

XVII Symposium on
Condensed Matter Physics
SFKM 2007

**Program
and
Contributed Papers**



September 16–20, 2007, Vršac, Serbia

Editors:

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XVII National Symposium on Condensed Matter Physics SFKM 2007

Scientific Program

Focused sessions:

1. Nanostructures and Low-dimensional Systems
2. Superconductivity, Magnetism and Strongly Correlated Systems
3. Soft Matter
4. Semiconductors
5. Optics and Spectroscopy
6. Experimental Methods, Instruments, and Applied Condensed Matter Physics

Conference Program

Sunday, 16 September 2007:

- 17.30 Bus ride: Belgrade - Vršac
19.00 – 22.00 Registration and Welcome Cocktail

Monday, 17 September 2007

- 9.00 - 9.30 Registration
9.30 - 10.00 Opening Ceremony
- 10.00-10.25 R. Tenne: Inorganic Nanotubes and Fullere-ne-like Structures (IF): Progress Report
10.25-10.50 I. Bozovic: Studies of Atomically Perfect High-Tc Thin Films and Superlattices
10.50-11.15. J. Zaanen: Fermionic Quantum Criticality
- 20 min Coffee Break
- 11.35-12.00 Z. Tesanovic: Emergence of Cooper Pairs and the Physics of Cuprates
12.00-12.25 C. Petrovic: Search For New Quasi Low Di-mensional Superconductors and Semiconductors
12.25-12.50 S. H. Simon: Topological Quantum Compiling
12.50-13.15 A. Auerbach: Quantum Properties of Vortices of Two-Dimensional Continuum and Lattice Bosons
- Lunch
- 15.00-15.20 Igor Herbut: "Higgs" Phase Transitions on Graphene's Honeycomb Lattice
15.20-15.40 B. K. Nikolic: Quantum transport of massless Dirac fermions in graphene nanoribbons
15.40-16.00 M. O. Goerbig: Magnetophonon resonance in grapheme
16.00-16.20 Z. Sljivancanin: Metastable Structures and Recombination Pathways for Atomic Hydrogen on the Graphite(0001) Surface

15 min Coffee Break

- 16.35-16.55 L. Forró: The Evolution of the Non-Fermi Liquid Behavior in BaVS₃ Under High Pressure
16.55-17.15 C. Strunk: Quantum Conductors as Josephson Junctions
17.15-17.35 V. Dobrosavljević: Coulomb-Frustrated Phase Separation in a Magnetically-Doped 2DEG
17.35-17.55 M.V. Milovanovic: Quantum Disordering of a Quantum Hall Superfluid
17.55-18.15 D. Tanaskovic: Spin liquid behavior in electronic Griffiths phases
- 18.15-20.00 **Poster session: 1, 5 & 6**

Tuesday, 18 September 2007

NANOLab Workshop

- 9.00-9.20 F. R. Vukajlović: Atomic structure and spin magnetism of self-assembled Co nanowires on Pt (332)
9.20-9.40 P. Monceau: Charge Density Wave Gap Spectroscopy in Quasi-one-dimensional Compounds
9.40-10.00 K. Biljaković: Charge density glass - facts and fictions

15 min Coffee Break

- 10.15-10.35 B. Tadic: Multiscale Network Models of Nano-Materials
10.35-10.55 V. Meunier: Using large-scale computing for the simulation and prediction of novel phenomena at the nanoscale
10.55-11.15 A. Karwowski: Moment Equations for the Boltzmann Gas of Elastic Spheres: A Road from Statistical Physics to Continuum Mechanics

15 min Coffee Break

- 11.30-11.50 J. Maultzsch: Electron-phonon coupling in metallic carbon nanotubes observed by Raman scattering
11.50-12.10 I. Milosevic: Pentaheptite Allotropes of Carbon Nanotubes
12.10-12.30 N. Cotfas: Permutation representations with application to quasicrystals and CNTs
12.30-12.50 Z. Papadopolos: Is Al Correctly Placed in the Model of Icosahedral Al-Pd-Mn and Al-Cu-Fe?
12.50-13.10 E. Dobardzic: Phonons in low-dimensional crystals

