

DEPARTMENT OF PHYSICS

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Head of Department

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I. STAFF

Professors	Prof. Ing. Rudolf Durný, DrSc., Prof. RNDr. Július Krempaský, DrSc., Prof. Ing. Ivan Štich, DrSc.
Associate Professors	Doc. Ing. Peter Ballo, PhD., Doc. Ing. Otto Budke, PhD., Doc. Ing. Július Cirák, PhD., Doc. RNDr. Ivan Červeň, PhD., Doc. Ing. Peter Dieška, PhD., Doc. RNDr. Edmund Dobročka, PhD., Doc. Ing. Ján Vajda, PhD., Doc. RNDr. Pavol Valko, PhD.
Assistant Professors	Ing. Peter Bokes, PhD., Ing. Ondrej Foltin, PhD., Ing. Karolína Kočíšková, PhD., Ing. Vladimír Scholtz, Ing. Jaroslav Tóbič, PhD., Ing. Pavol Tomčík, RNDr. Milan Valach, RNDr. Mária Valková, Mgr. Marek Vančo, PhD, Ing. Alfréd Vlnieška, Ing. Martin Weis, PhD., Ing. Ivan Zelenay, PhD.
Senior Scientist	Ing. Jozef Bielek, PhD.
Research Workers	RNDr. René Derian, PhD., Ing. Ľuboš Keleši, Mgr. Martin Konôpka, PhD., RNDr. Martin Moško, PhD
Technical Staff	Zuzana Váciová (secretary), Štefan Kučera
PhD. Students	Ing. Miroslava Diešková, Ing. Jana Röschlová, Ing. Michal Sokolský, RNDr. Kamil Tokár, RNDr. Róbert Turanský

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratories of elementary and advanced physics
- Laboratory of ordered molecular layers and systems
- Laboratory of applied optics
- Laboratory of electrical transport
- Laboratory of X-ray diffraction
- Laboratory of thermophysical properties
- Laboratory of macrostructure of composites
- Laboratory of material simulation
- Laboratory of spectroscopy
- Center for computational materials science

II.2 Special Measuring Instruments and Computers

- Refrigerator cooled cryostat NOK-10-3D
- Langmuir - Blodgett deposition device, Nima, U.K.
- Electrostatic voltmeter Trek
- 7801 Solartron special multimeter
- Measuring microscope CZJ

- X-ray diffraction powder goniometer
- 4 numerical servers (clusters) and supporting infrastructure
- Sun storage tek 6140 FC maxperf
- Parallel computer with 31 Nodes (62 CPU) + 64 GB RAM.
- Parallel computer with 11 Nodes (22 CPU) + 22 GB RAM

III. TEACHING

III.1 Undergraduate Study (Bc.)

Subject, semester, hours per week for lectures and for seminars or practical exercises, name of lecturer

Introduction to Technical Physics	(1st sem., 0-2h)	R. Derian, M. Diešková, R. Turanský
Physics	(2nd sem., 3-2h)	J. Cirák
Physics I	(2nd sem., 3-2h)	P. Ballo, O. Foltin, P. Valko
Special Seminar - Physics I	(2nd sem., 0-2h)	P. Ballo, O. Foltin, P. Valko
Physics II	(2nd sem., 3-3h)	P. Dieška
Special Seminar - Physics I	(2nd sem., 0-2h)	P. Dieška
Physics I	(3rd sem., 3-2h)	P. Dieška
Special Seminar - Physics I	(3rd sem., 0-2h)	P. Dieška
Physics II	(3rd sem., 3-2h)	O. Foltin, P. Valko M. Vančo
Special Seminar - Physics II	(3rd sem., 0-2h)	O. Foltin, P. Valko M. Vančo
Modern Physics	(5th sem., 3-2h)	J. Krempaský
Thermodynamics of Materials and Statist. Physics	(5th sem., 3-2h)	M. Moško
Solid State Physics	(7th sem., 3-2h)	R. Durný
Conductors and Superconductors	(7th sem., 2-2h)	R. Durný
Modern Methods of Material Diagnostics	(8th sem., 3-2h)	E. Dobročka

III.2 Graduate Study (Ing.)

