

DEPARTMENT OF NUCLEAR PHYSICS AND TECHNOLOGY

<http://www.nuc.elf.stuba.sk/>

Head of Department

Prof. Ing. Vladimír Nečas, PhD.

e-mail: vladimir.necas@stuba.sk

Tel/Fax: +421-2-654 27 207

Tel: +421- 918 64 04 33

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 Hinc, PhD., Ing. Klement Vitázek, PhD.
Research Workers	Ing. Jarmila Degmová, PhD., Ing. Július Dekan, Ing. Gabriel Farkas, RNDr., Štefan Krnáč, PhD., Ing. Milan Pavúk, Ing. Martin Petriska, Ing. Milan Seberini, Ing. Stanislav Stanček, Ing. Ignác Tóth
Technical Staff	Eva Mániková (secretary), Peter Mikula, Andrea Podhájska
PhD. Students	Ing. Peter Bezák, Ing. Juraj Breza, Ing. Tomáš Kaňuch, Ing. Vladimír Kršjak, Ing. Milan Ladzianský, Ing. Svetozár Michálek, Ing. Marek Mikloš, Ing. František Ondra, Ing. Jozef Prítrský, Ing. Stanislav Sojak, Ing. Matúš Stacho, Ing. Ivan Strašík, Ing. Matej Zachara, 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
- Sector Magnet Mass Spectrometer, isotope resolution
- 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
 - VISED
 - SCALE 4.4a
 - GENIE 2000
 - CONFIT
 - Field Precision - STATIC FIELD ANALYSIS TOOLKIT (TK 0300)

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. Nečas, J. Haščík, V. Slugeň
Environmentalistics	(6th sem., 3-2h)	J. Sitek

III.2 Graduate Study (Ing.)

Nuclear Physics and Technology	(1st sem., 2-2h)	J. Lipka
Team Projects 1	(1st sem., 0-4h)	J. Haščík, J. Sitek, K. Vitázek, V. Nečas, V. Slugeň
Team Projects 2	(2nd sem. 0-4h)	J. Sitek, 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
Accelerator Physics and Technology I	(2nd sem., 2-2h)	M. Pavlovič
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

- Radioactive Materials in Innovative Nuclear Fuel Cycles and after Terminating the Operation of Nuclear Installations. VEGA 1/3160/06, 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
- 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
- Magnetic Structural Processes in Nano- and Microcrystalline States Materials Prepared from Amorphous Precursors. VEGA 1/3189/06, J. Sitek
- Radiation Embrittlement Study of NPP Advanced Construction Materials. VEGA 1/3188/06, V. Slugeň
- A New Generation Digital Radiology Kit. APVV-99-P06305, V. Nečas
- Accelerators for Ion Cancer Therapy. Scientific and educational collaboration with Forschungs- und Technologietransfer GmbH, FOTEC, Wiener Neustadt, Austria, INTERREG III A, M. Pavlovič
- Irradiation Tests of Magnetic Alloy and Organic Insulator Materials INTAS 06-1000012-8683, M. Pavlovič
- 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

V. COOPERATION

V.1 Cooperation in Slovakia

- Cyclotron Centre of Slovak Republic, Bratislava
- DECOM jsc, Trnava
- DECONTA jsc, 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. Šafárik, Institute of Physical Sciences, Košice
 - VUJE jsc, Trnava
 - Nuclear Regulatory Authority of the Slovak Republic, Bratislava
 - Relko Ltd., Bratislava
 - Slovak Electric Ltd., Bratislava
 - JAVYS jsc, Nuclear Decommissioning Company jsc, Jaslovské Bohunice
 - 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
 - Magic Trading Corporation jsc, Liptovský Mikuláš
 - T&N System, Banská Bystrica

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
- Framatome ANP BT62 Brennelement Laboratory, Erlangen, Germany
- GSI, Accelerator Department, Darmstadt, Germany
- IMS - Nanofabrication, GmbH, Vienna, Austria
- 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 of Advanced Materials, 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

