

CURRICULUM VITAE ET STUDIORUM: Prof. LAURA PIGANI



Personal data: Born in Modena (Italy), 19/04/1973
Present Position: Associate Professor
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EDUCATION

- **July 1998** Degree in Chemistry (summa cum laude) at University of Modena and Reggio Emilia with a thesis entitled 'Agenti ferro-chelanti di interesse biologico', under the supervision of Prof. R. Grandi
- **January 2002** Ph. D. in Chemistry at the University of Modena and Reggio Emilia with a thesis entitled 'Multitechnique Characterisation of Polythiophene Conducting Polymers on the Electrode Surface' under the supervision of Prof. R. Seeber

PREVIOUS POSITIONS

- **01.12.2001-30/11/2019** Researcher in Analytical Chemistry (CHIM/01) at University of Modena and Reggio Emilia, Department of Chemical and Geological Science

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

The research activity covers different aspects of electroanalysis and is particularly devoted to:

- synthesis and characterization of new modified electrodes by conducting polymers and composite organic/inorganic materials;
- development of amperometric sensors for the determination of analytes of interest in real matrices;
- setup of electronic tongues for blind analysis of food samples.

MAJOR COLLABORATIONS

- *National collaborations:*

A. Ulrici, G. Foca, F. Pellati, D. Bertelli, University of Modena and Reggio Emilia

M. Innocenti University of Florence

C. Zanardi, University Ca' Foscari of Venice

- *International collaborations:*

S. Lupu University of Bucharest (Romania)

L Cubillana Aguilera, J.M. Palacios Santander, University of Cadiz (Spain)

A. Heras, A. Colina, University of Burgos (Spain)

FUNDING AND PROJECTS

1999 Funding agent: MIUR (Progetto Giovani Ricercatori)

Title; "Caratterizzazione di politiofeni conduttori quali modificanti di superfici elettrode mediante tecniche elettroanalitiche e di superficie".

Role: PI

2001 Funding agent: MIUR (Progetto Internazionale di Cooperazioni Interuniversitarie)

Title: "Promozione di una dimensione europea nella formazione del chimico: mobilità e progetti integrati di formazione e ricerca".

Role: participant

PI: R. Seeber

2001 Funding agent: MIUR (FIRB 2001)

Title: "Nanoorganizzazione di molecole ibride inorganiche/organiche con proprietà magnetiche ed ottiche".

Role: participant

PI: D. Gatteschi

2002 Funding agent: MIUR (PRIN 2002)

Title: "Sistemi elettrodi e metodologie elettroanalitiche innovative per analisi in matrici reali". Role: participant

PI: A. Mazzocchin

2003 Funding agent: MIUR (Azioni integrate Italia-Spagna)

Title: "Sviluppo di nuovi sensori elettrochimici ed applicazione di nuovi algoritmi chemiometrici alla trattazione di segnali analitici".

Role: participant

PI: R. Seeber

2004 Funding agent: MIUR (PRIN 2004)

Title: "Progettazione, caratterizzazione ed applicazioni analitiche di sensori elettrochimici innovativi"

Role: participant

PI: R. Seeber

2005 Funding agent: MIUR (PRIN 2005)

Title: "Progettazione ed autoorganizzazione di architetture molecolari per nanomagnetici e sistemi optoelettronici"

Role: participant

PI: D. Gatteschi

2008 Funding agent: MIUR (PRIN 2008)

Title: "Strutture molecolari e nanocristalline con funzionalità magnetiche, fotomagnetiche e fotoemittitrici e la loro organizzazione su superfici in film polimerici e gel"

Role: participant

PI: D. Gatteschi

2009 Funding agent: MIUR (Azioni integrate Italia-Spagna)

Title: "Sviluppo di sensori e di insieme di sensori per la caratterizzazione di campioni di origine alimentare"

Role: participant

PI: R. Seeber

2009 Funding agent: UNIMORE (Programma di Cooperazione Scientifica e Culturale dell'Ateneo di Modena con Università Straniere)

Title: "Development of sensors and of sensors array for the characterisation of food samples"