Physics of Processes	(1st sem., 3-2h)	J. Tóvik
Superconductivity and Low Temperature Physics	(1st sem., 2-2h)	P. Valko
Nanotechnologies	(1st sem., 2-2h)	J. Cirák
Bioelectronics	(1st sem., 2-1h)	J. Cirák
Principles of Applied Optics	(1st sem., 2-2h)	J. Vajda
Non-equilibrium Systems and Chaos	(1st sem., 3-2h)	P. Ballo
Physics of Materials I	(3rd sem., 3-2h)	P. Dieška, R. Durný
Applied Optics	(2nd sem., 3-2h)	J. Vajda

Biomaterials and Biosystems (2nd sem., 2-2h) J.Cirák

III.3 Undergraduate and Graduate Study for Foreign Students (in English Language)

Seminar - Physics I (1st sem., 1-0h) O. Foltin

IV. RESEARCH PROJECTS

- Cluster of advanced studies ESF. J. Cirák
- Physical properties of organic two-dimensional systems and formation of nanostructures for molecular electronics. VEGA 1/3038/06. J. Cirák
- Hybrid spintronic nanostructures controlled by spin-polarized current. APVV-0173-06, J. Cirák
- Advanced opto- and micro-electronic devices based on organic materials. APVV-0290-06, J. Cirák
- Preparation and properties of organic thin film transistors. Wissenschaft und Erziehung Kooperation. J. Cirák
- Manufacture and properties of particulate composite systems based on carbon and modified by outstandingly conductive particles, diverse in size. G 1/7269/20. Š. Emmer, J. Bielek
- Sound, image and biomedical signals digital processing. 102/VTP/2000, P. Fuchs, J. Bielek
- Gradient materials prepared by powder metallurgy of micro- and nano-particles. APVV-20-057805. Š. Emmer, J. Kováčik, J. Bielek
- Investigation of magnetic materials for electrical engineering, electronics, recording and electromagnetic compatibility applications. VEGA 1/3096/06. J. Sláma, J. Bielek
- Physical interrelation in the sun-magnetosphere system and sunshine. VEGA 2/2009. A. Prigancová, J. Bielek
- Analysis of kinetics of reactions connected with charge transfer in solid and liquid systems. 2/1013/22. R. Durný
- New techniques of scanning probe microscopy and nanostructure analysis spectroscopy. APVT-51-013904. R. Durný
- Center of excellency of SAS – Center of electronic and electrotechnical components of new generation. SENG. R. Durný
- Analysis and manipulation of materials at atomic scale, using AFM. APVT-20-21505, I. Štich
- Engineering properties of nanoparticles using pressure and stress: Nanostress. C/S-b-Sti-Sk1-Nanostress. I. Štich.
- Interactive multimedial project of teaching physics in technical universities. KEGA 3/108003. P. Ballo, J. Krempaský, I. Červeň
- Ab-initio approach to conductance of quantum junctions accounting for dynamical correlation of electrons. NATO EAP.RIG 981521. P. Bokes
- Calculation of conductance of quantum junctions at ab-initio level. VEGA 1/2020/05. P. Bokes
- Study and modelling of thermophysical properties of composites. VEGA 2/5100/25. V. Boháč, P. Dieška
- Study of fast phase transitions, resulting in a topology defects creation. VEGA 1/2019/05. P. Valko
- Materials for fusion technologies, Euratom FU06-CT-2006-00441. P. Ballo

V. COOPERATION

V.1 Cooperation in Slovakia

- Faculty of Chemical and Food Technology, STU, Bratislava
- Faculty of Informatics and Information Technologies, STU, Bratislava

