

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	:	Naďa Remencová Juraj Remenec

2.1. Sections of the Department

2.1.1 Section of General Physics

Head of the Section	:	Ivan Melo
Associate Professor	:	Juraj Braciník
Research Fellows	:	Mikuláš Gintner Ivan Melo
Senior Lecturers (with PhD)	:	Mária Richterová Beáta Trpišová
Senior Lecturers (without PhD)	:	Anna Braciníková Gabriela Tarjániová Pavol Virdzek Lenka Duchoňová
Lectors	:	Ivan Bellan Igor Varga

2.1.2. Section of Applied Physics

Head of the Section	:	Július Štelina
Professor	:	Peter Bury
Associate Professors	:	Igor Jamnický Jozef Kejst Sofia Slabeyciusová Július Štelina
Research Fellows	:	Drahoslav Vajda Ctibor Musil Ivan Martinček Dušan Pudiš Jozef Kúdelčík Ivan Turek (1/2)
Senior Lecturers (with PhD)	:	Daniel Káčik Norbert Tarjányi
Senior Lecturers (without PhD)	:	Jaroslav Kovár Peter Sidor Ladislav Vikisály Vladimír Žucha Peter Hockicko
Technical Support	:	František Černobila

2.1.3 Postgraduate Students

Internal (full-time)	:	Miroslav Dúbravka
External (part-time)	:	Ivan Kubovský, Peter Sidor, Gabriela Tarjániová, Pavel Virdzek, Vladimír Žucha

3 Teaching

3.1 Courses in Bachelor and Master Degree Programmes

		Lessons-Seminars-Lab.exercises		
Code	Tittle	Semester	hours/week	Teachers
<i>Courses for the Faculty of Electrical Engineering</i>				
3B202	Physics I	2	3 - 2 - 1	Bury, Káčik, Jamnický
3B301	Physics II	3	3 - 2 - 1	Bury, Jamnický
31059	Semiconductor Physics	4	4 - 0 - 0	Braciník
3B323	Computer Modelling of the Real Processes	3	1 - 0 - 2	Jamnický, Pudiš
31081	Seminar on Semiconductors	4	0 - 2 - 0	Pudiš
31639	Measuring Methods in Optoelectronics	9	2 - 0 - 0	Káčik
32236	Optoelectronics	5	2 - 0 - 2	Štelina
31099	Wave processes	4	2 - 2 - 0	Kejst
3B202	Physics I (External studies)	2	14 - 6 - 4	Kejst
31074	Physics II (External studies)	3	14 - 4 - 4	Kejst
<i>Courses of the Faculty of Mechanical Engineering</i>				
2B010	Seminar on Physics	1	0 - 2 - 0	Trpišová
2B018	Physics I	2	3 - 2 - 0	Vajda, Slabeyciusová
2B033	Physics II	3	2 - 0 - 2	Pudiš, Slabeyciusová
2B018	Physics I (External studies)	2	20 - 6 - 0	Martinček
2B033	Physics II (External studies)	3	20 - 6 - 0	Martinček
2B018	Technical Physics – Pov. Bystrica	2	3 - 2 - 0	Trpišová
22002	Technical Physics - Bch- external	2	2 - 2 - 0	Trpišová
<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	Tarjányi
4E203	Physics – (External studies)	2	12 - 8 - 0	Tarjányi
4E208	Chapters of Physics - (External studies)	2	10 - 0 - 0	Tarjányi

Department of Physics

Courses of the Faculty of Operation and Economics of Transport and Communication

11P01 Physics	1	2 - 1 - 1	Martinček, Hockicko, Kejst
12P01 Physics (External studies)	1	16 - 0 - 0	Bury

