

Anexa 2a

Titlu proiect: Studiul interacțiunii polimer – radiație laser în atmosferă controlată.

Obținerea de filme nanostructurate prin ablație laser. Aplicații

Categoria de proiect: CNCSIS PN-II-ID-PCE-2011-3-0650

Contractul de finanțare: 269/05.10.2011

Manager proiect: Conf.univ.dr. Silviu GURLUI

Lista rezultate

Nr. crt.	NUME AUTORI	TITLUL ARTICOLULUI/ CĂRȚII / COMUNICĂRII ȘTIINȚIFICE	REVISTA / VOLUMUL/EDITURA IN CARE A APARUT / CONFERINȚA LA CARE S-A COMUNICAT	ANUL PUBLICĂRII/ COMUNICĂRII
ARTICOLE ISI				
1	C. Focsa, S. Gurlui, S. Pellerin, N. Pellerin, D.Pagnon, M. Dudeck, L. Balika	Laser-induced breakdown spectroscopy in a running Hall effect thruster for space propulsion	Spectrochimica Acta - Part B Atomic Spectroscopy 74-75, p. 184-189	2012
2	P. Nica, M. Agop, S. Gurlui, C. Bejinariu, C. Focsa	Characterization of Aluminum Laser Produced Plasma by Target Current Measurements	Japanese Journal of Applied Physics 51, 106102	2012
3	M. Agop, P. Nica, O. Niculescu, D. G. Dimitriu	Experimental and theoretical investigations of the negative differential resistance in a discharge plasma	Journal of the Physical Society of Japan 81, 064502	2012
4	G. Dascalu, G. Pompilian, B. Chazallon, O. F. Caltun, S. Gurlui, C. Focsa	Femtosecond pulsed laser deposition of cobalt ferrite thin films	Applied Surface Science 278, p. 38-42	2013
5	S. Gurlui, G. O. Pompilian, P. Nemec, V. Nazabal, M. Ziskind, C. Focsa	Plasma Diagnostics in Pulsed Laser Deposition of GaLaS Chalcogenides	Applied Surface Science 278, p. 352-356	2013
6	D. G. Dimitriu, M. Aflori, L. M. Ivan, V. Radu, E. Poll, M. Agop	Experimental and theoretical investigations of plasma multiple double layers and their evolution to chaos	Plasma Sources Science and Technology 22, 035007	2013
7	G. Bulai, S. Gurlui, O. F. Caltun, C. Focsa	Pure and rare earth doped cobalt ferrite laser ablation: space and time resolved optical emission spectroscopy	Digest Journal of Nanomaterials and Biostructures 10 (3), p. 1043 – 105	2015
8	D. G. Dimitriu, S.A. Irimiciuc, S. Popescu, M. Agop, C. Ionita and R.W. Schrittwieser	On the interaction between two fireballs in low-temperature plasma	Physics of Plasmas 22, 113511	2015

