

## LISTA DE LUCRARI

**Prof. Pirvu Valeriu Cristian**

**a) Lista lucrarilor relevante pentru realizarile profesionale**

1. C. Ungureanu, C. Dumitriu, S. Popescu, M. Enculescu, V. Tofan, M. Popescu, **C. Pirvu\***, Enhancing antimicrobial activity of TiO<sub>2</sub>/Ti by torularhodin bioinspired surface modification. *Bioelectrochemistry* 107, 14-24, 2016, ISSN:1878-562X, WOS:000365363600003. **F.I. – 4.172**
2. Dumitriu C, Popescu M, Ungureanu C, **Pirvu, C\***, Antibacterial efficiencies of TiO<sub>2</sub> nanostructured layers prepared in organic viscous electrolytes, *Applied Surface Science*, 341, 157-165, 2015, ISSN: 0169-4332, WOS: 000352214700021, **F.I. - 2.711**
3. Ungureanu C, Popescu S, Purcel G, Tofan V, Popescu M, Salageanu A, **Pirvu, C\***, Improved antibacterial behavior of titanium surface with torularhodin-polypyrrole film, *Materials Science and Engineering C*, 42, pp. 726-733, 2014, ISSN: 0928-4931, WOS: 000340687400091, **F.I. – 3.088**
4. Popescu S, Ungureanu C, Albu AM, **Pirvu, C\***, Poly(dopamine) assisted deposition of adherent PPy film on Ti substrate, *Progress in Organic Coating*, 77(11), pp. 1890-900, 2014, ISSN: 0300-9440, WOS: 000353185300038, , **F.I. – 2.358**
5. Dumitriu, C., **Pirvu, C.\***, Demetrescu, I., The electrochemical formation and shielding mechanism of TiO<sub>2</sub> nanotubes in organic electrolytes with different viscosity, *Journal of the Electrochemical Society* 160 (2) , pp. G55-G60, 2013, ISSN:0013-4651, WOS:000313581600066, , **F.I. – 3.266**
6. **Pirvu, C.\***, Manole, C.C., Electrochemical surface plasmon resonance for in situ investigation of antifouling effect of ultra thin hybrid polypyrrole/PSS films, *Electrochimica Acta* 89 , pp. 63-71, 2013, ISSN:0013-4686, WOS:000315558200009, , **F.I. – 4.504**
7. **Pirvu, C.**, Manole, C.C., Stoian, A.B., Demetrescu, I., Understanding of electrochemical and structural changes of polypyrrole/polyethylene glycol composite films in aqueous solution, *Electrochimica Acta* 56 (27) , pp. 9893-9903, 2011, ISSN:0013-4686, WOS:000297399100029, , **F.I. – 4.504**
8. Mîndroiu, M., *Pirvu, C.*, Ion, R., Demetrescu, I., Comparing performance of nanoarchitectures fabricated by Ti6Al7Nb anodizing in two kinds of electrolytes, *Electrochimica Acta* 56 (1) , pp. 193-202, 2010, ISSN:0013-4686, WOS:000297399100029, , **F.I. – 4.504**
9. Demetrescu, I., **Pirvu, C.\***, Mitran, V., Effect of nano-topographical features of Ti/TiO<sub>2</sub> electrode surface on cell response and electrochemical stability in artificial saliva, *Bioelectrochemistry* 79 (1) , pp. 122-129, 2010, ISSN:1567-5394, WOS:000278666300020, **F.I. – 4.172**
10. Pigiari, L., Musiani, M., *Pirvu, C.*, Terzi, F., Zanardi, C., Seeber, R., Electro-oxidation of chlorophenols on poly(3,4-ethylenedioxythiophene)-poly(styrene sulphonate) composite electrode, *Electrochimica Acta* 52 (5) , pp. 1910-1918, 2007, ISSN:0013-4686, WOS:000243647700010, , **F.I. – 4.504**

**b) Teza de doctorat**

**T1. ... METODELE ELECTROCHIMICE DE DEPOLUARE A COMPUSILOR ORGANICI, 2004.**



### c) Brevete de inventie

- B1.** RO125235-A2, R. Stancu, A. Mihalcea, I. Demetrescu, **C. Pirvu**, E. Vasilescu, P. Drob, *Solutie ecologica pentru pasivarea galbena a depunerilor electrochimice de zinc*, A/00587/2008.
- B2.** RO125234-A2, R. Stancu, A. Mihalcea, I. Demetrescu, **C. Pirvu**, C. Vasilescu, P. Drob, *Solutie ecologica pentru pasivarea albastru irizant a depunerilor electrochimice de zinc*, A/00588/2008.
- B3.** RO125236-A2, R. Stancu, A. Mihalcea, I. Demetrescu, **C. Pirvu**, E. Vasilescu, P. Drob, *Solutie ecologica pentru pasivarea alb albastrui a depunerilor electrochimice de zinc*, A 00589/2008.
- B4.** RO127533-A2 - **Pirvu C**, Demetrescu I, Mindroiu M, Popescu S, Cora V, Drob S I, *Procedeu curat de obtinere acoperiri multistrat, protectoare împotriva coroziunii*, A 00221/2010
- B5.** RO127065-A2 - Demetrescu I, **Pirvu C**, Popescu S, Mindroiu M, Manole C C, *Procedeu de modificare a suprafetei titanului cu filme polimerice hibride cu umectabilitate controlata*, A 00618/2010
- B6.** A00253 / 25.03.2013, **Pirvu C.**, Popescu S., *Procedeu de imbunatatire a aderenței filmelor de polipirol prin ancore de polimeri bio-inspirati de tip polidopamina*.

