

LISTA DE LUCRĂRI

Candidat: Conf. dr. ing. Andrea Rozalia Kellenberger

A. TEZA DE DOCTORAT

1. **A. Kellenberger**, *Studii asupra procesului de obținere a electrozilor schelețați prin metoda pulverizării termice și caracterizarea lor*, Universitatea Politehnica Timișoara, 2004

B. BREVETE DE INVENȚIE

1. R. Banică, **A. Kellenberger**, D. Ursu, L. Cseh, P.A. Linul, N. Vaszilcsin, Procedeu de sinteză a nanofirelor de argint acoperite cu nanoparticule metalice cu punct de topire scăzut, nr. A/00732/14.10.2016.

C. CĂRȚI PUBLICATE

1. **A. Kellenberger**, Electrozi schelețați. Obținere, caracterizare și aplicații, Editura Politehnica Timișoara, ISBN 978-973-625-329-4, 135 pagini, 2006.
2. **A. Kellenberger**, N. vaszilcsin, Electrochimia stării solide, Editura Politehnica Timișoara, ISBN 978-606-554-563-2, 179 pagini, 2013.

D. ARTICOLE PUBLICATE ÎN REVISTE ISI

1. R. Banică, D. Ursu, T. Nyari, **A. Kellenberger***, Polyol synthesis of silver nanowires in the presence of silver chloride, *Journal of Optoelectronics and Advanced Materials*, 19 (2017) 266-271.
2. R. Banică, D. Ursu, T. Nyari, **A. Kellenberger***, Two step polyol-solvothermal growth of thick silver nanowires, *Materials Letters*, 194 (2017) 181-184.
3. A.F. Enache, M.L. Dan, **A. Kellenberger**, N. Vaszilcsin, Anodic oxidation of sulphite in alkaline aqueous solution on graphite electrode, *Bulgarian Chemical Communications* (2017) accepted.
4. R. Banica, D. Ursu, P. Svera, C. Sarvas, S.F. Rus, S. Novaconi, **A. Kellenberger**, A.V. Racu, T. Nyari, N. Vaszilcsin, Electrical properties optimization of silver nanowires supported on polyethylene terephthalate, *Particulate Science & Technology*, 34 (2016) 217-222.
5. M. Țară Lungă Mihali, N. Plesu, **A. Kellenberger**, G. Ilia, Adsorption of an Azo dye on polyaniline/niobium substrate, *International Journal of Electrochemical Science* 10 (2015) 7643-7659.