Lunch

- 15.00-15.20 S. Logothetidis: Flexible Electronic Devices: Principles - Processes and Applications
15.20-15.40 N. Konjevic: Balmer Alpha Line Shape of Hydrogen Isotopes for Monitoring Discharge – Metal Surface Interaction
15.40-16.00 Lj. Zekovic: Galvanoluminescence After the Century
16.00-16.20 C. Teichert: Self-organization of Semiconductor Nanostructures and their Application to Fabricate Nanomagnet Arrays

15 min Coffee Break

XVII National Symposium on Condensed Matter Physics, Vršac 2007

16.35-16.55	D. Porath: Towards DNA- and Protein-Based Nanoelectronics?
16.55-17.15	I. M. Kulic: Hitchhikers Guide through the Cell
17.15-17.35	J. Kondev: DNA Looping and Regulation of Gene Expression
17.35-17.55	D. Dulić: Temperature gating of the ring-opening process in diarylethene molecular switches
17.55-18.15	S. Milosević: Determining the type of muscle motor activity by applying the wavelet theory and theory of random walks to characterize the neuronal noise
18.15-18.35	A. Damjanovic: Structural consequences of the ionization of internal groups in proteins
18.15-20.00	Poster session: 2,3 & 4

Wednesday, 19 September 2007

9.00-9.20	V.V. Ryazanov: Coexistence of 0- and pi-states in Josephson SFS junctions
9.20-9.40	M. Aprili: Dynamics of Ferromagnetic Josephson Junctions
9.40-10.00	M. L. Kulic: Pi-Contact Interferometry Based on Ultracold Fermionic Atomic Gases
10.00-10.20	M. Bozovic: Spin-triplet correlations in superconductor-ferromagnet multilayers
10.20-10.40	Lj. Dobrosavljevic-Grujic: Superharmonic Josephsons devices based on d-wave junctions with a ferromagnetic barrier
	20 min Coffee Break
11.00-11.20	H. Raffy: Evolution of Electronic Properties of BiSrCaCuO Thin Films Controlled by Oxygen Doping: Selected Experimental Results
11.20-11.40	D. Popovic: Glassy Effects in the Low Temperature Transport and Noise in Lightly Doped La _{2-x} Sr _x CuO ₄
11.40-12.00	D. Pavuna: The Genuine Challenge of High-T _c Superconductivity: Physics and Nano-engineering of Heteroepitaxial Films
12.00-12.20	J. Demsar: Ultrafast Phenomena in Superconductors Studied by Real-time Probes
12.20-12.40	M. Skrinjar: Magnetic Properties of Spin-1/2 Antiferromagnet and High-T _c Parent Compound La ₂ CuO ₄
	Lunch
14.00-15.00	L. Forro, D. Pavuna, M. Kulic , Z. Rado-vic: Mini-Symposium in Honor of Ivan Bozovic - "High-Temperature Superconductors and Related Problems"
15.00-15.20	J. Filipovic: Scientific Diaspora and Homeland - partnership for prosperity
15.20-	Round Table
20.00	Excursion & Conference Dinner

Thursday, 20 September 2007

9.00-9.20	L. Golubovic: Far-From-Equilibrium Statistical Mechanics of the Epitaxial Growth on (110) Crystal Surfaces
9.20-9.40	M. Knezevic: Some New Results for Zero Temperature Random Field Ising Model
9.40-10.00	A. Baldereschi:

15 min Coffee Break

- 10.15-10.35 M. Drndic: Sub-10 nm Device Fabrication in a Transmission Electron Microscope
10.35-10.55 M. Loncar: Light-Matter Interaction in Nanophotonic Devices
11.15-11.35 N. Vukmirović: Theory of Quantum Dot Intraband Optoelectronic Devices
11.35-11.55 V. I. Srdanov: Combinatorial approach to organic optoelectronic materials made by PVD