Role: PI

2012 Funding agent: European Commission (Collaborative European Project - FP7)

Title: "Drugs and Precursor Sensing by Complementing Low Cost Multiple Techniques"

Role: participant

PI: Selex Italia

2014 Funding agent: UNIMORE (FAR 2014)

Title: "Lingua ed occhio elettronici per il monitoraggio in campo del grado di maturazione dell'uva"

Role: PI

2015 Fondazione di Vignola (Bando per la Ricerca Scientifica e Tecnologica 2015)

Title: "Monitoraggio del grado di maturazione dell'uva tramite lo sviluppo di dispositivi lingua ed occhio elettronici"

Role: PI

2016 Funding agent: UNIMORE (FAR Dipartimentale 2016)

Title: "Sviluppo di metodologie per la caratterizzazione rapida di sostanze polifenoliche recuperate da scarti o prodotti secondari del settore agro-alimentare"

Role: PI

2018 Funding agent: UNIMORE (FAR Interdipartimentale 2018)

Title: "Prunus avium L. cherries and other red fruits as new sources of neuroprotective compounds: a multidisciplinary study"

Role: participant

PI: D. Bertelli

2019 Funding agent: UNIMORE (FAR Interdisciplinare 2019)

Title: "Novel analytical tools for the determination of cannabinoids in *Cannabis sativa* L. based products and biological fluids"

Role: participant

PI: C. Zanardi

2020 Funding agent: UNIMORE (FAR 2020)

Title: “Sviluppo di sensori amperometrici e di lingue elettroniche per la determinazione di analiti specifici e di parametri di interesse in ambito alimentare.”

Role: PI

2021 Funding agent: UNIMORE (FAR Interdisciplinare 2021)

Title: “MOUNTAIN product: metodologie analitiche per coniugare IDentita, sostenibilità e valore (MOUNTAIN ID)”

Role: participant

TEACHING ACTIVITIES

- from 2004 “Laboratorio di Chimica Analitica I” (Corso di Laurea triennale in Chimica, UNIMORE, 6 CFU)
- from 2017 “Sensori Chimici e Biochimici” (Corso di Laurea magistrale in Scienze Chimiche, UNIMORE, 6 CFU)
- AA. AA.2001-2008 “Laboratorio di Chimica Analitica II” (Corso di Laurea triennale in Chimica, UNIMORE)
- AA.AA. 2007-09 “Laboratorio di Chimica Analitica Strumentale” (Corso di Laurea triennale in Chimica, UNIMORE)
- AA.AA. 2004-2005 “Elettroanalisi – Laboratorio” (Corso di Laurea Magistrale in Scienze Chimiche, UNIMORE)
- A.A. 2003-2004 “Tecniche di Analisi di Superficie” (Corso di Laurea Magistrale in Scienze Chimiche, UNIMORE)
- A.A. 2003-2004 “Chimica Analitica II” (Corso di Laurea in Biotecnologie, UNIMORE)
- A.A. 2002-2003 “Laboratorio di Chimica Analitica” (Corso di Laurea Biotecnologie, UNIMORE)

ACADEMIC DUTIES

- **2012-2014** member of the Tuition Committee of the Department of Chemical and Geological Sciences
- **2015-2021** member of the Research and Development Committee of the Department of Chemical and Geological Sciences
- **2014-2019** member of Tutoring Committee of the Bachelor Degree in Chemistry and of the Master Degree in Chemical Sciences of the University of Modena and Reggio Emilia
- **2019-2021** Coordinator of Tutoring Committee of the Bachelor Degree in Chemistry and of the Master Degree in Chemical Sciences of the University of Modena and Reggio Emilia
- **from 2022:** member of the joint student-teacher committee of the Department of Chemical and Geological Sciences
- **2015-2020** member of the Steering Committee of the Emilia Romagna Board of della Società Chimica Italiana
- **from 2021:** member of the Safety Committee of the Department of Chemical and Geological Sciences

