium Content Determination in Copșa Mică Soils", *Rev. Chim.* (2013) (Bucharest), 64, 1, pp.22-26.
12. V.-M. Radu, Elena Diacu, A. Varduca, "Development of Procedures for Hydrochemical Monitoring Data Integration for the Danube River related to the Hydrological Conditions", *Rev. Chim.* (2013) (Bucharest), 64, 3, pp.242-245.
13. M.-N. Badea, Elena Diacu, M.- V. Radu "Influence of Antibiotics on Copper Uptake by Plants", *Rev. Chim.* (2013) (Bucharest), 64, 7, pp.684-687.
14. V.-M. Radu, P. Ionescu, G. Deak, Y. A.A. Ivanov, E. Diacu, "Multivariate Statistical Analysis for Quality Assessment of Aquatic Ecosystem on the Lower Danube", *Journal of Environmental Protection and Ecology*, (2014), 15, 2, pp.412-424.
15. M.M. Jurcovan, Elena Diacu, "Development of a Reversed-Phase High Performance Liquid Chromatographic Method for Simultaneous Determination of Allura Red AC and Ponceau 4r in Soft Drinks", *Rev. Chim.* (2014) (Bucharest), 65, 2, pp.137-141.
16. P.-B. Pavel, M. Puschenreiter Wenzel Walter, Elena Diacu, C.H. Barbu, "Aided phytostabilization using *Miscanthus sinensis* x *giganteus* on heavy metal-contaminated soils", *SCIENCE OF THE TOTAL ENVIRONMENT*, (2014) 479, pp.125-131.
17. Tociu, Carmen; Diacu, Elena; Maria, Cristina, "Minimization of Chemical Risk by using Recovered Aluminium from Metallurgical Slag as Coagulant in Wastewater Treatment", *ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL*, (2014), 13, 2, pp.429-434.
18. P. Ionescu, V.-M. Radu, G. Deak, E. Diacu, "Distribution, Partition and Fluxes of Trace Heavy Metals in the Lower Danube River", *REV. CHIM.*, (2014), 65, 9, pp. 1092-1095.

Cărți (selectie)

1. Elena Diacu, "Quantitative Analytical Chemistry", Centrul de Multiplicare U.P.B., 1996.
2. F. G. Bănică și Elena Diacu, "Metode de analiză instrumentală", Editura Didactică și Pedagogică" Bucuresti, ISBN 973-30-3041-4, 1998.
3. Elena Diacu și Alina Catrinel Ion, *Quantitative Chemical Analysis*, 2002, Ed. Printech, ISBN 973-652-551-1, 169 pagini.
4. Alina Catrinel Ion, I. Ion și Elena Diacu, "Metode electrochimice de analiza", Ed. Printech, 2002, ISBN 973-652-570-8.
5. Elena Diacu, "Analytical Chemistry-Fundamentals", Editura Printech ISBN 973-652-722-0 (2003).
6. Elena Diacu și Daniela Bogdan, "Probleme de chimie analitica", Ed. Mistral INFO MEDIA, ISBN 937-86291-1-X, 2003.
7. Daniela Bogdan și Elena Diacu, "Chimie generala. Probleme pentru bacalaureat și olimpiade", Ed. Mistral INFO MEDIA, ISBN 973-86291-0-1, 2003.
8. Elena Diacu și Lucia Mutihac, "Aplicatii analitice ale receptorilor macrociclici", Ed. Printech, ISBN 973-718-450-4, 2006.



9. D. Bogdan și Elena Diacu, "Probleme de chimie pentru clasa a XII-a", Ed. Mistral INFO MEDIA, ISBN 978-973-88418-5-7, 2007.

Capitole in cărți (selectie)

1. A. D. Stancu, M. Ceausescu, L. Kim, Elena Diacu, L. Mutihac, "Cyclodextrins Involved in Separation of Amino Acids by Liquid Membranes", in **Trends in Membranology**, Ed. Printec, ISBN 978-606-521-525-2, 2010.

Conferințe științifice (selectie)

1. Elena Diacu, "Relevance of Environmental Heavy Metal Content to Honey Quality", Proceedings of the First International Conference of Modern Technologies and Biotechnologies for Environmental Protection, 2008, 12-22, ISBN 978-973-739-6157-0.

2. Elena Diacu și C. P. Ene "A Rapid HPLC Method for the Analysis of Water Soluble Synthetic Pigments in Soft Drinks", *Chimia 2009-New Trends In Applied Chemistry*, 2009, p. 182-183. Best POSTER AWARD

3. E.-M. Ungureanu, L. Pîlan, G. Bidan, Elena Diacu, *Materials for molecular recognition obtained by electrochemical grafting*", Oral presentation OB2 in section B Materials Science, International Conference CHIMIA 2009 „New Trends in Applied Chemistry”, 2009, p.75-76.