### d) Cărți publicate

#### Ca – Cărți / cursuri (manuale) pentru uzul studenților, publicate în edituri recunoscute

Ca 1. M. Mîndroiu, **C. Pirvu**, R. Popescu, *Chimie generală experimentală*, Ed. Politehnica Pres, 2008, ISBN 978-606-515-014-0, 198 pg.

#### Cb - Cărți de specialitate publicate în edituri recunoscute (autor, coautor, editor)

Cb 1. **C. Pirvu**, *Chimie Generală. Noțiuni Fundamentale*, Ed. Printech, 2009, ISBN 978-606-521-241-1, 152 pg.

Cb 2. M. Ungureanu, **C. Pirvu**, *Experimental Organic Electrochemistry*, Ed. Printech, 2004, ISBN 973-652-978-9, 156 pg.

Cb 3. G. Hubca, M. Tomescu, Iuliana Niță, **C. Pirvu**, *Polimeri utilizati in electronica, electrotehnica si tehnica de calcul*, Ed. Semne, 2006, ISBN 973-642-363-X, 638 pg.

#### I - Culegeri și Îndrumare publicate

I 1. M. Tomescu, **C. Pirvu**, *Teste grila si aplicatii de chimie generala*, Ed. Printech, 2004, ISBN 973-652-993-2, 163 pg.

I 2. M. Tomescu, **C. Pirvu**, *Lucrari practice de chimie generala*, Ed. Printech, 2000, ISBN 973-652-205-9, 100 pg.

#### D – Capitole de carti

D1. I. Demetrescu, P. Drob, S.I. Drob, D. Ionita, A. Mazare, **C. Pirvu**, C. Ungureanu, C. Vasilescu, E. Vasilescu, *Strategies to improve bio-performance of permanent and temporary metallic implants*, in *Advances biocompatible structures for prospective bioengineering: concepts and strategies*, The Publishing House of the Romanian Academy, Bucharest, 2013, Pages 19 - 46.

D2. I. Demetrescu, D. Ionita, and **C. Pirvu**, *Processing Metallic Biomaterials for a Better Cell Response*, chapter in *Biomaterials and Stem Cells in Regenerative Medicine*, edited by Murugan Ramalingam, Seeram Ramakrishna, and Serena Best, CRC Press 2012, Pages 259–280.

### e) Articole / studii in extenso publicate (R,V)

Ris - *Reviste de specialitate de circulație internațională recunoscute (cotate / indexate ISI Thomson Reuters, sau indexate in alte Baze de Date Internationale - BDI specifice domeniului, care fac un proces de selectie a revistelor pe baza unor criterii de performanta).*

- Ris1.** Dumitriu C, Ungureanu C, Popescu S, Tofan V, Popescu M, *Pîrvu, C\**, Ti surface modification with a natural antioxidant and antimicrobial agent, *Surface and Coating Technology*, 276, 175-185, 2015, **ISSN:** 0257-8972, **WOS:** 000360594600022.
- Ris2.** Manole CC, Pirvu C, Stoian AB, Moreno JMC, Stanciu D, Demetrescu I., The Electrochemical Stability in NaCl Solution of Nanotubes and Nanochannels Elaborated on a New Ti-20Zr-5Ta-2Ag Alloy, *Journal of Nanomaterials*, 2015, article ID 521276, 9 pages, 2015, **ISSN:** 1687-4110, **WOS:**000351112000001.
- Ris3.** Dumitriu C, Popescu M, Ungureanu C, *Pîrvu, C\**, Antibacterial efficiencies of TiO<sub>2</sub> nanostructured layers prepared in organic viscous electrolytes, *Applied Surface Science*, 341, 157-165, 2015, **ISSN:** 0169-4332, **WOS:** 000352214700021.
