

INFORMATII PERSONALE

Teodor Adrian Enache



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Sex M | Data nasterii 22/08/1982 | Nationalitatea Romania

WORK EXPERIENCE

- 2021 - present **Scientific researcher I**
 National Institute of Materials Physics (www.infim.ro)
 Magurele, Romania
- 2018 – 2021 **Scientific researcher II**
 National Institute of Materials Physics (www.infim.ro)
 Magurele, Romania
- 2017 – 2018 **Scientific researcher III**
 National Institute of Materials Physics (www.infim.ro)
 Magurele, Romania
- 2012 – 2016 **Postdoctoral researcher**
 Pedro Nunes Institute (www.ipn.pt)
 Coimbra, Portugal
- 2008 – 2011 **PhD student**
 Department of chemistry, University of Coimbra
 Coimbra, Portugal
- 2007 – 2008 **Scientific researcher assistant**
 Pedro Nunes Institute (www.ipn.pt)
 Coimbra, Portugal

EDUCATION AND TRAINING

- 2008 – 2011 **Doctorate in Biochemistry**
 University of Coimbra, Portugal
- 2004 – 2006 **Master in Biophysics and Medical Physics**
 Faculty of Physics, University of Bucharest, Romania
- 2000 – 2004 **B.sc. in Biophysics**
 Faculty of Physics, University of Bucharest, Romania

PERSONAL SKILLS

Mother tongue(s) Romanian

UNDERSTANDING	SPEAKING	WRITING
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Other language(s)	Listening	Reading	Spoken interaction	Listening	
English	C2	C2	C2	C2	C2
Portuguese	C2	C2	C2	C2	C2
Spanish	B2	B2	B1	A2	A1
French	A1	A1	A1	A1	A1

Communication skills Excellent communication skills
 ■ Acquired through presentations at international scientific congresses, workshops, and seminars, and during the scientific orientation of M.Sc. and Ph.D. students at Pedro Nunes Institute, Coimbra, Portugal, and at the National Institute of Materials Physics, Romania

Organisational / managerial skills Project director of 3 national project
 Administration and organization of the laboratory
 ■ Various types of laboratory services, administration and organization within the Laboratory for electroanalysis and corrosion of the Pedro Nunes Institute, Coimbra, Portugal and the National Institute of Materials Physics, Romania.

Job-related skills Fundamental aspects in the areas of bioelectrochemistry, the study of kinetics and mechanism of electrode processes, and bioelectroanalysis.
 ■ Studies of electron transfer reactions of compounds of biological interest such as antioxidants, radicals, amino acids, peptides, amyloids, enzymes, proteins and cells.

SELF-ASSESSMENT				
Information processing	Information processing	Information processing	Information processing	Information processing
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

ADDITIONAL INFORMATION

Publications

41 articles

Relevant publications:

1. M. Onea, M. Bacalum, A.L. Radulescu, M. Raileanu, L. Craciun, T.R. Esanu, **T.A. Enache**; Electrochemical evaluation of proton beam radiation effect on the B16 cell culture, *Sci Rep* 2022 12(1):2261.
2. **TA Enache**, E Matei, VCDiculescu, Electrochemical Sensor for Carbonyl Groups in Oxidized Proteins, *Analytical chemistry* 2019 91 (3), 1920-1927
3. VC Diculescu, **TA Enache**, Voltammetric and mass spectrometry investigation of methionine oxidation, *Journal of Electroanalytical Chemistry* 2019 834, 124-129
4. **T.A. Enache**, A.-M. Chiorcea-Paquim, A.M. Oliveira Brett, Amyloid Beta Peptide VHHQ, KLVFF, and IIGLMVGGVV Domains Involved in Fibrilization: AFM and Electrochemical Characterization, *Anal. Chem.* 2018, 90, 3, 2285–2292
5. **T.A. Enache**, A.M, Oliveira Brett Alzheimer's disease amyloid beta peptides in vitro electrochemical oxidation, *Bioelectrochemistry*, 2017, 114, 13-23.
6. **T.A. Enache**, A.-M. Chiorcea-Paquim, A.M. Oliveira Brett, Amyloid- β peptides time-dependent structural modifications: AFM and voltammetric characterization, *Anal. Chim. Acta*, 2016, 926, 36-47
7. **T.A. Enache**, A.M. Oliveira Brett, Electrochemical evaluation of Glutathione S-transferase kinetic parameters, *Bioelectrochemistry*, 2015, 101, 46-51.
8. V.C.Diculescu, **T.A.Enache**, Electrochemical evaluation of Abelson tyrosine-protein kinase 1 activity and inhibition by imatinib mesylate and danusertib, *Anal.Chim. Acta*, 2014, 845, 23-29
9. S.C.B. Oliveira, I.B. Santarino, **T.A. Enache**, C. Nunes, J. Laranjinha, R.M.