4. E.-M. Ungureanu, H. Huser, Elena Diacu, A.C. Razus, L. Birzan, "Correlation Structure-Properties Electrochimique et Acido-Basique pour Azoazulenes Substitutes", *Journées d'Electrochimie*, 2009, 54, 2-P-02.

5. C. P. Ene și Elena Diacu, "Method Development for Simultaneous Determination of Sudan Group Colorants in Foodstuffs by Liquid Chromatography–tandem Mass Spectrometry", *Euroanalysis XV*, (2009), PO57-A2, p.57.

6. C. P. Ene și Elena Diacu, "High Performance Liquid Chromatographic Method for the Determination of Benzoic Acid in Beverages", *RICCCE 16*, 2009, p.S2-P-05.

7. E.-M.Ungureanu, Elena Diacu, M.-L.Soare, E.Georgescu, "Electrochemical Studies on some Indolizines with Potential Application", *International Symposium "The Environmental and Industry"*, Vol.II, 2009, 342-349, ISSN 1843-5831.

8. Cornelia Petronela Ene, Elena Diacu, "Target and Non-target Screening of Food by LC-MS-MS", *Chester Food and Environmental Science Week*, 2010, P. 26. www.analyticalmethodologycentre.co.uk

9. Elena Diacu, E. Ruse, I.Diaconu, M. M. Ceausescu, L. Mutihac, "Extraction Aspects of Modified Cyclodextrins upon Biological Compounds", *15th International Cyclodextrin Symposium*, P150, 2010.

10. M.M. Ceausescu, Elena Diacu, "Dopamine complexation and extractability with water-insoluble modified cyclodextrins", *The International Conference "Students for Students*, 2010, p. 93-94, ISBN 978-973-133-738-8.

11. Elena Diacu, E. M. Ungureanu, "Determination of Surface Active Substances from Waters by Electrochemical Methods", *The Second International Conference of Modern Technologies and Biotechnologies for Environmental Protection*, 2010, 46-54.



12. E. M. Ungureanu, G. O. Buica, Elena Diacu, “*Nouveaux Matériaux a base de derives d’azulene pour la reconnaissance electrochimique des mineraux*”, Nouveaux Matériaux Pour La Reconnaissance Electrochimique Des Mineraux et des Espèces Biologiques, «*NOMARES*», 2010, 18. <http://remorese.chim.upb.ro/nomares>

13. Elena Diacu, A. A. Ivanov, M. M. Ceausescu, A. D. Stancu, L. Mutihac, “*Electrochemical Recognition Of Some Anions By Functionalized Calixarenes*”, Nouveaux Matériaux Pour La Reconnaissance Electrochimique Des Mineraux et des Espèces Biologiques, «*NOMARES*», 2010, 22-27. <http://remorese.chim.upb.ro/nomares>

14. M. L. Soare, M. Bujduveanu, E. M. Ungureanu, Elena Diacu, E. Georgescu, “*Techniques Electrochimiques en Vue D’obtenir des Flms Polymeriques*”, Le Sixième Colloque Franco – Roumain de Chimie Appliquee »-COFrRoCA 2010, p. 63.

15. E. M. Ungureanu, A.C. Razus, L. Birzan, G. O. Buica, Elena Diacu, C.A. Amarandei, “*Alanlyse Electrochimique des Anions avec des Sels d’Azulene-Pyranylium*”, Le Sixième Colloque Franco – Roumain de Chimie Appliquee »-COFrRoCA 2010, p. 91.

16. Elena Diacu, M. M. Ceausescu, L. Mutihac, “*Extraction Aspects of some Catecholamines with Modified Cyclodextrins*”, 7th International Conference of the Chemical Societies of the South-East European Countries- Beauty and Application” ICOSECS 2010, Book of Abstracts, p. 173. <http://www.icosecs7.upb.ro>

17. Elena Diacu, C. P. Ene, “*Validation Of Chromatographic Method Used For Determniation Of Permitted Prezervatives In Fruit Juices*”, 7th International Conference of the Chemical Societies of the South-East European Countries- Beauty and Application” ICOSECS 2010, Book of Abstracts, p. 5. <http://www.icosecs7.upb.ro>

18. Elena Diacu, M. M. Ceausescu, “*Extraction Aspects of Dopamine with Modified Cyclodextrins – a Comparision of Different Counterions*”, The International Conference “Students for Students, 2011, p. 100-101, ISBN 978-973-133-912-2.

19. Elena DIACU, M.M. CEAUSESCU, L. MUTIHAC, “*Influence of Coupling Anion Presence on Dopamine Extraction with Heptakis (2, 3, 6-Tri-O-Acetyl)-B- Cyclodextrin*”, RICCCCE 17, 2011.

20. C.P. Ene, Elena Diacu, M. M. Jurcovan, “*Development and Characterization of HPLC Method for Simultaneous Determiation of Artificial Sweeteners in Soft Drink Samples*”, RICCCCE 17, 2011.