- Ris4.** Comorosan, S, Popescu, I., Polosan, S., Pirvu, C, Ionescu, E. Paslaru, L., Apostol, M., Conformational changes and metastable states induced in proteins by green light, *European Physical Journal B*, 88 (8), pp. 1-9, 2015, **ISSN:** 1434-6028, **WOS:**000348122700002.
- Ris5.** Ungureanu C, Popescu S, Purcel G, Tofan V, Popescu M, Salageanu A, *Pîrvu, C\**, Improved antibacterial behavior of titanium surface with torularhodin-polypyrrole film, *Materials Science and Engineering C*, 42, pp. 726-733, 2014, **ISSN:** 0928-4931, **WOS:** 000340687400091.
- Ris6.** Popescu S, Ungureanu C, Albu AM, *Pîrvu, C\**, Poly(dopamine) assisted deposition of adherent PPy film on Ti substrate, *Progress in Organic Coating*, 77(11), pp. 1890-900, 2014, **ISSN:** 0300-9440, **WOS:** 000353185300038.
- Ris7.** Penta V, Pirvu C, Demetrescu I. Electrochemical Impedance Spectroscopy Investigation on the Clinical Lifetime of ProTaper Rotary File System, *Biomed Research International*, 2014, Article ID 754189, 10 pages, 2014, **ISSN:** 2314-6133, **WOS:** 000330881200001.
- Ris8.** Mindroiu M, *Pîrvu, C\**, Galateanu B, Demetrescu I., Corrosion Behaviour and Cell Viability of Untreated and Laser Treated Ti6Al7Nb Alloys, *Rev Chim-Bucharest.*, 65(3), 328-334, 2014, **ISSN:** 00347752, **WOS:**000335294800015.
- Ris9.** Andrei M, *Pîrvu, C\**, Demetrescu I. Electrochemical impedance spectroscopy in understanding the influence of ultrasonic dental scaling on the dental structure-dental filling interface, *European Journal of Oral Sciences.*, 122(6), pp. 411-416, 2014, **ISSN:** 0909-8836, **WOS:** 000344785300007.
- Ris10.** Popescu S, Manole CC, *Pîrvu, C\**, Surface Features Changes and Corrosion Stability of Titanium Surfaces by Suitable Treatments, *Rev Chim-Bucharest*, 64(8), pp. 796-802, 2013, **ISSN:** 00347752, **WOS:** 000330329400003.
- Ris11.** Mîndroiu, M., *Pîrvu, C\**, Cîmpean, A., Demetrescu, I., Corrosion and biocompatibility of PPy/PEG coating electrodeposited on Ti6Al7Nb alloy, *Materials and Corrosion*, 64 (10) , pp. 926-931, 2013, **ISSN:** 09475117, **WOS:**000327742100009.
- Ris12.** Penta, V., Vornicescu, D., Keusgen, M., *Pîrvu, C\**, Understanding the cleaning effect with sodium hypochlorite of *Enterococcus faecalis* endodontic pathogen using electrochemical impedance spectroscopy (EIS), atomic force microscopy (AFM) and surface plasmon resonance (SPR), *Digest Journal of Nanomaterials and Biostructures*, 8 (3) , pp. 1205-1214, 2013, **ISSN:** 18423582, **WOS:**000327816300028.
- Ris13.** Penta, V., *Pîrvu, C.*, Electrochemical impedance spectroscopy (EIS) investigation on the action of dental endodontic lavage substances, *Rev Chim-Bucharest*, 64 (9), pp. 965-970, 2013, **ISSN:** 00347752, **WOS:**000326855900009.
- Ris14.** Mindroiu, M., Ion, R., *Pîrvu, C.*, Cîmpean, A., Surfactant-dependent macrophage response to polypyrrole-based coatings electrodeposited on Ti6Al7Nb alloy, *Materials Science and Engineering C*, 33 (6) , pp. 3353-3361, 2013, **ISSN:** 09284931, **WOS:**000320973000033.
- Ris15.** Mîndroiu, M., Ungureanu, C., Ion, R., *Pîrvu, C\**, The effect of deposition electrolyte on polypyrrole