Courses of the Faculty of Management Science and Informatics

5BF05 Fundamentals of Physics	1	3 - 1 - 1	Braciník
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Courses of the Faculty of Special Engineering

		hours/sem	
92026 Physics	2	2 - 1 - 1	Kovár
97026 Physics	2	24 - 0 - 0	Richterová

Courses of the Faculty of Natural Sciences

8BT09 Mechanics and Thermodynamics	2	3 - 2 - 0	Kejst
8MF03 Theoretical mechanics	4	2 - 1 - 0	Braciník
8BT15 Electricity and Magnetism	3	3 - 2 - 0	Melo
8MF05 Computer Physics I	5	1 - 2 - 0	Kúdelčík
8MF09 Computer Physics II	6	1 - 0 - 2	Kúdelčík
8MF04 General Physics III	4	4 - 3 - 0	Melo
8MF06 General Physics IV	5	3 - 2 - 0	Gintner
8MF07 Quantum Physics	6	2 - 1 - 0	Gintner
8MF10 Statistical physics and thermodynamics	7	2 - 1 - 0	Braciník
8MF08 Teaching Physics I	6	2 - 1 - 0	Richterová
8MF11 Teaching physics II	7	0 - 3 - 0	Tarjányiová
8MF13 Teaching Physics III	8	1 - 2 - 0	Richterová
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	8	2 - 1 - 0	Štelina
8MF21 Selected chapters of physics	7	2 - 0 - 0	Braciník
8MT42 Condensed matter physics I	7	2 - 2 - 0	Kejst
8MT49 Condensed matter physics II	8	2 - 2 - 0	Vajda
8MF18 Condensed matter physics	9	2 - 1 - 0	Kejst
8MF19 Physics problems solving I	9	0 - 3 - 0	Hockicko
8MT30 Experimental methods in physics I	6	2 - 2 - 0	Kúdelčík
8MT39 Experimental methods in physics II	7	2 - 2 - 0	Kúdelčík
8MT59 Diploma Seminar in physics	9	0 - 0 - 4	Kúdelčík
8MF20 Diploma Seminar in physics	9	0 - 1 - 0	Tarjányiová
8MT57 Computer Modelling of phys. Phenomena	8	2 - 0 - 1	Jamnický, Pudiš
8MT56 Fundamentals of Plasma Physics	8	1 - 1 - 0	Kúdelčík

4 Education, Research and Scientific Projects

4.1. Internal Research Projects

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, Kovár Jaroslav, Bellan Ivan, Vajda Drahoslav, Sidor Peter, Vikisály Ladislav

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: Sensitivity of future colliders to VVtt vertex and the role of the top quark in the mechanism of electroweak symmetry breaking

Coordinator: Gintner Mikuláš

Co-operators: Melo Ivan, Trpišová Beáta

4.2 National Projects

4.2.1 Research Projects funded by the Science & Education Grant Agency of the Slovak Republic

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
Vice-coordinator : Martinček Ivan
Co-operators : Turek Ivan, Káčik Daniel
Tarjányi Norbert, Slabeyciusová Sofia,
Kováč Jaroslav, ILC Bratislava, Chovan Jozef,
ILC Bratislava

Title: Study of kinetics of nanoparticles in magnetic fluids using the light diffraction (Grant VEGA 02 12 601/2003)

Project is a part of the programme: Study of Physical Parameters of Complex Systems with Fine Magnetic Particles (coordinator: doc.RNDr. Kopčanský, CSc., Košice)

Coordinator (in Žilina): Štelina Július

Co-operators: Musil Ctibor, Braciník Juraj

*Title: Study of physical properties of new construction materials using acoustic methods
(Grant VEGA 1/2016/05)*

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

Title: INTERACTION OF DISCHARGE IN DIELECTRICS AND OF ELECTRON GAS IN CONDUCTORS WITH ULTRASOUND AND LASER RADIATION (Grant VEGA 1/2017/05)

Coordinator : Prof. Ing. Ivo Čáp, CSc.
Vice-coordinator : RNDr. Kúdelčík Jozef, PhD.
Co-operators : RNDr. Bellan Ivan

4.2.2 Projects Funded by the Cultural & Education Grant Agency (KEGA)

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

(KEGA č. 3/3076/05)