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- Faculty of Mechanical Engineering, STU, Bratislava
 - Faculty of Material Technology, STU, Trnava
 - University of Trnava, Trnava
 - Natural Science Faculty, Comenius University, Bratislava
 - School of Medicine, Comenius University, Bratislava
 - Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava
 - Faculty of Pharmacy, Comenius University, Bratislava
 - Faculty of Industrial Technologies, University of Trenčín, Púchov
 - Electrotechnical Faculty, University of Žilina, Žilina
 - Institute of Physics, Slovak Academy of Sciences, Bratislava
 - Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava
 - Institute of Anorganic Chemistry, Slovak Academy of Sciences, Bratislava
 - Institute of Polymers, Slovak Academy of Sciences, Bratislava
 - Institute of Informatics, Slovak Academy of Sciences, Bratislava
 - Geophysical Institute, Slovak Academy of Sciences, Bratislava
 - Institute of Materials and Machine Mechanics, Slovak Academy of Sciences, Bratislava
 - IBOK, Bratislava

V.2 International Cooperation

- Tomáš Baťa University, Zlín, CzR
- Institute of Macromolecular Chemistry, AVČR, Prague, CzR
- Institute of Physics, AVČR, Prague, CzR
- Faculty of Electrical Engineering, Czech Technical University, Prague
- Inst. of Immunology and Microbiology, 1st Medical Faculty, Charles University, Prague
- Institute of Materials Science - Demokritos, Athens, Greece
- Tokyo Institute of Technology, Tokyo, Japan
- Fukuoka University, Fukuoka, Japan
- Fudan University, Shanghai, China
- University of York, U.K.
- Universidad Autonoma de Madrid, Spain
- Universitat Politecnica de Catalunya, Barcelona, Spain
- Centro de Fisica Nuclear, Lisbon, Portugal
- International School for Advanced Studies (SISSA), Trieste, Italy
- Ruhr Universität, Bochum, Germany
- Technische Universität, Munich, Germany
- Physikalisches Institut, Universität Münster, Germany
- Delft University, Delft, The Netherlands
- Brussels Free University, Institute of Physics, Brussels, Belgium
- Institute of Solid State Physics, Graz University of Technology, Graz, Austria

V.3 Membership in International Organizations and Societies

- P. Bokes, J. Cirák, I. Štich: American Physical Society
- P. Ballo, P. Bokes, J. Cirák, I. Červeň, R. Durný, J. Krempaský:
Europhysical Society
- J. Cirák: IEEE
- P. Bokes: Institute of Physics
- J. Krempaský: European Society for Science and Arts

VI. THESES

VI.1 Master Theses

Master thesis supervised at the Department of Physics. The name of supervisor is in brackets.

- [1] M. Dubecký: Study of electron correlation effects in molecule of azobenzene. (I. Štich)

VI.2 PhD Theses

PhD theses supervised at the Department of Physics. The name of supervisor is in brackets.

- [1] K. Kočíšková: Numerical simulation of properties of FCC metals. (P. Ballo)
- [2] M. Vančo: Preparation and study of physical properties of Langmuir monolayers. (J. Cirák)
- [3] M. Weis: Study of dynamic processes in Langmuir organic monolayers. (J. Vajda)

VII. OTHER ACTIVITIES

- Organizing the 13th international workshop - Applied Physics of Condensed Matter, APCOM '07. Bystrá, 27.-29.6.2007, J. Vajda, M. Weis
- Academic ranking and rating agency, I. Štich
- Club of physicists: J. Cirák, M. Weis
- Aldebaran group for astrophysics, V. Scholtz
- Board of editors, J. Electrical Engineering, P. Ballo

