

DEPARTMENT OF PHYSICS

1 General Information

The Department of Physics teaches General Physics to students of all faculties of the University and Advanced Physics for some special courses. The Department provides the students with the basic understanding of physics, training them in applying the principles of physics to various engineering problems as well as giving the students a review of modern physics.

The department is divided into three sections according to their research and educational specialisation and an additional one, which has special tasks to support the research activities of the Department. The staff consists of 1 professor, 7 associate professors, 14 senior lecturers, 5 external and 1 internal Ph.D. students, 7 research fellows, 3 technicians and 1 secretary.

The research carried out at the department is mostly concerned with the utilization of acoustic and optical wave processes for the investigation of condensed matter. Currently a wide range of ultrasonic techniques is used to investigate semiconductors, metals and ferroelectric materials as well as new ultrasonic techniques are developed. Other research areas include study of wave processes and x-ray diffraction analysis of thin layers. Optical group studies physical properties of the conventional telecommunications optic fibres, twin core optic fibres, photonic crystal fibres, biological photonic structures and semiconductor laser diodes based on quantum wells. Self-diffraction of light in magnetic fluids and photorefractive phenomenon in selected condensed matter materials are also studied within the group. In last years the research programme was extended to theoretical high-energy physics. One research group works in the area of strong electroweak symmetry breaking.

The research groups of the Department are also well known abroad. The scientific activities of the Department are regularly presented at the international conferences and are published in significant physical journals.

In accordance with their qualifications the members of the staff participate in various educational, scientific and management activities beyond the framework of the department and the University, especially on various scientific boards of both domestic and international institutions. There are also many activities directed to advancing the education of physics teachers working in secondary schools and to the organisation of Physics Olympiads in order to prepare young people for national and international competitions.

2 Staff of the Department

Head of the Department	:	Igor Jamnický
Vice-head of the Department	:	Peter Bury
Secretary for Education	:	Gabriela Tarjányiová
Administrative Support	:	Anna Chasníková
Technical Support	:	Nad'a Remencová
		Juraj Remenec (1/3 since Sep 1, 2007)

2.1. Sections of the Department

2.1.1 Section of General Physics

Head of the Section	:	Ivan Melo
Associate Professor	:	Juraj Braciník (½)
Research Fellows	:	Mikuláš Gintner Ivan Melo
Senior Lecturers (with PhD)	:	Beáta Trpišová
Senior Lecturers (without PhD)	:	Anna Braciníková (½ until Sep 1, 2007) Gabriela Tarjániová Pavol Virdzek
Lectors	:	Ivan Bellan Igor Varga (½)

2.1.2. Section of Applied Physics

Head of the Section	:	Dušan Pudiš
Professor	:	Peter Bury
Associate Professors :		Igor Jamnický Ivan Martinček Dušan Pudiš Sofia Slabeyciusová Július Štelina (½ since Sep 2007)
Research Fellows	:	Ctibor Musil Jozef Kúdelčík Ivan Turek (1/2)
Senior Lecturers (with PhD)	:	Daniel Káčik Norbert Tarjányi
Senior Lecturers (without PhD)	:	Peter Sidor Ladislav Vikisály Peter Hockicko

2.1.3. Administrative and Technical Support

Technical Support	:	František Černobila
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2.1.4 Postgraduate Students

External (part-time)	:	Ivan Kubovský, Peter Sidor, Gabriela Tarjániová, Pavel Virdzek (until Sep 1, 2007)
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3 Teaching