Coordinator : Miroslav Gutten
Vice-coordinator : Jozef Kúdelčík
Anna Zahoranová

Title: Use of Information-communication technologies as means to increase interest in physics in classes and in extracurricular activities at elementary and high schools

(Grant KEGA 3/2386/04)

Coordinator : Alexander Dirner (ÚFV, PF UPJŠ)
Co-operator : Gabriela Tarjániová

4.2.3 Research Projects Funded by the Science & Development Assistance Agency (APVV)

Title: Study of photorefractive records and their connection with photonic crystals

APVT 20 – 013504

Coordinator : Norbert Tarjányi
Vice-coordinator : Daniel Káčik
Co-operators : Gabriela Tarjániová

Title: Discovering the Beauty of Physics

APVV-LPP 0192-06

Coordinator : Marián Kíreš (UPJŠ Košice)

Coordinator (in Žilina) : Ivan Melo
Co-operators : Mikuláš Gintner, Gabriela Tarjányiová, Beata Trpišová,
Jozef Kúdelčík

4.2.4 Other National Projects (Central Development Project of the Ministry of Education, IT 2005 and 2006)

Title: Implementation of intelligent digital technologies

Coordinator : Pavol Murín, CSc.
(UPJŠ Košice)
Coordinator (in Žilina) : Ivan Melo
Co-operators : Mikuláš Gintner

4.3 International Projects

4.3.1 EUROPEAN PHYSICS MASTERCLASSES 2006, <http://wyp.teilchenphysik.org/mc.htm>

Coordinator : Pavol Murín, CSc.
(UPJŠ Košice)
Coordinator (in Žilina) : Ivan Melo
Co-operators : Mikuláš Gintner, Gabriela Tarjányiová, Beata Trpišová,
Mária Richterová

4.3.2 COST 299: OPTICAL FIBRES FOR NEW CHALLENGES FACING THE INFORMATION SOCIETY (FIDES)

National coordinator : Daniel Káčik
Co-operators : Ivan Turek, Ivan Martinček, Dušan Pudiš,
Norbert Tarjányi

5 Co-operation

5.1 Co-operation Partners in Slovakia

- Department of Physics, Faculty of Electrical Engineering and Information Technology , Slovak University of Technology in Bratislava
- Departments of Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava
- Department of Physical Engineering, Faculty of Industrial Technology, Trenčín University, Púchov
- Department of Physics, Military Academy, Liptovský Mikuláš
- ATLAS group, Institute of Experimental Physics, Slovak Academy of Science, Košice,
- Virtual Collaboration, University of P.J. Šafarik, Košice
- 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
- Dept. of Microelectronics, FEI STU Bratislava
- International Laser Center, Bratislava

- Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava
- Polymer Institute, Slovak Academy of Science, Bratislava
- Institute of Physics, Slovak Academy of Science, Bratislava
- Matej Bel University, Banská Bystrica

5.2 International co-operation Partners

- Institute of Biochemical Physics, RAS, Moscow
- Škoda – Research, Prague
- Department of Physics, Nottingham University
- ÚRE Prague
- Institute of Experimental Physics Science, Czech Academy, Prague
- ATLAS collaboration, CERN, Switzerland
- Centaurus Technologies (University of Sydney)
- Fakultät für Chemie und Mineralogie, University of Leipzig, Germany

5.3 Visits of the Foreign Institutions

Name	Institution	Length of stay
- I. Melo, M. Gintner	Physical Institute of Czech Academy of Sciences, Prague, CR	6 days
- I. Melo, M. Gintner, B. Trpišová	CERN, Switzerland,	6 days
- I. Melo, M. Gintner, B. Trpišová	University of Vienna, Vienna Central European Seminar	6 days
- Sofia Slabeyciusova	Academy of Science of Belorussia, conference Institute of Heat Exchange and Matter	6 days
- Dušan Pudiš	Conference HETECH 06, Manchester, Great Britain	4 days

