

DEPARTMENT OF PHYSICS

1 General Information

Advances in technical fields have always relied to a large degree on know-how and methods originating in Physics. It is therefore very important to provide the students of the technical fields with good basics of Mathematics and Physics.

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 two sections according to their research and educational specialisation. The staff consists of 1 professor, 7 associate professors, 10 senior lecturers (among them 4 external Ph.D. students), 3 internal Ph.D. students, 5 research fellows and 3 technical/administrative workers who support the research and teaching activities of the Department.

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. 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 and quark-gluon plasma.

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 for teachers and young people in secondary schools.

2 Staff of the Department

Head of the Department	:	Peter Bury
Vice-head of the Department	:	Dušan Pudiš
Secretary for Education	:	Gabriela Tarjániová
Administrative Support	:	Anna Chasníková
Technical Support	:	Nadežda Remencová František Černobila Juraj Remenec (1/3)

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)	:	Gabriela Tarjányiová, Pavel Virdzek, Ivan Bellan, Juliana Knociková, Ladislav Vikisály

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)
Research Fellows	:	Jozef Kúdelčík, Ctibor Musil (1/2, Ivan Turek (1/2)
Senior Lecturers (with PhD)	:	Peter Hockicko, Daniel Káčik, Norbert Tarjányí, Marián Janek (since Sep 2009)
Senior Lecturers (without PhD)	:	Peter Sidor

2.1.3 Postgraduate Students

Internal	:	Ivana Kubicová, Ľuboš Šušlík, Peter Tvarožek
External	:	Peter Sidor, Gabriela Tarjányiová, Pavel Virdzek

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>				
31110	Introduction to Physics	1	1 - 2 - 0	Káčik
3B202	Physics I	2	3 - 2 - 1	Bury, Káčik, Jamnický
31303	Physics II	3	3 - 2 - 1	Bury, Jamnický

Department of Physics

3B410 Introduction to Semiconductors	4	3 - 1 - 1	Bracíník
3B441 Basics of Optoelectronics	4	2 - 1 - 0	Tarjányi
32109 Physics III	1	2 - 1 - 0	Bury
32315 Integrated Optics	3	2 - 0 - 0	Tarjányi
32321 Measurement in Telecommunications 4	3	0 - 2 - 0	Káčik

Courses of the Faculty of Mechanical Engineering

2B010 Seminar on Physics	1	0 - 2 - 0	Trpišová
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	Kúdelčík

Courses of the Faculty of Civil Engineering

4B113 Physics	1	2 - 1 - 1	Štelina
4B118 Seminar on Physics	1	0 - 2 - 0	Virdzek
4B218 Physics - optics	2	2 - 1 - 0	Štelina
4B202 Physics I	2	2 - 1 - 1	Hockicko, Martinček
4B211 Chapters of Physics	2	0 - 2 - 0	Tarjányi
4D102 Applied Physics	1d	2 - 0 - 0	Bury, Štelina
4E203 Physics – (External studies)	2	12 - 8 - 0	Tarjányi
4E208 Chapters of Physics - (External studies)	2	10 - 0 - 0	Tarjányi

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

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

Courses of the Faculty of Management Science and Informatics

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

		hours/sem	
92026 Physics	2	2 - 1 - 1	Kúdelčík
97026 Physics	2	18 - 0 - 0	Trpišová

Courses of the Faculty of Natural Sciences

8BT90 Planning and Evaluation of Experiment	4	2 - 1 - 1	Jamnický
8BT148 Computer Physics I	5	2 - 0 - 2	Kúdelčík
8BT44 Computer Physics II	6	1 - 0 - 2	Kúdelčík

8BT77 Statistical Methods in Physics and Technics	2	3 - 2 - 0	Bracíník
8BT45 Quantum Physics I	1	2 - 2 - 0	Gintner
8BT167 Condensed Matter Physics	1	3 - 2 - 0	Bracíník
8BT188 Applications of Wave Phenomena	3	2 - 0 - 2	Bury
8BT198 Quantum Physics II	3	2 - 1 - 0	Gintner