- surface interaction with biological environment, *Applied Surface Science*, 276 , pp. 401-410, **ISSN:** 01694332, WOS:000318979800058.
- Ris16.** Dumitriu, C., *Pirvu, C.\**, Demetrescu, I., The electrochemical formation and shielding mechanism of TiO<sub>2</sub> nanotubes in organic electrolytes with different viscosity, *Journal of the Electrochemical Society*, 160 (2) , pp. G55-G60, 2013, **ISSN:**0013-4651, WOS:000313581600066.
- Ris17.** Drob, S.I., *Pirvu, C.*, Moreno, J.M.C., Vasilescu, C., Popa, M., Characterization and protective properties of a new water-based acryl coating, *Rev Chim-Bucharest*, 64 (3) , pp. 287-293, 2013, **ISSN:** 00347752, WOS:000319179300015.
- Ris18.** *Pirvu, C.\**, Manole, C.C., Electrochemical surface plasmon resonance for in situ investigation of antifouling effect of ultra thin hybrid polypyrrole/PSS films, *Electrochimica Acta*, 89 , pp. 63-71, 2013, **ISSN:**0013-4686, WOS:000315558200009.
- Ris19.** Ungureanu, C., *Pirvu, C.*, Mindroiu, M., Demetrescu, I., Antibacterial polymeric coating based on polypyrrole and polyethylene glycol on a new alloy TiAlZr, *Progress in Organic Coatings*, 75 (4) , pp. 349-355, 2012, **ISSN:**0300-9440, WOS:000309695700010.
- Ris20.** Cursaru, D.-L., Andronescu, C., *Pirvu, C.*, Ripeanu, R., The efficiency of Co-based single-wall carbon nanotubes (SWNTs) as an AW/EP additive for mineral base oils, *Wear*, 290-291 , pp. 133-139, 2012, **ISSN:**0043-1648, WOS:000307032800016.
- Ris21.** *Pirvu, C.*, Manole, C.C., Stoian, A.B., Demetrescu, I., Understanding of electrochemical and structural changes of polypyrrole/polyethylene glycol composite films in aqueous solution, *Electrochimica Acta*, 56 (27) , pp. 9893-9903, 2011, **ISSN:**0013-4686, WOS:000297399100029.
- Ris22.** *Pirvu, C.*, Demetrescu, I., Drob, P., Vasilescu, E., Ivanescu, S., Mindroiu, M., Vasilescu, C., Drob, S.I., Corrosion behaviour of a new Ti-6Al-2Nb-1Ta alloy in various solutions, *Materials and Corrosion*, 62 (10) , pp. 948-955, 2011, **ISSN:** 09475117, WOS:000297742200007.
- Ris23.** Lungu, A., Şulcă, N.M., Vasile, E., Badea, N., *Pîrvu, C.*, Iovu, H., The influence of POSS substituent on synthesis and properties of hybrid materials based on urethane dimethacrylate (UDMA) and various polyhedral oligomeric silsesquioxane (POSS), *Journal of Applied Polymer Science*, 121 (5) , pp. 2919-2926, 2011, **ISSN:**0021-8995, WOS:000291598100053.
- Ris24.** Manole, C.C., *Pirvu, C.*, Surface and electrochemical analysis for the understanding of TiO<sub>2</sub> nanopores/nanotubes changes in post-elaboration treatment, *Surface and Interface Analysis*, 43 (7) , pp. 1022-1029, 2011, **ISSN:**0142-2421, WOS:000291600900003.
- Ris25.** Lacatusu, I., Badea, N., Murariu, A., *Pirvu, C.*, Meghea, A., Vegetal nanoclusters in hybrid silica films prepared by sol-gel spin coating technique, *Journal of Non-Crystalline Solids*, 357 (7) , pp. 1716-1723, 2011, **ISSN:**0022-3093, WOS:000290006900018.
- Ris26.** Mîndroiu, M., *Pirvu, C.*, Ion, R., Demetrescu, I., Comparing performance of nanoarchitectures fabricated by Ti6Al7Nb anodizing in two kinds of electrolytes, *Electrochimica Acta*, 56 (1) , pp. 193-202, 2010, **ISSN:**0013-4686, WOS:000297399100029
- Ris27.** Demetrescu, I., *Pirvu, C.\**, Mitran, V., Effect of nano-topographical features of Ti/TiO<sub>2</sub> electrode surface on cell response and electrochemical stability in artificial saliva, *Bioelectrochemistry*, 79 (1) , pp. 122-129, 2010, **ISSN:**1567-5394, WOS:000278666300020
- Ris28.** *Pirvu, C.*, Demetrescu, I., Drob, P., Vasilescu, E., Vasilescu, C., Mindroiu, M., Stancu, R., Electrochemical stability and surface analysis of a new alkyd paint with low content of volatile organic compounds, *Progress in Organic Coatings*, 68 (4) , pp. 274-282, 2010, **ISSN:**0300-9440, WOS:000279237900003
- Ris29.** *Pirvu, C.*, Marcu, M., Banu, A., Deactivation of gold electrode at chlorophenols electrooxidation, *Rev Chim-Bucharest*, 61 (6) , pp. 585-589, 2010, **ISSN:** 00347752, WOS:000279757800015
- Ris30.** Mindroiu, V.M., *Pirvu, C.\**, Popescu, S., Demetrescu, I., Polypyrrole electrodeposition on Ti6Al7Nb alloy in aqueous and non-aqueous solutions, *Rev Chim-Bucharest*, 61 (4) , pp. 390-394, 2010, **ISSN:** 00347752, WOS:000278425100014
- Ris31.** Popescu, S., *Pirvu, C.\**, Mindroiu, M., Manole, C., Demetrescu, I., Electrochemical synthesis and characterization of Ti modified electrodes with polypyrrole - polyethylene glycol hybrid coating, *Rev Chim-Bucharest*, 61 (3) , pp. 245-248, 2010, **ISSN:** 00347752, WOS:000276667000005
- Ris32.** Demetrescu, I., Ionita, D., *Pirvu, C.*, Portan, D., Present and future trends in TiO<sub>2</sub> nanotubes elaboration, characterization and potential applications, *Molecular Crystals and Liquid Crystals*, 521 , pp. 195-203, 2010,

