

DEPARTMENT OF NUCLEAR PHYSICS AND TECHNOLOGY

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Head of Department

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I. STAFF

Professors	Prof. Ing. Jozef Lipka, DrSc., Prof. Ing. Marcel Miglierini, DrSc., Prof. Ing. Vladimír Nečas, PhD., Prof. Ing. Jozef Sitek, DrSc., Prof. Ing. Vladimír Slugeň, PhD.
Associate Professors	Doc. Ing. Ján Haščík, PhD., Doc. Ing. Mária Pavlovič, PhD., Doc. Ing. Andrea Šagátová, PhD.
Assistant Professors	Ing. Róbert Hinca, PhD., Ing. Klement Vitázek, PhD.
Research Workers	Ing. Jarmila Degmová, PhD., Ing. Július Dekan, Ing. Gabriel Farkas, PhD., RNDr. Štefan Krnáč, PhD., Ing. Milan Pavúk, Ing. Martin Petriska, Ing. Milan Seberíni, PhD., Ing. Stanislav Stanček, Ing. Ignác Tóth
Technical Staff	Eva Mániková (secretary), Peter Mikula, Andrea Podhájska
PhD. Students	Ing. Alica Bajusová, Ing. Peter Bezák, Ing. Pavol Čudrnák, Ing. Peter Čudrnák, Ing. Tomáš, Hatala, Ing. Tomáš Hrnčíř, Ing. Vladimír Kršjak, Ing. Milan Ladzianský, Ing. Svetozár Michálek, Ing. František Ondra, Ing. Michal Pánik, Ing. Stanislav Sojak, Ing. Matúš Stacho, Ing. Ivan Strašík, Ing. Jana Veterníková, Ing. Matej Zachar, Mgr. Zuzana Zajacová

II. EQUIPMENT

II.1 Teaching and Research Laboratories

Nuclear Technologies Centre:

- Laboratory of Mössbauer Spectroscopy
- Ion Beam Laboratory
- Laboratory of Positron Annihilation Spectroscopy
- Laboratory of Low Level Radioactivity Measurement
- Laboratory of Optical Spectroscopy
- Laboratory of Radioactive Isotopes
- Laboratory of Neutron Physics
- Computer Laboratory

II.2 Special Measuring Instruments and Computers

- Mössbauer Spectrometers - 4 units (77 - 1200 K)
- 1 MV Cascade Accelerator. Ion beam analyses: 2 MeV He²⁺ RBS with UHV target chamber, sample heating 300 - 1200 K, 1 MeV H⁺ PIXE; Ion beam modification: 10 keV - 1 MeV ion implantation, high dose ~ 10¹⁹ ion/cm²
- Life-Time and Angular Correlation Positron Annihilation Spectrometers
- Low-Background Chamber with HPGe detector and gamma ray spectrometer
- Department's LAN computer network
- 16 PC Cluster

II.3 Special Software

- Particle Beam Optics Laboratory PBO Lab™ 2.1
- Transport
- Trace-3D
- Electrostatic Palette
- WinAGILE
- MATLAB R2006A
- SRIM
- MCNP-4C2, MCNP 5
- VISED
- SCALE 4.4a, SCALE 6
- GENIE 2000
- CONFIT
- Field Precision - STATIC FIELD ANALYSIS TOOLKIT (TK 0300)
- Visiplan Suite 4.0 3D ALARA planning tool

III. TEACHING**III.1 Undergraduate Study (Bc.)**

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

Nuclear Installations	(4th sem., 3-2h)	V. Nečas, J. Haščík, V. Slugeň
Sources of Radiation	(6th sem., 2-3h)	M. Miglierini
Nuclear Installations	(6th sem., 20 h)	V. Slugeň
Environmentalistics	(6th sem., 3-2h)	J. Sitek, J. Degmová

III.2 Graduate Study (Ing.)