9	R. W. Schrittwieser, C. Ionita, C. T. Teodorescu-Soare, O. Vasilovici, S. Gurlui, S. A. Irimiciuc, D. G. Dimitriu	Spectral and electrical diagnosis of a complex space-charge configuration inside and around a spherical grid with hole	Physica Scripta (trimis spre publicare)	2016
ARTICOLE ALTE BAZE DE DATE				
1	D. G. Dimitriu, M. Aflori, L. M. Ivan, E. Poll, M. Agop	Transition to chaos through sub-harmonic bifurcations in plasma. I. Experiment	Bulletin of the Polytechnic Institute of Iasi, section Mathematics. Theoretical Mechanics. Physics 58 (4), p. 29-35	2012
2	M. Agop, E. Poll, D. G. Dimitriu, M. Aflori, L. M. Ivan	Transition to chaos through sub-harmonic bifurcations in plasma. II. Fractal hydrodynamics	Bulletin of the Polytechnic Institute of Iasi, section Mathematics. Theoretical Mechanics. Physics 58 (4), p. 37-55	2012
3	E. Poll, M. Agop, D. G. Dimitriu, M. Aflori, L. M. Ivan	Transition to chaos through sub-harmonic bifurcations in plasma. III. Theoretical modeling	Bulletin of the Polytechnic Institute of Iasi, section Mathematics. Theoretical Mechanics. Physics 58 (4), p. 57-70	2012
COMUNICARI STIINTIFICE NATIONALE				
1	C. Focsa, S. Gurlui	High Technological, Potential Materials, Explored by Laser, Ablation	5-th National Conference of Applied Physics, May 23 - 24, 2013, Iasi, Romania	2013
2	F. Husanu, G. Bulai, M. Pinteala, C. Focsa, S. Gurlui	Studiul nanoparticulelor de ferită de cobalt obținute prin ablație laser în lichid	Conferința Națională Fizica și Tehnologiile Educaționale Moderne, Iași, 2015, Romania	2015
3	B.C. Hodoroaba, S. A. Irimiciuc, G. Bulai, C. Focsa, S. Gurlui	Studiul plasmei de ferita de cobalt produsa prin ablatie laser	Conferința Națională Fizica și Tehnologiile Educaționale Moderne, Iași, 2015, Romania	2015
COMUNICARI STIINTIFICE INTERNATIONALE				
1	R. Cimpoesu, O. Pompilian, N. Cimpoeșu, D. G. Dimitriu, S. Gurlui, C. Focsa	UV-pulsed laser deposition of polymer thin films: fundaments and applications	Physics Conference TIM – 11, 24 - 27 November 2011, Timisoara, Romania	2011
2	S. Gurlui, I. Lihtetchi, V. Hurduc, D. G. Dimitriu, M. Strat	Nanostructured polymer surfaces and nanoagregates of some diazobenzene polymers in film sate	Physics Conference TIM – 11, 24 - 27 November 2011, Timisoara, Romania	2011
3	S. Gurlui, C. Focsa	Development of Laser-Produced Plasma Technology. Fundamentals and Applications	8th General Conference of Balkan Physical Union, 5-7 July 2012, Constanta, Romania	2012
4	O. G. Pompilian, G. Dascalu, S. Gurlui, C. Focsa	Processing and characterization of advanced materials by laser ablation techniques	9th International Conference on Physics of Advanced Materials, 20 - 23 September 2012, Iasi, Romania	2012