ISSN:1542-1406, WOS:000278163100017

- Ris33.** Pirvu, C.\*, Mindroiu, M., Popescu, S., Demetrescu, I., Electrodeposition of polypyrrole/poly(Styrene Sulphonate) composite coatings on Ti6Al7Nb alloy, *Molecular Crystals and Liquid Crystals*, 521 , pp. 126-139, 2010, ISSN:1542-1406, WOS:000278163100010
- Ris34.** Popescu, S., Pirvu, C.\*, Mindroiu, M., Demetrescu, I., Enhancing the stability of PPy film on Ti by PEG incorporation, *Molecular Crystals and Liquid Crystals*, 522 , pp. 125-135, 2010, ISSN:1542-1406, WOS:000278163300015
- Ris35.** Popescu, R., Pirvu, C., Moldoveanu, M., Grote, J.G., Kajzar, F., Rau, I., Biopolymer thin films for optoelectronics applications, *Molecular Crystals and Liquid Crystals*, 522 , pp. 229-237, 2010, ISSN:1542-1406, WOS:000278163300024
- Ris36.** Stefanescu, T., Manole, C., Parvu, C., Barbinta Patrascu, M.E., Tugulea, L., Supported phospholipid bilayers with chlorophyll for optoelectronic devices, *Optoelectronics and Advanced Materials, Rapid Communications*, 4 (1) , pp. 33-38, 2010, ISSN:1842-6573, WOS:000274804300008
- Ris37.** Manole, C.C., Pirvu, C., Demetrescu, I., Evaluation of TiO<sub>2</sub> nanotubes changes after ultrasonication treatment, *Molecular Crystals and Liquid Crystals*, 521 , pp. 84-92, 2010, ISSN:1542-1406, WOS:000278163100005
- Ris38.** Mindroiu, M., Pirvu, C., Popescu, S., Demetrescu, I., Polypyrrole as conducting polymer coating on Ti6Al7Nb alloy, *Materiale Plastice*, 46 (4) , pp. 394-398, 2009, ISSN:0025-5289, WOS:000274282300010
- Ris39.** Comorosan, S., Kappel, W., Constantinescu, I., Gheorghe, M., Ionescu, E., Pirvu, C., Cinca, S., Cristache, L., Green light effects on biological systems: a new biophysical phenomenon, *Journal of Biological Physics*, 35 (3), pp. 265-277, ISSN: 0092-0606, WOS:000268069000006
- Ris40.** Radovici, O., Banu, A., Pirvu, C., Micro reactor for chlorophenols electrocatalytic oxidation, *ECS Transactions* 16 (27) , pp. 1-9, 2009, ISSN:1938-5862,
- Ris41.** Pirvu, C.\*, Stancu, R., Drob, P., Vasilescu, E., Vasilescu, C., Mindroiu, M., Influence of various binder of the protective properties of paint coatings, *Key Engineering Materials*, 415 , pp. 73-76, 2009, ISSN:1662-9795, WOS:000278916000019
- Ris42.** Pirvu, C.\*, Mindroiu, M., Stancu, R., Bojin, D., Demetrescu, I., Scanning electronic microscopy in supporting electrochemical deposition and characterization of hybrid polymeric composite, *Key Engineering Materials*, 415 , pp. 69-72, 2009, ISSN:1662-9795, WOS:000278916000018
- Ris43.** Pirvu, C.\*, Mindroiu, M., Demetrescu, I., One-step potentiostatic electrodeposition of polypyrrole coatings on zinc coated steel surfaces, *Key Engineering Materials*, 415 , pp. 65-68, 2009, ISSN:1662-9795, WOS:000278916000017
- Ris44.** Manole, C.C., Pirvu, C., Demetrescu, I., TiO<sub>2</sub>: From nanotubes to nanopores by changing the anodizing voltage in fluoride-glycerol electrolyte, *Key Engineering Materials*, 415 , pp. 5-8, 2009, ISSN:1662-9795, WOS:000278916000002
- Ris45.** Pirvu, C., Banu, A., Radovici, O., Marcu, M., Application of electrochemical impedance spectroscopy (EIS) To study of phenolic films, *Revue Roumaine de Chimie*, 53 (11) , pp. 1007-1015, 2008, ISSN:0035-3930, WOS:000266226500004
- Ris46.** Marcu, M., Pirvu, C., Banu, A., Vulpasu, E., Effect of chlorine substitute on phenols electrooxidation studied by cyclic voltammetry, *Rev Chim-Bucharest*, 59 (8) , pp. 867-870, 2008, ISSN: 00347752, WOS:000260067700007
- Ris47.** Man, I., Pirvu, C., Demetrescu, I., Enhancing titanium stability in Fusayama saliva using electrochemical elaboration of TiO<sub>2</sub> nanotubes, *Rev Chim-Bucharest*, 59 (6) , pp. 615-617, 2008, ISSN: 00347752, WOS:000257604600002
- Ris48.** Pirvu, C., Stancu, R., Sovar, M.M., Anticorrosive properties of hybride organic (Polypyrrole) inorganic (Zinc) coatings on steel surface, *Rev Chim-Bucharest*, 58 (9) , pp. 933-937, 2007, ISSN: 00347752, WOS:000250636800017
- Ris49.** Pignani, L., Musiani, M., Pirvu, C., Terzi, F., Zanardi, C., Seeber, R., Electro-oxidation of chlorophenols on poly(3,4-ethylenedioxythiophene)-poly(styrene sulphonate) composite electrode, *Electrochimica Acta*, 52 (5) , pp. 1910-1918, 2007, ISSN:0013-4686, WOS:000243647700010
- Ris50.** Banu, A., Marcu, M., Radovici, O., Pirvu, C., Vasilescu, M., Electrodisolution studies of three aluminum alloys in acid, neutral and alkaline solutions, *Revue Roumaine de Chimie*, 51 (3) , pp. 193-198, 2006, ISSN:0035-3930, WOS:000240447100005

- Ris51.** Heras, M.A., Lupu, S., Pigani, L., *Pirvu, C.*, Seeber, R., Terzi, F., Zanardi, C., A poly(3,4-ethylenedioxythiophene)-poly(styrene sulphonate) composite electrode coating in the electrooxidation of phenol, *Electrochimica Acta*, 50 (7-8), pp. 1685-1691, 2005, **ISSN:**0013-4686, WOS:000226969600029
- Ris52.** *Pirvu, C\**., Brillas, E., Radovici, O., Banu, A., Degradarea electrochimică a clorofenolilor prin oxidare anodică în prezență de H<sub>2</sub>O<sub>2</sub> electrogenerată | [The electrochemical degradation of chlorophenols by anodic oxidation in the presence of electrogenerated H<sub>2</sub>O<sub>2</sub>], *Rev Chim-Bucharest*, 55 (6), pp. 430-434, 2004, **ISSN:** 00347752, WOS:000222753600013
- Ris53.** *Pirvu, C\**., Brillas, E., Radovici, O., Banu, A., Degradarea 4-clorofenolului prin metode de oxidare electrochimică avansată | [Degradation of 4-chlorophenol by advanced electrochemical oxidation methods], *Rev Chim-Bucharest*, 55 (10), pp. 764-768, 2004, **ISSN:** 00347752, WOS:000225068100008