6. **A. Kellenberger***, D. Ambros, N. Plesu, Scan rate dependent morphology of polyaniline films electrochemically deposited on nickel, *International Journal of Electrochemical Science* 9 (2014) 6821-6833.
7. R. Cretu, **A. Kellenberger**, M. Medeleanu, N. Vaszilcsin, Cathodic Hydrogen Evolution Reaction on Gold Catalyzed by Proton-Carriers, *International Journal of Electrochemical Science* 9 (2014) 4465-4477.
8. R. Cretu, **A. Kellenberger**, N. Vaszilcsin, Enhancement of hydrogen evolution reaction on platinum cathode by proton carriers, *International Journal of Hydrogen Energy* 38 (2013) 11685-11694.
9. N. Plesu, **A. Kellenberger***, I. Taranu, B.O. Taranu, I. Popa, Impedimetric detection of dopamine on poly(3-aminophenyl boronic acid) modified skeleton nickel electrodes, *Reactive & Functional Polymers* 73 (2013) 772-778.
10. **A. Kellenberger***, N. Plesu, M. Tara Lunga Mihali, N. Vaszilcsin, Synthesis of polyaniline nanostructures by electrochemical deposition on niobium, *Polymer* 54 (2013) 3166-3174.
11. M. Bobină, **A. Kellenberger**, J.-P.Millet, C.Muntean, N.Vaszilcsin, Corrosion resistance of carbon steel in weak acid solutions in the presence of L-histidine as corrosion inhibitor, *Corrosion Science* 69 (2013) 389-395.
12. C.C. Vaduva, N. Vaszilcsin, **A. Kellenberger**, Aromatic amines as proton carriers for catalytic enhancement of hydrogen evolution reaction on copper in acid solutions, *International Journal of Hydrogen Energy* 37 (2012) 12089-12096.
13. C.C. Vaduva, N. Vaszilcsin, **A. Kellenberger**, M. Medeleanu, Inhibition effect of some aromatic amines on copper electrodeposition from acidic baths, *Journal of Applied Electrochemistry* 42 (2012) 217-224.
14. **A. Kellenberger***, E. Dmitrieva, L. Dunsch, Structure dependence of charged states in "linear" polyaniline as studied by in situ ATR-FTIR spectroelectrochemistry, *Journal of Physical Chemistry B* 116 (2012) 4377-4385.
15. C.C. Vaduva, N. Vaszilcsin, **A. Kellenberger**, M. Medeleanu, Catalytic enhancement of hydrogen evolution reaction on copper in the presence of benzylamine, *International Journal of Hydrogen Energy* 36 (2011) 6994-7001.
16. **A. Kellenberger***, E. Dmitrieva, L. Dunsch, The stabilization of charged states at phenazine-like units in polyaniline under p-doping. An in situ ATR-FTIR spectroelectrochemical study, *Physical Chemistry Chemical Physics* 13 (2011) 3411-3420.
17. M. Dan, V. Pralong, N. Vaszilcsin, **A. Kellenberger**, N. Duteanu, Electrochemical behavior of YBaCo₄O₇ in alkaline aqueous solution, *Journal of Solid State Electrochemistry* 15 (2011) 1227-1233.

18. M.L. Dan, N. Vaszilcsin, **A. Kellenberger**, N. Duteanu, Electrochemical behaviour of YBaCo_4O_7 in neutral aqueous solution, *Studia Universitatis Babeş Bolyai, Chemia* 56 (2011) 119-127.
19. N. Plesu, **A. Kellenberger***, M. Mihali, N. Vaszilcsin, Effect of temperature on the electrochemical synthesis and properties of polyaniline films, *Journal of Non-crystalline Solids* 356 (2010) 1081-1088.
20. L.F. Chazaro-Ruiz, **A. Kellenberger**, L. Dunsch, In situ ESR-UV-Vis-NIR and ATR-FTIR spectroelectrochemical studies on the p-doping of copolymers of 3-methylthiophene and 3-hexylthiophene, *Journal of Physical Chemistry B* 113 (2009) 2310-2316.
21. L.F. Chazaro-Ruiz, **A. Kellenberger**, E. Jähne, H.J. Adler, T. Khandelwal, L. Dunsch, In situ ESR-UV-Vis-NIR spectroelectrochemical study of the p-doping of poly[2-(3-thienyl)ethyl acetate] and its hydrolyzed derivatives, *Physical Chemistry Chemical Physics* 11 (2009) 6505-6513.
22. **A. Kellenberger***, E. Jähne, H.J. Adler, T. Khandelwal, L. Dunsch, In situ FTIR spectroelectrochemistry of poly[2-(3-thienyl)ethyl acetate] and its hydrolyzed derivatives, *Electrochimica Acta* 53 (2008) 7054-7060.
23. **A. Kellenberger***, N. Vaszilcsin, N. Duteanu, M.L. Dan, W. Brandl, Structure, morphology and electrochemical properties of high surface area copper electrodes obtained by thermal spraying techniques, *Studia Universitatis Babeş Bolyai, Chemia* 53 (2008) 89-96.
24. N. Duteanu, **A. Kellenberger**, N. Vaszilcsin, K. Scott, Studies on Sodium Borohydride Fuel Cells, *Revista de Chimie* 59 (2008) 1361-1365.
25. N. Duteanu, K. Scott, N. Vaszilcsin, **A. Kellenberger**, Increasing of the performances of direct methanol combustion fuel cells, *Revista de Chimie* 58 (2007) 1207-1211.
26. **A. Kellenberger***, N. Vaszilcsin, W. Brandl, N. Duteanu, Kinetics of hydrogen evolution reaction on skeleton nickel and nickel-titanium electrodes obtained by thermal arc spraying technique, *International Journal of Hydrogen Energy* 32 (2007) 3258-3265.
27. **A. Kellenberger***, N. Vaszilcsin, W. Brandl, Roughness factor evaluation of thermal arc sprayed skeleton nickel electrode, *Journal of Solid State Electrochemistry* 11 (2007) 84-89.
28. **A. Kellenberger***, N. Vaszilcsin, Determinarea factorului de rugozitate al electrozilor pe bază de nichel scheletat prin voltametrie ciclică, *Revista de Chimie* 56 (2005) 712-715.
29. N. Pleşu, **A. Kellenberger**, N. Vaszilcsin, I. Manovicu, Electrochemical Polymerisation of Aniline on Skeleton Nickel Electrode, *Molecular Crystals and Liquid Crystals* 416 (2004) 127-135.