21. P.-B. Pavel, Elena Diacu, C.-H. Barbu, . “*Vertical Distribution and Determiation of Cadmium and Copper in Copsa Mică Soils using HR-CS AAS*”, RICCCCE 17, 2011.

22. I.C.Enache, V.-M. Radu, Elena Diacu, “*Evaluation of Longitudinal and Temporal Differentiation in Concentrations of Heavy Metals as Priority Hazardous Substances in the Water of Moara Domneasca Lake*”, INCD ECOIND – INTERNATIONAL SYMPOSIUM – SIMI 2011-“THE ENVIRONMENT AND INDUSTRY”, vol.2, p. 310-314, ISSN 1843-5831, 2011.

23. Elena Diacu, E. M. Ungureanu, C. P. Ene, “*Voltammetric Studies for Determiation and Degradation Assessment of Some Synthetic Food Colours*”, ICAC -International Conference on Applied Chemistry , 2011.

24. E. Holban, G.Deák, V. Dăescu, Elena Diacu, Georgiana Simona, “*Study regarding the pollutants from construction materials industry from integrated environmental protection point of view*”, BENA-INTERNATIONAL CONFERENCE “ENVIRONMENTAL CAPACITY BUILDING”, 2011.



25. M.M. Jurcovan, Elena Diacu, E.-M.Ungureanu, A.A.Ivanov, “Effect Of Ph On The Electrochemical Behavior Of Tatzine And Sunset Yellow”, 3rd REGIONAL SYMPOSIUM ON ELECTROCHEMISTRY: SOUTH-EAST EUROPE, RSE-SEE3, Bucharest, OEH-P-11, p.47, **2012**.

26. P.-B. Pavel, Elena Diacu, C.-H. Barbu, “Cadmium and Lead Distribution in Different Parts of *Miscanthus sinensis* ‘giganteus’ Cultivated on Polluted Soils at Copșa Mică”, “AGRI-FOOD SCIENCES, PROCESSES AND TECHNOLOGIES”-AGRI-FOOD 20, 2012, 165-170, ISBN: ISSN 1843-0694.

27. V.-M. Radu, Elena Diacu, Petra Ionescu, “L’élimination Des Nutriments De L’eau Avec Macrophytes Aquatiques”, LE 7ÈME COLLOQUE FRANCO-ROUMAIN DE CHIMIE APPLIQUÉE - CoFrRoCA 2012, p. 263, Bacau, 2012, ISBN: ISSN 2068-6382.

28. C. Tociu, Elena Diacu, C. Maria, “Chemical Pollution Risk Diminishment By Using The Recovered Aluminium From Metallurgical Slag For Wastewater Treatment”, **ELSEDIMA International Conference, the 9th Edition 2012**, Environmental legislation safety engineering and disaster management Cluj-Napoca, p. 107, Book of Abstracts.

29. V.-M. Radu, Elena Diacu, A. A. Ivanov, G. Deak, “Gas-Chromatographic Technique for The Analysis of Flocculant Praestol in Surface Waters”, **ELSEDIMA International Conference, the 9th Edition 2012**, Environmental legislation safety engineering and disaster management Cluj-Napoca, p. ,91, Book of Abstracts.

30. Elena Diacu, “Sustainable Land Use and Soil Protection in the Danube Region of Romania”, SUSTAINABLE LAND USE AND SOIL PROTECTION IN THE DANUBE REGION, Tulln, Austria, **2013** , Book of Abstracts, p.2.

31. M. M. Jurcovan, Elena Diacu, Eleonora Mihaela Ungureanu, Alexandru Anton Ivanov, “Voltammetric Study for The Detection of Food Dyestuff Red Ponceau in Soft Drinks”, **RICCCE 18, 2013**, p. S5-36, **ISSN:2344-1895; ISSN: L 2247-5389**

32. V.-M. RADU, Elena DIACU, DEAK György, Petra IONESCU, “Characterization of Spatio-Temporal Evolution of Nutrient Pollution in Danube River on the Calarasi-Braila Section”, **18th Romanian International Conference on Chemistry and Chemical Engineering, RICCCE 18, 2013**, p. S5-13, **ISSN:2344-1895; ISSN: L 2247-5389**.

33. P. IONESCU, V.-M. RADU, D G.EAK, Elena DIACU, “GC-ECD method development for analysis of polychlorinated biphenyl compounds for environmental quality monitoring”, **18th Romanian International Conference on Chemistry and Chemical Engineering, RICCCE 18, 2013**, p. S5-13, **ISSN:2344-1895; ISSN: L 2247-5389**.

34. P.-B. Pavel, C. H.BARBU, M. PUSCHENREITER, Elena DIACU, “Fractionation of Heavy Metals in Soil and the Uptake and Translocation in *Miscanthus Sinensis Giganteus* Cultivated on Contaminated Soils From Copșa Mică-Romania”, **RICCCE 18, 2013**, p. S5-25, **ISSN:2344-1895; ISSN: L 2247-5389**.