VIII. PUBLICATIONS

VIII.1 Journals

- [1] BOKES, P., JUNG, J., GODBY, R.W.: Ab Initio Formulation of the Four-Point Conductance of Interacting Electronic Systems. In: Physical Review B. - ISSN 0556-2805. - Vol. 76 (2007), p. 125433-1-8. (in English)
- [2] BRNDIAR, J., DERIAN, R., MARKOŠ, P.: Generalized Dorokhov-Mello-Pereyra-Kumar Equation for Strongly Localized Regime: Numerical Solutions. In: Physical Review B. - ISSN 0556-2805. - Vol. 76 (2007), p. 155320.1-4. (in English)
- [3] ČERVENĚ, I., KREMPASKÝ, J.: Dionýz Ilkovič - 100 Years since His Birth. In: Obzory matematiky, fyziky a informatiky. - Vol. 36, No. 1 (2007), p. 53-58. (in Slovak)
- [4] DIEŠKOVÁ, M., KONÔPKA, M., BOKES, P.: Atomic and Electronic Structure of Ultra-Thin Al/AlO_x/Al Interfaces. In: Surface Science. - ISSN 0039-6028. - Vol. 601 (2007), p. 4134-4137. (in English)
- [5] FOLTIN, O.: Estimation of Screened Plasma Resonance Frequencies of a Layered Semiconductor Using a Single Oblique Incidence Reflectance Spectrum. In: Physica Status Solidi (a). - ISSN 0031-8965. - Vol. 204, No. 4 (2007), p. 1158-1161. (in English)
- [6] GMUCOVÁ, K., WEIS, M., BARANČOK, D., CIRÁK, J., TOMČÍK, P., PAVLÁSEK, J.: Ion Selectivity of Poly(3-Pentylmethoxythiophene) LB-Layer Modified Carbon-Fiber Microelectrode as a Consequence of the Second Order Filtering in Voltcoulometry. In: Journal of Biochemical and Biophysical Methods. - Vol. 70 (2007), p. 385-390. (in English)
- [7] JASENEK, J., JANČÁRIK, V., JANÍČEK, F., VAJDA, J.: The Harmonization of Education and the Application of the Tuning Project Method in Electrical and Information Engineering. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 13, Special Issue (2007), p. 9-12. (in Slovak)
- [8] JASENEK, J., JANÍČEK, F., VAJDA, J.: New Approaches to the Study Programmes Design. In: Academia. - ISSN 1335-5864. - Vol. 18, No. 3, p. 25-33. (in Slovak)
- [9] KOČIŠKOVÁ, K., BALLO, P.: Atomic Calculation of Elastic Constants for Fcc Metals: *ab-initio* and Semiempirical Approach. In: Kovové materiály. Metallic materials. - ISSN 0023-