4 Educational, Research and Scientific Projects

4.1 National Projects

4.1.1 Research Projects Funded by the Scientific Grant Agency of the Slovak Republic (VEGA)

*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: 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, ÚEF SAV Košice
Sub-Coordinator : Štelina Július
Co-operators : Musil Ctibor, Bracíník Juraj

*Title: Design, fabrication and diagnostics of the planar photonic structures and the photonic crystal fibers with a submicrometer period for optoelectronic devices.
(Grant VEGA 1/0868/08)*

Coordinator : Dušan Pudiš
Sub-Coordinator : Ivan Martinček
Co-operators : Daniel Káčik, Norbert Tarjányi, Peter Tvarožek, Ľuboš Šušlik, Ivana Kubicová

4.1.3 Research Projects Funded by the Slovak Research and Development Agency (APVV)

*Title: Children's University of Žilina
(APVV LPP – 0195-07)*

Coordinator : Peter Hockicko
Co-operators : Gabriela Tarjányiová, Ivan Turek, Jarmila Müllerová

Title: Research and parameter optimization of C-Si and POLY-Si MIS solar cells

(APVV-0577-07)

Coordinator : Emil Pinčík, FÚ SAV Bratislava
Co-operators : Peter Bury, Peter Hockicko

Title: Discovering the beauty of physics

(APVV LPP 0192-06)

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

Title: Revealing microworld mysteries through experimental data analysis

(APVV LPP 0059-09)

Coordinator : Alexander Dirner (UPJŠ Košice)
Sub-Coordinator : Ivan Melo
Co-operators : Mikuláš Gintner, Gabriela Tarjániová, Beáta Trpišová, Jozef Kúdelčík, Juraj Remenec

Title: Interactive exhibition of physical demonstrations „Country of Waves“

(APVV-LPP-0090-06)

Coordinator : Turek Ivan
Co-operators : Káčik Daniel, Tarjányi Norbert, Tarjániová Gabriela, Hockicko Peter, Pudiš Dušan, Slabeyciusová Sofia

4.1.6 Projects of European Structural Funds

Title: Center of excellence for power electronics and their material components

(26220120003)

Coordinator Activities 4.1 : Peter Bury
Co-operators : Peter Hockicko, Igor Jamnický, Daniel Káčik, Jozef Kúdelčík, Ivan Martinček, Dušan Pudiš, Peter Sidor, Norbert Tarjányi, František Černobila

4.2 International Projects

4.2.9 COST Project

Title: Optical fibres for new challenges facing the Information society

(COST 299 FIDES)

National Coordinator : Káčik Daniel
Cooperators : Turek Ivan, Martinček Ivan, Pudiš Dušan, Tarjányi Norbert

4.2.10 Other International Projects

Title: 5th International Physics Masterclasses 2009

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

National Coordinator : Melo Ivan
Sub-Coordinator : Tarjániová Gabriela

Cooperators : Gintner Mikuláš, Trpišová Beáta, Kúdelčík Jozef,
Remenec Juraj

Title: Mentoring partnerships – Children's University of Žilina and Children Age University Olomouc (Project realized within the framework of the project EUCU.NET – European Children's universities network is funded by the European Commission under the 7th Framework Programme, Science and Society.)

Coordinator for ŽU : Peter Hockicko

5 Co-operation

5.1 Co-operation Partners in Slovakia

- International Laser Center, Bratislava
- Institute of Physics, Slovak Academy of Science, Bratislava
- Dept. of Microelectronics, FEI STU Bratislava
- Institute of Experimental Physics , Slovak Academy of Science, Košice,
- Matej Bel University, Banská Bystrica
- University of P.J. Šafarik, Košice
- Institute of Experimental and Applied Physics, Czech Technical University in Prague

5.2 International co-operation Partners

- Helsinki University of Technology, Finland
- ISIR, Osaka University, Japan
- ATLAS collaboration, CERN, Switzerland
- University of Frankfurt, Germany
- Aalto University, Finland
- IPHT Jena, Germany
- UFE ČAV, Prague, CZ
- OFTC University of Sydney, Australia
- VŠB-Technical University of Ostrava, CZ

5.3 Visitors to the Department

Name	Institution	Length of stay
Dr. Josef Juráň	ÚTEF ČVUT, Prague	3+30 days
prof. Juraj Ševčík	Přírodovědecká fakulta,	1 day
Michal Smolka	Univerzita Palackého v Olomouci	2 days