3.1 Courses in Bachelor and Master Degree Programmes

Lessons-Seminars-Lab.exercises

Code	Title	Semester	hours/week	Teachers
<i>Courses for the Faculty of Electrical Engineering</i>				
3B107	Introduction to Physics	1	1 - 2 - 0	Káčik
3B202	Physics I	2	3 - 2 - 1	Bury, Káčik, Jamnický
3B301	Physics II	3	3 - 2 - 1	Bury, Jamnický
3B410	Introduction to Semiconductors	4	3 - 1 - 1	Bracíník
3B323	Computer Modelling of the Real Processes	3	1 - 0 - 2	Jamnický, Pudiš
31639	Measuring Methods in Optoelectronics	9	2 - 0 - 0	Káčik
31602	Physical Basics of Optoelectronics	4	2 - 1 - 0	Káčik
4B441	Basics of Optoelectronics	5	2 - 1 - 0	Tarjányi
<i>Courses of the Faculty of Mechanical Engineering</i>				
2B010	Seminar on Physics	1	0 - 2 - 0	Trpišová
2B010	Seminar on Physics – Ex S	1	0 - 2 - 0	Vikisály
2B018	Physics I	2	3 - 2 - 0	Pudiš, Slabeyciusová
2B033	Physics II	3	2 - 0 - 2	Pudiš, Slabeyciusová
2B018	Physics I (External studies)	2	20 - 6 - 0	Vikisály
2B033	Physics II (External studies)	3	20 - 6 - 0	Vikisály
<i>Courses of the Faculty of Civil Engineering</i>				
4B118	Seminar on Physics	1	0 - 2 - 0	Virdzek
4B113	Physics	1	2 - 1 - 1	Štelina
4B202	Physics I	2	2 - 1 - 1	Štelina, Martinček
4B218	Physics - optics	2	2 - 1 - 0	Štelina
4B211	Chapters of Physics	2	0 - 2 - 0	Virdzek
4E203	Physics – (External studies)	2	12 - 8 - 0	Tarjányi
4E208	Chapters of Physics - (External studies)	2	10 - 0 - 0	Tarjányi
<i>Courses of the Faculty of Operation and Economics of Transport and Communication</i>				
11P01	Physics	1	2 - 1 - 1	Martinček, Hockicko, Kúdelčík
12P01	Physics (External studies)	1	16 - 0 - 0	Bury
<i>Courses of the Faculty of Management Science and Informatics</i>				

Department of Physics

5BF05 Fundamentals of Physics 1 3 - 1 - 1 Bracíník

Courses of the Faculty of Special Engineering

hours/sem

92026 Physics 2 2 - 1 - 1 Kúdelčík
97026 Physics 2 24 - 0 - 0 Kovár

Courses of the Faculty of Natural Sciences

8BT09 Mechanics and Thermodynamics	2	3 - 2 - 0	Kejst
8BT15 Electricity and Magnetism	3	3 - 2 - 0	Melo
8MF09 Computer Physics II	6	1 - 0 - 2	Kúdelčík
8BT20 Oscillations and Wave Motion	4	3 - 2 - 0	Melo
8MF07 Quantum Physics	6	2 - 1 - 0	Gintner
8MF10 Statistical physics and thermodynamics	7	2 - 1 - 0	Trpišová
8MF08 Teaching Physics I	6	2 - 1 - 0	Tarjányiová
8MF11 Teaching physics II	7	0 - 3 - 0	Tarjányiová
8MF13 Teaching Physics III	8	1 - 2 - 0	Tarjányiová
8MF12 Special laboratory of school experiments I	7	0 - 3 - 0	Tarjányiová
8MF14 Special laboratory of school experiments II	8	0 - 3 - 0	Tarjányiová
8MF15 Astronomy, Geophysics and Meteorology	8	2 - 1 - 0	Štelina
8MT49 Condensed matter physics II	8	2 - 2 - 0	Kejst
8MF18 Condensed matter physics	9	2 - 1 - 0	Bracíník
8MF19 Physics problems solving I	9	0 - 3 - 0	Hockicko
8MF24 History of Physics and Technology	10	2 - 0 - 0	Bracíník
8MF25 Philosophical Aspects of Physics	10	2 - 0 - 0	Gintner
8MF20 Diploma Seminar in Physics	9	0 - 1 - 0	Tarjányiová
8MT56 Fundamentals of Plasma Physics	8	1 - 1 - 0	Kúdelčík
8MT62 Selected Chapters of Physics	9	2 - 0 - 0	Gintner

4 Educational, Research and Scientific Projects

4.1. Research Projects Funded by the Grant Agencies of the Slovak Republic

Title: Study of Physical Properties of Perspective Materials Using Acoustic Methods (VEGA grant 1/2016/05)

Coordinator : Slabeyciusová Sofia
Co-operators : Bury Peter, Jamnický Igor, Hockicko Peter, Žucha Vladimír, Sidor Peter

Title: The scanning of optical fields by means of tapered optic fibres and the application of the method to the investigation of the optical fields of the optoelectronic and optic elements (Grant VEGA 1/2048/05).