15 min Coffee Break

- 12.10-12.30 G. Eres: Transient Interlayer Transport in SrTiO₃ Pulsed Laser Deposition Studied by Time-Resolved Surface X-Ray Diffraction
12.30-12.50 G. Srajer: Atomic Origin of Magnetic Hardness in our Best Permanent Magnet
12.50-13.10 Z. Konstantinović: Metallic Nanoparticles Embedded in an Insulator Matrix: Growth Mechanisms, Magnetic and Transport Properties
13.10-13.30 M. Šćepanović: Vibrational Spectroscopy Methods as a Powerful Tool for Nanomaterials Characterization
13.30-13.50 N. Bibic: Interface mixing of Fe/Si bilayers by noble-gas ions: effects of the ion charge-state and low-energy Ar ion pre-morphization of Si substrates
13.50-14.10 M. J. Konstantinović: Solid state physics problems in nuclear materials
16.00 Bus ride: Vršac - Belgrade

Contents

Session 1: Nanostructures and Low-Dimensional Systems

s1o001	Inorganic Nanotubes And Fullerene-like Structures	1
<i>oral</i>	(IF): Progress Report R. Tenne	
s1o002	Metallic Nanoparticles Embedded in an Insulator	2
<i>oral</i>	Matrix: Growth Mechanisms, Magnetic and Transport Properties Z. Konstantinović, M. García del Muro, M. Varela, X. Batlle and A. Labarta	
s1o003	From the STM images of quasicrystal surfaces to the chemistry of the bulk-terminations	6
<i>oral</i>	Z. Papadopolos, O. Gröning and R. Widmer	
s1o004	"Higgs" Phase Transitions on Graphene's Honeycomb Lattice	10
<i>oral</i>	Igor Herbut	
slo005	Pentaheptite Nanotubes	11
<i>oral</i>	Ivanka Milosevic, George Volonkis, Zoran Popovic, Stergios Logothetidis, Milan Damnjanovic	
slo006	Self-organization of Semiconductor Nanostructures and their Application to Fabricate Nanomagnet Arrays	16
<i>oral</i>	Christian Teichert	
slo007	Vibrational Spectroscopy Methods as a Powerful Tool for Nanomaterials Characterization	18
<i>oral</i>	Maja Šćepanović, Zorana Dohčević-Mitrović, Mirjana Grujić-Brojčin and Zoran V. Popović	
slo008	Atomic structure and spin magnetism of self-assembled Co nanowires on Pt (332)	26
<i>oral</i>	Filip R. Vukajlović, Zeljko Sljivančanin, Zoran S. Popović, Alfonso Baldereschi	
slo009	Transient Interlayer Transport in SrTiO₃ Pulsed Laser Deposition Studied by Time-Resolved Surface X-Ray Diffraction	27
<i>oral</i>	Gyula Eres, J.Z. Tischler, B.C. Larson, C.M. Rouleau I, and P. Zschack	
slo010	Permutation representations with application to quasicrystals and carbon nanotubes	28
<i>oral</i>	Nicolae Cotfas	
slo011	Far-From-Equilibrium Statistical Mechanics of the Epitaxial Growth on (110) Crystal Surfaces	29
<i>oral</i>	Leonardo Golubovic	
slo012	Charge Density Wave Gap Spectroscopy in Quasi-one-dimensional Compounds	33
<i>oral</i>	Pierre Monceau	