Nuclear Physics and Technology	(1st sem., 2-2h)	J. Lipka
Team Projects 1 (EE)	(1st sem., 0-4h)	M. Pavlovič
Team Projects 1 (AI)	(1st sem., 0-3h)	K. Vitázek
Team Projects 2 (TLK)	(2nd sem., 0-4h)	K. Vitázek
Theory of Nuclear Reactors	(2nd sem., 2-2h)	J. Haščík
Material of Nuclear Power Plants	(2nd sem., 2-2h)	V. Nečas
Atomic and Molecular Spectroscopy	(2nd sem., 2-2h)	M. Miglierini
Experimental Reactor Techniques	(2nd sem., 2-2h)	J. Haščík
Dosimetry and Radiation Protection	(2nd sem., 2-2h)	R. Hince
Methods of Nuclear Physics	(3rd sem., 2-2h)	J. Sitek
Operation of Nuclear Power Plants	(3rd sem., 2-2h)	V. Slugeň
Decommissioning of Nuclear Power Plants	(3rd sem., 2-2h)	V. Nečas
Safety and Reliability of Power Engineering Installations	(4th sem., 2-2h)	V. Slugeň

Safety and Reliability of Power Engineering

Installations

(4th sem., 20h)

V. Slugeň

IV. RESEARCH PROJECTS

- Materials of Alternative Nuclear Fuel Cycles and Decommissioned NPP, VEGA 1/0685/09, V. Nečas
- Neutron Detectors: Technology of Preparation, Study of Electrical and Detection Properties, VEGA 2/7170/7, V. Nečas
- Research and Development of Methods for Increasing the Effectiveness and Safety of Nuclear Installations Decommissioning, APVV-0761-07, V. Nečas
- Conditional Release of Materials from Decommissioning (CONRELMAT), Incentives MŠ SR N° CD-2009-36909/39460-1:11, V. Nečas
- Consolidation of European Nuclear Education, Training and Knowledge Management, EC Contract Number FP6-036414, M. Miglierini
- Formation of Nanocrystalline Grains in Rapidly Quenched Fe-B-based Alloys with Additions of Other Elements. VEGA 1/4011/07, M. Miglierini
- Radiation Embrittlement Study of NPP Advanced Construction Materials. VEGA 1/3188/06, V. Slugeň
- Microstructural Characterization of Fe-Cr Alloys: Simulation, Positron Annihilation, Mössbauer Spectroscopy. 6th Framework Project European Atom Energy Community No FU-CT-2005-00136, V. Slugeň
- Depth Profiling Radiation Induced Defect Concentration in DEMO Structural Materials Using Pulsed Low Energy Positron System (PLEPS). 7th Framework Project of the European Atomic Energy Community No FU70-Euratom.CU (2007-2009), V. Slugeň
- Safety and Material Analysis of Feed Water Pipelines of VVER-440 Steam Generators. Research contract with ENEL produzione S. p. A. No 140007989 in frame of EC6RP-NULIFE, J. Lipka
- Non destructive of Microstructural Changes in Ion Implanted Model Alloys (SMORE). IAEA Research No 14991/RO, V. Slugeň
- Nuclear Installation Material Study in Extreme Radiation Load Condition, VEGA 1/0129/09, V. Slugeň
- Enhancement of Education Process for Graduates Focused on Working Positions with Impact on Increase of NPP Safe Operation and Decommissioning , KEGA 3/7241/09, R. Hinca
- Structural and Magnetic Changes of Disordered and Nanocrystalline Alloys, VEGA 1/0606/09, J. Sitek
- Irradiation Tests of Magnetic Alloy and Organic Insulator Materials. Bilateral Agreement STU-GSI Darmstadt, M. Pavlovič

V. COOPERATION

V.1 Cooperation in Slovakia

- Cyclotron Centre of Slovak Republic, Bratislava
- DECOM a.s., Trnava
- DECONTA a.s., Trnava
- Faculty of Natural Science, Comenius University, Bratislava
- Geological Institute, Slovak Academy of Sciences, Bratislava
- Comenius University in Bratislava, Faculty of Natural Sciences, Department of Geology and Paleontology, Bratislava
- Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava
- Institute of Experimental Physics, Slovak Academy of Sciences, Košice
- Institute of Measurement Science, Slovak Academy of Sciences, Bratislava

