

Titlu proiect: FUNCTIONALIZAREA CU PLASMA A SONDELOR NANOSCOPICE
Categoria de proiect: PN-II-ID-PCE-2011-3-0270
Contractul de finanțare: 267 - 05/10/2011
Manager proiect: Sirghi Lucel

<http://www.plasma.uaic.ro/idei267>

Lista rezultate

Nr. crt.	NUME AUTORI	TITLUL ARTICOLULUI/ CĂRȚII / COMUNICĂRII ȘTIINȚIFICE	REVISTA / VOLUMUL/EDITUR A IN CARE A APARUT / CONFERINTA LA CARE S-A COMUNICAT	ANUL PUBLICĂRII/ COMUNICĂRII
ARTICOLE ISI				
1	Sirghi Lucel	PLASMA CLEANING OF SILICON SURFACE OF ATOMIC FORCE MICROSCOPY PROBES	ROMANIAN JOURNAL OF PHYSICS	2011
2	Sirghi Lucel	Transport Mechanisms in Capillary Condensation of Water at a Single-Asperity Nanoscopic Contact	LANGMUIR, 28(5) 2558-2566	2012
3	Tiron Vasile, Sirghi Lucel, Popa Gheorghe	Control of aluminum doping of ZnO:Al thin films obtained by high-power impulse magnetron sputtering	THIN SOLID FILMS, 520 (13) 4305-4309	2012
4	A. Apetrei and L. Sirghi	Stochastic adhesion of hydroxylated atomic force microscopy tips to supported lipid bilayers	LANGMUIR, 29 (52), 16098-16104	2013
5	L. Sirghi, D. Ciumac and V. Tiron	Mechanical properties of atomic force microscopy probes with deposited thin films	Thin Solid Films 565, 28 August 2014, Pages 267-270	2014
6	L. Sirghi, V. Tiron and M. Dobromir	Single asperity friction force between diamond-like carbon thin film surfaces Diamond and Related Materials	Thin Solid Films 565, 52 (2015) p 38-42.	2015
7	Lucel Sirghi, Florentina Samoila, Viorel Anita	Cleaning of silica surfaces by surface discharge barrier discharge plasma, Proceedings of the 15th International Conference on Global Research and Education	Advances in Intelligent Systems and Computing , 519 (2016) p255	2016
8	F. Samoila, A. Besieaga and L. Sirghi	Atomic Force Microscopy study of contamination of glass surface exposed to oleic acid vapors Proceedings of the 15th International Conference on Global Research and Education	Advances in Intelligent Systems and Computing , 519 (2016) p71	2016
ARTICOLE ALTE BAZE DE DATE				
1				
n				
CAPITOLE CARTI				
1	Sirghi Lucel	Water Condensation at Nanoscale: An Atomic Force Microscopy Study	Water Condensation: Processes, Modeling and Control, Nova Publishers, 978-1-61324-874-4	2012

	Sirghi Lucel, Samoila Florentina, Anitei Viorel	Cleaning of silica surfaces by surface dielectric barrier plasma	Recent Global Research and Education: Technological Challenges, Springer, ISBN 978-3-319-46490- 9	2016
	Samoila Florentina, Besleaga Alexandra, Sirghi Lucel	Atomic force microscopy study of contamination process of glass surface exposed to oleic acid vapors	Recent Global Research and Education: Technological Challenges, Springer, ISBN 978-3-319-46490- 9	2016
CARTI				
1				
n				
COMUNICARI STIINTIFICE NATIONALE				
1	A. Apetrei and L. Sirghi	Stochastic Behavior of Hydrogen Bond Formation Between Phospholipid Constituents Of Supported Lipid Membranes and Hydroxylated AFM Tips	12th National Conference on Biophysics, with international participation, Iasi, Romania (oral presentation).	13-16th June 2013
2	D. Ciumac, A. Apetrei, L. Sirghi and T. Luchian	Mechanical properties of supported lipid bilayers. An Atomic Force Microscopy indentation approach	12th National Conference on Biophysics, with international participation, Iasi, Romania (poster presentation)	13-16th June 2013
3	A. Dascalu, A. Demeter, L. Sirghi	Interactiunea cu solutii apoase a plasmei descarcarii cu bariera dielectrica de suprafata	a XLV-a Conferinta Nationala de Fizica si Tehnologii Educationale Moderne (FTEM), Iasi, Romania (poster presentation)	14 mai 2016
4	A. Besleaga, F. Samoila, A. Apetrei, L. Sirghi	Lifetime of tethered lipid nanotubes	a XLV-a Conferinta Nationala de Fizica si Tehnologii Educationale Moderne (FTEM), Iasi, Romania (poster presentation)	14 mai 2016
COMUNICARI STIINTIFICE INTERNATIONALE				
1	Sirghi Lucel, Apetrei Aurelia, Tudor Luchian	Adhesion of a hydroxylated atomic force microscopy probe to lipid membranes	8th NanoBio – Europe conference, Varese, Italy (poster presentation).	18-20th June 2012
2	Sirghi Lucel, Apetrei Aurelia, Dobromir Marius	Hydroxylation of atomic force microscopy probes by H ₂ O plasma Treatment	9th International Conference On Physics Of Advanced Materials, Iasi, Romania (oral presentation).	20-23th September 2012
3	Sirghi Lucel	Capillary force at single- asperity nanoscopic contacts	10 years of nanotechnology development in Republic of Moldova, Balti, Republic of Moldova (oral presentation).	22-23th October 2012
4	L. Sirghi, V. Tiron, and M. Dobromir	High power impulse magnetron sputtering deposition of diamond-like carbon thin films on atomic force microscopy probes	16th International Conference on Plasma Physics and Applications, Magurele, Bucharest, Romania (oral presentation).	20-25th June 2013