slo013	Interface mixing of Fe/Si bilayers by noble-gas ions: effects of the ion charge-state and low-energy Ar ion pre-amorphization of Si substrates	34
<i>oral</i>	Natasa Bibic	
slo014	Magnetophonon resonance in graphene	35
<i>oral</i>	Mark O. Goerbig, Jean-Noel Fuchs, Kostyantyn Kechedzhi, and Vladimir I. Fal'ko	
slo015	Theory of Quantum Dot Intraband Optoelectronic Devices	36
<i>oral</i>	N. Vukmirovic, D. Indjin, Z. Ikonc, I. Savic, V. D. Jovanovic, and P. Harrison	
slo016	Multiscale Network Models of Nano-Materials	37
<i>oral</i>	Bosiljka Tadic and Milovan Suvakov	
slo017	Metastable Structures and Recombination Pathways for Atomic Hydrogen on the Graphite(0001) Surface	41
<i>oral</i>	Zeljko Sljivancanin	
slo018	Quantum transport of massless Dirac fermions in graphene nanoribbons	42
<i>oral</i>	Branislav K. Nikolic and Liviu P. Zarbo	
slo019	Sub-10 nm Device Fabrication in a Transmission Electron Microscope	43
<i>oral</i>	Marija Drndic	
slo020	Electron-phonon coupling in metallic carbon nanotubes observed by Raman scattering	44
<i>oral</i>	J. Maultzsch, Y. Wu, E. Knoesel, B. Chandra, M. Huang, J. Hone, M. Y. Sfeir, L. E. Brus, and T. F. Heinz	
slo021	Flexible Electronic Devices: Principles - Processes and Applications	45
<i>oral</i>	S. Logothetidis	
slo022	Charge density glass - facts and fictions	46
<i>oral</i>	Katica Biljaković	
slo023	Phonon in low-dimensional crystals	47
<i>oral</i>	Edib Dobardzic	
slo024	Using large-scale computing for the simulation and prediction of novel phenomena at the nanoscale	48
<i>oral</i>	Vincent Meunier	
slo025	Coulomb Interaction, Ripples, and the Minimal Conductivity of Graphene	49
<i>oral</i>	Vladimir Juricic, Igor F. Herbut, and Oskar Vafek	
slo026	The Evolution of the Non-Fermi Liquid Behavior in BaVS₃ Under High Pressure	50
<i>oral</i>	Neven Barišić, Ana Akrap, Helmuth Berger and László Forró	

slp001 <i>poster</i>	Quantum Disordering of the 111 State and the Compressible-Incompressible Transition in Quantum Hall Bilayer Systems Zlatko Papic and Milica V. Milovanovic	51
slp002 <i>poster</i>	Elementary events of electron transfer in a voltage-driven quantum point contact M. Vanevic, Yu. V. Nazarov, and W. Belzig	52
slp003 <i>poster</i>	Self-Trapping in Anisotropic Molecular Crystals Željko Pržulj and Zoran Ivić	53
slp004 <i>poster</i>	Enhancement of the Anisotropy of Electron Bands Due to Electron-Phonon Interaction Danijela Ljuić, Dalibor Čevizović, Slobodan Zeković and Zoran Ivić	57
slp005 <i>poster</i>	Fractionalization into Merons in Quantum Dots Aleksandra Petkovic and Milica V. Milovanovic	61
slp006 <i>poster</i>	Electrical Properties of ZnFe₂O₄ Doped with Yttrium Biljana Jokić, Željka Cvejić, Stevan Jankov, Srđan Rakić, Vladimir Srdić	62
slp007 <i>poster</i>	Studies on Binary Mixtures of Bell-Shaped and Calamitic Compounds D. Ž. Obadović, A. Vajda, M. Kohout, J. Svoboda, M. Stojanović, N. Éber, G. Galli and K. Fodor-Csorba	63
slp008 <i>poster</i>	Guiding of Electrons by Al₂O₃ Nanocapillaries A. R. Milosavljevic, Gy. Viktor, Z. D. Pesic, S. Matefi-Tempfli, M. Matefi-Tempfli, L. Piraux, P. Kolarz, D. Sevic, and B. P. Marinkovic	64
slp009 <i>poster</i>	Interaction of the Doped Carbon Nanotube and a Hydrogen Molecule Sreten Lekic, Sasa Njezic and Zoran Rajilic	68
slp010 <i>poster</i>	Electron-phonon Interaction in Ultrathin Films and Superconductive Effects B.S.Tošić, V.D.Sajfert, S.K.Jaćimovski, J.P.Šetrajčić,D.I.Ilić, D.Lj.Mirjanić, S.M.Vučenović	72
slp011 <i>poster</i>	Two-Electron Quantum Dots in Magnetic Field: 3D Analysis of the Strong Electrons Correlation Regime N. S. Simonovic	76
slp012 <i>poster</i>	Non-universal behavior of Conductivity Critical Exponent of Anisotropic Nanocomposite Networks Marko Vasiljevski and Vladimir Miljković	80
slp013 <i>poster</i>	Tunable Epsilon-Negative Mesh Media As Platform For Plasmon-Based Sensing Zoran Jakšić, Dragan Tanasković, Katarina Radulović	81
slp014 <i>poster</i>	Microstructure of Nanosize Ferrites Determined by X-ray Line Broadening Analysis M. Vučinić-Vasic, A. Kremenović, B. Antić	85