SUPERVISION OF PhD STUDENTS AND POSTDOCTORAL FELLOWS

- **2009** Supervisor of one graduated student, Dr. Alina Culetu working on a project entitled ‘Development of Sensors and of Sensors Array for the Characterization of Food Samples’
- **2016** Supervisor of one post-doctoral fellow, Dr. G. Vasile Simone working on a project entitled ‘Lingua ed occhio elettronici per il monitoraggio in campo del grado di maturazione dell'uva’
- **2021** Supervisor of one PhD student, Dr. Alessandro Monari, working on a project entitled ‘A new electrochemical sensoristic approach for the analysis of complex matrices’

AWARDS

- **2018:** national scientific enabling (ASN) for the position of Full Professor in the sector 03/A1 (Chimica Analitica) (call 2016)

MEMBERSHIPS AND APPOINTMENTS

- Member of the Division of Analytical Chemistry of the Italian Chemical Society.
- Member of the Interdivisional Group of Sensors of the Italian Chemical Society.
- Member of the Interuniversity Consortium for the Science and Technology of Materials (INSTM)
- Member of Biogest Siteia Technopole consortium.
- Member of the International Society of Electrochemistry (ISE).
- Member of the Doctorate School “Models and Methods for Material and Environmental Sciences” of the University of Modena and Reggio Emilia (from the academic years 2013/2014 to present)

ORGANISATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- **2009** member of the organizing committee of “GS 2009” Giornate di Studio 2009 del Gruppo Sensori della Divisione di Chimica Analitica della Società Chimica Italiana - Modena 17-18 settembre 2009
- **2015** main organizer and member of the scientific committee of “XV Giornata della Chimica dell’Emilia Romagna”, Modena 18 December 2015
- **2016** member of the scientific committee of “XVI Giornata della Chimica dell’Emilia Romagna”, Ferrara 19 December 2016
- **2017** member of the scientific committee of “XVII Giornata della Chimica dell’Emilia Romagna”, Bologna 1 December 2017
- **2018** member of the scientific committee of “XVIII Giornata della Chimica dell’Emilia Romagna”, Parma 17 December 2018
- **2019** main organizer and member of the scientific committee of “XIX Giornata della Chimica dell’Emilia Romagna”, Modena 6 December 2019

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS

- **2012-2017** Member of the editorial board of “Journal of Chemistry” ISSN: 2090-9063 (Print) ISSN: 2090-9071 (Online) DOI: 10.1155/2962 (IF 1.726, 2017)
- **2020** Guest Editor for “Sensors” (ISSN 1424-8220), Special Issue “Electronic Tongues, Electronic Noses, and Electronic Eyes”
- **from 2020** member of the Editorial Board for “Analytica” (ISSN 2673-4532)
- **from 2020** review editor for “Frontiers in Sensors”
- **Referee** of international journals as Analytica Chimica Acta, Sensors and Actuators B, Journal of Electroanalytical Chemistry, Food Analytical Methods, Electrochimica Acta, Heliyon, Journal of Hazardous Materials.

BIBLIOMETRIC INDICATORS (Scopus) AND SCIENTIFIC PRODUCTION

Total number of publications in scientific journals: 71

Total number of book chapters: 1

Total number of other publications: 8

Total number of citations: 1383

H-index: 23

PUBLIC ENGAGEMENT

Participant to the project PLS, leading seminars and laboratory activities for high school students.

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS WITH IF.

1. H. Ding, L. Pigani, R. Seeber, C. Zanardi
P- and n-doping of Electrochemically Formed Poly[4,4’-bis(butylsulfanyl)-2,2’-bithiophene]. A Novel Material with Reduced Bandgap.
J. New Mat. Electrochem. Systems, 3 (2000) 337-341.
2. M. Cocchi, A. Marchetti, L. Pigani, G. Sanna, L. Tassi, A. Ulrici, G. Vaccari, C. Zanardi