* autor principal (prim autor sau autor de corespondență)

E. ARTICOLE PUBLICATE ÎN REVISTE BDI (extras)

1. N. Vaszilcsin, **A. Kellenberger**, M. Medeleanu, Enhancement of cathodic hydrogen evolution reaction through the use of proton carriers, *Kimya Problemleri*, 4, 2016, 366-371.
2. C.C. Văduva, N. Vaszilcsin, **A. Kellenberger**, Effect of aromatic amines on the diffusion layer thickness during the copper deposition from acid bath, *Chemical Bulletin of „Politehnica” University of Timișoara*, 56(70), 2, 2011, 75-80.
3. C.C. Văduva, N. Vaszilcsin, **A. Kellenberger**, Phenyl-methylammonium and chloride ions influence on acid copper electrodeposition, *The Annals of “Dunarea de Jos” University of Galati*, Fascicle IX Metallurgy and Materials Science, Special Issue, May 2011, 180-187.
4. N. Plesu, **A. Kellenberger**, N. Vaszilcsin: A polyaniline-skeleton nickel electrode for the potentiometric detection of nitrate and nitrite, *Chemical Bulletin of „Politehnica” University of Timișoara*, 52(66), 1, 2007, 117-119.
5. N. Duțeanu, N. Vaszilcsin, **A. Kellenberger**, M. L. Dan: Skeleton nickel electrodes for anion exchange membrane fuel cells, *Chemical Bulletin of „Politehnica” University of Timișoara* 50(64), 1, 2005, 1-4.
6. N. Vaszilcsin, **A. Kellenberger**, M. Nemeș, N. Duțeanu, M. L. Dan: Methanol Electrooxidation on Skeleton Ni Based Electrodes, *Chemical Bulletin of „Politehnica” University of Timișoara*, 49(63), 1, 2004, 76-79.
7. N. Vaszilcsin, **A. Kellenberger**, T. Magheț, R. Dumitru, M. Bîrzescu, M. Niculescu: Crystalline structure of the product of thermal decomposition of polynuclear coordination compound $[\text{Ni}(\text{OH})_2(\text{H}_3\text{CCH}(\text{OH})\text{COO}^-)_2 (\text{H}_2\text{O})_2 \cdot 0.5\text{H}_2\text{O}]_n$, *Chemical Bulletin of „Politehnica” University of Timișoara*, 49(62), 1, 51, 2004, 72-75.
8. M. L. Dan, N. Vaszilcsin, **A. Kellenberger**, M. Niculescu, N. Pop: Influence of the Quaternary Ammonium Salts on the Galvanic Deposition of Zinc from Weak Acid Baths, *Chemical Bulletin of „Politehnica” University of Timișoara*, 47(61), 2002, 66-70.
9. **A. Kellenberger**, N. Vaszilcsin, M. Nemeș, M. Niculescu: Electrochemical Behaviour of Wolfram Studied by Cyclic Voltammetry, *Chemical Bulletin of „Politehnica” University of Timișoara*, 45(59), 2000, 7-13.
10. N. Pleșu, N. Vaszilcsin, **A. Kellenberger**, I. Manovicu: Study upon Electrochemical Polymerization of Aniline in Sulphuric Acid Solution on Skeleton Electrode, *Chemical Bulletin of „Politehnica” University of Timișoara*, 45(59), 2000, 198-207.
11. N. Vaszilcsin, W. Brandl, **A. Kellenberger**, D. Toma: Characterization of Skeleton Nickel Cathodes Obtained through Thermal Arc Spraying Technique, *Chemical Bulletin of „Politehnica” University of Timișoara*, 43(57), 1998, 330-339.