Coordinator : Pudiš Dušan
Co-operators : Martinček Ivan, Turek Ivan, Káčik Daniel
Tarjányi Norbert, Slabeyciusová Sofia,
Kováč Jaroslav (ILC Bratislava), Chovan Jozef
(ILC Bratislava)

Title: Investigation of photorefractive records and their relationship with photonic crystals (APVT 20 – 013504)

Coordinator : Norbert Tarjányi
Co-operators : Daniel Káčik, Gabriela Tarjányiová

Title: Phenomenology of ultrarelativistic nuclear collisions (VEGA grant 1/4012/07)

Coordinator : Tomášik Boris (PF UMB, Banská Bystrica)
Sub-Coordinator : Gintner Mikuláš
Co-operators : Melo Ivan

Title: Discovering the beauty of physics (APVV LPP 0192-06)

Coordinator : Kíreš Marián (PF UPJŠ Košice)
Sub-Coordinator : Melo Ivan
Co-operators : Gintner Mikuláš, Tarjányiová Gabriela
Trpišová Beáta, Kúdelčík Jozef

Title: Study of impact of thermodiffusion coefficient on kinetics of nanoparticles in magnetic fluids using the light diffraction or other methods (Grant VEGA 2/6166/6)

Project is a part of the programme: Study of Physical Parameters of Complex Systems with Fine Magnetic Particles

Coordinator : Kopčanský, Košice
Sub-Coordinator : Štelina Július
Co-operators : Musil Ctibor, Bracínik Juraj

Title: Use of multimedia technologies and e-learning as a support for teaching physics in Bachelor degree programme

(KEGA: 3/3076/05)
Coordinator (in Žilina) : Igor Jamnický
Vice-co-ordinator : Peter Hockicko

Title: Interaction of discharge in dielectrics and of electron gas in conductors with ultrasound and laser radiation

(Grant VEGA 1/2017/05)
Coordinator : Čáp Ivo
Vice-coordinator : Kúdelčík Jozef
Co-operators : Bellan Ivan

Title: Interactive exhibition of physical demonstrations „Country of Waves“ (APVV-LPP-0090-06)

Coordinator : Turek Ivan
Co-operators : Káčik Daniel, Tarjányi Norbert, Tarjányiová Gabriela,
Hockicko Peter

Title: Creation of multimedia e-book for the Electrotechnics and Physics courses in the experimental form of teaching

(KEGA 3/3076/05)

Cooperators : Kúdelčík Jozef, Tarjányiová Gabriela, Bellan Ivan, Virdzek Pavel

4.2 International Projects

Title: Optical fibres for new challenges facing the Information society

(**COST 299**)

National Coordinator : Káčik Daniel

Cooperators : Turek Ivan, Martinček Ivan, Pudiš Dušan, Tarjányi Norbert

Title: International Physics Masterclasses 2007

(<http://wyp.teilchenphysik.org/mc.htm>)

National Coordinator : Melo Ivan

Sub-Coordinator : Tarjányiová Gabriela

Cooperators : Gintner Mikuláš, Trpišová Beáta, Kúdelčík Jozef

4.3 Internal Research Projects

Title: Investigation of Optical Properties of Photonic Structures and Experimental Study of Kinetics of Nanoparticles in Colloid Liquids

Coordinator : Martinček Ivan

Co-operators : Káčik Daniel, Pudiš Dušan, Tarjányi Norbert, Turek Ivan, Štelina Július, Musil Ctibor, Virdzek Pavol, Černobila František

Title: Study of Physical Properties of Perspective Materials Using Acoustic Methods

(partly VEGA grant 1/2016/05)

Coordinator : Peter Bury

Co-operators : Jamnický Igor, Slabeyciusová Sofia, Hockicko Peter, Kúdelčík Jozef, Bellan Ivan, Sidor Peter, Vikisály Ladislav

Title: Phenomenological study of the properties of microworld at current and future colliders