slp015	On Metamaterial-Containing Subwavelength Multilayers Incorporating Gain Media	89
<i>poster</i>	Vladimir Miljković and Zoran Jakšić	
slp016	Modelin Conduction with Coulomb Blockade: From Single Dot to Nano-particle Films	93
<i>poster</i>	Milovan Suvakov and Bosiljka Tadic	
slp017	Raman Excitation Profiles of Semimetallic Single Wall Carbon Nanotubes	94
<i>poster</i>	Bozidar Nikolic, Ivanka Milosevic and Milan Damnjanovic	
slp018	Nanocomposites of Metal and Semiconductor Nanoparticles in Starch Matrix: Structure and Optical Properties	98
<i>poster</i>	V. Djoković, R. Krsmanović, D. K. Boani, P. S. Nair T. Radhakrishnan	
slp019	The Excitonic Aharonov-Bohm Effect in a Type-II Self-Assembled Nanoring	99
<i>poster</i>	A. Sremac, M. Tadiæ, R. Ramoviaæ, and F. M. Peeters	
slp020	Determination of S and B Parameters Values That Separates Two Type of Small Polaron Conductivity	100
<i>poster</i>	D. Cevizović, S. Galović, Z. Stojanović, Z. Ivić	
slp021	Effect of Carbon Adsorption on the Isomer Stability of Ir 4 Clusters	106
<i>poster</i>	Vladan Stevanovic, Zeljko Sljivancanin and Alfonso Baldereschi	
slp022	The Effects of Spin-Orbit Interactions on Dwell Times of Electrons Tunneling Through Double- and Triple- Barrier Structures	107
<i>poster</i>	Marko Eric, Jelena Radovanovic, Vitomir Milanovic, Zoran Ikonic, Dragan Indjin	
slp023	Electrical Conductivity Behaviour of the Epoxy/Graphite Nanosheets Composites	112
<i>poster</i>	N. Jović, D. Dudić, A. Montone, M. Vittori Antisari and V. Djoković	
slp024	Double quantum dots in InAs nanowires	113
<i>poster</i>	Stevan Nadj-Perge, Mark Scheffler, Leo Kouwenhoven, Magnus T. Borgstrom and Erik P.A.M. Bakkers	
slp025	Efficient Calculation of Energy Expectation Values in the Path Integral Formalism	114
<i>poster</i>	J. Grujic, A. Bogojevic, A. Balaz	
slp026	Synthesis and magnetic properties of various ferric-oxides phases	115
<i>poster</i>	M.Perovic, M.Tadic, A.Mrakovic, D.Markovic, V.Kusigerski, V.Spasojevic	