- Institute of Physics, Slovak Academy of Sciences, Bratislava
- Institute of Informatics, Slovak Academy of Sciences, Bratislava
- Institute of Preventive and Clinical Medicine, Bratislava
- International Laser Centre, Bratislava
- University of P. J. Šafarik, Institute of Physical Sciences, Košice
- VUJE a.s., Trnava
- Nuclear Regulatory Authority of the Slovak Republic, Bratislava
- Relko Ltd., Bratislava
- Slovak Electric Ltd., Bratislava
- Nuclear Decommissioning Company, plc., (JAVYS) Bratislava
- Slovak Electric Ltd., Mochovce Nuclear Power Plant, Mochovce
- Slovak Electric Ltd., Bohunice Nuclear Power Plant, Jaslovské Bohunice
- Slovak Office for Normalization, Metrology and Testing, Bratislava
- Slovak Institute of Metrology, Bratislava
- BIONT Inc., Bratislava
- National Nuclear Fund of Slovak Republic, Bratislava

V.2 International Cooperation

- All-Russian Scientific Institute of Experimental Physics, Theoretical Physics Department, Sarov, Russia
- Atominstytut der Österreichischen Universitäten, Vienna, Austria
- Centro de Investigación y de Estudios Avanzados del IPN Unidad Saltillo, Mexico
- Department of Nuclear Reactors, Technical University in Prague, CzR
- EFDA Close Support Unit, Garching, Germany
- Energovýzkum, Brno, CzR
- Flerov Laboratory of Nuclear Reactions, Joint Institute of Nuclear Research, Dubna, Russia
- Forschungs- und Technologietransfer GmbH, FOTEC, Wiener Neustadt, Austria
- AREVA-NP, Erlangen, Germany
- GSI, Accelerator Department, Darmstadt, Germany
- Leibniz Institut für Festkörper- und Werkstofforschung, Dresden, Germany
- Institute for Nuclear Research of the Russian Academy of Sciences, Neutron Research Department, Moscow, Russia
- Institute for Theoretical and Experimental Physics, High Energy Density in Matter Produced by Heavy Ion Beam Department, Moscow, Russia
- Institute for Energy, European Commission, JRC Petten
- Institute of Nuclear Techniques, Budapest University of Technology and Economics, Hungary
- Institute of Thin Films and Interfaces, Research Centre Jülich, Germany
- International Atomic Energy Agency, Vienna, Austria
- Laboratory of Nuclear Problems, Joint Institute of Nuclear Research, Dubna, Russia
- Leibniz Institute für Festkörperphysik, University Vienna, Austria
- Nuclear Research Institute, Řež, CzR
- Universität der Bundeswehr, München, Germany
- University of Gent, Belgium
- Palacky University, Olomouc, Czech Republic
- Institute of Experimental and Applied Physics, Czech Technical University in Prague, CzR
- Institute of Inorganic Chemistry, Academy of Sciences of Czech Republic, Řež, CzR
- University of Applied Sciences, Wiener Neustadt, A-2700, Austria

V.3 Membership in Slovak Organizations and Societies

- Board of Nuclear Safety SE-EBO (J. Haščík)
- Board of Nuclear Safety SE-EMO (V. Slugeň)
- Board of Nuclear Safety JAVYS (V. Nečas)
- Council of Nuclear Regulatory Authority of the Slovak Republic (V. Nečas, V. Slugeň)
- Co-ordination Board for Cooperation with JINR Dubna (V. Nečas)

- Expert Board of Cyclotron Centre of Slovak Republic (M. Pavlovič)
- Scientific Council of FEI SUT (V. Nečas)
- Scientific Council of Slovak Institute of Metrology (J. Lipka, V. Nečas)
- Slovak Nuclear Forum (J. Lipka – vice-president)
- Slovak Nuclear Society (V. Slugeň - chairman, J. Degmová, J. Haščík, R. Hinca, Š. Krnáč, J. Lipka, M. Miglierini, V. Nečas, M. Petriska, J. Sitek, A. Šagátová, M. Seberini, M. Pavlovič)
- Slovak Physical Society (M. Miglierini, V. Nečas, J. Sitek, V. Slugeň)
- Slovak Spectroscopic Society (M. Miglierini - president, J. Degmová, J. Haščík, Š. Krnáč, J. Lipka, M. Seberini, J. Sitek, V. Slugeň, I. Tóth, members)
- State Examination Committee for the Verification of Operating Staff of Nuclear Installations Specific Abilities (J. Haščík, V. Slugeň)
- Slovak National Nuclear Found (V. Slugeň, vice-chairman)