F. ARTICOLE PUBLICATE ÎN VOLUMELE UNOR CONFERINȚE (extras)

1. M.L. Dan, **A. Kellenberger**, N. Vaszilcsin, Electrochemical Oxygen Intake/Release Process over $\text{YBaCo}_2\text{Fe}_2\text{O}_{7.5}$ Electrodes In Aqueous Solutions, *22nd International Symposium on Analytical and Environmental Problems*, Szeged, Hungary, 10/2016, 116-119, ISBN 978-963-306-507-5;
2. N. Pleșu, **A. Kellenberger**, S. Remete, N. Vaszilcsin, Potentiodynamic and potentiostatic deposition of PANI on niobium surface, *Proc. of the sixth edition of the Symp. New trends and strategies in the chemistry of advanced materials* 8-9 Noiembrie, 2012, Timisoara, Romania.
3. C.C. Văduva, N. Vaszilcsin, **A. Kellenberger**, Phenyl-methylammonium and chloride ions influence on acid copper electrodeposition, *New trends in environmental and materials engineering*, 18-20 May 2011, Galati, Romania.
4. N. Pleșu, **A. Kellenberger**, I. Popa, B. Țăranu, I. Țăranu, A. Dragoș, Electrochemical behavior of poly-3 aminophenylboronic acid, *Proc. of the Symp. New trends and strategies in the chemistry of advanced materials with relevance in biological systems, technique and enviromental protection*, 3-4 Noiembrie, 2011, Timisoara, Romania, pp. 172-174.
5. M. Mihali, N. Pleșu, **A. Kellenberger**, EIS spectra of polyaniline-azo dye films, *Proc. of the Symp. New trends and strategies in the chemistry of advanced materials with relevance in biological systems, technique and enviromental protection*, 4-5 Noiembrie, 2010, Timisoara, Romania, pp. 172-174.
6. **A. Kellenberger**, N.Vaszilcsin, N.Duteanu, M.L.Dan: Kinetics of aluminum dissolution reaction in skeleton nickel electrode preparation, *Proc of 9th Int. Conf. on Fundamental and Applied Aspects of Physical Chemistry*, Belgrade, 24-26 Sept, 2008, 273-275.
7. **A. Kellenberger**, N.Vaszilcsin, L.Dunsch, E.Jähne, H.J.Adler: Spectroelectrochemical study of the p-doping of poly(2-(3-thienyl)ethyl acetate) and its derivatives, *First Regional Symp. on Electrochemistry of SE Europe*, Rovinj, Croatia, May 2008, 93-94.
8. N.Duteanu, K.Scott, N.Vaszilcsin, **A. Kellenberger**, M.Dan: Parametric study of direct borohydride fuel cells, *First Regional Symp. on Electrochemistry of SE Europe*, Rovinj, Croatia, May 2008, 159-161.
9. **A.Kellenberger**, N. Vaszilcsin, N. Duțeanu: Investigations of thermal arc sprayed Ni and Cu based skeleton electrodes. Part I. Deposition of the precursor Ni-Al and Cu-Al coatings, *Proceedings of the microCAD 2005 International Scientific Conference*, Miskolc, Hungary, Mar. 2005, p. 59-64.
10. **A. Kellenberger**, N.Vaszilcsin, M. L. Dan: Investigations of thermal arc sprayed Ni and Cu based skeleton electrodes. Part II. Activation by alkaline leaching., *Proceedings of the microCAD 2005 International Scientific Conference*, Miskolc, Hungary, Mar. 2005, p. 65-70.