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. Hince, Š. Krnáč, J. Lipka, M. Miglierini, V. Nečas, M. Petriska, J. Sitek, P. Tatranský, M. Mikloš, V. Kršjak, A. Šagátová, M. Seberíni, 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. Seberíni, 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

- ENEN Association (M. Miglierini, J. Haščík, V. Slugeň)
- European Nuclear Society / member of Board (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)

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
- Š. Krnáč, J. Lipka, I. Tóth: Measurement of Selected Components of Ionisation Fire-Announcers. Contract with Am EKO Bratislava
- J. Haščík, R. Hince, M. Miglierini, V. Nečas, V. Slugeň: Post-gradual Requalification Training Course: Safety aspects of nuclear installations operation. Contract with Slovenské elektrárne jsc
- V. Slugeň, J. Haščík, G. Farkas, S. Michálek, M. Petriska, A. Balga, K. Vitáček, R. Hince, 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-ENEL jsc
- J. Lipka, I. Tóth: Corrosion Product from NPP. Contract with AllDeco Ltd., Jaslovské Bohunice
- M. Pavlovič: Evaluation of the Technical Concept of the Slovak Cyclotron Centre, Contract with Turner & Townsend GmbH, München, Germany

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] P. Glos: Transformation processes in powder steels (M. Miglierini)
 - [2] M. Kaizer: Analysis of fuel clad leakage in terms interim storage spent fuel (M. Mikloš, V. Slugeň)
 - [3] M. Kolesár: Radiation protection of employees with sources of ionizing radiation (R. Hinca)
 - [4] D. Lojko: Study of archeological artefacts from metallurgical kilns by Mössbauer spectrometry (M. Miglierini)
 - [5] M. Makovník: Characteristics of semi-insulating GaAs X-ray detectors for digital radiography (F. Dubecký, V. Nečas)
 - [6] Z. Németh: Neutronic properties of molten salt in the MSR fuel channel (P. Dařílek, V. Nečas)
 - [7] M. Pivarčí: Influence of electrodes of semi-insulating GaAs X-ray detectors on chosen characteristics (A. Šagátová)
 - [8] P. Snida: Mapping of decomposition of neutron flux density in NPP fuel element VVER-440 with MCNP-4C2 transport code (G. Farkas, V. Slugeň)
 - [9] S. Sojak: Study of radiation damage in fusion reactors materials with application of positron annihilation spectroscopy (V. Kšjak, V. Slugeň)
 - [10] M. Stacho: Mapping of distribution of neutron flux density in pressure vessel of VVER-440 reactor with application of transport code MCNP-4C2 (G. Farkas)
 - [11] P. Švec: Complex metastable phase formed in amorphous Fe-Ni-Nb-B system (P. Švec, M. Miglierini)
 - [12] I. Trokšiar: Detector of fast neutrons based on GaAs (A. Šagátová)
 - [13] M. Uhlár: Microstructure of nanocrystalline alloys $(\text{Fe}_{1-x}\text{Co}_x)_{76}\text{Mo}_8\text{Cu}_1\text{B}_{15}$ NANOPERM type dependent on ratio Fe:Co (M. Miglierini)

VI.2 Doctoral Theses

- [1] B. Hatala: Safety analysis for VVER-440 fuel licensing (V. Slugeň)
- [2] V. Kršjak: Positron annihilation study of advanced nuclear reactor materials (V. Slugeň)
- [3] M. Mikloš: Safety aspects of nuclear fuel operation (V. Slugeň)
- [4] J. Pritrský: Methodology of fuel cycles long-term safety assessment of SNF/HLW geological disposal (V. Nečas)
- [5] V. Šebian: Transmutation of spent fuel radionuclides by VVER-440 reactor (V. Nečas)
- [6] P. Tatranský: Optimization and material treating from the process of decommissioning nuclear facilities from the operation regarding their impact on the environment (V. Nečas)

VII. OTHER ACTIVITIES

- Organization of the Postgraduate Study 'Safety Aspects of Nuclear Equipment Operation' for participants from different organizations. Organised for Slovak Electric, Ltd.
- 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 School 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 international school ERASMUS 2008 'Engineering and characterisation of nanostructures by photon, ion beam, and nuclear methods', Smolenice, 2 – 11 May 2008