V.4 Membership in International Organizations and Societies

- European Nuclear Society (V. Slugeň, President)
- ENEN Association (M. Miglierini, J. Haščík, V. Slugeň)
- European Physical Education Network (V. Slugeň)
- German Nuclear Society (V. Slugeň)
- International Board on the Applications of the Mössbauer Effect "IBAME" (M. Miglierini)
- International Journal of Nuclear Energy Science and Technology, Member of the Editorial Board (V. Nečas)
- International Journal of Nuclear Knowledge Management, Member of the Editorial Board (J. Lipka, V. Slugeň)
- OECD/NEA Bank's Computer Program Service (J. Lipka -Liaison Officer)
- Science and Technology Advisory Committee of EU - Area Nuclear Fusion (V. Slugeň)
- The Research Board of Advisors of the American Biographical Institute (M. Pavlovič)
- The Advisory Council of the International Biographical Centre Cambridge (M. Pavlovič)
- The Scientific Board of Nuclear Research Institute Řež, plc, CzR (V. Slugeň)
- The High Scientific Council at European Nuclear Society (V. Slugeň)
- International Jordan Journal of Physics, Member of the International Advisory Board (J. Lipka)
- Evaluator of EC 7th Framework Projects – Area Reactor Systems (V. Slugeň)

V.5 Contracts

- J. Haščík: Periodical Training of Supervising Physicists of the NPP Bohunice, JAVYS and Mochovce on the Experimental Nuclear Reactors. Contract with NPP Bohunice, Mochovce and JAVYS, Jaslovské Bohunice
- J. Haščík, R. Hinca, J. Lipka, V. Nečas, V. Slugeň: Post-gradual Requalification Training Course: Safety aspects of nuclear installations operation. Contract with SE, a.s.
- V. Slugeň, J. Haščík, G. Farkas, S. Michálek, M. Petriska, A. Balga, K. Vitázek, R. Hinca, Š. Krnáč, M. Stacho, I. Neuhold, T. Melo, A. Vanková: Computer Simulation of Neutron Physical Characteristics of VVER-440 Reactors and their Experimental Validation. Contract with SE, a.s.
- M. Pavlovič: Evaluation of the Technical Concept of the Slovak Cyclotron Centre, Contract with Turner & Townsend GmbH, Munich, Germany
- M. Pavlovič: Distant Teaching of Radiation and Nuclear Physics at the University of Applied Sciences Wiener Neustadt, Austria
- V. Slugeň, J. Haščík, J. Degmová, K. Vitázek, R. Hinca, Š. Krnáč, G. Farkas, M. Petriska, J. Dekan, M. Stacho, S. Sojak, J. Veterníková: Radiation Degradation Assessment of NPP Materials, Contract with SE a.s.

VI. THESES

VI.1 Masters Theses

Masters theses supervised at the Department of Nuclear Physics and Technology. The names of supervisors are in brackets.