11. **A. Kellenberger**, W. Brandl, N. Vaszilcsin, N. Pleșu: Potentiometric sensor based on polyaniline-skeleton nickel electrode. I. Electrode preparation, *7th International Conference on Fundamental and Applied Aspects of Physical Chemistry*, Belgrade, Serbia, Sept, 2004, p. 311-313.
12. N. Pleșu, **A.Kellenberger**, N. Vaszilcsin, W.Brandl: Potentiometric sensor based on polyaniline-skeleton nickel electrode. II. Sensing properties, *7th International Conference on Fundamental and Applied Aspects of Physical Chemistry*, Belgrade, Serbia, Sept, 2004, p. 314-316.
13. N. Vaszilcsin, **A.Kellenberger**, N. Duțeanu, M. L. Dan: Anodic Degradation of Benzene from Waste Waters, *International Conference of the Balcanic Environment Association – University of Alba Iulia, 2007, Methods Applied for Wastewater Control and Depollution*, p. 59-63
14. N. Duțeanu, **A. Kellenberger**, N.Vaszilcsin, N. Pleșu, M. Bărbăței: PANI-modified Anion Exchange Membranes for Direct Methanol Fuel Cells, *International Symposium, UAV, Arad, Romania, Nov. 2006, Scientific and Technical Bulletin UAV Arad*, 11, 2006, p. 232-241.
15. R.Erimescu, **A. Kellenberger**, N. Duțeanu, D. Bratu, N. Vaszilcsin: Potentiostatic Polarization Analysis of Some Dental Alloys, *Proceedings of th 7th International Symposium on Metal Elements in Environment, Medicine and Biology*, Timisoara, Romania, Nov. 2006, p.121-126.
16. M. L. Dan, N. Vaszilcsin, **A.Kellenberger**, N. Duțeanu: Metal removal from dilute solutions using vibrating electrode. III. Zinc removal, *Proceedings of the 6th International Symposium on Metal Elements in Environment, Medicine and Biology*, Timișoara, Romania, Nov. 2004, p.353-358.
17. M. L. Dan, N.Vaszilcsin, **A. Kellenberger**, N. Duțeanu: Metal removal from dilute solutions using vibrating electrodes. II. Nickel removal, *International Symposium, UAV, Arad, Romania, Analele UAV, Seria Chimie*, 2004, p. 41-47.
18. N. Duțeanu, M. Ursulescu, N. Vaszilcsin, M. L. Dan, **A. Kellenberger**: Studies upon electrochemical phosphating of carbon steel, *International Symposium, UAV, Arad, Romania, Analele UAV, Seria Chimie*, 2004, p. 48-55.
19. M. L. Dan, N. Vaszilcsin, **A. Kellenberger**, I. Morar: Metal removal from dilute solutions using vibrating electrode. I. Copper removal, *Simpozion de comunicări științifice XXXV, Agenția de Cercetare pentru Tehnică și Tehnologii Militare, București, Mai 2004*, p. 693-698.
20. **A. Kellenberger**, N. Vaszilcsin, N. Pleșu, I. Manovicu: Skeleton nickel – a suitable substrate for electrochemical polymerisation of aniline, *ROMPHYSICHEM 11 Timișoara, Romania, Sept. 2003, Annals of West Univ. of Timisoara, Series Chemistry*, 12(3), 2003, 575-588.