- Organization of E. Wigner Course for Reactor Physics Experiments, Bratislava, Budapest, Vienna, Prague, 3 – 23 September 2008

VIII. PUBLICATIONS

VIII.1 Journals

- [1] AGOSTEO, S., MAGISTRIS, M., MEREGHETTI, A., SILARI, M., ZAJACOVÁ, Z.: Shielding Data for 100-250 MeV Proton Accelerators: Attenuation of Secondary Radiation in Thick Iron and Concrete/Iron Shields. In: Nuclear Instruments and Methods in Physics Research B. - ISSN 0168-583X. - Vol. 266 (2008), p. 3406-3416. (in English)
- [2] BAČÍK, P., UHER, P., SÝKORA, M., LIPKA, J.: Low-Al Tourmalines of the Schorl-Dravite-Povondriate Series in Redeposited Tourmalinities from the Western Carpathians, Slovakia. In: Canadian Mineralogist. - ISSN 0008-4476. - Vol. 46 (2008), p. 1117-1129. (in English)
- [3] BREZA, J., ZAJAC, R., DAŘÍLEK, P., NEČAS, V.: Non-Proliferation Aspects of Advanced Fuels under Light Water Reactor Conditions. In: ESARDA Bulletin. - ISSN 0392-3029. - No. 39 (2008), p. 21-25. (in English)
- [4] BUTVIN, P., BUTVINOVÁ, B., SITEK, J., DEGMOVÁ, J., VLASÁK, G., ŠVEC, P., JANIČKOVIČ, D.: Magnetic Properties and Macroscopic Heterogeneity of FeCoNbB Hitperms. In: Journal of Magnetism and Magnetic Materials. - ISSN 0304-8853. - Vol. 320 (2008), p. 1133-1140. (in English)
- [5] DEBARBERIS, L., ZEMAN, A., BRUMOVSKÝ, M., SLUGEŇ, V., MIKLOŠ, M.: Contribution to Preservation and Management of Nuclear Knowledge on WWER Reactor Pressure Vessels. In: International Journal of Nuclear Knowledge Management. - Vol. 3, No. 1 (2008), p. 41-49. (in English)
- [6] DEGMOVÁ, J., DEBARBERIS, L., NOVOTNÝ, R.: Characterisation of a Cast Model Mn-Si-Cr-Ni Steels for Reactor Pressure Vessel Applications. In: Energy Materials: Materials Science and Engineering for Energy Systems. - ISSN 1748-9237. - Vol. 3, No. 1 (2008), p. 32-34. (in English)
- [7] GONZÁLEZ-ANGELES, A., GRUSKOVÁ, A., LIPKA, J., SLÁMA, J., JANČÁRIK, V.: Magnetic and Structural Studies of Ba_{0.5}Sr_{0.5}(ZnTi)_xFe_{12-2x}O₁₉ Prepared by Ball Milling. In: Jordan Journal of Physics. - ISSN 1994-7607. - Vol. 1, No. 1 (2008), p. 37-42. (in English)
- [8] GONZÁLEZ-ANGELES, A., LIPKA, J., GRUSKOVÁ, A., JANČÁRIK, V., TÓTH, I., SLÁMA, J.: (Ni, Zn, Sn) Ru and (Ni, Sn) Sn Substituted Barium Ferrite Prepared by Mechanical Alloying. In: Hyperfine Interactions. - ISSN 0304-3843. - Vol. 184 (2008), p. 135-141. (in English)
- [9] HASIAK, M., MIGLIERINI, M., KALETA, J., ZBROSZCZYK, J., FUKUNAGA, H.: Microstructure and Magnetic Properties of Nanocrystalline Fe-Based Alloys. In: Materials Science-Poland. - ISSN 0137-1339. - Vol. 26, No. 1 (2008), on-line. (in English)
- [10] HASIAK, M., MIGLIERINI, M., KALETA, J., ZBROSZCZYK, J., ZSCHECH, E.: Microstructure Investigations and Magnetic After-Effect in Amorphous and Nanocrystalline Fe-Zr-Ti-B-Cu Alloy. In: Journal of Magnetism and Magnetic Materials. - ISSN 0304-8853. - Vol. 320 (2008), p. 783-786. (in English)
- [11] HEDBERG, V., MAGISTRIS, M., MOREV, M.N., SILARI, M., ZAJACOVÁ, Z.: Predicting Induced Radioactivity in a Large High-Energy Physics Apparatus: The Example of the ATLAS Experiment. In: Nuclear Instruments and Methods in Physics Research A. - ISSN

