

Titlu proiect: Noi sisteme chimice pe baza de rețele nanocristaline și arhitecturi proase pentru pilele de combustie de temperatură intermediară (IT-SOFC) operând cu biogaz

Categoria de proiect: PCCA1

Contractul de finanțare: Nr.26/2012

Manager proiect: Dr. Simona Somacescu

Lista rezultate

Nr. crt.	NUME AUTORI	TITLUL ARTICOLULUI / CĂRȚII / COMUNICĂRII ȘTIINȚIFICE	REVISTA / VOLUMUL/EDITURA ÎN CARE A APĂRUT / CONFERINȚA LA CARE S-A COMUNICAT	ANUL PUBLICĂRII / COMUNICĂRII
ARTICOLE ISI				
1	M. Filipescu, V. Ion, S. Somacescu, B. Mitu, M. Dinescu	Investigation of Ta₂O₅ and TaSixO_y thin films obtained by radio frequency plasma assisted laser ablation for gate dielectric applications	Applied Surface Science, Volume 276, 1 July 2013, Pages 691–696	2013
2	Rares Scurtu, Simona Somacescu, Jose Maria Calderon-Moreno, Daniela Cristina Culita, Ion Bulimestru, Nelea Popa, Aurelian Gulea, Petre Osiceanu	Nanocrystalline Sm_{0.5}Sr_{0.5}CoO_{3-δ} synthesized using a chelating route for use in IT-SOFC cathodes: Microstructure, surface chemistry and electrical conductivity	Journal of Solid State Chemistry, Volume 210, Issue 1, Pages 53-59	2014
3	Bogdana Mitu, Rovena Pascu, Simona Somacescu, George Epurescu, Catalin Luculescu, Mihaela Filipescu, Dana Colceag, Petre Osiceanu and Ruxandra Barjega	Pulsed Laser Deposition of YSZ based heterostructure	THIN SOLID FILMS Volume: 553 Pages: 98-103 Published: FEB 28 2014	2014
	S. Somacescu, M. Florea, P. Osiceanu, J.M. Calderon Moreno, C. Ghica, J.M. Serra	Ni-doped (CeO_{2-δ})-YSZ mesoarchitectured with nanocrystalline framework: the effect of thermal treatment on structure, surface chemistry and catalytic properties in the partial oxidation of methane (CPOM)	Journal of Nanoparticle Research, Vol 17 (11), 1-16	2015

4	R. Pascu, G. Epurescu, S. Somacescu, R. Birjega, A. Moldovan, D. Colceag, M. Dinescu	Optical and structural characterization of ni doped YSZ thin films deposited by excimer laser ablation	Romanian Reports in Physics 67 (2), pp. 523-531.	2015
5	N. Cioatera, E.A. Voinea, I. Kehal, A. Rolle, C.I. Spinu, R.N. Vannier	Effect of calcium doping on La ₄ (Ti ₂ O ₈)O ₂ structure and conductivity	Journal of Alloys and Compounds, Volume 670, 15 June 2016, Pages 150-155	2016
6	S. Somacescu, L. Navarrete, M. Florea, J. M. Calderon-Moreno, J. M. Serra	Self-assembled (Ni/Cu, Ti)-YSZ with potential applications for IT-SOFCs: Catalytic and electrochemical assessment	Journal of Alloys and Compounds Volume 690, 5 January 2017, Pages 873–883 Accepted 20 August 2016 Available online 22 August 2016	2017
COMUNICARI STIINTIFICE NATIONALE				
1	Ion Bulimestru, Simona Șomacescu, Petre Osiceanu, Nelea Popa, Aurelian Gulea	MATERIALE CATODICE NANOSTRUCTURATE PENTRU PILELE DE COMBUSTIE CU ELECTROLIT OXID SOLID (SOFC)	XXXII-a Conferinta Nationala de Chimie, 03-05 octombrie 2012, Caciulata, Ramnicu Valcea	2012
2	M. Florea, C. Rotaru, S. Somacescu and P. Osiceanu	Synthesis of perovskites materials as cathodes for IT-SOFC	ROMCAT Conference 2013, Cluj-Napoca, Romania, May 29-31, 2013	2013
COMUNICARI STIINTIFICE INTERNATIONALE				
1	M. Florea, C. Rotaru, S. Somacescu and P. Osiceanu	Microwave assisted synthesis of perovskites as cathodes for SOFC: structural, textural and surface chemistry investigations	11th European Congress on Catalysis – EuropaCat-XI, Lyon, France, September 1st-6th, 2013	2013
2	B. Mitu, R. Pascu, G. Epurescu, M. Dinescu, N. Cioatera, S. Somacescu and P. Osiceanu	Investigation of structure, surface chemistry and electrochemical performances of SOFC electrolytes thin films and combined anode/electrolytes structures	Symposium O : Synthesis, processing and characterization of nanoscale multi functional oxide films IV of the E-MRS 2013 Spring Meeting, Congress Center in Strasbourg	2013
3	C. Solís, S. Somacescu, E. Palafox, P. Pla, J. M. Serra	NiFe ₂ O ₄ thin films	ELECTROCERAMICS XIV, 16-20 June 2014, Bucharest, Romania	2014
4	R. Pascu, S. Somacescu, N. Cioatera, G. Epurescu, B. Mitu, M. Dinescu	Gadolinium doped cerium oxide/Yttria stabilized zirconia layers grown by Pulsed Laser Deposition	ELECTROCERAMICS XIV, 16-20 June 2014, Bucharest, Romania	2014