- Density and Volumetric Properties of Ethane-1,2-diol + Di-ethylen-glycol Mixtures at Different Temperatures. *Fluid Phase Equil.*, 172 (2000) 93-104. DOI: 10.1016/S0378-3812(00)00365-4
3. S. Lupu, L. Pigani, R. Seeber, C. Zanardi
Electrochemical characterization of polythiophene derivatives modified electrodes using differential pulse techniques
UPB Scientific Bulletin, Series B: Chemistry and Materials Science, 63 (2001) 411-420.
 4. M. Cocchi, A. Marchetti, L. Pigani, L. Tassi, A. Ulrici, G. Vaccari, C. Zanardi
Density and Volume Properties of the 2-Methoxyethanol + 1,2-Dimethoxyethane + Water Ternary Solvent Systems at various Temperatures.
Phys. Chem. Liq., 39 (2001) 151-168. DOI: 10.1080/00319100108030336
 5. B. Ballarin, F. Costanzo, F. Mori, A. Mucci, L. Pigani, L. Schenetti, R. Seeber, D. Tonelli, C. Zanardi
Electropolymerisation and Characterisation of Poly[4,4'-bis(butylsulfanyl)-2,2'-bithiophene].
Electrochim. Acta, 46 (2001) 881-889. DOI: 10.1016/S0013-4686(00)00655-1
 6. H. Ding, Z. Pan, L. Pigani, R. Seeber, C. Zanardi
P- and n-doping Processes in Polythiophenes with Reduced Bandgap. An Electrochemical Impedance Spectroscopy Study. *Electrochim. Acta*, 46 (2001) 2721-2732. DOI: 10.1016/S0013-4686(01)00485-6
 7. H. Ding, Z. Pan, L. Pigani, R. Seeber
Impedance Characteristics of Poly[4,4'-bis (butylsulfanyl)-2,2'-bithiophene] Film Electrode as a Function of Different Oxidation Levels.
J. New Mat. Electrochem. Systems, 4 (2001) 61-67.
 8. M. Cocchi, G. Franchini, M. Manfredini, A. Marchetti, L. Pigani, R. Seeber, L. Tassi, A. Ulrici, M. Vignali, C. Zanardi, P. Zannini
 β - functionalised Polythiophenes as Microelectrode Modifiers in Low Conductive Media.
Ann.Chim. (Rome), 92 (2002) 177-185.
 9. S. Lupu, A. Mucci, L. Pigani, R. Seeber, C. Zanardi
Polythiophene Derivative Conducting Polymer Modified Electrodes and Microelectrodes for Determination of Ascorbic Acid. Effect of Possible Interferents.
Electroanalysis, 14 (2002) 519-525. DOI: 10.1002/1521-4109(200204)14:7/8<519::AID-ELAN519>3.0.CO;2-G
 10. M. Cocchi, M. Manfredini, A. Marchetti, L. Pigani, L. Tassi, A. Ulrici, G. Vaccari, C. Zanardi
Viscosity of (Ethane-1,2-diol + 1,2-Dimethoxyethane + Water) at Temperatures from 263.15 K to 353.15 K
J. Chem. Thermodyn., 34 (2002) 593-611. DOI: 10.1006/jcht.2001.0925
 11. M. Cocchi, M. Manfredini, A. Marchetti, L. Pigani, R. Seeber, L. Tassi, A. Ulrici, M. Vignali, C. Zanardi, P. Zannini
Temperature and Composition Dependence of Refractive Indices for 2-Chloroethanol + 2-Methoxyethanol Binary Mixtures.
Ann. Chim. (Rome), 92 (2002) 187-201.
 12. S. Lupu, C. Mihailciuc, L. Pigani, R. Seeber, N. Totir, C. Zanardi
Electrochemical preparation and characterisation of bilayer films composed by Prussian Blue and conducting polymer.
Electrochem. Comm. 4 (2002) 753-758. DOI: 10.1016/S1388-2481(02)00440-X
 13. S. Lupu, F. Parenti, L. Pigani, R. Seeber, C. Zanardi
Differential pulse techniques on modified conventional-size and microelectrodes. Poly[4,4'-bis(butylsulfanyl)-2,2'-bithiophene]coating.
Electroanalysis, 15 (2003) 715-725. DOI: 10.1002/elan.200390090
 14. A. Mucci, F. Parenti, L. Pigani, R. Seeber, C. Zanardi, M.I. Pilo, N. Spano, M. Manassero,
The effect of Pd (II) Coordination on the properties of an alkylsulfanyl substituted polythiophene. Comparison with the corresponding monomer.
J. Mater. Chem., 13 (2003) 1287-1292. DOI: 10.1039/b301932m
 15. L. Pigani, R. Seeber, F. Terzi, C. Zanardi
Influence of the nature of the supporting electrolyte on the formation of poly[4,4'-is(butylsulphanyl)-2,2'-bithiophene] films. A role for both counter-ion and co-ion in the polymer growth and p-doping processes.
J. Electroanal. Chem., 562 (2004) 231-239. DOI: 10.1016/j.jelechem.2003.09.006