-
- 0168-9002. - Vol. 592 (2008), p. 230-246. (in English)
- [12] HÍVEŠ, J., BENOVÁ, M., BOUZEK, K., SITEK, J., SHARMA, V.: The Cyclic Voltammetric Study of Ferrate (VI) Formation in a Molten Na/K Hydroxide Mixture. In: *Electrochimica Acta*. - ISSN 0013-4686. - Vol. 54 (2008), p. 203-208. (in English)
- [13] JIRÁSKOVÁ, Y., MARYŠKO, M., MIGLIERINI, M.: New Findings in Mössbauer Studies of Amorphous FeMoCuB NANOPERM-Type Alloy. In: *Acta Physica Polonica A*. - ISSN 0587-4246. - Vol. 113, No. 1 (2008), p. 151-154. (in English)
- [14] KAŇUCH, T., MIGLIERINI, M., LANČOK, A., ŠVEC, P., ILLEKOVÁ, E.: Influence of Cobalt Substitution on Hyperfine Interactions in (Fe_{1-x}Cox)₇₆Mo₈Cu₁₆B₁₅ Alloys. In: *Acta Physica Polonica A*. - ISSN 0587-4246. - Vol. 113, No. 1 (2008), p. 63-66. (in English)
- [15] KRŠJAK, V., SLUGEŇ, V., MIKLOŠ, M., PETRISKA, M., BALLO, P.: Application of Positron Annihilation Spectroscopy on the Ion Implantation Damaged Fe-Cr Alloys. In: *Applied Surface Science*. - ISSN 0169-4332. - Vol. 255 (2008), p. 153-156. (in English)
- [16] LANČOK, A., ZAVETA, K., KAŇUCH, T., MIGLIERINI, M., POSTAVA, K., KOHOUT, J., ŽIVOTSKÝ, O., FENDRYCH, F.: Hyperfine Interaction Studies and Magnetic Properties of FeCoAlN Nanocomposite Films. In: *Hyperfine Interactions*. - ISSN 0304-3843. - Vol. 183 (2008), p. 171-177. (in English)
- [17] LANČOK, A., FENDRYCH, F., MIGLIERINI, M., KOHOUT, J., KLEMENTOVÁ, M.: Study of Hyperfine Interactions in Fe-Co Nanocomposite Films by Mössbauer Spectroscopy and NMR. In: *Journal of Non-Crystalline Solids*. - ISSN 0022-3093. - Vol. 354 (2008), p. 5255-5257. (in English)
- [18] MICHÁLEK, S., HAŠČÍK, J., FARKAS, G.: MCNP5 Delayed Neutron Fraction (B_{eff}) Calculation in Training Reactor VR-1. In: *Journal of Electrical Engineering*. - ISSN 1335-3632. - Vol. 59, No. 4 (2008), p. 221-224. (in English)
- [19] MIGLIERINI, M.: Crystallization of NANOPERM-Type Amorphous Alloys. In: *Journal of Non-Crystalline Solids*. - ISSN 0022-3093. - Vol. 354 (2008), p. 5093-5096. (in English)
- [20] MIGLIERINI, M.: Mössbauer Spectrometry in FeMoCuB-Type Nanocrystalline Alloys. In: *Acta Physica Polonica A*. - ISSN 0587-4246. - Vol. 113, No. 1 (2008), p. 47-50. (in English)
- [21] MIGLIERINI, M., KAŇUCH, T., PAVÚK, M., ŠVEC, P., SCHUMACHER, G., ZIZAK, I., JIRÁSKOVÁ, Y.: Structural Transformations in Nanoperm-Type Alloys Studied by Mössbauer Spectrometry and Diffraction of Synchrotron Radiation. In: *Hyperfine Interactions*. - ISSN 0304-3843. - Vol. 183 (2008), p. 31-35. (in English)
- [22] MIKLOŠ, M., SLUGEŇ, V.: A Method for Spent Fuel Cladding Leaktightness Assessment Based on SCALE4.4a Calculation. In: *Bezpečnosť jaderné energie*. - ISSN 1210-7085. - Vol. 16, No. 5/6 (2008), p. 169-172. (in Slovak)
- [23] MIKLOŠ, M., SLUGEŇ, V.: SCALE Calculation for Evaluation of Spent Fuel Condition during Long-Term Storage. In: *Nuclear Engineering and Design*. - ISSN 0029-5493. - Vol. 238 (2008), p. 2811-2814. (in English)
- [24] PALUGA, M., ŠVEC, P., JANIČKOVIČ, D., MULLER, D., MRAFKO, P., MIGLIERINI, M.: Nanocrystallization in Rapidly Quenched Fe-Mo-Cu-B: Surface and Volume Effects. In: *Reviews on Advanced Materials Science*. - ISSN 1606-5131. - Vol. 18 (2008), p. 481-493. (in English)
- [25] PAVLOVIČ, M.: Ion Beam Point Directly at Tumors. In: *Hospodárske noviny*. - ISSN 1335-