G. PROIECTE DE CERCETARE

a) Proiecte de cercetare internaționale - partener

1. **PRETZEL** - Novel modular stack design for high pressure PEM water electrolyzer technology with wide operation range and reduced cost, submitted proposal HORIZON 2020.
2. **HYSUFCEL** - Hydrogen production from black sea water by sulfide driven fuel cells; Duration 09/2011 – 08/2013, BS ERA-NET project No. 7-046/2011.

b) Proiecte POSDRU – expert pe termen lung

1. **POSDRU/86/1.2/S/58146, 2010-2013, MASTERMAT:** Elaborarea și implementarea programelor de master în domeniul micro- și nanomaterialelor.
2. **POSDRU/21/1.5/G/13798, 2010-2012:** Școala doctorală în sprijinul cercetării în context european.
3. **POSDRU 159/1.5/S/137070, 2014-2015, ATTRACTING:** Creșterea atractivității și performanței programelor de formare doctorală și post-doctorală pentru cercetători în științe inginerești.

c) Proiecte de cercetare naționale

1. **2013 – 2016, IDEI 77/02.09.2013,** Nou concept de fabricare a electrozilor conductori, transparenti și flexibili, pe bază de nanofibre de argint/polianilină pentru celule solare (UEFISCDI 994.000 RON) – **director proiect**
2. **2008 – 2011, PNCDI 72-171/2008:** Senzori microporosi cu polianilină funcționalizată cu grupări pendante, material inovativ utilizabil în identificarea și controlul maladiei Parkinson (UEFISCDI 99.250 RON) – **director partener**
3. **2004, TD 32940/2004:** Senzori electrochimici pe bază de electrozi modificați nichel-scheletat-polianilină (CNCSIS 48.000 RON) – **director proiect**
4. PNCDI2 31-073/2007 Program 4, partener al INMR București: Metode și tehnologii inovative de gestionare și denocivizare a deșeurilor periculoase și tratare a levigatelor cu conținut de elemente toxice, provenite din metalurgia metalelor neferoase grele - membru
5. PNCDI2 71-017/2007 Program 4, partener al INCEMC Timișoara: Obținerea galiului în vederea valorificării complexe și ecoeficiente a bauxitei – membru.
6. 2006 – 2007 GRANT A, 76/2007: Pile de combustie H₂-O₂ (aer) cu membrană schimbătoare de anioni și electrozi pe bază de metale nenobile - membru.
7. 2003 – 2005, GRANT A 40535/2003: Pile de combustie metanol-aer cu electrozi pe bază de nichel scheletat obținuți prin sprayere termică în arc electric – membru.

8. CEEEX M1 758/2006 modul I (subcontract 3/0.1.09.2006), partener al INCEMC Timișoara: Metodă și instalație de producere a clorului și utilizare a acestuia la clorinarea apei potabile prin injectarea directă în conducta de alimentare – membru.
9. CEEEX PT18 23/2006 modul I (subcontract 3/15.09.2006), partener al INCEMC Timișoara: Dezvoltarea de celule fotoelectrochimice nano-structurate bazate pe TiO_2 și coloranți - membru.
10. CEEEX 47/2006 modul III: partener al UBB Cluj-Napoca: Consolidarea și lărgirea parteneriatului la nivel regional și european privind aplicarea metodelor electrochimice la controlul și depoluarea apelor – membru.
11. CEEEX 2-CEX-06-11.57/2006 modul I: partener al INCEMC Timișoara: Tehnologie modernă de obținere a acidului pirazin 2,3- dicarboxilic, intermediar în sinteza unor medicamente – membru.
12. GRANT A 35501/2002: Procese electrochimice în reactoare necompartimentate – membru.
13. GRANT A 36681/2000: Obținerea și caracterizarea electrozilor schelețai realizați prin metoda pulverizării termice în arc electric – membru.