- [1] Bajusová, A.: Verification of the IMRT plan in radiotherapy (G. Králík, M. Miglierini)
- [2] Benčík, M.: Influence of Co on hyperfine interactions in (Fe_{1-x}Co_x)₇₉Mo₈Cu₁B₁₂ (x=0 and 0.5) nanocrystalline alloy (M. Miglierini)
- [3] Čudrnák, P.: Minimization of uneven power distribution in VVER-440 gadolinium fuel assembly (P. Dařílek, V. Nečas)
- [4] Čudrnák, P.: Fuel assemblies for VVER-440 thorium fuel cycle (P. Dařílek, V. Nečas)
- [5] Dechet, L.: Analyze of material flow in decommissioning process of nuclear facilities with focus on non-contaminated material management (I. Rehák, V. Nečas)
- [6] Harmata, J.: Optimizing computerized PAS LT measurements (V. Kršjak, V. Slugeň)
- [7] Hatala, T.: Structural transformations in nanocrystalline alloys studied by diffraction of synchrotron radiation (M. Miglierini)
- [8] Hrnčíř, T.: Environmental impact of nuclear installations decommissioning with emphasis on release of decommissioning materials into the environment (V. Nečas)
- [9] Melo, T.: Tracking of neutron fields in fuel assemblies neighboring with control assembly in VVER-440 reactors using MCNP (J. Haščík)
- [10] Neuhold, I.: Analysis of causes increase neutron power by reaching critical state reactor in EMO (R. Hinca)
- [11] Pánik, M.: Dose assessment of personal handling with conditioned radioactive waste (M. Zachar, V. Nečas)
- [12] Sabatula, O.: Study of structural materials of VVER nuclear fuel with electron positron annihilation spectroscopy (S. Sojak)
- [13] Vanková, A.: Delayed neutron fraction (β_{eff}) calculation for VVER-440 reactor (J. Haščík)

VI.2 Doctoral Theses

- [1] Bezák, P.: Algorithmisation of activities for dismantling of technological systems, decontamination of surfaces of civil structures and demolishing of civil structures performed in the frame of decommissioning of nuclear installation (V. Nečas)
- [2] Farkas, G.: Determination of the weighing functions of the ex-core detectors for VVER-440 nuclear reactors by Monte Carlo Method (J. Haščík)
- [3] Keníž, J.: Magnetic structure of isochronous accelerator DC-72 (M. Miglierini)
- [4] Krištof, M.: A realistic approach by estimation of uncertainties for the safety analyses of nuclear power plants (J. Lípka, F. D'Auria)
- [5] Ladzianský, M.: Influence of the neutron damage on the properties of the semi-insulation GeAs detectors (V. Nečas)
- [6] Ondra, F.: Method of control of uncertainties in computational determination of the decommissioning parameters (V. Nečas)
- [7] Strašík, I.: Activation study of high-energy heavy-ion accelerators (M. Pavlovič)

VII. OTHER ACTIVITIES

- Organization of the Postgraduate Study 'Nuclear Installation Operation Safety Aspects' for participants from different organizations. Organised for SE, a.s.
- Organization of students excursion to Austrian Research Center Seibersdorf
- Students Practical Exercises at the TRIGA Mark II Reactor in Atom Institute of the Austrian Universities, Vienna, Austria
- Students Practical Exercises at the Training Reactor of the Budapest University of Technology and Economics, Budapest, Hungary

- Students Practical Exercises at the Training Reactor of the Czech Technical University in Prague, Czech Republic
- Organization of French-Slovak Summer School 'Decommissioning of Nuclear Power Plants', Kočovce, 6-9 September 2009
- Contribution to the '5th International Summer School on Nuclear Physics Methods and Accelerators in Biology and Medicine', Bratislava, 6-15 July 2009