- 432X. - Vol. 45, No. 2 (2007), p. 81-84. (in English)
- [10] KOPÁNI, M., WEIS, M.: Influence of Alcohol on Mechanical and Electrical Properties of Thin Organic Films. In: Central European Journal of Physics. - Vol. 5, No. 3 (2007), p. 405-415. (in English)
- [11] KOPÁNI, M., WEIS, M., MÁLEK, T., JAKUBOVSKÝ, J.: Protection Effect of Vitamine C on Alcohol Binding to Phospholipid Monolayers. In: Chemické listy. - ISSN 0009-2770. - Vol. 101 (2007), p. 197-198. (in English)
- [12] KREMPASKÝ, J.: The Importance of Physics for Contemporary Society. In: Jemná mechanika a optika. - ISSN 0447-6441. - Vol. 52, No. 10 (2007), p. 297-299. (in Slovak)
- [13] MERA, H., BOKES, P., GODBY, R.W.: Hartree-Fock Theory of a Current-Carrying Two-Dimensional Homogeneous Electron Gas. In: Physical Review B. - ISSN 0556-2805. - Vol. 76 (2007), p. 125319-1-5. (in English)
- [14] NÁDAŽDY, V., DURNÝ, R., PUIGDOLLERS, J., GMUCOVÁ, K., et al: Experimental Observation of Oxygen-Related Defect State in Pentacene Thin Films. In: Applied Physics Letters. - ISSN 0003-6951. - Vol. 90, (2007), p. 092112.1-3. (in English)
- [15] NEDEV, N., MANOLOV, E., PANTCHEV, B., IVANOV, Ts., DURNÝ, R., NÁDAŽDY, V.: Influence of the a-Si:H Interfacial Region Defects on the Quasi-Static Capacitance of Metal/c-Si/SiO₂/a-Si:H. In: Journal of Optoelectronics and Advanced Materials. - ISSN 1454-4164. - Vol. 9, No. 2 (2007), p. 352-354. (in English)
- [16] NELSON, W., BOKES, P., RINKE, P., GODBY, R.W.: Self-Interaction in Green's-Function Theory of the Hydrogen Atom. In: Physical Review A. - ISSN 0556-2791. - Vol. 75 (2007), 032505.1-4. (in English)
- [17] ŠTOFANIK, V., MARKOVIČ, M., BOHÁČ, V., DIEŠKA, P., KUBIČÁR, L.: RT-Lab - the Equipment for Measuring Thermophysical Properties by Transient Methods. In: Measurement Science Review. - ISSN 1335-8871. - Vol. 7, Section 3, No. 3 (2007), p. 15-18. (in English)
- [18] TÓBIK, J., TOSATTI, E.: Jahn-Teller Effect in the Magnesium Phthalocyanine Anion. In: Journal of Molecular Structure. - ISSN 0022-2860. - Vol. 838 (2007), p. 112-115. (in English)
- [19] TÓBIK, J., TOSATTI, E.: Structure, Vibrations and Raman Modes in Electron Doped Metal Phthalocyanines. In: Journal of Physical Chemistry A. - ISSN 1089-5639. - Vol. 111 (2007), p. 12570-12576. (in English)
- [20] VALKO, P., GOMES, M.R., GIRARD, T.A.: Nucleation of Superconductivity in Thin Type-I Foils. In: Physical Review B. - ISSN 0556-2805. - Vol. 75 (2007), p. 140504.1-4. (in English)
- [21] VITOVÍČ, P., WEIS, M., TOMČÍK, P., CIRÁK, J., HIANIK, T.: Maxwell Displacement Current Allows to Study Structural Changes of Gramicidin A in Monolayers at the Air-Water Interface. In: Bioelectrochemistry. - ISSN 1567-5394. - Vol.70 (2007), p. 469-480. (in English)
- [22] WEIS, M., GMUCOVÁ, K., NÁDAŽDY, V., CAPEK, I., ŠATKA, A., KOPÁNI, M., CIRÁK, J., MAJKOVÁ, E.: Quantized Double-Layer Charging of Iron Oxide Nanoparticles on a-Si:H Controlled by Charged Defects in a-Si:H. In: Electroanalysis. - ISSN 1040-0397. - Vol. 19, No. 12 (2007), p. 1323-1326. (in English)
- [23] WEIS, M., JANÍČEK, R., CIRÁK, J., HIANIK, T.: Study of the Calix[4]resorcinarene-Dopamine Interactions in Monolayers by Measurement of Pressure-Area Isotherms and Maxwell Displacement Currents. In: Journal of Physical Chemistry B. - ISSN 1089-5647. - Vol. 111 (2007), p. 10626-10631. (in English)