Coordinator : Melo Ivan

Co-operators : Gintner Mikuláš, Trpišová Beáta

4.4 Other Projects

Title: Implementation of intelligent digital technologies of new generation (Central Development Project of the Ministry of Education, IT 2006 and 2007)

Coordinator : Murín Pavol (UPJŠ Košice)

Sub-Coordinator : Melo Ivan

Co-operators : Gintner Mikuláš

Title: Bilateral project between ISIR OSAKA UNIVERSITY JAPAN AND PI SAS

Coordinator : E. Pinčík
Co-operators : Bury Peter, Hockicko Peter

5 Co-operation

5.1 Co-operation Partners in Slovakia

- Polymer Institute, Slovak Academy of Science, Bratislava
- International Laser Center, Bratislava
- Institute of Physics, Slovak Academy of Science, Bratislava
- Dept. of Microelectronics, FEI STU Bratislava
- Matej Bel University, Banská Bystrica
- University of P.J. Šafarik, Košice
- Departments of Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava
- Department of Physics, Faculty of Electrical Engineering and Information Technology , Slovak University of Technology in Bratislava
- Department of Physical Engineering, Faculty of Industrial Technology, Trenčín University, Púchov
- Department of Physics, Military Academy, Liptovský Mikuláš
- Dept. of Magnetism, Institute of Experimental Physics , Slovak Academy of Science, Košice,
- Volkswagen Slovakia, Bratislava
- Welding Research Institute, Bratislava
- Department of Ceramics, Glass and Cement, Faculty Chemical and Food Technology, Slovak University of Technology in Bratislava
- Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava

5.2 International co-operation Partners

- OFTC University of Sydney
- IPE CAS Prague
- Physical Institute, Czech Academy of Sciences, Prague
- ATLAS collaboration, CERN, Switzerland
- University of Montreal, Canada
- Faculty of Mathematics and Physics, Charles university, Prague
- VŠB-TU Ostrava, Czech Republic
- ISIR, Osaka University, Japan

5.3 Visits of the Foreign Institutions

Name	Institution	Length of stay
S. Slabeyciusová, M. Gintner	University "La Sapienza", Rome, Italy Physical Institute of Czech Academy of Sciences, Prague, CR	26 days 5 days

	CERN, Geneva, Switzerland	10 days
	Slezská univerzita in Opava, CR	1 day
I. Melo	Physical Institute of Czech Academy of Sciences, Prague, CR	5 days
	CERN, Geneva, Switzerland	10 days
	EPPOG meeting, Lisbon, Portugal	4 days
B. Trpišová	CERN, Geneva, Switzerland	6 days
P. Bury	Shanghai, China	6 days
	ISIR, Osaka University, Japan	15 days

5.4 Visitors from Foreign Institutions

Name	Institution	Length of stay
Karol Kovařík,	Austrian Academy of Sciences, Vienna, Austria	2 days
Karel Kampf,	Charles University, Prague, CR	1 day
M. Takahshi,		
T. Shishido,		
R. Urago,	Osaka University, Japan	Jun 2007
T. Matsumoto,		
K. Imamura,	Osaka University, Japan	Nov 2007

6. Other Activities

6.1 Conferences Organized by the Department

- 16th Conference of Slovak Physicists, Sep 10 – 13, 2007, University of Žilina (P. Bury – chairman of the Organizing Committee, I. Jamnický, D. Pudiš, I. Martinček, J. Kúdelčík, – members of the Organizing Committee)

- 13th International Conference Applied Physics of Confensed Matter, APCOM 2007, Liptovský Ján, Hotel Bystrá Jun 27-29, 2007 (I. Jamnický - chairman of the Organizing Committee, D. Pudiš, I. Martinček, P. Bury - members)

6.2 Seminars at the Department

- Karol Kampf (MFF UK Prague): Effective Field Methods in Particle Physics (10.4.)
- Karol Kovařík (HEPHY OA Vienna): Mystery of Mass (19.4.)
- Boris Tomášik (UMB Banská Bystrica): Ancient Soup (22.5.)
- Jozef Kúdelčík: Generation of Discharge in Liquid Medium (25.9.)
- Július Vanko (FMFI UK Bratislava): Neutrino Physics (16.10.)
- Peter Hockicko: Study of Relaxation Mechanizms in Condensed Matter with Acoustic Methods (23.10.)
- Dušan Pudiš: Investigation of Properties of Laser Diodes by NOBIC method (30.10.)
- Ivan Melo: Physics Masterclasses 2007 (6.11.)
- Mikuláš Gintner: Lagrangian for Modified BESS model (20.11.)