5	D. Ciumac, A. Apetrei, L. Sirghi	Atomic force spectroscopy investigation of the interactions manifested between teflon coated AFM tips and supported lipid bilayers	The Third International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences - "IC-ANMBES 2014", Brasov, Romania (poster presentation).	June 13th – 15th, 2014
6	F. Samoila, V. Anita, L. Sirghi	Cleaning of silicon surface by surface dielectric barrier discharge	32nd International Conference on Phenomena in Ionized Gases (ICPIG 2015), Iasi, Romania, (poster presentation)	July 26-30, 2015
7	Lucel Sirghi, Aurelia Apetrei, Viorel Anita and Marius Dobromir	Functionalization of Atomic force microscopy probes by thin film depositions	The 9th International Conference on Global Research and Education (InterAcademia 2015), Hamamatsu, Japan, (oral presentation).	September 28-30, 2015
	L. Sirghi, A. Dascalu, V. Anita	Surface dielectric barrier discharge in closed volume air	The 6th International Conference on Plasma Medicine (ICPM6), Bratislava, Slovakia, (poster presentation.)	4-9 septembrie 2016
	Lucel Sirghi, Florentina Samoila, Viorel Anita	Cleaning of silica surfaces by surface discharge barrier discharge plasma	The 15th International Conference on Global Research and Education (InterAcademia 2016), Varsovia, Polonia, (oral presentation.).	September 26-28, 2016
	F. Samoila, A. Besleaga and L. Sirghi	Atomic Force Microscopy of Contamination of glass surface exposed to oleic acid vapors	The 15th International Conference on Global Research and Education (InterAcademia 2016), Varsovia, Polonia, (poster presentation.).	September 26-28, 2016
ATLASE, DICTIONARE DE SPECIALITATE				
I				
II				
CERERI BREVET DE INVENTII/BREVET OBTINUT				
ALTE rezultate				
I		Assistant researcher Daniela Ciumac won the Best Poster Prize at the 12 th National Conference on Biophysics, with international participation, 13-16 th June 2013, Iasi, Romania, for the work: "Mechanical properties of supported lipid bilayers. An Atomic Force Microscopy indentation approach."	12 th National Conference on Biophysics, with international participation, 13-16 th June 2013, Iasi, Romania	
2		Assistant researcher Daniela Ciumac attended the Summer School „SPM microscopy” organized on 10-11 th June 2013, in Brno, Czech Republic.	Summer School „SPM microscopy	
II				

Lista achizițiilor realizate în cadrul proiectului

Denumire echipament	Categorie de achiziții: (numai mijloace fixe)	Valoarea (lei)	Locație
Spectrometru optic Avantes: AvaSpec-ULS2048 USB2		16293.60	Lab AFM
Pompa preliminara uscata (tehnologie scroll) Agilent SH-110		15441.35	Lab AFM
Pompa preliminara uscata (tehnologie scroll) Agilent SH-110		15441.35	Lab plasma
Pompa turbomoleculara Agilent TV-81M		19972.80	Lab plasma
Joja presiune full range Agilent FRG-700		4694.42	Lab plasma
Agitator Vortex 220 V		1240.48	Lab AFM
pH metru de laborator HANNA HI 2211		1760.71	Lab AFM
Balanta de precizie cu greutate de calibrare		4144.08	Lab AFM
Pipete digitale cu volum ajustabil, capacitate 20-200 ml, acuratete 1ml (5%), subdiviziuni 1ml, varf de tip B,C,G**,H**,I**		1116.24	Lab AFM
Pipete digitale cu volum ajustabil, capacitate 100-1000 ml, acuratete 5ml (5%), subdiviziuni 1ml, varf de tip D, J**		1116.24	Lab AFM
Computer personal Fast Data cu monitor		3402.56	Lab AFM
Videoproietor		3086.36	Lab plasma
masa optica model Thorlabs PBIS1516		11548.42	Lab AFM
suport masa optica cu sistem antivibratii pasiv, model Thorlabs PFH52502		11222.86	Lab AFM
Sursa de rf CESAR 133 13.56 MHz		31806	Lab plasma
Glove box		26794.58	Lab plasma
Microscop cu Fortia Atomica		460018.92	
Osciloscop Tektronix DPO2024		10809.08	Lab plasma
Unitate UPS pentru protectia calculatorului si a aparaturii experimentale, 2000VA		1398.32	Lab AFM
System de translatie xy (Miniature 1/2 inch translator) K-TH-T12XY/M		2572.89	Lab AFM
Sistem de translatie uniaxial cu precizie nanometrica (NanoFlex 5mm, Translation Stage with Differential Mic.)Torlabs K-TH-NFL5DP20/M		5073.75	Lab AFM
Controler electronic pentru un element piezoelectric (Single Axis Piezo Control)Torlabs K-TH-MDT694A		3716.19	Lab AFM
Fotodioda cu patru cadrane (Quadrant Detector for PDQ80S1 System) Compatibil minim sau echivalent cu modelul Torlabs K-TH-PDQ80A		2504.63	Lab AFM
(T-Cube Quad Detector) Torlabs K-TH-TQD001		3877.53	Lab AFM
Fereastra cu acces rapid in incinta de vid		3979,26	Lab AFM
Fereastra cu acces rapid inst. vid		4228,93	Lab plasma
TOTAL MIJLOACE FIXE		659053,4 RON	

Director proiect,
Sirghi Lucel