VIII.2 Conference Proceedings

- [1] BALLO, P., HARMATHA, L.: First-Principles Study of P-Type Doping in ZnO. In: APCOM 2007. Applied Physics of Condensed Matter: 13th International Workshop. Bystrá, Slovak Republic, 27.-29.6.2007. - Žilina: University of Žilina, 2007. - ISBN 978-80-8070-709-5. - p. 117-120. (in English)
- [2] BEŇO, J., WEIS, M.: Physical Properties of Mixed 2D Molecular Systems. In: APCOM 2007. Applied Physics of Condensed Matter: 13th International Workshop. Bystrá, Slovak Republic, 27.-29.6.2007. - Žilina: University of Žilina, 2007. - ISBN 978-80-8070-709-5. - p. 68-71. (in English)
- [3] BOKES, P.: Dynamics of Electrons and Ab-Initio Modelling of Quantum Transport. In: 15th Conference of Slovak Physicists: Stará Lesná, Slovak Republic, 11.-14.9.2006. - Košice: Slovak Physical Society, 2007. - ISBN 978-80-969124-4-5. - p. 61-62. (in English)
- [4] CIRÁK, J., WEIS, M., VANČO, M., VITTOVIČ, P., HIANIK, T.: Investigation of a Lipid-Protein Monolayer System: Mechanical, Thermodynamical, and Electrical Properties. In: 15th Conference of Slovak Physicists: Stará Lesná, Slovak Republic, 11.-14.9.2006. - Košice: Slovak Physical Society, 2007. - ISBN 978-80-969124-4-5. - p. 67-68. (in English)
- [5] CIRÁK, J., WEIS, M., JANÍČEK, R., HIANIK, T.: Investigation of Artificial Receptor - Target Molecule Interactions for the Development of Biosensors Based on Molecular Recognition. In: NANOVED 2007: 4th International Conference on Nanosciences and Nanotechnologies. Bratislava, Slovak Republic, 11.-14.11.2007. - Bratislava: Tribun, 2007. - ISBN 978-80-7399-121-0. - L27. (in English)
- [6] CIRÁK, J., WEIS, M.: Ordered 2D System of Organic Molecules and Nanoparticles in Langmuir Monolayers and Langmuir-Blodgett Films. In: Synchrotron Facilities for the Development of Science and Technology in Central and Eastern Europe: Brno, Czech Republic, 20.-21.11.2007. - p. 14-15. (in English)
- [7] CIRÁK, J., WEIS, M., RÖSCHLOVÁ, J., GMUCOVÁ, K.: Ordered 2D Systems of Metallic Nanoparticles and Their Physical Properties. In: Development of Materials Science in Research and Education. DMS - RE 2007: 17th Joint Seminar. Tatranská Štrba, Slovak Republic, 10.-14.9.2007 - Bratislava: NOI, 2007. - ISBN 978-80-89088-55-3. - p. 11-12. (in English)
- [8] CIRÁK, J., WEIS, M., GMUCOVÁ, K., NÁDAŽDY, V.: Perspectives of LB Layers for Molecular Electronics. In: Winterschool on Organic Electronics: Planneralm, Austria, 27.1.-2.2.2007. - Graz: TU, 2007. - p. 42. (in English)
- [9] CIRÁK, J., WEIS, M., GMUCOVÁ, K., NÁDAŽDY, V., ŠATKA, A., CAPEK, I., KOPÁNI, M., MAJKOVÁ, E.: Probing Single-Electron Double-Layer Charging of Iron Oxide Nanoparticles with Cyclic Voltammetry. In: Organized Molecular Films. 12th International Conference: Krakow, Poland, 1.-5.7.2007. - Krakow: Jagiellonian University, 2007. - Mo-P-12. (in English)
- [10] CIRÁK, J., RÖSCHLOVÁ, J., WEIS, M.: Self-Organized 2D Arrays of Magnetic Nanoparticles. In: New Trends in Physics: Brno, Czech Republic, 15.-16.11.2007. - Brno: University of Technology, 2007. - ISBN 978-80-7355-078-3. - p. 243-246. (in English)
- [11] EMMER, Š., KOVÁČIK, J., BIELEK, J.: Cu - 10 Vol.% MWCNTS Composite Material. In: Technology 2007: Proceedings. 10th International Conference. - Bratislava, Slovak Republic, 19.-20. 9. 2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2712-9. - p. 51-56. (in Slovak)
- [12] JAKABOVIČ, J., KOVÁČ, J., WEIS, M., HAŠKO, D., RESEL, R.: Parylene Layers for