5	O. G. Pompilian, G. Dascalu, S. Gurlui, C. Focsa	Laser-induced plasma: fundamentals and applications	Physics Conference TIM-12, 27-30 November 2012, Timisoara, Romania	2012
6	L. Balika, C. Focsa, S. Gurlui, S. Pellerin, N. Pellerin, D. Pagnon, M. Dudeck	Laser Ablation in a Hall Effect Thruster for Space Propulsion	E-MRS Spring 2012 - Symposium V, 2012	2012
7	G. Dascalu, G. Pompilian, B. Chazallon, V. Nica, O. F. Caltun, S. Gurlui, C. Focsa	Rare earth doped cobalt ferrite thin films deposited by PLD	E-MRS Spring 2012 - Symposium V, 2012	2012
8	S. Gurlui, G. O. Pompilian, P. Nemec, V. Nazabal, M. Ziskind, C. Focsa	Plasma Diagnostics in Pulsed Laser Deposition of GaLaS Chalcogenides	E-MRS Spring 2012 - Symposium V, 2012	2012
9	R. Cimpoesu, S. Gurlui, O. Pompilian, M. Lohan, N. Cimpoesu, C. Focsa	Thermo-elastic solicitation of a shape memory alloy enhanced with thin polymer films through pulsed laser deposition technique	8th General Conference of Balkan Physical Union, 5-7 July 2012	2012
10	S. Gurlui, D. Dimitriu, M. Strat	Optical and Spectral Properties of Polyurethane Coumarine. Self-organization phenomena induces nanoaggregate formations	8th General Conference of Balkan Physical Union, 5-7 July 2012	2012
11	S. Gurlui, N. Cimpoesu, M. Strat	Selforganization phenomena in polyurethane coumarine film. The study of formation of nanoagregates by means of AFM and SEM methods	8th General Conference of Balkan Physical Union, 5-7 July 2012	2012
12	M. Agop, D. G. Dimitriu, S. Gurlui	Negative Differential Resistance of the Discharge Plasma through Fractal Space-Time Theory	5th Chaotic Modeling and Simulation International Conference, 12 – 15 June 2012, Athens, Greece	2012
13	M. Agop, D. G. Dimitriu, S. Gurlui	Modeling of a Scenario of Transition to Chaos in Plasma through Sub-harmonic Bifurcations	5th Chaotic Modeling and Simulation International Conference, 12 – 15 June 2012, Athens, Greece	2012
14	O. Niculescu, M. M. Cazacu, M. N. Dănilă, D. G. Dimitriu, S. Gurlui, M. Agop	Magnetosphere double layers and aurora borealis. Acceleration mechanisms and instabilities	Environmental Legislation, Safety Engineering and Disaster Management (ELSEDIMA), Cluj-Napoca, Romania, 2012	2012
15	S. Gurlui, O. Niculescu, D. G. Dimitriu, C. Ionita, R. Schrittwieser	Spectral investigations of two simultaneous fireballs in plasma	Physics Conference TIM-12, Timisoara, Romania, 2012	2012
16	S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa	Peculiar Behavior of Plasma Plumes Generated by Femtosecond Laser Ablation of Metallic Targets	12th International Conference on Laser Ablation, 6-11 October 2013, Ischia, Italy	2013

17	S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa	Two-Temperature Plasmas Generated by Femtosecond Laser Ablation of Metallic Targets	16th International Conference on Plasma Physics and Applications, June 20-25, 2013, Magurele, Bucharest, Romania	2013
18	O. G. Pompilian, G. Dascalu, I. Mihaila, S. Gurlui, M. Olivier, P. Nemec, V. Nazabal, N. Cimpoesu, C. Focsa	Pulsed Laser Deposition of Gallium Lanthanum Sulphide Chalcogenide Thin Films	12th International Conference on Laser Ablation, 6-11 October 2013, Ischia, Italy	2013
19	O. Niculescu, S. Gurlui, D. G. Dimitriu, C. Ionita, R. Schrittwieser	Optical Emission Spectroscopy and Nonlinear Dynamics Analysis of Two Fireballs Simultaneously Obtained in a Cold Diffusion Plasma	31st ICPIG, July 14-19, Granada, Spain, 2013	2013
20	O. Niculescu, S. Gurlui, D. G. Dimitriu, C. Ionita, R. Schrittwieser	Study on the Interaction of two Complex Plasma Structures. Optical Emission Spectroscopy and Nonlinear Dynamics Analysis	PLASMA-2013, September 2-6, Warsaw, Poland, 2013	2013
21	G. Dascalu, S. Gurlui, P. Nemec, O. Pompilian, C. Focsa	Nano-, Pico- and Femto-second Laser Ablation of Pure and Rare-earth-doped Gallium Lanthanum Sulphide: A Comparative Study by Space- and Time-resolved Optical Emission Spectroscopy	International Conference on Laser Induced Breakdown Spectroscopy (LIBS 2014), 2014, Beijing, China	2014
22	G. Dascalu, O. G. Pompilian, I. Mihaila, S. Gurlui, P. Hawlova, P. Nemec, V. Nazabal, C. Focsa	Pure and Rare-Earth Doped Gallium Lanthanum Sulphide Amorphous Thin Films Grown by Pulsed Laser Deposition in Various Temporal Regimes	European Materials Research Society (E-MRS) Spring Meeting, E-MRS 2014, Lille, France	2014
23	R. Boidin, S. Gurlui, G. Dascalu, P. Nemec, V. Nazabal, C. Focsa	Pulsed Laser Deposition of Ge-Sb-Se glasses: A plasma plume dynamics study	European Materials Research Society Spring Meeting, E-MRS 2014, Lille, France	2014
24	G. Bulai, O. Caltun, S. Gurlui, M. Feder, B. Chazallon, C. Focsa	Structural and magnetic properties of rare earth doped cobalt ferrite thin films grown by pulsed laser deposition	International Conference on Thin Films, 2014, Dubrovnik, Croatia	2014
25	R. Boidin, J. M. Kfoury, S. Gurlui, G. Dascalu, P. Nemec, V. Nazabal, C. Focsa	Space- and Time-Resolved Optical Emission Spectroscopy of Plasma Plume Dynamics in Laser Ablation of Ge-Sb-Se Chalcogenide Glasses	International Conference on Laser Induced Breakdown Spectroscopy (LIBS 2014), 2014, Beijing, China	2014
26	G. Bulai, O. Pompilian, V. Nazabal, P. Nemec, B. Chazallon, S. Gurlui, C. Focsa	Influence of ablation conditions on the structural and optical properties of Ge-Sb-Te based thin films	Electroceramics Conference, 2014, Bucharest, Romania	2014