Session 2: Superconductivity, Magnetism and Strongly Correlated Systems

s2o001	Ultrafast Phenomena in Superconductors Studied by Real-time Probes	116
<i>oral</i>	Jure Demsar	
slo002	Fermionic Quantum Criticality	117
<i>oral</i>	Jan Zaanen	
s2o003	Quantum Properties of Vortices of Two- Dimensional Continuum and Lattice Bosons	118
<i>oral</i>	Assa Auerbach	
s2o004	Emergence of Cooper Pairs, d-wave Duality and the Physics of Cuprates	119
<i>oral</i>	Zlatko Tesanovic	
s2o005	Quantum Conductors as Josephson Junctions	120
<i>oral</i>	C. Strunk	
s2o006	Magnetic Properties of Spin-1/2 Antiferromagnet and High-Tc Parent Compound La₂CuO₄	121
<i>oral</i>	Mario Skrinjar	
s2o007	Spin liquid behavior in electronic Griffiths phases	122
<i>oral</i>	Darko Tanaskovic, Vladimir Dobrosavljevic and Eduardo Miranda	
s2o008	Topological Quantum Compiling	126
<i>oral</i>	Steven H. Simon	
s2o009	Quantum Disordering of a Quantum Hall Superfluid	127
<i>oral</i>	Milica V. Milovanovic and Zlatko Papic	
s2o010	Atomic Origin of Magnetic Hardness in our Best Permanent Magnet	130
<i>oral</i>	George Srajer	
s2o011	Studies of Atomically Perfect High-Tc Thin Films and Superlattices	131
<i>oral</i>	Ivan Bozovic	
s2o012	Search For New Quasi Low Dimensional Superconductors and Semiconductors	132
<i>oral</i>	Cedomir Petrovic	
s2o013	Pi-Contact Interferometry Based on Ultracold Fermionic Atomic Gases	133
<i>oral</i>	Miodrag L. Kubic	
s2o014	Glassy Effects in the Low Temperature Transport and Noise in Lightly Doped La_{2-x}Sr_xCuO₄	134
<i>oral</i>	I. Raicevic, J. Jaroszynski, Dragana Popovic, G. Jelbert, C. Panagopoulos, and T. Sasagawa	
s2o015	Coulomb-Frustrated Phase Separation in a Magnetically-Doped 2DEG	135
<i>oral</i>	Hanna Terletska, Sergey Pankov, and Vladimir Dobrosavljevic	

s2o016	Evolution of Electronic Properties of BiSrCaCuO Thin Films controlled by Oxygen Doping : selected experimental results	136
<i>oral</i>	H. Raffy	
s2o017	Some New Results for Zero Temperature Random Field Ising Model	137
<i>oral</i>	Djordje Spasojevic, Sanja Jaicevic, and Milan Knezevic	
s2o018	Superharmonic Josephsons devices based on d-wave junctions with a ferromagnetic barrier	138
<i>oral</i>	Ljiljana Dobrosavljevic-Grujic and Radomir Zikic	
s2o019	Proximity effect in superconductor-ferromagnet nanostructures	139
<i>oral</i>	A. Buzdin	
s2o020	The Genuine Challenge of High-Tc Superconductivity: Physics and Nano-engineering of Heteroepitaxial Films	140
<i>oral</i>	Davor Pavuna	
s2o021	Coexistence of 0- and pi-states in Josephson SFS junctions	141
<i>oral</i>	V.V. Ryazanov, V.A. Oboznov, A.N. Rossolenko, V.V. Bolginov	
s2o022	Dynamics of Ferromagnetic Josephson Junctions	142
<i>oral</i>	Marco Aprili	
s2o023	Spin-triplet correlations in superconductor-ferromagnet multilayers	143
<i>oral</i>	M. Bozovic, Z. Pajovic, and Z. Radovic	
s2p001	On The Room Temperature Ferromagnetism In Mn-Zn-O	144
poster	B. Babić-Stojić, D. Milivojević, J. Blanuša and V. Spasojević	
s2p002	Non-interacting Bosons in the Theory of Complex Magnetic Structures – Simple Formalism and Non-trivial Interpretation	148
poster	D. Kapor, M. Pantić and M. Pavkov-Hrvojević	
s2p003	Temperature dependence of Sublattice Magnetization in Quasi-two-dimensional s=1/2 Cuprate Antiferromagnets	149
poster	M.Rutonjski, S.Radošević and M.Škrinjar	
s2p004	Local and Staggered Spin Susceptibilities Around Vacancy in the CuO₂ Plane	150
poster	Z. Lj. Kovacevic	
s2p005	Time symmetry and phase dynamics of magnetized Josephson junctions	154
poster	I.Petkovic and M.Aprili	
s2p006	Bistability in magnetic response of double SQUIDs	155
poster	Stevan Nadj-Perge and Zoran Radovic	