- Organic Thin Film Transistor Thin Parylene Layers for Microelectronic Applications. In: New Trends in Vacuum Technology Related Research and Applications: Štrbské Pleso, Slovak Republic, November 2007. - Bratislava: Slovenská vákuová spoločnosť, 2007. - ISBN 978-80-969435-3-1. - p. 76-79. (in English)
- [13] KOPÁNI, M., WEIS, M., JAKUBOVSKÝ, J.: Analysis of Human Spleen Contamination. In: MRS 2007 Fall Meeting: Boston, USA, 26.-30.11.2007. - Boston: Materials Research Society, 2007. - p. 358. (in English)
- [14] KOPÁNI, M., WEIS, M., JAKUBOVSKÝ, J.: Influence of Vitamin C on Alcohol Binding to Phospholipid Monolayers. In: 5th European Congress of Toxicologic Pathology. 6th International Congress of the IFSTP: Basel, Switzerland, 16.-19.9.2007. - p. 90. (in English)
- [15] KOPÁNI, M., WEIS, M., MISTINOVÁ, J., JAKUBOVSKÝ, J., DANIŠOVIČ, E.: Vitamin C and Alcohol Binding to Phospholipid Monolayers. In: The Malaysian Journal of Pathology. - ISSN 0126-8635. - Vol. 29, Suppl. A (2007), p. 232. (in English)
- [16] KOPÁNI, M., WEIS, M., JAKUBOVSKÝ, J., MAŇKA, J.: Analysis of Human Spleen Contamination. In: Morphology 2007: 41st International Congress of Slovak Anatomical Society and 44th Lojda Symposium on Histochemistry. - Bratislava: Slovak Anatomical Society, 2007. - ISBN 978-80-89305-01-8. - p. 56. (in English)
- [17] MÁLEK, T., WEIS, M., KOPÁNI, M., JAKUBOVSKÝ, J.: Protection Effect of Vitamin C on Phospholipid Monolayers. In: Morphology 2007: 41st International Congress of Slovak Anatomical Society and 44th Lojda Symposium on Histochemistry. - Bratislava: Slovak Anatomical Society, 2007. - ISBN 978-80-89305-01-8. - p. 66. (in English)
- [18] MÁLEK, T., WEIS, M., KOPÁNI, M., JAKUBOVSKÝ, J.: Protective Effect of C Vitamin Concerning the Etanol Caused Induced Changes of Phospholipid Monolayer. In: Sborník abstrakt. 12. mezioborová česko-slovenská toxikologická konference: Prague, Czech Republic, 11.-13.6.2007. - Prague: Státní zdravotní ústav, 2007. - ISBN 978-80-7071-283-2. - p. 73. (in English)
- [19] POČAROVSKÝ, Š., VALKO, P.: Quantum Microelectronic Devices. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [20] RÖSCHLOVÁ, J., WEIS, M., CIRÁK, J., ŠATKA, A., KOPÁNI, M., HIANIK, T., CAPEK, I.: Iron Oxide Nanoparticles: Ordered 2D Systems and Their Characterization. In: 15th Conference of Slovak Physicists: Stará Lesná, Slovak Republic, 11.-14.9.2006. - Košice: Slovak Physical Society, 2007. - ISBN 978-80-969124-4-5. - p. 57-58. (in English)
- [21] RÖSCHLOVÁ, J., WEIS, M., NISHIDA, A., DEKAN, J., ŠATKA, A., PETRIDIS, D., CIRÁK, J.: Magnetic Nanoparticles Systems and Their Characterization. In: Organized Molecular Films. 12th International Conference: Krakow, Poland, 1.-5.7.2007. - Krakow: Jagiellonian University, 2007. - Tu-P-43. (in English)
- [22] RÖSCHLOVÁ, J., WEIS, M., CIRÁK, J., DEKAN, J., ŠATKA, A., PIŠTORA, J., PETRIDIS, D.: Magnetic Properties of Metallic Nanoparticle 2D Structures Prepared by Langmuir-Blodgett Technology. In: APCOM 2007. Applied Physics of Condensed Matter: 13th International Workshop. Bystrá, Slovak Republic, 27.-29.6.2007. - Žilina: University of Žilina, 2007. - ISBN 978-80-8070-709-5. - p. 76-79. (in English)
- [23] SIFFALOVIC, P., MAJKOVÁ, E., CHITU, L., HALAHOVETS, Y., JERGEL, M., SENDERÁK, R., LUBY, Š., WEIS, M., ŠATKA, A., ROTH, S.: Structural Characterization of