VIII. PUBLICATIONS

VIII.1 Journals

- [1] BAJUSOVÁ, A.: Application of Enhanced Dynamic Wedges in Radiotherapy. In: Posterus.sk. - ISSN 1338-0087. - June (2009), <http://www.posterus.sk/?p=827>. (in English)
- [2] ČUDRNÁK, Pavol, DAŘÍLEK, P., NEČAS, V.: Minimalization of Uneven Power Distribution in VVER-440 Fuel Assembly with Gd. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, No. 6 (2009), p. 14-16. (in Slovak)
- [3] ČUDRNÁK, Peter, DAŘÍLEK, P., NEČAS, V.: Thorium Fuel Assemblies for VVER-440 Fuel Cycle. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, No. 6 (2009), p. 12-13. (in Slovak)
- [4] DEGMOVÁ, J., DEBARBERIS, L.: Model Steels with Parametric Variation of Ni, Mn, Si and Cr Content: Correlation between Magnetic Barkhausen Noise and Charpy Impact Tests Results. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 60, No. 3 (2009), p. 161-165. (in English)
- [5] HINCA, R., LIPKA, J.: Metrology of Ionising Radiation in Nuclear Facilities. In: Metrológia a skúšobníctvo. - ISSN 1335-2768. - Vol. 14, No. 1 (2009), p. 21-22. (in Slovak)
- [6] HRNČÍŘ, T., NEČAS, V.: Conditional Release of Materials from Decommissioning of NPP and Their Influence on the Population. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, No. 6 (2009), p. 10-11. (in Slovak)
- [7] KOZLOVA, E., STRAŠÍK, I., FERTMAN, A., MUSTAFIN, E., RADON, T., HINCA, R., PAVLOVIČ, M., FEHRENBACHER, G., GEISSEL, H., GOLUBEV, A., IWASE, H., SCHARDT, D.: Benchmark Test of the Fluka Monte Carlo Code for Residual Production with 500 and 950 MeV/u Uranium Beams on Copper and Stainless Steel Targets. In: Nuclear Technology. - ISSN 0029-5450. - Vol. 168 (2009), p. 747-751. (in English)
- [8] KRIŠTOF, J., KLIMENT, T., PETRUZZI, A., LIPKA, J.: RELAP5 Simulation of Surge Line Break Accident Using Combined and Best Estimate Plus Uncertainty Approaches. In: Nuclear Engineering and Design. - ISSN 0029-5493. - Vol. 239 (2009), p. 2500-2513. (in English)
- [9] KRNÁČ, Š., LIPKA, J.: Detection and Determination Limits of Spectral Gamma Analysis. In: Metrológia a skúšobníctvo. - ISSN 1335-2768. - Vol. 14, No. 1 (2009), p. 14-20. (in English)
- [10] KRNÁČ, Š., LIPKA, J.: Detection Limit Study of Spectrometric Models Used in Spectral Gamma Analysis. In: Metrológia a skúšobníctvo. - ISSN 1335-2768. - Vol. 14, No. 1 (2009), p. 4-15. (in English)
- [11] KRŠJAK, V., EGGER, W., PETRISKA, M., SOJAK, S.: Helium Implanted FeCr Alloys Studied by Positron Annihilation Lifetime Technique. In: Problems of Atomic Science and Technology. - ISSN 1562-6016. - Iss. 4 (2009), p. 109-115. (in English)