5.4 Visits to Foreign Institutions

Peter Tvarožek	Helsinki University of Technology	3 months
Peter Hockicko	Eberhard Karls University of Tübingen/Germany	2 days
	Západočeská univerzita, Plzeň	4 days
	Univerzita Palackého, Olomouc	2 days
	Institute of Physics, Wroclaw University of Technology	3 days
	Ostravská univerzita, Ostrava	3 days
	University of Liverpool	2 days
Ivan Melo	Universität Wien	2 days
	Frankfurt, Institut fuer Theoretische Physik, Johann Wolfgang Goethe Universitaet	6+7 days
	Milano, 24th EPPOG meeting	4 days
	CERN, Zeneva, 25th EPPOG meeting	3 days
Daniel Káčik	Budapest, KFKI RMKI, Zimanyi Winter School 2009	5 days
Mikuláš Gintner	Technical University of Wroclaw	4 days
	ČVUT Prague	4x3 days

6. Other Activities

6.1 Conferences, Workshops, Symposiums Organized by the Department

- 15th International Conference Applied Physics of Condensed Matter, APCOM 2009, Liptovský Ján, Hotel Bystrá Jun 24-26, 2009 (Chair of the Organizing Committee: Igor Jamnický, Chair of the Scientific Committee: Peter Bury, Administrator: Dušan Pudiš, member of the Organizing Committee: Ivan Martinček)
- 5th International Particle Physics Masterclasses 2009, Žilinská univerzita v Žiline, Mar 26, 2009 (Ivan Melo – National coordinator, Gabriela Tarjániová – coordinátor in Žilina, members of the Organizing Committee - Mikuláš Gintner, Beáta Trpišová, Jozef Kúdelčík, Juraj Remenec)

6.2 Seminars Organized by the Department

„New web pages of the Physics Department“

Lecturer: Igor Jamnický, KF EF ŽU
Date: 17th February, 2009

“Standard model of elementary particles”

Lecturer: Mikuláš Gintner, KF EF ŽU
Date: 26th March, 2009

„Computer evaluation of electrophysiological signals and simulation of the neuron mechanisms of breathing and respiration reflexes“

Lecturer: Ing. Juliana Knociková, KF EF ŽU
Date: 31st March, 2009

„Children's University of Žilina within the network EUCU.NET“

Lecturer: Peter Hockicko, KF EF ŽU
Date: 7th April, 2009

"Symmetries and their breaking" (Masterclasses seminar)

Lecturer: Martin Mojžiš, FMFI UK Bratislava

Date: 16th April, 2009

„Photopolymers – materials for hologram recording“

Lecturer: Dušan Sabol, University College Dublin

Date: 28th April, 2009

„Supercontinuum Generation in twocore microstructure fibres“

Lecturer: Martin Koyš, Comenius University, Bratislava, International Laser Centre, Bratislava

Date: 2nd June, 2009

„ Use of Lecher lines for demonstrations of electromagnetic waves“

Lecturer: Josef Hubeňák, University of Hradec Králové

Date: 9th June, 2009

„BESS model resonance at future e+e- colliders“

Lecturer: Beáta Trpišová, KF EF ŽU

Date: 13th September, 2009

„Tour of Country of waves“

Lecturer: Ivan Turek, KF EF ŽU

Date: 29th September, 2009

„Sonoluminescence“

Lecturer: Ivan Hamáček, ÚEF SAV Košice

Date: 6th October, 2009

„ Acoustic spectroscopy of magnetic liquids“

Lecturer: Jozef Kúdelčík, KF EF ŽU

Date: 1st December, 2009

„Influence of transverse magnetic field on the kinetics of nanoparticles in magnetic liquid“

Lecturer: Július Štelina and Ctibor Musil, KF EF ŽU

Date: 8th December, 2009

„High power radiation in photonic crystal fibres“

Lecturer: Peter Tvarožek, KF EF ŽU

Date: 15th December, 2009

6.3. Invited Lectures/Papers

Event-by-event fluctuations in heavy ion collisions

Lecturer: Ivan Melo

Where/Date: Dept. of nuclear and subnuclear physics, UFV PF UPJŠ Košice, 28th January, 2009