- Novel Double Tunnel Barriers Based on Ordered Arrays of Fe_3O_4 Nanoparticles. In: HASYLAB Annual Report 2006. - p. 1031-1032. (in English)
- [24] VALKO, P., UŠÁKOVÁ, M.: Minimal Surfaces and Intermediate State of Type-I Semiconductors. In: 15th Conference of Slovak Physicists: Stará Lesná, Slovak Republic, 11.-14.9.2006. - Košice: Slovak Physical Society, 2007. - ISBN 978-80-969124-4-5. - p. 117-118. (in English)
- [25] WEIS, M., GMUCOVÁ, K., NÁDAŽDY, V., CAPEK, I., ŠATKA, A., KOPÁNI, M., MAJKOVÁ, E.: Control of Quantized Double-Layer Charging of Metallic Nanoparticles onto Amorphous Silicon Surface. In: APCOM 2007. Applied Physics of Condensed Matter: 13th International Workshop. Bystrá, Slovak Republic, 27.-29.6.2007. - Žilina: University of Žilina, 2007. - ISBN 978-80-8070-709-5. - p. 72-75. (in English)
- [26] WEIS, M., HABER, T., WERZER, O., MÜLLER, F., FRITZSCHE, G., RESEL, R., CIRÁK, J.: Surface Pressure-Induced Structural Transition in Thin Films of Iron-Oxide Nanoparticles. In: Organized Molecular Films. 12th International Conference: Krakow, Poland, 1.-5.7.2007. - Krakow: Jagiellonian University, 2007. - Tu-P-75. (in English)

VIII.3 Books

- [1] ČERŇANSKÝ, P., ČERVENĚ, I., DILLINGER, J., HOLÁ, O., HORYLOVÁ, R., CHRAPAN, J., KRUPA, D., OŽVOLDOVÁ, M., PAVLICOVÁ, V., REIFFERS, M., ŠUTTA, A.: Physical Dictionary - Slovak-English, English-Slovak. - Nitra: Protonit, 2007. - 235 p. - ISBN 978-80-969798-7-5
- [2] ČERVENĚ, I., DOBROČKA, E., FEJDI, P.: Crystallographic Plane Groups. - Bratislava: Česká a slovenská kryštalografická spoločnosť, 2007. - CD-ROM. - ISBN 978-80-901748-9-4. (in Slovak)
- [3] OŽVOLDOVÁ, M., ČERVENĚ, I., DILLINGER, J., HALUSKOVÁ, S., LAURINC, V., HOLÁ, O., FEDORKO, P., ŠTUBŇA, I., KRAJČOVIČ, J.: Multimedial Textbook from Physics I. - Trnava: Trnavská univerzita, 2007. - CD-Rom. - ISBN 978-80-8082-127-2. (in Slovak)
- [4] OŽVOLDOVÁ, M., KVETAN, K., DILLINGER, J., HALUSKOVÁ, S., ŠTUBŇA, I., JANČUŠKA, I., ČERVENĚ, I., HOLÁ, O., ČERŇANSKÝ, P., BALLO, P., KREMPASKÝ, J.: Multimedial Textbook from Physics II. - Trnava: Trnavská univerzita, 2007. - CD-Rom. - ISBN 978-80-8082-128-9. (in Slovak)

VIII.4 Textbooks

- [1] ČERVENĚ, I.: Physics in Chapters. 1: Vectors. - Bratislava: STU, 2007. - 52 p. - ISBN 978-80-227-2663-4. (in Slovak)
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- [10] ČERVENĚ, I.: Physics in Chapters. 10: Magnetic Field. - Bratislava: STU, 2007. - 52 p. - ISBN 978-80-227-2672-6. (in Slovak)
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