16. M. Cocchi, G.C. Franchini, A. Marchetti, L. Pigani, R. Seeber, L. Tassi, A. Ulrici, C. Zanardi, P. Zannini
A Study of the Dielectric Behaviour and the Liquid Structure of a Ternary Solvent System.
Ann. Chim. (Rome), 94 (2004) 165-176. DOI: [10.1002/adic.200490020](https://doi.org/10.1002/adic.200490020)
17. L. Pigani, R. Seeber, F. Terzi, C. Zanardi
EQCM study of the p- and n-doping processes of a poly[4,4'-bis(alkylsulphanyl)-2,2'-bithiophene].
J. Electroanal. Chem., 570/2 (2004) 235-242. DOI: [10.1016/j.jelechem.2004.04.002](https://doi.org/10.1016/j.jelechem.2004.04.002)
18. G. Foca, M. Manfredini, D. Manzini, A. Marchetti, L. Pigani, S. Sighinolfi, L. Tassi, A. Ulrici
Dielectric properties in Ternary Mixtures of Ethane-1,2-diol + 1,2-Dimethoxyethane + Water.
Intl. J. Thermophysics, 25 (2004) 839-855. DOI: [10.1023/B:IJOT.0000034239.58332.be](https://doi.org/10.1023/B:IJOT.0000034239.58332.be)
19. L. Pigani, A. Heras, Á. Colina, R. Seeber, J. López-Palacios
Electropolymerization of 3,4-ethylenedioxythiophene in aqueous solutions.
Electrochem. Comm., 6 (2004) 1192-1198. DOI: [10.1016/j.elecom.2004.09.021](https://doi.org/10.1016/j.elecom.2004.09.021)
20. M.A. Heras, S. Lupu, L. Pigani, C. Pirvu, R. Seeber, F. Terzi, C. Zanardi
A poly(3,4-ethylenedioxythiophene)-poly(styrene sulphonate) composite electrode coating in the electrooxidation of phenol.
Electrochim. Acta, 50/7-8 (2005) 1685-1691. DOI: [10.1016/j.electacta.2004.10.029](https://doi.org/10.1016/j.electacta.2004.10.029)
21. M. Innocenti, F. Loglio, L. Pigani, R. Seeber, F. Terzi, R. Udisti
In situ Atomic Force Microscopy in the Study of Electrogeneration of Polybithiophene on Pt Electrode
Electrochim. Acta, 50/7-8 (2005) 1497-1503. DOI: [10.1016/j.electacta.2004.10.034](https://doi.org/10.1016/j.electacta.2004.10.034)
22. S. Lupu, L. Pigani, F. Terzi, R. Seeber, C. Zanardi
Study of Ultra-Thin Prussian Blue Films Using in Situ Electrochemical Surface Plasmon Resonance.
Coll. Czech. Chem. Comm., 70 (2005) 154-167. DOI: [10.1135/cccc20050154](https://doi.org/10.1135/cccc20050154)
23. L. Antolini, A. Mucci, F. Parenti, L. Pigani, R. Seeber, C. Zanardi, G. Minghetti, G. Sanna
Palladium(II) derivatives of alkylsulfanyl substituted thiophenes as precursors of inorganic polymers: Spectroscopic, electrochemical investigations and X-ray crystal structure of trans-PdCl₂[3-(butylsulfanyl)thiophene]₂.