6. Other Activities

6.1 Seminars at the Department

- My Research in Japan (Karol Gronžák, 28.2.)
- Photonic Crystal Fibres at the Department (Ivan Turek, 14.3.)
- Standard Model of Elementary Particles, European Physics Masterclasses 2006 (Mikuláš Gintner, 15.3.)
- Accelerators and Detectors of Elementary Particles, European Physics Masterclasses 2006 (Ivan Melo, 15.3.)
- Investigation of photorefractive records and their connection with photonic crystals (Norbert Tarjányi, 21.3.)
- Optical Properties of Biological Photonic Structures (Dušan Pudiš, Ivan Martinček, 4.4.)
- Darwin and Design: a Challenge for Science of 21 st Century (Drahošlav Vajda, 25.4.)
- The quality of our students (Vladimír Žucha, 2.5.)
- Quark-gluon Plasma (Boris Tomášik, UMB Banská Bystrica, 6.6.)
- Surface-emitting Laser with Horizontal Resonator Studied by NSOM Method (Dušan Pudiš, 10.10)

- The Origin of Elements in Stars (Július Štelina, 12.12.)

6.2 Seminars outside the Department

- Accelerators and Detectors of Elementary Particles (Ivan Melo, European Physics Masterclasses, Nitra, 21.3.)
- Strong EWSB in Top Quark Production at ILC (Ivan Melo, invited seminar at Institute of Physics ČAV Praha, 30.3.)
- VRVS Information Seminar (Mikuláš Gintner, UMB Banská Bystrica, 24.4.)
- Photorefractive Phenomenon in LiNbO₃:Fe (Ivan Turek, Norbert Tarjányi, Bratislava Optical Seminar, May 2006)
- Natural Sciences are (should be) Part of Culture (Ivan Turek, Liptovský Mikuláš)
- Optical Properties of the Photonic Biological Structures (Dušan Pudiš, Ivan Martinček, F. Černobila, Bratislava Optical Seminar, 29.5.)
- Influence of Donor Illumination on Particle Structuralization in Magnetic Fluid (Július Štelina, Ctibor Musil, Research and Educational Activities at Physics Departments at Technical Universities, Bratislava 6.6.)
- Kinetics of Nanoparticles in Liquids, Tidal Forces and the Moon, The origin of Elements in Stars (Július Štelina, invited seminar at „Day of Science“, Gymnázium Kremnica, 22.11.)
- Childrens University of the Faculty of Electrical Engineering 2006 (Peter Hockicko, Liptovský Mikuláš, 8.2.)
- Methods of the Scanning Atomic Microscopy (Sofia Slabeyciusová, Institute of Competitiveness and Innovations, Žilina, 18.12.)
- Scanning Atomic Microscopy (Sofia Slabeyciusová, FMT TnU, Púchov, 22.2.)

6.3 Membership in International Institution/Committees

Juraj Bracínik

- member of joint commission 11-22-9 Solid State Physics
- member of Academic Senate EF ŽU
- chief editor of Advances in Electrical and Electronics Engineering

Peter Bury

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

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

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)

6.4 Other Activities

- Exhibition of Photographs from the Optic Laboratory
- Optic demonstrations in the Demonstration Laboratory (all year round)
- Excursions to our laboratories (all year round)
- Prof. Ján Vanovič Award – Bronze Medal to P. Hockicko for „How the Waves Move and how we hear”

7 Publications

Monographies:

- [1] I. Martinček, I. Turek, D. Káčik, D. Pudiš: *Untraditional Methods of Investigation of Optic Fibres and Semiconductor Laser Diodes*, EDIS – ŽU, ISBN 80-8070-569-0
- [2] N. Tarjányi, I. Turek: *Photorefractivity of Lithium Niobate*, EDIS – ŽU, ISBN 80-8070-616-0

Lecture Notes:

- [3] Q. Jackuliak, V. Žucha, G. Tarjányiová, P. Hockicko, D. Vajda: *Physics II: Collection of Problems*, EDIS – ŽU, ISBN 80-8070-564-X
- [4] M. Gutten, J. Kúdelčík, M. Šimko: *Measuring Devices and Systems of Electrical and Nonelectrical Quantities*, EDIS – ŽU, ISBN – 80-8070-619-0

CC Journals:

- [5] J. Kúdelčík, M. Gutten, A. Zahoranová: *Comparison of the first negative corona current pulses in N_2+SF_6 and CO_2+SF_6 mixtures*, Czechoslovak Journal of Physics, Vol 56, (2006), No. 4

- [6] M. Gintner, I. Melo, B. Trpišová: *A NEW VECTOR RESONANCE PRODUCTION AT FUTURE COLLIDERS*, *acta physica slovacica* vol. 56, No. 4, 473-483
- [7] T. Guhne, V. Gottschalch, G. Leibiger, H. Herrnberger, J. Kováč, J. Kovac, Jr., R. Schmidt-Grundt, B. Rheinländer, D. Pudiš: *Properties of (InGa)As/GaAsQW ($\lambda \approx 1.2 \mu\text{m}$) Facet-Coated Edge Emitting Diode Laser*, *Laser Physics*, 2006, Vol. 16, No.3, 441-446 ISSN 1054-660X
- [8] J. Kováč, jr., J. Kováč, D. Pudiš, A. Šatka, F. Uherek, V. Gottschalch, B. Theinländer, H. Herrnberger, J. Zajadacz, K. Zimmer, A. Schindler: *Propertie of InGaAs/GaAs QW coupled edge and surface emitting tilted cavity lasers*, *Laser Phys. Lett.* 1-4, 2006,/ DOI 10.1002/lapl. 200610092

Other Journals:

- [9] D. Pudiš, I. Martinček, I. Turek, M. Michalka, J. Kováč jr., V. Gottschalch, D. Káčik: *SCANNING OF OPTICAL FIELDS USING NEAR-FIELD SCANNING OPTICAL MICROSCOPY*, *Komunikácie* 1/2006, 13 ISSN 1335-4205
- [10] M. Gutten, J. Michalík, J. Kúdelčík: *ERRORS AND UNCERTAINTY OF MEASUREMENT*, *Czechoslovak Journal for Physics*, vol. 56, 4/2006, ISSN 0009-0700
- [11] C. Musil, J. Štelina: *METHODS OF DETERMINATION OF THE SIGN OF THE THERMO-DIFFUSION COEFICIENT IN DISPERSED LIQUIDS*, *Komunikácie* 1/2006, 19 ISSN 1335-4205
- [12] J. Kúdelčík, M. Gutten, M. Brandt: *Development of electrical breakdown in transformer oil*, *Advances in Electrical and Electronic Engineering*, Vol. 5/2006, 277-280, ISSN 1336-1376
- [13] P. Hockicko, P. Bury, M. Jamnický, I. Jamnický: *Dielectric spectroscopy of ionic glasses of the system CuI-CuBr-Cu₂O-P₂O₅*, *Advances in Electrical and Electronic Engineering*, Vol. 5/2006, 341-343, ISSN 1336-1376
- [14] Turek, D. Káčik, I. Martinček: *The symmetry of optical field in photonic crystal fibre with trigonal symmetry*, *Advances in Electrical and Electronic Engineering*, Vol. 5/2006, 365-368, ISSN 1336-1376
- [15] G. Tariányiová, P. Hockicko: *CHILDRENS UNIVERSITY OF EF ŽU 2005 THROUGH EYES OF CHILDREN, PARENTS AND TEACHERS*, *Matematika Informatika Fyzika*, No. 28, XV. year, Prešov, 117-122, ISSN 1335-7794
- [16] I. Turek: *A Dream about One Country*, *journal JEMNÁ MECHANIKA A OPTIKA*, 6/2006, 18,1 ISSN 0447-6441