Higgs boson: why everybody is searching for it and why we may not find it

Lecturer: Mikuláš Gintner

Where/Date: Dept. of Mathematics, FPV UMB, B. Bystrica, 28th April, 2009

Strong Electroweak Symmetry Breaking seminar at IEAP CTU

Lecturer: Mikuláš Gintner

Where/Date: UTEF ČVUT Prague, 29th September, 2009

Acoustic spectroscopy of materials and structures

Lecturer: Peter Bury

Where/Date: *Scientific Conference PHYSICS OF MATERIALS 2009, 14.-16. Oct. 2009, Košice*

Characterization of Interface States in MOS Structures by Complex Acoustic Spectroscopy

Lecturer: Peter Bury

Where/Date: Int. Conference SURFINT-SREN II. 16.-19. Nov. 2009, Florence, I

Event-by-event fluctuations in heavy ion collisions

Lecturer: RNDr. Ivan Melo, PhD.

Where/Date: International Summer School in Particle Physics "Theoretical Tools for LHC Physics" organized by the FMFI UK Bratislava in Svit, Slovakia, Sep 3-10, 2009

LHC – from dream to reality

Lecturer: RNDr. Ivan Melo, PhD.

Where/Date: Gymnázium sv. Andreja High School, Ružomberok, 1st November, 2009
Gymnázium sv. Františka High School, Žilina, 30th March, 2009
Slovensko-anglické Gymnázium High School, Žilina, 20th April, 2009
Bilingválne gymnázium High School, Žilina, 4th May, 2009

6.4. Membership in International Institutions /Committees

Ivan Melo

- Slovak delegate in EPPOG (European Particle Physics Outreach Group)

Peter Bury

- chairman of the National IUPAP Committee (International Union for Pure and Applied Physics)

Peter Hockicko

- Member of SEFI (European Society for Engineering Education), PWG (Working Group on Physics)

Norbert Tarjányi - member of Optical Society of America

6.5. Membership in National Institutions/Committees

Igor Jamnický

- member of the Working Group of AK (Slovak Accreditation Committee) for the research area 15 Electronics and Electric Power Engineering

Peter Bury

- member of the Slovak Physical Society Council

- member of the Joint Field Commission 11-22-9 Solid State Physics and Acoustics

- member of the Field Commission Solid State Physics and Acoustics at FEI STU

Bratislava

- member of the Scientific Committees of the following conferences:
 - SURFINT-SOREN II, Florence 2009;
 - 15th Conference APCOM 2009, Liptovský Ján, 2009
 - 17th Conference of Slovak Physicists, Bratislava, 2009

Ladislav Vikisály

- member of the Trade Union Council of the Educational System Employees Slovakia
- member of the Association of the Trade Unions of Universities and PRO Slovakia

Dušan Pudiš

- member of the Organizing Committee of 15th Conf. APCOM 2009

Ivan Melo

- National coordinator of the 5th International Masterclasses in Particle Physics for high school students

6.6 Membership in University Boards

Ivan Martinček

- member of the Commission for the field 5.2.12 Electrotechnologies and materials

Dušan Pudiš

- member of the Commission for the field 5.2.12 Electrotechnologies and materials
- secretary of the Academic Senate of EF ŽU
- member of the Executive Council of the KAP club (alumni and friends of U of ŽILINA)

Igor Jamnický

- member of the Commission for the field 5.2.12 Electrotechnologies and materials
- member of Scientific Council of EF ŽU
- member of Scientific Council of U of ŽILINA
- chairman of Academic Senate of ŽU

Peter Bury

- chair of the Commission for the field 5.2.12 Electrotechnologies and materials, EF ŽU
- member of the Communications journal editorial board
- member of editorial board ŽU, EDIS ŽILINA
- member of Scientific Council EF ŽU

Ladislav Vikisály

- chair of the Trade Unions, OZ PŠaV ŽU
- member of the Disciplinary committee, ŽU
- member of tender committees at the rectorate of ŽU
- Children's University 2009