Rio – *Alte reviste de specialitate de circulație internațională.*

- Rio 1. Dumitriu, C., *Pirvu, C.*, Electrochemical studies on TiO<sub>2</sub> nanotubes modified ti electrodes, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 74 (3), pp. 93-106, 2013, **ISSN:** 14542331, indexat SCOPUS.
- Rio 2. Stoian, A.B., *Pirvu, C.*, *Synthesis and characterisation of TiO<sub>2</sub> nanotubes with EC-AFM*, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 75 (2), pp. 43-54, 2012, **ISSN:** 14542331, indexat SCOPUS.
- Rio 3. Portan, D., Papaefthymiou, K., *Pirvu, C.*, Papanicolaou, G., Demetrescu, I., Manufacturing and characterization of TiO<sub>2</sub> nanotubes on pure titanium surfaces for advanced biomedical applications, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 73 (2), pp. 181-196, 2011, **ISSN:** 14542331, indexat SCOPUS.
- Rio 4. Manole, C.C., Stoian, A.B., *Pirvu, C.*, Surface perspective of a TiO<sub>2</sub> nanoarchitecture, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 72 (4), pp. 91-98, 2010, **ISSN:** 14542331, indexat SCOPUS.
- Rio 5. *Pirvu C.*, C. Manole, D.Bojin, I. Demetrescu, Monitoring hydrophilic –hydrophobic balance of a surface electrode via TiO<sub>2</sub> nano particles addition as aspect of interface phenomena proceeding of International Conference of Nanotechnology and Biosensors Hong Kong 2010 pag. 173-177
- Rio 6. C. Trisca-Rusu, A.C. Nechifor, S. Mihai, *Pirvu C.*, S.I. Voicu, G. Nechifor, Polysulfone-functionalized multiwalled carbon nanotubes composite membranes for potential sensing applications, CAS 2009 Proceedings, vol. 1, pg. 285-288, 2009, **ISBN:** 978-142444413-7, indexat SCOPUS.
- Rio 7. M. Mihaly, A. Comanescu, A. Rogozea, *Pirvu C.*, I. Rau, Biomaterials based on DNA embedded in silica matrix, Proceedings of SPIE, vol. 7403, 0277-786X, 7403 7408, 2009, **ISSN:** 0277-786X, WOS:000289839400004.
- Rio 8. *Pirvu C.*, E. Brillas, O. Radovici, A. Banu, M. Marcu, *Electrochemical studies of 2Chlorophenol oxidation*, “Trends in Electrochemistry and Corrosion at the beginning of the 21th Century” Barcelona, pp. 443-452, Editor E.Brillas, Ed. Publications Universitat de Barcelona, Col. LECCIO HOMENATGES, pp. 2004 ISBN 84-475-2639-9 carte indexata in CAPLUS
- Rio 9. Banu, O.Radovici, M. Marcu, *Pirvu C.*, Electrochemical Behavior of corroding Co-Cr Dental Alloys in artificial saliva, Trends in Electrochemistry and Corrosion at the beginning of the 21th Century” Editor E.Brillas, Ed. Publications Universitat de Barcelona, Col. LECCIO HOMENATGES, vol 20, pp. 613-621, 2004, ISBN 84-475-2639-9 carte indexata in CAPLUS
- Rio 10. *Pirvu, C.*, Banu, A., Radovici, O., pH influence on electrochemical oxidation of phenol on platinum, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 64 (4), pp. 13-18, 2002, **ISSN:** 14542331, indexat SCOPUS.
- Rio 11. Ungureanu, E.-M., Nechifor, G., *Pirvu, C.*, Șerban, B., Aspects concerning chemical and electrochemical reactivity of some synthesized calixarenes, UPB Scientific Bulletin, Series B: Chemistry and Materials Science 61 (1-2), pp. 55-65, 1999, **ISSN:** 14542331, indexat SCOPUS.

Rns - *Reviste de specialitate de circulație națională recunoscute de CNCSIS.*

- Rns 1. *Pirvu C.*, Maria Marcu, Alexandra Banu, Octavian Radovici, *Cyclic Voltametry studies on anodic oxydation of 2chlorophenol*, a XIII-a Conferinta Internationala de Chimie Fizica Trimisoara, 2003, Analele Universitatii de Vest, 12 (3), pp. 1409-1492, 2003; rev cat B CNCSIS recenzata in CSA

Rns 2. **Pirvu C.**, Alexandra Banu, O.Radovici, "*pH influence on electrochemical oxidation of phenol on platinum*", UPB, Sci., Bull. Series B; vol 64, nr.4, pp.13-18, 2002, revista CNCSIS B+, indexata CSA, Chem.Abstr. PLUS (CAPLUS)

Rns 3. E.M. Ungureanu, G. Nechifor, **Pirvu C.**, B. Serban, "*Aspets concerning chemical and electrochemical reactivity of some synthesized calyxarenes*" Bull. Sci. UPB, 61, 1-2, p. 55-65, 1999. revista CNCSIS B+, indexata CSA, Chem.Abstr. PLUS (CAPLUS)

#### **Rno - Alte reviste de specialitate de circulație națională.**

Rno 1. Alexandra Banu, Maria MARCU, **C. Pirvu**, " Electrochemical manufacturing of nanostructured materials with polypyrrole matrix, an expanding technology in materials science", Nonconventional Technologies Review – 2/2007, pg.3 – 8., Romanian Academy rev. ISSN 1454-3087

Rno 2. E.M. Ungureanu, B. Serban, M. Avramescu, **C. Pirvu**, G. Nechifor, "Electrochemical behaviour of new synthesized calyxarenes", Chem. Bull. Politehnica Univ. Timisoara, 43, (57), 1, pp. 55-58, 1998, ISSN 1224-6050.