Conference Proceedings (locally organized):

- [17] J. Kováč jr., J. Kováč, A. Šatka, D. Pudiš, V. Gottschalch, B. Rheinländer: *Horizontal Cavity Surface Emitting Laser with Bragg Mirror*, *Proceedings of the 12th International Conference on APCOM, Malá Lučivná 2006*, 292-295, ISBN 80-227-2424-6
- [18] D. Pudiš, J. Škriniarová, I. Martinček, N. Tariányi, J. Kováč, M. Dúbravka: *Photonic Structures Prepared by Two-Beam Interference Method*, *Proceedings of the 12th International Conference on APCOM, Malá Lučivná 2006*, 288-291, ISBN 80-227-2424-6

- [19] I. Turek, N. Tariányi, J. Škriniarová, D. Pudiš, M. Dúbravka: *Interference Imaging of the Photoresist Layers*, Proceedings of the 12th International Conference on APCOM, Malá Lučivná 2006, 322-325, ISBN 80-227-2424-6
- [20] S. Berezina, I. Turek, D. Káčik: *Practical Arrangement of Interferometer for Optical Fiber Chromatic Dispersion Measurements*, Proceedings of the 12th International Conference on APCOM, Malá Lučivná 2006, 312-317, ISBN 80-227-2424-6
- [21] J. Štelina, C. Musil, J. Bracínik, P. Kopčanský, M. Timko, L. Tomčo: *The Influence of Permanent Illumination on the Time Dependence of Formation of the Nanoparticle Grating in Magnetic Fluid*, Proceedings of the 12th International Conference on APCOM, Malá Lučivná 2006, 256-260, ISBN 80-227-2424-6
- [22] I. Martinček, D. Pudiš, A. Šatka: *Investigation of the properties of chitin biological photonic structures*, Proceedings of the International conference „Unconventional Technologies 2006“, Žilina 2006, 1/26-9/26, ISBN 80-8070-553-4

Conference Proceedings (Sk):

- [23] P. Bury: *ACOUSTOELECTRIC EFFECT IN BULK AND MULTILAYERED SEMICONDUCTORS – BASE OF ACOUSTIC TECHNIQUES FOR DEEP CENTERS INVESTIGATION*, Proceedings of Acoustic High Tatras 06, International Acoustical Conference – EAA Symposium 2006, 17-28, ISBN 80-228-1673-6
- [24] G. Tariányiová, P. Hockicko: *Experiences and trends in the use of innovative approaches in teaching science classes at Elementary Schools as realized in Childrens University*, Proceedings of the international conference „Teacher of Science Classes in the Beginning of the 21 st Century“, Prešov 2006, 58-61, ISBN 80-8068-462-6
- [25] Dirner, P. Murin, G. Martinská, S. Lehocká, J. Vrláková, M. Uličný, O. Lehocký, R. Adámek, M. Kíreš, D. Pašáková, J. Hlaváčová, M. Repašan, I. Melo, M. Gintner, G. Tariányiová, B. Trpišová, J. Remenec, S. Tokár,...: *Physics of Microworld for High School Students in Slovakia*, Proceedings of the international conference „Teacher of Science Classes in the Beginning of the 21 st Century“, Prešov 2006, 58-61, ISBN 80-8068-462-6
- [26] J. Štelina, C. Musil: *Influence of Additional Illumination on Particle Structuralization in Magnetic Disperse Fluid*, Proceedings „Research and Educational Activities at Physics Departments at Technical Universities in Slovakia“, STU Bratislava 2006, 95-97, ISBN 80-227-2430-0
- [27] P. Virdzek: *Study of the volume activity of ^{222}Rn in air from the drills in Astronomy and Geophysics Observatory of the Comenius University in Modra-Piesky in May-August 2005*, Proceedings of the conference „Research and educational activities at Physics departments at Technical Universities in Slovakia“, STU Bratislava 2006, 204-208, ISBN 80-227-2430-0
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