- s2p007** **Magneto-dielectric anisotropy study of** 156
poster **multiferroicity in Y-doped HoMnO₃**
 Relja Vasic, Haidong D. Zhou, Chris. R. Wiebe, James
 S. Brooks

Session 3: Soft Matter

- s3o001** **Moment Equations for the Boltzmann Gas of** 157
oral **Elastic Spheres: A Road from Statistical Physics to**
Continuum Mechanics
 Andrzej Karwowski
- s3o002** **Determining the type of muscle motor activity by** 158
oral **applying the wavelet theory and theory of random**
walks to characterize the neuronal noise
 Đorđe Stratimirović, Suzana Blesić and Sava
 Milosević
- s3o003** **Hitchhikers Guide through the Cell** 163
oral Igor M. Kulic
- s3o004** **“Towards DNA- and Protein-Based** 164
oral **Nanoelectronics?”**
 Danny Porath
- s3o005** **Structural consequences of the ionization of** 166
oral **internal groups in proteins**
 Ana Damjanovic, Xiongwu Wu, Bertrand Garcia-
 Moreno E. and Bernard R. Brooks
- s3o006** **DNA Looping and Regulation of Gene Expression** 167
oral Jane Kondev
- s3p001** **Scaling of Compact Polymers on Modified 3D** 168
poster **Sierpinski Fractals**
 Dušanka Marčetić and Sunčica Elezović-Hadžić
- s3p002** **Force-Induced Desorption of a Linear Polymer** 172
poster **Adsorbed on a Boundary of the Sierpinski Gasket**
Fractal
 Ivana Vidanović and Sunčica Elezović-Hadžić
- s3p003** **Can Collapsed Polymer Globule Exist on n-simplex** 176
poster **Lattice with Odd n?**
 Sunčica Elezović-Hadžić and Danijela Ljujić
- s3p004** **Adsorption-Induced Unzipping of a Double-** 180
poster **Stranded Polymer System on a Fractal Lattice**
 Vladimir Miljković, Sunčica Elezović-Hadžić, Ivan
 Živić and Sava Milošević
- s3p005** **Heuristic algorithm for determination of local** 181
poster **properties of scale-free networks**
 Marija Mitrovic, Aleksandar Belic
- s3p006** **Adsorption-Desorption Processes of Mixtures on a** 185
poster **Triangular Lattice**
 Ivana Lončarević, Ljuba Budinski-Petkovic and
 Slobodan B. Vrhovac