		deposited by PLD		
27	G. Dascalu, O. Pompilian, S. Gurlui, P. Nemec, C. Focsa	Space- and time-resolved optical emission spectroscopy of transient plasma generated by ns and fs laser ablation of Pr- and Er-doped GaLaS	European Materials Research Society Spring Meeting, E-MRS 2014, Lille, France	2014
28	G. Dascalu, O. Pompilian, N. Cimpoesu, V. Nazabal, P. Nemec, P. Hawlova, B. Chazallon, S. Gurlui, C. Focsa	Improved surface structure and chemical composition of Ge-Sb-Te thin films grown by femtosecond and picosecond PLD	European Materials Research Society Spring Meeting, E-MRS 2014, Lille, France	2014
29	G. Bulai, V. Nica, B. Chazallon, S. Gurlui, C. Focsa	Influence of rare earth addition on structural and magnetic properties of cobalt ferrite thin films	EMRS Spring Meeting, 2015, Lille, France	2015
30	G. Bulai, B. Chazallon, I. Dumitru, S. Gurlui, C. Focsa	Influence of deposition conditions on rare earth doped cobalt ferrite thin films obtained by PLD	Conference on Laser Ablation, 2015, Cairns, Australia	2015
31	G. Bulai, S. Gurlui, B. Parvatheeswara Rao, O. F. Caltun	Alternating target laser ablation deposition of Cu doped cobalt ferrite thin films	International Conference on Magnetism, 2015, Barcelona, Spain	2015
32	G. Bulai, A. Fifere, I. Dumitru, M. Pinteala, C. Focsa, S. Gurlui	Structural and magnetic properties of cobalt ferrite nanoparticles obtained by laser ablation in liquid	International Conference on Magnetism, 2015, Barcelona, Spain	2015
33	M. Strat, N. Cimpoesu, V. Pohoata, E. Buruiana, G. Bulai, S. Gurlui	Selforganization of Nanoagregates Polyurethane Coumarins	Frontiers in Polymer Science, 2015, Riva del Garda, Italy	2015
34	S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa	Langmuir Probe Measurements on Femtosecond Laser Ablation of Several Metals	EMRS Spring Meeting, 2015, Lille, France	2015
35	S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa	Electrical and optical investigation of plasma plumes generated by femtosecond laser ablation of various metals	13th Conference on Laser Ablation (COLA-2015) Cairns, Australia	2015
36	S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa	Optical and electrical investigations of transient plasmas generated by femtosecond laser ablation	XXXII ICPIG, 2015, Iasi, Romania	2015
37	S. Gurlui, G. Bulai, M. M. Cazacu, A. Timofte, A. Cocean, S. Irimiciuc, V. Pelin, B. Albina, N. Cimpoesu, P. Nica, M. Agop, M. Ziskind, C. Focsa	Space-and-time-resolved spectroscopy of transitory laser ablation plasma	International EMMI Workshop in Plasma Physics at FAIR, GSI Darmstadt, July 11th-13th 2016	2016
38	G. Bulai, B. Chazallon, A. Popa, D. Toloman, F. Iacomi, S. Gurlui, C. Focsa	Influence of rare earth addition in cobalt ferrite thin films deposited by PLD	EMRS Spring Meeting, 2016, Lille, France	2016
39	S. Irimiciuc, R. Boidin, G. Bulai, S. Gurlui, P. Nemec,	Laser ablation of $(\text{GeSe}_2)_{100-x}(\text{Sb}_2\text{Se}_3)_x$	EMRS Spring Meeting, 2016, Lille, France	2016