5	N. Cioatera, E.A. Voinea, A. Rolle, E. Capoen, C.I. Spinu, and R.N. Vannier	Electrochemical and structural investigations of pyrochlore-type solid oxides. Optimization of composition	ELECTROCERAMICS XIV, 16-20 June 2014, Bucharest, Romania	2014
6	S. Somacescu*, L. Navarrete, M. Florea, J.M. Serra	$\text{Ni}(3+/2+)\text{xTiO}_{0.10}\text{Yo}_{0.16}\text{Zr}_{74-\text{x}}\text{O}_{2-\delta}$ and $\text{Cu}(2+)\text{xTiO}_{0.01}\text{Yo}_{0.16}\text{Zr}_{74-\text{x}}\text{O}_{2-\delta}$ mesostructured with nanocrystalline framework for IT-SOFCs application	Fourth International Conference on Multifunctional, Hybrid and Nanomaterials, Sitges (near Barcelona), Spain 9 - 13 March 2015	2015
7	N. Cioatera, M. Florea, G. Epurescu, R. Birjega, S. Somacescu, B. Mitu	$\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.8}\text{Cu}_{0.2}\text{O}_{3\delta}$, $\text{Pr}_{0.5}\text{Ba}_{0.5}\text{Cu}_{0.8}\text{Fe}_{0.2}\text{O}_{5+\delta}$, $\text{La}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3\delta}$ thin films cathodes for ITSOFCs application	EMRS 2015 Spring Meeting, Congress Center in Lille (France) from May 11 to 15, 2015	2015
8	M. Florea, S. Somacescu, L. Navarrete, J.M. Calderon-Moreno, J.M., Serra	CATALYTIC AND ELECTROCHEMICAL PROPERTIES OF (CU, TI)-YSZ FOR IT-SOFCs ANODE	12th European Congress on Catalysis – EuropaCat-XI, Kazan, Russia, 30 August – 4 September, 2015	2015
9	M. M. Trandafir, S. Somacescu, J. Calderon-Moreno, P. Osiceanu, M. Florea	$\text{Ni}_{0.2}\text{Ti}_{0.1}\text{Yo}_{0.16}\text{Zr}_{0.54}\text{O}_{2-\delta}$ and $\text{Cu}_{0.2}\text{Ti}_{0.1}\text{Yo}_{0.16}\text{Zr}_{0.54}\text{O}_{2-\delta}$ as anodes for IT-SOFCs anode	THE 8th INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS: ROCAM 2015, 7-10 JULY 2015, BUCHAREST, ROMANIA	2015
10	R. Pascu, G. Epurescu, S. Somacescu, R. Birjega, B. Mitu, V. Ion, M. Dinescu	1. Electrical properties of Ni-YSZ Thin Film for Solid Oxide Fuel Cells	E-MRS Spring Meeting, Lille (France) from May 11 to 15, 2015	2015
11	N. Cioatera, M. Florea, G. Epurescu, R. Birjega, S. Somacescu, B. Mitu,	$\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.8}\text{Cu}_{0.2}\text{O}_{3-\text{x}}$, $\text{Pr}_{0.5}\text{Ba}_{0.5}\text{Cu}_{0.8}\text{Fe}_{0.2}\text{O}_{5-\text{x}}$, $\text{La}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\text{x}}$ thin films cathodes for IT-SOFCs application	E-MRS Spring Meeting, Lille (France) from May 11 to 15, 2015	2015
12	Bogdana Mitu, Nicoleta Cioatera, Mihaela Florea, Rovena Pascu, George Epurescu, Ruxandra Birjega and Simona Somacescu	Evaluation performance $\text{La}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_3 - \delta$ (LSCF) and $\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.8}\text{Cu}_{0.2}\text{O}_3 - \delta$ (NSCC) thin films cathodes for IT - SOFC	Romphyschem 16, "DUNAREA DE JOS" UNIVERSITY OF GALATI, 21-23 September 2015	2015
13	Nicoleta Cioatera, Simona Somacescu, Elena-Adriana Voinea, Sabina Nicolae, Florentina Neatu, Mihaela Florea	Catalytic and electrochemical investigations of multiple doped ceria	ROMCAT 2016, The 11th International Symposium of The Romanian Catalysis Society, Timisoara 6-8 June 2016	2016

Lista achizițiilor realizate în cadrul proiectului

Denumire echipament	Categorie de achiziții* : (numai mijloace fixe)	Valoarea (lei)	Locație
CTR. 26/2012	2012		
Dell-Laptop Vostro 3360	Imobilizari corporale	4199	ICF
Autoclave Carl Roth - model IV	Imobilizari corporale	55475,67	ICF
HP Imprimanta Laser Jet Pro 400	Imobilizari corporale	1959,01	ICF
Kaspersky Internet Security	Imobilizari necorporale	297,33	ICF
	2013		
Pompa de vid cu membrana	Imobilizari corporale	3352,85	ICF
Stirrer magnetic HEI	Imobilizari corporale	4456,98	ICF
Kaspersky Internet Security	Imobilizari necorporale	196,29	ICF
	2014		
Cuptor	Imobilizari corporale	14276,52	ICF
Kaspersky Internet Security	Imobilizari necorporale	152,84	ICF
Team Viewer	Imobilizari necorporale	2156,65	ICF
	2015		
Autoclava	Imobilizari corporale	27381,33	ICF
Kaspersky Internet Security	Imobilizari necorporale	94,15	ICF
	2016		
Kaspersky Internet Security	Imobilizari necorporale	499,98	ICF
Team Viewer	Imobilizari necorporale	908,65	ICF

**Director proiect,
Dr. Simona Somacescu**