Inorg. Chim. Acta, Vol 358/11 (2005) 3033-3040. DOI: [10.1016/j.ica.2005.03.043](https://doi.org/10.1016/j.ica.2005.03.043)
24. F. Terzi, R. Seeber, L. Pigani, C. Zanardi, L. Pasquali, S. Nannarone, M. Fabrizio, S. Daolio
3-Methylthiophene Self-Assembled Monolayers on Planar and Nanoparticle Au systems.
J. Phys. Chem. B 109 (2005) 19397-19402. DOI: [10.1021/jp0530956](https://doi.org/10.1021/jp0530956)
25. L. Pigani, R. Seeber, F. Terzi, O. Cerri, M. Innocenti, R. Udisti.
Relaxation Phenomena and Structural Modifications of Substituted Polythiophenes During the p-doping Processes. An Electrochemical and Morphological Study.
Electrochim. Acta, 51 (2006) 2698-2705. DOI: [10.1016/j.electacta.2005.08.018](https://doi.org/10.1016/j.electacta.2005.08.018)
26. C. Zanardi, R. Scanu, L. Pigani, M.I. Pilo, G. Sanna, R. Seeber, N. Spano, F. Terzi, A. Zucca
Synthesis and electrochemical polymerisation of 3'-functionalised terthiophenes. Electrochemical and spectroelectrochemical characterisation.
Electrochim. Acta, 51 (2006) 4859-4864. DOI: [10.1016/j.electacta.2006.01.025](https://doi.org/10.1016/j.electacta.2006.01.025)
27. C. Zanardi, R. Scanu, L. Pigani, M.I. Pilo, G. Sanna, R. Seeber, N. Spano, F. Terzi, A. Zucca
Electrochemical and spectroelectrochemical characterisation of poly(3'-hydroxymethyl-2,2':5',2"-terthiophene)
Synth. Met., 156 (2006) 984-989. DOI: [10.1016/j.synthmet.2006.06.016](https://doi.org/10.1016/j.synthmet.2006.06.016)
28. L. Pigani, M. Musiani, C. Pirvu, F. Terzi, C. Zanardi, R. Seeber
Electro-oxidation of chlorophenols on poly(3,4-ethylenedioxythiophene)-poly(styrene sulphonate) composite electrode
Electrochim. Acta, 52 (2007) 1910-1918. DOI: [10.1016/j.electacta.2006.07.055](https://doi.org/10.1016/j.electacta.2006.07.055)
29. V. Martina, K. Ionescu, L. Pigani, F. Terzi, A. Ulrici, C. Zanardi, R. Seeber
Development of an electronic tongue based on a PEDOT-modified voltammetric sensor.
Anal. Bioanal. Chem., 387 (2007) 2101-2110. DOI: [10.1007/s00216-006-1102-1](https://doi.org/10.1007/s00216-006-1102-1)
30. L. Pasquali, F. Terzi, C. Zanardi, L. Pigani, R. Seeber, G. Paolicelli, S.M. Sutin, N. Mahne, S. Nannarone
Structure and properties of 1,4-benzenedimethanethiol films grown from solution on Au(111): An XPS and NEXAFS study.
Surface Science 601 (2007) 1419-1427. DOI: [10.1016/j.susc.2007.01.007](https://doi.org/10.1016/j.susc.2007.01.007)