7 Publications

Monographs

- [1] P. Bury P., Hockicko P.: *Transport and relaxation mechanisms in ionic glasses*, in monograph J. Šesták et al.: Some thermodynamic, structural and behavioral aspects of materials accentuating non-crystalline state, Praha 2009, pp 328-342, ISBN 978-87269-06-0

Current Content Journals

- [2] Turek I., Tarjányi N.: *Investigation of nonlinearity of photorefractive effect in LiNbO₃*, *Optica Applicata*, Vol. 39, No. 3, p. 587-599, 2009 ISSN 0078-5466
- [3] Melo I., Tomášik B., Torrieri G., Vogel S., Bleicher M., Koróny S., Gintner M.: *Kolmogorov-Smirnov test and its use for the identification of fireball fragmentation*, *Physical Review*, Vol. 80, No. 2 (2009), p. 4904-1-4904-8, ISSN 0556-2813
- [4] Hána P., Bury P., Burianova L., Zhang S.J., ShROUT T.R., Ryzhenko V.: Temperature and electric field dependence of ultrasonic wave propagation and attenuation in PZN-PT single crystal in vicinity of a phase transition, *Journal of electroceramics*, Vol. 20, is. 1 (2008), p. 27-34, ISSN 1385-3449
- [5] Bury P., Kobayashi H., Takahashi M., Imamura K., Sidor P., Černobila F.: Acoustic spectroscopy and electrical characterization of SiO₂/Si structures with ultrathin SiO₂ layers formed by nitric acid oxidation, *Central European Journal of Physics*, Vol. 7, No. 2, (2009), pp. 237-241 ISSN 1895-1082
- [6] Passeri D., Bettucci, A. ; Biagioni, A. ; Rossi, M. ; Alippi, A. ; Tamburri, E. ; Lucci, M. ; Davoli, I. ; Berezina, Sofia *Indentation modulus and hardness of viscoelastic thin films by atomic force microscopy: A case study*, *Ultramicroscopy*. - Vol. 109, No. 12 (2009), s. 1417-1427, - ISSN 0304-3991.
- [7] Tomášik B., Melo I., Torrieri G., Vogel S., Bleicher M.: *The use of Kolmogorov-Smirnov test in event-by-event analysis*, *Nuclear Physics A*. Vol. 830 (2009), s. 195c-198c, ISSN 0375-9474

Journals indexed in a world-wide database (Thomson Scientific Master Journal List or SCOPUS)

- [8] Timko M, Kopčanský P., Repašan M., Koneracká M., Hnatič M, Džarová A, Štelina J., Musil C.: *Structuralization induced by the photothermal effect in magnetic fluid film*, *Physics of Particles and Nuclei Letters*, Vol. 5, No. 3 (2008) p. 334-337, ISSN 1547-4771
- [9] Pudiš D., Škriniarová J., Martinček I., Kováč J. Jr., Tarjányi N., Haščík Š.: *Periodic structures patterned on metal and III-V compound surfaces using two-beam interference method*, *Journal of Electrical Engineering* : Vol. 60, No. 3 (2009), s. 166-169, ISSN 1335-3632
- [10] Melo I., Torrieri G., Mushustin I., Bartoš P., Gintner M., Koróny S.: Fragmentation of the fireball and how to observe it, *Acta Physica Polonica B.*, Vol. 1, No.3 Proceedings suppl (2008), p. 513-516

Papers in proceedings of the world congress/conference published in prestigious foreign publisher such as Springer, Kluwer, Elsevier, John Wiley etc., or published by world-wide reputable scientific institutions such as IFAC, IFIP, IEEE, ACM, IET, SPIE, or listed in Web of Science

- [11] Tariányi N. , Káčik D., Sabol D., Sheridan J.T.: *Low spatial frequency grating recorded in photopolymer material*, Holography: advances and modern trends: proceedings of SPIE, Vol. 7358, Washington, SPIE, 2009 p. 73581/-1-73581/-12, ISSN 0277-786X

Reviewed Conference Proceedings Abroad (if not included above)