- Ignác Bugár (Bratislava): Microstructural Fibres (27.11.)
- Norbert Tarjányi: Light Induced Structures in Photorefractive Materials (11.12.)
- Gintner: Higgsologie in the Eve of LHC
- Slabeyciusová S. Scanning Microscopy: Possibilities for Investigation of Metal Nanostructures. Sjf ŽU, (13.07.)

6.3. Solicited Lectures

Title of Lecture: Acoustic Spectroscopy of Condensed Matter

Lecturer: P. Bury

Where/When: 16th Conference of Slovak Physicists, Žilina, Sep 10-13, 2007

Title of Lecture: Event-by-event Fluctuations in Heavy Ion Collisions

Lecturer: I. Melo

Where/When: Physical Institute of AVČR, Prague, Sep 10-13, 2007

Title of Lecture: Strong Electroweak Symmetry Breaking

Lecturer: I. Melo

Where/When: Summer School in Particle Physics for students from FMFI UK Bratislava, Svit, Sep 13, 2007

6.4. Awards

6.5 Membership in Committees of International Institutions

Daniel Káčik:

- Member of OSA (Optical Society of America)

Peter Bury

- chairman of the National IUPAP Committee
- member of Scientific Advisory board of many international conferences

Ivan Turek

- member of the Committee which awards DrSc. Degree in CZ
- regular member of SPIE (The International Society of Optical Engineering)
- member of SAIA Council

Július Štelina

- regular member of SPIE (The International Society of Optical Engineering)

Ivan Melo

- Slovak delegate in European Particle Physics Outreach Group

6.6. Membership in Committees of National Institutions

Ivan Martinček:

- member of the organizing committee of APCOM 2007
- member of the organizing committee of the Conference of Slovak Physicists 2007

Peter Bury

- member of Acta Physica Slovaca editorial board
- member of joint commission 11-22-9 Solid State Physics
- member of the Slovak Physical Society Council
- member of Slovak Acoustic Society Council

Dušan Pudiš

- member of Organizing Committee of Elektro 2006
- member of Organizing APCOM 2006
- 3 x member of PhD. Defence committee, FEI STU Bratislava

RNDr. I. Melo, PhD.:

- National coordinator of the 3rd International Masterclasses in Particle Physics for high school students

6.7. Membership in University Boards

Ivan Martinček:

- Member of the Scientific Council of the Faculty of Electroengineering, University of Žilina

Peter Bury

- member of Communications editorial board
- chief editor: Advances in Electrical and Electronics Engineering
- member of editorial board EDIS ŽILINA
- member of Scientific Council EF ŽU
- member of Scientific Council FPV ŽU

Igor Jamnický

- member of Scientific Council of EF ŽU
- member of Scientific Council of U of ŽILINA
- member of Academic Senate of EF ŽU
- chairman of Academic Senate of ŽU

Dušan Pudiš

- member of the Executive Council of the KAP club (alumni and friends of U of ŽILINA)
- executive editor of AEEE

6.8 Other Activities

- 3rd Children's University (DUEF), Jul 9-13, 2007, University of Žilina (G. Tarjániová, J. Štelina, I. Jamnický, J. Remenec, L. Vikisály, F. Černobila, N. Tarjányi, I. Turek, J. Kúdečík, P. Hockicko)
- 2nd Children's University (DUEF-LM), Jul 16-20, 2007, Liptovský Mikuláš (P. Hockicko)
- 3rd International Masterclasses in Particle Physics for High School Students (I. Melo)

- Optic demonstrations in the Demonstration Laboratory (all year round)
- Excursions to our laboratories (all year round)

7 Publications

7.1 Book Publications

Monographs:

Special Books

Lecture Notes:

- 1) D. Pudiš, I. Martinček, P. Hockicko, J. Kúdelčík, D. Vajda, Selected Chapters of *Physics*, EDIS – ŽU, 2007, ISBN 978-80-8070-653-1

7.2 Journals

Current Content Journals

- 1) Blank, V. D. , Buga, S. G. , Dubitsky, G. A., Serebryanaya, N. R., Prokhorov, V. M., Mavrin, B. N., Denisov, V. N., Chemozatonskii, L. A. , Berezina, S., and Levin V. M.: *Synthesis of Superhard and Ultrahard Materials by 3D-polymerization of C₆₀, C₇₀ Fullerenes Under High Pressure (15 GPa) and Temperatures up to 1820 K*, Z. Naturforsch, 61b, 1-8 (2006)
- 2) Turek, I., Tarjánvi, N.: *Investigation of symetry of photorefractive effect in LiNbO₃*, Optics Express, Vol. 15, Iss. 17 , 2007, pp: 10782-10788
- 3) Kováč, J. Jr., Kováč, J., Pudiš, D., Šatka, A., Uherek, F., Gottschalch, V., Rheinländer, B., Herrnberger, H., Zajadacz, J., Zimmer, K. and Schindler, A.: *Properties of InGaAs/GaAs QW coupled edge and surface emitting tilted cavity lasers*, Laser Phys. Lett. 4, No. 3, 200-203 (2007)
- 4) Škriniarová, J. Pudiš, D., Martinček, I., Kováč, J., Tarjánvi, N., Veselý, M., Turek, I.: *Periodic structures prepared by two-beam interference method*, ELSEVIER Microelectronics Journal 38 (2007) 746-749

Non-current Content Foreign Journals

- 1) Kúdelčík, J.: *Characteristics of the discharge development in transformer oil*, Odborný měsíčník pro elektrárénství, teplárénství a použití energie ENERGETIKA č. 4/2007, r. 57, str. 122

Journals (SK):

- 1) Kúdelčík, J.: *Development of discharge in transformer oil*, Advances in Electrical Electronic Engineering, No. 1, Vol. 6/2007, 35 ISSN 1336-1376

7.3. Conference Proceedings

Foreign Reviewed Conference Proceedings

- 1) Tarjányi, N., Káčik, D., Tarjányiová, G.: *Light-induced microstructure fabrication*, in SPIE Newsroom, Micro/Nanolithography & Fabrication, doi: 10.1117/2.1200708.0818. www zdroj: <http://spie.org/x16012.xml?highlight=x2402>
- 2) Tarjányi, N., Káčik, D., Tarjányiová, G.: *Ligth-induced microstructures in Fe doped LiNbO3 crystal*, in Photonic Crystal Fibers, Proc. SPIE Vol. 6588, 658812, 2007.
- 3) Káčik, D., Peterka, P., Canning, J., Turek, I., Kolimar, M., Berezina, S.: *The modified interferometer for measurement of the chromatic dispersion in PCFs*, in Photonic Crystal Fibers, Proc. SPIE Vol. 6588, 65880N, 2007.
- 4) Turek, I., Tarjányi, N.: *The photorefractive effect in LiNbO3 crystals*, in 15th Czech-Polish-Slovak Conference on wave and Quantum Aspects of Contemporary Optics, Proc. SPIE Vol. 6609, 660906, 2007.
- 5) Turek, I., Káčik, D., Canning, J., Martinček, I., Issa, N. A.: *Intermodal interference in photonic crystal fibers*, in 15th Czech-Polish-Slovak Conference on wave and Quantum Aspects of Contemporary Optics, Proc. SPIE Vol. 6609, 66090I, 2007.
- 6) Virdzek, P., Bellan, I., Tarjányiová, G., Kúdelčík, J., Gutten, M., *Multimedia e-book for the laboratory exercises in Electrotechnics and Physics courses*, Zborník z 5. Konference o matematice a fyzice na vysokých školách technických, Brno 2007, 516-521, ISBN 978-80-7231-274-0
- 7) Zahoranová, A., Zahoran M., Kúdelčík J., Kováčik D., Černák M.: *Mechanism of negative corona discharge in SF₆ based gaseouses insulation*, XVIIth Symposium on physics of switching ARC, Vol. I, Brno, sept. 2007, 229-232 –ISBN 978-80-214-3370-0