**Vis- Volumele unor manifestări științifice internaționale recunoscute, organizate în țară și străinătate, indexate ISI Thomson Reuters sau indexate în alte Baze de Date Internaționale - BDI specifice domeniului, care fac un proces de selecție a publicațiilor pe baza unor criterii de performanță.**

#### **Vi - Volumele unor manifestări științifice internaționale recunoscute, organizate în țară și străinătate;**

Vi 1. M.V.Popa, C.Pirvu, R.Stancu, Development of eco-multilayer coatings on steel surface, Conference Excellence research – A way to innovation – volume 2, pp 216-1 – 216-6, Ed. Tehnică, 2008, ISSN 1844 – 7090.

Vi 2. Alexandra Banu, **Pirvu C.**, Maria Marcu, Timisoara, "Comparative Study of Phenol and Chlorophenol Electrooxidation on Stationary and Rotating Disk Electrodes for Industrial Waters Cleaning" in SUSTAINABILITY FOR HUMANITY & ENVIRONMENT IN THE EXTENDED CONNECTION FIELD -SCIENCE-ECONOMY-POLICY, Ed Politehnica, Timisoara, Vol.I, pag. 149-152, ISBN 973-625-204-3;2005

Vi 3. Alexandra Banu, Maria Marcu, **Pirvu C.**, I. Antoniac, Bucuresti, "The Effect of Artificial Biofluids on Electrochemical Properties of AISI 316L Stainless Steel for Surgical Devices", RICCCCE IVX, Bucharest, 22-24 sept; 2005

Vi 4. **Pirvu C.**, A.Banu, O.Radovici, M.Marcu, "Electrochemical oxidation of 2CP on platinum bare electrode and rotating disk electrode", Proc. al 5-lea Simpozion International de ecologie si acoperiri metalice, Sibiu 2003, pg.135-142

Vi 5. **Pirvu C.**, Alexandra Banu, O.Radovici, S. Nisipeanu, "Electrochemical Oxidation of Aqueous Phenol Waste" Proc. Of 12th Romanian International Conference on Chemistry and Chemical Engineering, Bucharest, 2001 pg.92-97

Vi 6. E.Nisipeanu, R. Stepa, Alexandra Banu, **Pirvu C.**, "Technical Solution for Atmospheric pollution abatement", Proc. Of 12th Romanian International Conference on Chemistry and Chemical Engineering, Bucharest, 2001, pg.74-79

Vi 7. E. Nisipeanu, R Stepa, R. Chiurtu, Alexandra Banu, **Pirvu C.**, Technology for Galvanic residues insolubilization with recoverable by-product, 12th Romanian International Conference on Chemistry and Chemical Engineering, Bucharest, 2001, pg.80-85

#### **Vn - Volumele unor manifestări științifice naționale.**

Vn 1. Alexandra Banu, Maria Marcu, **Pirvu C.**, Bucuresti, "Studii preliminare de laborator pentru determinarea parametrilor electrochimici in vederea depoluării apelor industriale cu incarcatura fenolica", Proc. Simpozion Generarea, prevenirea si procesarea emisiilor poluante in mediul industrial, Bucuresti 19—20Oct, 2005 Ed Printech ISBN 973-718-332-0

Vn 2. **Pirvu C.**, Alexandra Banu, Maria Marcu, Angela Calotă, Octavian Radovici, Bucuresti "Studiul electrooxidării fenolului și derivaților săi clorurați" in "TCM 50 years evolution present and beyond", 2004, pg 259-264 ISBN 973-718-071-2;

Vn 3. B. Serban, C.Moldovan, G. Nechifor, **Pirvu C.**, "New alkaline system for silicium corrosion", Conferința internațională de știința și ingineria materialelor, Bramat'99, Bulletin științific, vol. IV, pg.16-21, 1999, ISSN 973-98797-0-5.

#### **f) Contracte și rapoarte științifice**

***P – Proiecte de cercetare-dezvoltare – inovare obținute prin competiție, pe bază de contract/grant, în țară/străinătate***

***Pn – nationale***

**Director**

**Pn 1.** Produse prietenoase mediului pe baza de acoperiri compozite polimerice conductoare pe suporturi nanostructurate cu efect antifouling și aplicații în reducerea poluării și a coroziunii, PN II, 32.106/01.10.2008

**Responsabil**

**Pn 2.** Dezvoltarea de noi produse și tehnologii avansate pentru acoperiri multistrat, protectoare împotriva coroziunii, prietenoase mediului, cu conținut scăzut de compuși organici volatili (COV), PN II, 31.003.2/14.09.2007

**Pn 3.** Noi acoperiri nanostructurate multifuncționale pentru implanturi ortopedice (NanoCoat), PN II, 253/2014.

**Colaborator**

Pn 3. Studii exploratorii asupra mecanismului de formare și inducere de noi proprietăți unor electrozi modificați cu forme structurale TiO<sub>2</sub> nanotuburi / nanoparticule și compozite polimerice, proiect Idei – Proiecte de cercetare exploratorie, 2008, cod CNCISIS 1712.

Pn 4. Noi concepte și strategii pentru dezvoltarea cunoașterii unor noi structuri biocompatibile în bioinginerie, proiect Idei – Proiecte complexe de cercetare exploratorie, 2008, cod CNCISIS 248.

Pn 5. Cercetări privind sinteza electrochimică a unor materiale compozite micro și nanostructurate pentru aplicații în dezvoltarea durabilă, CEEEX 309/13.09.2006-2008.

Pn 6. Platforma interdisciplinară bioinginerie - biotehnologie pentru cercetare, dezvoltare și formare profesională, 2006-2008.