	V. Nazabal, C. Focsa	chalcogenide glasses: Influence of the target composition on the plasma plume dynamics		
40	G. Bulai, O. Pompilian, S. Gurlui, P. Nemec, V. Nazabal, N. Cimpoesu, B. Chazallon, C. Focsa	Structural and optical properties of Ge-Sb-Te chalcogenide thin films deposited by nanosecond, picosecond and femtosecond laser ablation	International Conference on Physics of Advanced Materials 2016, Cluj- Napoca, Romania	2016
41	S. A. Irimiciuc, B. C. Hodoroba, S. Gurlui, M. Agop, P. Nica, C. Focsa	Space-and time-resolved Langmuir probe investigations of nanosecond laser ablation plasma plumes	International Conference on Physics of Advanced Materials 2016, Cluj- Napoca, Romania	2016
42	A. Cocean, V. Pelin, M. M. Cazacu, S. Gurlui, F. Iacomì	Thermal doping effect on the limestone under laser irradiation	International Conference on Physics of Advanced Materials 2016, Cluj- Napoca, Romania	2016
43	S. Gurlui, C. T. Teodorescu-Soare, D. G. Dimitriu, R. Schrittwieser, C. Ionita	Optical and electrical investigations of a complex space charge structure excited by a spherical grid cathode with hole	27th Symposium on Plasma Physics and Technology, 2016, Prague, Czech Republic	2016
44	R. Schrittwieser, C. T. Teodorescu-Soare, D. G. Dimitriu, S. Gurlui, C. Ionita, O. Vasilovici	Complex space charge structures excited by a spherical grid cathode	16th International Balkan Workshop on Applied Physics, July 7- 9, 2016, Constanta, Romania	2016

Lista achizițiilor realizate în cadrul proiectului

Denumire echipament	Categorie de achiziții* : (numai mijloace fixe)	Valoarea (lei)	Locație
Sistem integrat de caracterizare optică și spectrală a plasmelor produse prin ablație laser sub vid și în atmosferă liberă	Echipamente și aparatură de cercetare	709528	Laboratorul de Optica Atmosferei, Spectroscopie și Lasere, Facultatea de Fizică, Universitatea "Alexandru Ioan Cuza" din Iași
Osciloscop digital WaveSurfer 3054	Echipamente și aparatură de cercetare	33480	Laboratorul de Optica Atmosferei, Spectroscopie și Lasere, Facultatea de Fizică, Universitatea "Alexandru Ioan Cuza" din Iași

Categorie de achiziții* :

1. Echipamente și aparatură de cercetare
2. Rețele de comunicații specializate
3. Baze de date și informații de specialitate
4. Echipamente și mijloace moderne de documentare și comunicare
5. Alte categorii

Director proiect,

Conf.univ.dr. Silviu GURLUI