Foreign Non-reviewed Conference Proceedings

- 1) Kúdelčík, J., Kállay, F.: Influence of outer parameters on objectivity of experiment, XXXVI. Sešit Katedry teoretické elektrotechniky, Vysoká škola báňská – Technická univerzita Ostrava, jún 2007, 84, ISBN 978-80-248-1444-5
- 2) Timko, M., Kopčanský, P., Repašan, M., Koneracká, M., Hnatič, M., Džarová, A., Štelina, J., Musil, C., Ayrjan, E.: *Structuralization induced by photothermal effect in magnetic fluid film*, Objedinennyj institut jadernych issledovanij, Dubna, 2007-09-26
- 3) Kúdelčík, J.: Negative corona discharge *in the mixture of N₂+SF₆*, XXXVII. Sešit katedry teoretické elektrotechniky, Vysoká škola báňská – Technická univerzita Ostrava, 2007, str. 14, ISBN 978-80-248-1603-6
- 4) Gintner, M., Melo, I., Trpišová, B.: *BESS Model Resonance in the pp→W+tt+X Channel at LHC*, The 8th Small Triangle Meeting, September 2006, Herľany
- 5) Hockicko, P., Jurečka, S.: Frequency Analysis of Sound of Animals. Proceedings of the

conference New Trends in Physics NTF 2007, Brno, Czech Republic, November 15-16, 2007, p. 300-303, ISBN 978-80-7355-078-3

- 6) Hockicko, P., Bury, P., Jamnický, I., Jamnický, M.: Dielectric Relaxation Spectroscopy of Thermal Activated Processes in Ion Conductive Glasses. Proceedings of the conference New Trends in Physics NTF 2007, Brno, Czech Republic, November 15-16, 2007, p. 39-42, ISBN 978-80-7355-078-3

Reviewed Conference Proceedings (SK)

- 1) Kúdelčík, J., Gutten, M., Kúdelčíková, M.: Physics and Electrotechnics in similar laboratory exercises, Proceedings of the XVth International Conference DIDFYZ 2006, ISBN 978-80-8094-082-9
- 2) Gutten, M. Brandt, M., Kúdelčík, J.: Laboratory exercises over internet, Proceedings of the XVth International Conference DIDFYZ 2006, ISBN 978-80-8094-082-9
- 3) Pudiš, D., Martinček, I., Škriniarová, J., Tarjányi, N., Kováč, J.: Planar periodic structures prepared by interference method using laser beam, Proceedings Nekonvenčné technológie 2007, 189-194
- 4) Dirner A. Murín P., Pašáková D., Hlaváčová J., Franko F., Tarjányiová G.: European educational project in particle physics for high schools in Slovakia, Proceedings of the XVth International Conference DIDFYZ 2006, ISBN 978-80-8094-082-9
- 5) Martinček, I., Pudiš, D., Doupovec, J.: Design, fabrication and optical properties of microstructure optical fiber, Proceedings of the 13th International Conference on Applied Physics of Condensed Matter, 2007, 84
- 6) Štelina, J., Musil, C., Držík, M.: Experimental study of the influence of the phase grating on the kinetics nanoparticles in the magnetic fluid, Proceedings of the 13th International Conference on Applied Physics of Condensed Matter, 2007, 88
- 7) Pudiš, D., Kováč, J. jr., Kováč, J., Martinček, I., Šatka, A., Gottschalch, V., Rheinländer, B.: Horizontal cavity surface emitting laser studied by near-field scanning optical microscopy, Proceedings of the 13th International Conference on Applied Physics of Condensed Matter, 2007, 204-207
- 8) Hockicko, P., Bury, P., Jamnický, M., Jamnický, I.: Influence of chemical composition in phosphate ion conductive glasses on acoustic attenuation spectra, Proceedings of the 13th International Conference on Applied Physics of Condensed Matter, 2007, 212
- 9) Tarjányi, N., Vik, J., Škriniarová, J., Tarjányiová, G.: The possibility of studying the photochemical processes through grating recording in photoresist layer, Proceedings of the 13th International Conference on Applied Physics of Condensed Matter, 2007, 271
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