- Barbosa, A.M. Oliveira-Brett, Human colon adenocarcinoma HT-29 cell: electrochemistry and nicotine stimulation, *Bioelectrochemistry*, 94 (2013) 30–38.
10. **T.A. Enache**, A.M. Oliveira-Brett, Peptide methionine sulfoxide reductase A (MsrA): direct electrochemical oxidation on carbon electrodes, *Bioelectrochemistry*, 2013, 89, 11–18.
 11. **T.A. Enache**, A.M. Oliveira-Brett Pathways of electrochemical oxidation of indolic compounds, *Electroanalysis* 2011, 23, 1337 – 1344.
 12. **T.A. Enache**, A.M. Oliveira Brett, Phenol and para-substituted phenols electrochemical oxidation pathways J. *Electroanal. Chem.*, 2011, 655, 9–16.
 13. **T.A. Enache**, A.M. Oliveira Brett, Boron doped diamond and glassy carbon electrodes comparative study of the oxidation behaviour of cysteine and methionine, *Bioelectrochemistry*, 2011, 81, 46–52.
 14. **T.A. Enache**, A.-M. Chiorcea-Paquim, O. Fatibello-Filho, A.M. Oliveira-Brett, Hydroxyl radicals electrochemically generated in situ, *Electrochem. Com.*, 2009, 11, 1342-1345.

Sum of the Times Cited:	1320
Sum of Times Cited without self-citations:	1213
Citing Articles:	1074
Citing Articles without self-citations:	1043
Average Citations per Item: 32.19	
h-index:	16

Participation in Conferences/
Workshops / Symposia Over 60 poster and 10 oral communication