s3p007 <i>poster</i>	Irreversible Deposition of Mixtures on a Triangular Lattice Ivana Lončarević, Ljuba Budinski-Petkovic and Slobodan B. Vrhovac	189
s3p008 <i>poster</i>	Simulation Study of Granular Compaction D. Arsenovic, S.B. Vrhovac, Z.M. Jaksic, Lj. Budinski-Petkovic, A. Belic	193
s3p009 <i>poster</i>	Disordered Water Molecules In Proteins: Now You See Them, Now You Don't Ana Damjanovic, Jamie L. Schlessman, Carolyn A. Fitch, Angel E. Garcia and Bertrand Garcia-Moreno E.	197
s3p010 <i>poster</i>	Effective Actions for Path Integral Monte Carlo Calculations Ivana Vidanovic, Antun Balaž, Aleksandar Bogojevic, Aleksandar Belic	201
Session 4: Semiconductors		
s4p001 <i>poster</i>	A Stochastic Model of Gamma-Ray Induced Charge in Silicon Dioxide Films Mihajlo T. Odalović and Dragan M. Petković	205
s4p002 <i>poster</i>	Resistivity of Polycrystalline Silicon Films with Grain and Grain Boundary Trapping States Tijana S. Kevkić, Dejan Z. Mitić and Dragan M. Petković	209
s4p003 <i>poster</i>	Simplified Model For Diffusion From Phosphosilicaglass (PSG) Films Dragan Zlatanović and Dragan M. Petković	213
Session 5: Optics and Spectroscopy		
s5o001 <i>oral</i>	Temperature gating of the ring-opening process in diarylethene molecular switches Diana Dulić, T. Kudernac, A. Pugžlys, B. L. Feringa, B. J. Van Wees	217
s5o002 <i>oral</i>	Combinatorial approach to organic optoelectronic materials made by PVD Vojislav I. Srdanov	218
s5o003 <i>oral</i>	Light-Matter Interaction in Nanophotonic Devices Marko Loncar	219
s5o004 <i>oral</i>	Balmer Alpha Line Shape of Hydrogen Isotopes for Monitoring Discharge – Metal Surface Interaction N. Konjević, N. M. Sisović and G. Lj. Majstorović	220
s5p001 <i>poster</i>	Transparent bands of all-evanescent modes in multilayer structures with alternating left-handed and right-handed materials S. Vukovic, N. Aleksic and D. Timotijevic	221

s5p002 Photon in Spherical Coordinates	225
<i>poster</i> Mašković Ljiljana, Uroš Igor, Tošić Bratislav and Delić Nenad	
s5p003 The effect of annealing on the galvanoluminescence spectra of barrier anodic oxide films formed in organic electrolytes	226
<i>poster</i> S. Stojadinović, B. Kasalica, I. Belča, M. Sarvan, M. Tadić, M. Petković, Lj. Zeković	
s5p004 Surface Functionalization for Optoelectronic Applications	230
<i>poster</i> M. Scarpellini, E. Lucentia, A. Podesta, P. Milani, D. Roberto, V.I. Srdanov	
Session 6: Experimental Methods, Instruments, and Applied Condensed Matter Physics	
s6o001 Galvanoluminescence After the Century	231
<i>oral</i> Ljubisa Zekovic and Ivan Belca	
s6o002 Solid state physics problems in nuclear materials	235
<i>oral</i> Milan. J. Konstantinović	
s6p001 DSC and XRD Analysis of Inclusion Complexes of Pharmaceutically Active Compounds	236
<i>poster</i> Agneš Kapor, Sonja Skuban, Vesna Nikolić	
s6p002 Brain Photon Energy Spectrum	237
<i>poster</i> Mašković Ljiljana, Popović Brankica, Tošić Bratislav and Delić Nenad	
s6p003 Crystallization tubes	238
<i>poster</i> Branislav Cabric, Aco Janicijevic and Nebojsa Danilovic	
s6p004 Crystallization Test Tubes	239
<i>poster</i> Nebojsa Danilovic, Branislav Cabric and Aco Janicijevic	
s6p005 Crystallization Shelves	240
<i>poster</i> Aco Janicijevic, Nebojsa Danilovic and Branislav Cabric	
Miscellaneous	
mo001 Scientific Diaspora and Motherland – Partnership for prosperity	241
<i>oral</i> Jovan Filipović	