- [12] KRŠJAK, V., SLUGEŇ, V., PETRISKA, M., SOJAK, S., EGGER, W.: Microstructural Study of He-Implanted Fe-Cr Alloys with the Use of Conventional Lifetime Technique and Pulsed Low Energy Positron Beam. In: *Physica Status Solidi (C)*. - ISSN 1610-1634. - Vol. 6 (2009), p. 2339-2341. (in English)
- [13] KRŠJAK, V.: Potential of Positron Annihilation Lifetime Spectroscopy in Microstructural Study of Nuclear Reactor Steels. In: *Journal of Electrical Engineering*. - ISSN 1335-3632. - Vol. 60, No. 4 (2009), p. 198-203. (in English)
- [14] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., NEČAS, V., DUBECKÝ, F., LINHART, V.: Deep Traps Study of Radiation-Damaged Semi Insulating GaAs Detectors Introduced by Neutrons. In: *Nuclear Instruments and Methods in Physics Research A*. - ISSN 0168-9002. - Vol. 607 (2009), p. 135-137. (in English)
- [15] LANČOK, A., KLEMENTOVÁ, M., BEZDIČKA, P., MIGLIERINI, M.: Characterization of Magnetic Iron Oxide Nanoparticles. In: *Hyperfine Interactions*. - ISSN 0304-3843. - Vol. 189 (2009), p. 97-103. (in English)
- [16] LIPKA, J.: Reactor Pressure Vessel Steel Degradation Studied by Mössbauer and Positron Annihilation Spectroscopy. In: *Jordan Journal of Physics*. - ISSN 1994-7607. - Vol. 2, No. 2.(2009), p. 73-88. (in English)
- [17] MIGLIERINI, M., LANČOK, A., KUSÝ, M.: Characterization of Rapidly Solidified Powder of High-Speed Steel. In: *Hyperfine Interactions*. - ISSN 0304-3843. - Vol. 190, Iss. 1-3 (2009), p. 51-57. (in English)
- [18] MIGLIERINI, M., VITTEK, R., ŠVEC, P., JANIČKOVIČ, D.: Effect of Zr-Ti Substitution on Microstructure of the Fe-Zr/Ti-Cu-B Nanocrystalline Alloy. In: *Kovové materiály. Metallic materials*. - ISSN 0023-432X. - Vol. 47 (2009), p. 201-208. (in English)
- [19] MIGLIERINI, M., LANČOK, A., PAVLOVIČ, M.: Ion Bombardment of Fe-Based Amorphous Metallic Alloys. In: *Hyperfine Interactions*. - ISSN 0304-3843. - Vol. 189 (2009), p. 45-52. (in English)
- [20] MIGLIERINI, M.: Synchrotron Radiation. In: *Spravodaj Slovenskej spektroskopickéj spoločnosti*. - No. 16 (2009), p. 2-6. (in Slovak)
- [21] MUSTAFIN, E., SEIDL, T., PLOTNIKOV, A., STRAŠÍK, I., PAVLOVIČ, M., MIGLIERINI, M., STANČEK, S., FERTMAN, A., LANČOK, A.: Ion Irradiation Studies of Construction Materials for High-Power Accelerators. In: *Radiation Effects and Defects in Solids*. - ISSN 1042-0150. - Vol. 164, No. 7-8 (2009), p. 460-469. (in English)
- [22] PALUGA, M., ŠVEC, P., JANIČKOVIČ, D., MRAFKO, P., MIGLIERINI, M.: Surface and Volume Effects in Rapidly Quenched Fe-Mo-Cu-B System. In: *Journal of Physics: Conference Series*. - ISSN 1742-6588. - Vol. 144 (2009), Art.No 012108. (in English)
- [23] PÁNIK, M., ZACHAR, M., NEČAS, V.: Modelling the Exposure Dose of Personnel Caused by Conditioned Radioactive Waste. In: *EE časopis pre elektrotechniku a energetiku*. - ISSN 1335-2547. - Vol. 15, No. 6 (2009), p. 8-9. (in Slovak)
- [24] PAVLOVIČ, M.: Methodology for Assessment of Beam-Transport Accuracy at Rotating Ion-Therapy Gantry. Part II. In: *Metrológia a skúšobníctvo*. - ISSN 1335-2768. - Vol. 14, No. 1 (2009), p. 3-7. (in English)
- [25] PAVLOVIČ, M.: Methodology for Assessment of Beam-Transport Accuracy at Rotating Ion-Therapy Gantry. Part I. In: *Metrológia a skúšobníctvo*. - ISSN 1335-2768. - Vol. 14, No. 3 (2009), p. 3-11. (in English)

- [26] PETRISKA, M., ZEMAN, A., SLUGEŇ, V., KRŠJAK, V., SOJAK, S., DEBARBERIS, L.: Application of Fast-Digitizer Card Acqiris DP-240 in Positron Lifetime Spectroscopy. In: *Physica Status Solidi (C)*. - ISSN 1610-1634. - Vol. 6 (2009), p. 2465-2467. (in English)
- [27] SLUGEŇ, V., UHRÍK, P.: International Nuclear Events Scale. In: *EE časopis pre elektrotechniku a energetiku*. - ISSN 1335-2547. - Vol. 15, No. 4 (2009), p. 14-16. (in Slovak)
- [28] SLUGEŇ, V., KRŠJAK, V., PETRISKA, M., SOJAK, S., VETERNÍKOVÁ, J.: Microstructural Study of High Irradiated Reactor Steels. In: *Physica Status Solidi (C)*. - ISSN 1610-1634. - Vol. 6 (2009), p. 2342-2345. (in English)
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