Pn 7. Platforma Ingineria Integrată a Autovehiculelor – AutoIntegrIng, 2006 - 2008.

Pn 8. Cercetări privind sinteza electrochimică a unor materiale compozite micro și nanostructurate pentru aplicații în dezvoltarea durabilă” proiect CEEEX nr 309/13.09.2006, 2006-2008.

Pn 9. Contract CNCISIS, 49, tema 23, 2003, „Tehnologii membranare în separarea enantioselectivă a unor compuși biologici optic activi”.

Pn 10. Grant de cercetare UPB-MEN (cod CNCISIS 648), 2001, *Captori electrochimici selectivi bazăți pe electrozi modificați*,

Pn 11. Grant de cercetare UPB- Academia Română, (GAR 33) 47-01-06 (2001), *Captori electrochimici selectivi pentru anioni și cationi pe baza de feroceni*,

Pn 12. ‘Elaborarea de noi captori electrochimici selectivi la specii minerale sau organice bazăți pe electrozi modificați’, UPB - Academia Română (GAR 40) 47-20-11 (2000).

Pn 13. ‘Elaborarea de noi captori electrochimici selectivi la specii minerale sau organice bazăți pe electrozi modificați’, UPB - ANSTI A 83, 47-20-13 (2000).

Pn 14. Contract RELANSIN 592/2000 “Cercetări experimentale preclinice și clinice pentru realizarea și certificarea unor aliaje dentare în conformitate cu standardele internaționale”.

Pn 15. ‘Sintoni ferocen-bipiridil folosiți drept precursori pentru senzori moleculari’, contract de cercetare UPB-MEN 47-99-08 (1999), (cod CNCISU 255).

Pn 16. ‘Elaborarea de noi captori electrochimici selectivi la specii minerale sau organice bazăți pe electrozi modificați’, grant de cercetare UPB-ANSTI 47-99-14 (1999), tema B100.

Pn 17. Contract RELANSIN 92(875) “Electrozi de injecție pentru protecție catodică” 1999-2002.

**Pi-internaționale);**

**Colaborator**

Pi 1. Proiect nr. 296/2013 Bilateral România – Argentina.

Pi 2. Proiect Banca Mondială „Procese electrochimice de suprafață și coroziunea metalelor” Nr. 212/2000.

***g) Comunicări științifice nepublicate***



- E 1. **Pirvu C.**, R. Stancu, M. Mindroiu, I. Demetrescu, *Cercetarea si dezvoltarea de eco-materiale non-crom, non-plumb, non-cadmiu destinate industriei de componente auto*, The 58th Annual meeting, of International Society of Electrochemistry, Bannf, Canada sept 9-15 2007.
- E 2. O. Radovici, A. Banu, **Pirvu C.**, *Adsorption Pseudocapacitance produced by phenol oxidation in polyphenol layers*, The 58th Annual meeting, of International Society of Electrochemistry, Bannf, Canada sept 9-15 2007.
- E 3. **Pirvu C.**, R. Stancu, M. Sovar, I. Demetrescu, *Polypyrrolle coatings for corrosion prevention of zinc-coated steel electrodes*, International Conference Corrosion and Material Protection” Praga, 1-4 octombrie 2007.
- E 4. **Pirvu C.**, M. Mindroiu, P. Drob, *Anticorrosive performance of polypyrrole / zinc-molibdate coatings on steel electrode*, First Regional Symposium on Electrochemistry of South-East Europe Rovinj, Croatia, May 4-8, 2008.
- E 5. M. Mindroiu, R. Vasilescu, **Pirvu C.**, *Electrochemical impedance spectroscopy study of polypyrrole coated zinc-chromate/steel electrode*, First Regional Symposium on Electrochemistry of South-East Europe Rovinj, Croatia, May 4-8, 2008.
- E 6. **Pirvu C.**, R. Stancu, M. Mindroiu, I. Demetrescu, *EIS and EC-AFM investigation of hybrid polymeric composite materials electrodeposited on active metallic surfaces” autori*, 2nd International Conference on Functional Materials and Devices 2008 (ICFMD2008), 14-22 iunie 2008.
- E 7. Demetrescu, I. Man, **Pirvu C.**, *Electrochemical procedures in obtaining and characterization of TiO<sub>2</sub> nanotubes structure on Ti and Ti alloys*, 59th Annual Meeting of the International Society of Electrochemistry (ISE 2008)” Sevilla, 14 -21 sept.2008.
- E 8. **Pirvu C.**, M. Mindroiu, S. Popescu, I. Demetrescu, *Electrochemical Synthesis and Characterization of Corrosion Protective Coatings for Zinc-Coated Steel Surfaces*, 59th Annual Meeting of the International Society of Electrochemistry (ISE 2008)” Sevilla, 14 -21 sept.2008.
- E 9. **Pirvu C.**, R. Stancu, M. Mindroiu, I. Demetrescu, *Cercetarea si dezvoltarea de eco-materiale non-crom, non-plumb, non-cadmiu destinate industriei de componente auto*, The 58th Annual meeting, of International Society of Electrochemistry, Bannf, Canada sept 9-15 2007.
- E 10. Octavian Radovici, Alexandra Banu, **Pirvu C.**, *Adsorption Pseudocapacitance produced by phenol oxidation in polyphenol layers*, The 58th Annual meeting, of International Society of Electrochemistry, Bannf, Canada sept 9-15 2007.

Data :  
13.02.2016

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