Awards 2019 – Romanian Academy, “Radu Grigorovici” prize

Participation in Projects

- 1 HPRN-CT-2002-00186 - Research grant in EU Project (Research Training Network - NovTech) – Role: study of redox mechanism of phenolic compounds
- 2 PTDC/QUI-QUI/098562/2008, Development, characterization and applications of DNA biosensors; Role in projects: Study of interaction of DNA with antioxidants
- 3 PIRSES-GA-2008-230815, Electrochemical biosensors as new generation of biotechnological devices for food safety and quality monitoring, SEVENTH; Role in project: Quantification of antioxidants in natural products
- 4 PTDC/SAU-BMA/118531/2010, Nanostructured human telomeric DNA electrochemical biosensor for screening anti-cancer drugs. Role in projects: Study of interaction between specific DNA sequencing and antioxidant molecules
- 5 PTDC/QEQ-MED/0586/2012, DNA-protein and DNA-cancer cell interactions characterized by AFM and electrochemistry; Role in projects: Study of redox mechanisms of proteins
6. PTDC/DTP-FTO/0191/2012, Development of an electrochemical biosensor for the evaluation of structure-activity relationship of proteasome and identification of proteasome inhibitors; Role in projects: Study redox reaction of synthetic inhibitors for proteasome and their interaction
7. POC 37-689, Nanostructured electrochemical biosensors for medical diagnosis and drug discovery: development, surface characterization and applications” (2016-2020); Role in projects: Development of (bio)sensor for medical applications
8. PN-III-P1-1.2-PCCDI-2017-0697, Intelligent therapies for non-communicable diseases based on controlled release of pharmacological compounds from encapsulated engineered cells and targeted bionanoparticles; Role in project: Development of oxygen sensor for real time monitoring of cell culture oxygenation
9. PN-III-P1-1.2-PCCDI-2017-0062, New methods of diagnosis and treatment: current challenges and technologic solutions based on nanomaterials and biomaterials; Role in project: Director of component project nr. 3 – development of biosensor for quantification of oxidative damage in DNA and proteins
10. PN-III-P1-1.1-TE-2016-1924, The development of nanocomposite systems for photoelectrocatalytic applications; Electrochemical characterization of new catalytic materials
11. PNCDI III P5 ELI-NP /contract no. 23ELI, On-line measurement of laser-driven proton beams effect on human cells; Role in project: Director of Project; development of (bio)sensors for real time quantification of oxidative stress induced in cell cultures by proton beams
12. PN-III-P1-1.2-PCCDI-2017-0062; Noi metodologii de diagnosticare si tratament: Provocari actuale si solutii tehnologice bazate pe nanomateriale si biomateriale (SANOMAT); Role in the project: PI of project component nr. 3 and development of sensors and biosensors
13. PN-III-P1-1.1-TE-2019-0387, Disposable nanostructured biosensors based on metallic electrospun fibers for real time monitoring of superoxide in cell cultures. Rol in the project: Development of biosensors and in vitro assays
14. PN-III-P4-ID-PCE-2020-1403, Exploring the Alzheimer disease biomarkers: fabrication of new functional biomaterials and development of early diagnosis biosensor. Role in projects: development of a biosensor for early disease diagnostic of Alzheimer and evaluation of neuronal cell behavior at amyloid beta modified surfaces
15. ERANET-MANUNET-III-MINaFBioS; Biosenzori bazati pe arhitecturi nanofluidice pentru detectia proteinelor umane; Role in the project: development of biosensors and evaluation of redox mechanisms
16. PN-III-P2-2.1-PED-2021-1323; New protein hybrid nanostructures for specific targeting in colon tumor cells; Rol in the project: In vitro assays
17. PN-III-P1-1.1-TE-2021-1300; Complex experimental and theoretical approaches in the evaluation of magnetic hyperthermia application. Role in the project: In vitro assays.
18. PN-III-P2-2.1-SOL-2021-2-0167; Complex training facility for development, testing and validation of reaction means of special intervention forces against asymmetrical threats and risks in urban areas; Role in the project: development of sensors for

Project Manager

- 1.** 23ELI/2017 PNCDI III P5 ELI-NP - On-line measurement of laser-driven proton beams effect on human cells; Project director – Adrian Enache (1.350.000 RON)
Webpage: <https://infirm.ro/en/project/on-line-measurement-of-laser-driven-proton-beams-effect-on-human-cells/>
- 2.** Project no. 3 (Project director – Adrian Enache) New (bio)sensor platforms based on nanostructured functionalized materials for healthcare applications within PN-III-P1-1.2-PCCDI-2017-0062/contract no. 58. (1.053.624 RON out of 4.624.395 RON total amount for the entire project)
Webpage: <https://infirm.ro/en/project/sanomat/>
- 3.** PN-III-P4-ID-PCE-2020-1403, Exploring the Alzheimer disease biomarkers: fabrication of new functional biomaterials and development of early diagnosis biosensor. Project director – Adrian Enache (1.198.000 RON)
Webpage: <https://infirm.ro/en/project/exploring-the-alzheimer-disease-biomarkers-fabrication-of-new-functional-biomaterials-and-development-of-early-diagnosis-biosensor-2/>

28 August 2023