- [12] Hockicko P.: *Useful computer software for physical analysis of processes*, Information and communication technology in education: Annual Conference: Roznov pod Radhoštem, Czech Republic, Sept. 2009, pp. 103-107 ISBN 978-80-7368-459-4
- [13] Hockicko P., Tariányiová G.: *A way how the interest in studying physics and technology can be increased*, Physics teaching in engineering – PTEE 2009, Wroclaw, Poland, Sept. 2009, p. 189-192, ISBN 978-83-929400-0-5
- [14] Kúdelčík J., Gutten M.: *The influence of electric field on breakdown properties of transformer oil*, Diagnostika 09 – Západočeská univerzita Plzeň, 2009 p. 266-269, ISBN 978-80-7043-793-3
- [15] Hockicko P., Tariányiová G., Mullerová J.: *How to attract the interest of school-age children in science*, 16th conference of Czech and Slovak physicists: Sept. 2008, Hradec Králové, proceedings – MAFY, 2009, p. 394-399, ISBN 80-86148-93-9
- [16] Gintner M., Melo I., Trpišová B.: *Probing the strong electroweak symmetry breaking in a model with a vector resonance*, 16th conference of Czech and Slovak physicists: Sept. 2008, Hradec Králové, proceedings – MAFY, 2009, p. 25-34, ISBN 80-86148-93-9
- [17] Káčik D., Turek I., Tariányi N.: *Measurement of modal dispersion by low coherence interferometer*, 16th Polish-Slovak-Czech Optical conference on wave and quantum aspects of contemporary optics (elektronický zdroj), sept. 2008, Poland: proceedings of SPIE Vol. 7141, p. 71411K-1-71411K-5, ISBN 978-0-8194-7383-7
- [18] Hockicko P., Bury P., Sidor P.: *Analysis of A-DLTS spectra of MOS structures with ultrathin NAOS SiO₂/Si layers*, Progress in applied surface, interface and thin film science 2009. SURFINT - SREN II : November 16-19, 2009 Florence, Italy : Extended abstract book, (2009) pp. 116-117 ISBN 978-80-223-2723-7
- [19] P. Bury and P. Sidor: *Characterization of interface states in MOS structures by complex acoustic investigation*, Progress in applied surface, interface and thin film science 2009. SURFINT - SREN II : November 16-19, 2009 Florence, Italy : Extended abstract book, (2009) pp. 15-18 ISBN 978-80-223-2723-7

Reviewed Conference Proceedings in Slovakia

- [20] Bury P.: *Acoustic spectroscopy of materials and structures*, Physics of materials 09, proceedings of the scientific conference, 14-16 October 2009 Košice pp. 6-13, ISBN 978-80-8086-122-3 (invited lecture)
- [21] Kúdelčík J., Bury P.: *Acoustic spectroscopy of magnetic fluid*, Physics of materials 09, proceedings of the scientific conference, 14-16 October 2009 Košice pp. 91-93, ISBN 978-80-8086-122-3
- [22] Hockicko P., Sidor P., Bury P., Jamnický I., Bellan I.: *Acoustic investigation of interface states of MOS structures with ultrathin SiO₂ layers*, Physics of materials 09, proceedings of the scientific conference, 14-16 October 2009 Košice pp. 127-129, ISBN 978-80-8086-122-3
- [23] Knociková J.: *Elektrophysiological data processing in understanding the regulation of respiratory patterns*, Trends in biomedical engineering (elektronický zdroj), Sept. 2009, Bratislava, p. 94-97 ISBN 978-80-227-3105-8
- [24] Šušlík L., Pudiš D., Škriniarová J., Martinček I., Kováč J., jr., : *Photonic structures patterned in GaAs substrate*, APCOM 2009: proceedings of the 15th International Conference on Applied Physics of Condensed Matter: June 24-26, 2009 Liptovský Ján (2009), p. 73-76 ISBN 978-80-554-0057-0
- [25] Passeri D., Berezina S., Bettuci A., Biagioni A., Rossi M., Alippi A., Tamburri E., Lucci M., Davoli I.: *Measurement of indentation modulus and hardness of PEDOT thin films by atomic force microscopy*, APCOM 2009: proceedings of the 15th International Conference on Applied Physics of Condensed Matter: June 24-26, 2009 Liptovský Ján (2009), p. 104-108 ISBN 978-80-554-0057-0
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