31. C. Zanardi, F. Terzi, L. Pigani, A. Heras, A. Colina, J. Lopez-Palacios, R. Seeber
Development and characterisation of a novel composite electrode material consisting of poly(3,4-ethylenedioxythiophene) including Au nanoparticles
Electrochim. Acta 53, (2008) 3916-3923. DOI: 10.1016/j.electacta.2007.07.057
32. L. Pigani, G. Foca, K. Ionescu, V. Martina, A. Ulrici, F. Terzi, M. Vignali, C. Zanardi, R. Seeber
Amperometric Sensors Based on Poly(3,4-ethylenedioxythiophene) -Modified Electrodes. Discrimination of White Wines.
Anal. Chim. Acta, 614 (2008) 213-222. DOI: 10.1016/j.aca.2008.03.029
33. F. Terzi; C. Zanardi; V. Martina; L. Pigani; R. Seeber
Electrochemical, Spectroscopic and Microscopic Characterisation of Novel Poly(3,4-ethylenedioxythiophene)/Gold Nanoparticles Composite Materials.
J. Electroanal. Chem., 619 (2008) 75–82. DOI: 10.1016/j.jelechem.2008.03.009
34. F. Terzi, C. Zanardi, B. Zangognini, L. Pigani, R. Seeber, J. Lukkari, T. Aaritalo, J. Kankare
Preparation and Characterization of a Redox Multilayer Film Containing Au Nanoparticles
J. Phys. Chem. C., 113 (2009) 4868–4874 DOI: 10.1021/jp809402j
35. L. Pigani, G. Foca, A. Ulrici, K. Ionescu, V. Martina, F. Terzi, M. Vignali, C. Zanardi, R. Seeber
Classification of Red Wines by Chemometric Analysis of Voltammetric Signals from Pedot-Modified Electrodes.
Anal. Chim. Acta, 643 (2009) 67–73. DOI: 10.1016/j.aca.2009.03.040
36. C. Zanardi, F. Terzi, B. Zangognini, L. Pigani, R. Seeber, J. Lukkari, T. Aaritalo
Effective catalytic electrode system based on polyviologen and Au nanoparticles multilayer.
Sens. Act. B 144 (2010) 92–98. DOI: 10.1016/j.snb.2009.10.041
37. F. Terzi, B. Zangognini, C. Zanardi, L. Pigani, R. Seeber
Poly(3,4-ethylenedioxythiophene)/Au-nanoparticles composite as electrode coating suitable for electrocatalytic oxidation.
Electrochim. Acta 56 (2011) 3575–3579. DOI: 10.1016/j.electacta.2010.09.071
38. L. Pigani, A. Culetu, A. Ulrici, G. Foca, M. Vignali, R. Seeber
Pedot modified electrodes in amperometric sensing for analysis of red wine samples.
Food Chem. 129 (2011) 226-233. DOI: 10.1016/j.foodchem.2011.04.046
39. F. Terzi, B. Zangognini, C. Zanardi, L. Pigani, R. Seeber
Electroreduction of Chloramines Through Novel Electrode Materials.
Electroanal. 24 (2012) 833 – 841. DOI: 10.1002/elan.201100554
40. L. Pigani, B. Zangognini, R. Seeber
PEDOT-Modified Microelectrodes. Preparation, Characterisation and Analytical Performances.
Electroanal. 24 (2012) 1340–1347. DOI: 10.1002/elan.201200020
41. F. Terzi, J. Pellicciari, C. Zanardi, L. Pigani, A. Viinikanoja, J. Lukkari, R. Seeber
Graphene modified electrode. Determination of hydrogen peroxide at high concentrations.
Anal. Bioanal Chem. 405 (2013) 3579–3586. DOI: 10.1007/s00216-012-6648-5
42. C. Zanardi, L. Ferrari, B. Zangognini, L. Pigani, F. Terzi, S. Cattini, L. Rovati, R. Seeber
Development of a Sensor System for the Determination of Sanitary Quality of Grapes.
Sensors 13 (2013) 4571-4580. DOI: 10.3390/s130404571.
43. D. Vanossi, L. Pigani, R. Seeber, P. Ferrarini, P. Baraldi, C. Fontanesi
Electropolymerization of ortho-phenylenediamine. Structural characterisation of the resulting polymer film and its possible capacitive sensor application in electroanalysis.
J. Electroanal. Chem., 710 (2013) 22–28. DOI: 10.1016/j.jelechem.2013.04.028
44. F. Terzi, J. Pellicciari, B. Zangognini, L. Pigani, C. Zanardi, R. Seeber
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