4701. - No. 109 (2008), in Suppl. (in Slovak)
- [26] PAVÚK, M., MIGLIERINI, M., VUJTEK, M., ZBOŘIL, R., MAŠLÁŇ, M., ŠVEC, P.: Surface Morphology of Fe₇₉Mo₈Cu₁B₁₂ Ribbons Characterised by Atomic Force Microscopy. In: Reviews on Advanced Materials Science. - ISSN 1606-5131. - Vol. 18 (2008), p. 164-168. (in English)
- [27] RÖSCHLOVÁ, J., WEIS, M., CIRÁK, J., NISHIDA, A., DEKAN, J., PETRIDIS, D., ŠATKA, A.: Effect of Polydispersity on the Magnetic Properties of Ordered 2D Arrays of Ferrite Nanoparticles. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 59, No. 6 (2008), p. 328-331. (in English)
- [28] ŠAGÁTOVÁ-PERĐOCHOVÁ, A., LADZIANSKÝ, M., NEČAS, V.: GaAs Detectors with LiF Layer for Detection of Thermal Neutrons. In: Nuclear Instruments and Methods in Physics Research A. - ISSN 0168-9002. - Vol. 591 (2008), p. 98-100. (in English)
- [29] SEBERÍNI, M., SITEK, J.: Surface Analysis of Iron-Containing Samples by CEMS an Overview of the Method. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 59, No. 5 (2008), p. 234-240. (in English)
- [30] SITEK, J., SEDLAČKOVÁ, K., PAVLOVIČ, M.: Corrosion Influence on the Magnetic Structure of Fe-Based Nanocrystalline Alloys. In: Acta Physica Polonica A. - ISSN 0587-4246. - Vol. 113, No. 1 (2008), p. 613-606. (in English)
- [31] SLUGEŇ, V., HANUS, V., JACOBY, K.: Conference of Slovak, Czech and German Nuclear Societies - NUSIM 2008. In: International Journal for Nuclear Power. - ISSN 1431-5254. - Vol. 53, No. 6 (2008), p. 413-415. (in English)
- [32] SLUGEŇ, V., MIKLOŠ, M.: Uranium - the Primary Source of Electrical Energy. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 14, No. 4 (2008), p. 8-11. (in Slovak)
- [33] STANKOV, S., YUE, Z Y., MIGLIERINI, M., SEPIOL, B., SERGUEEV, I., CHUMAKOV, A.I., HU, L., ŠVEC, P., RÜFFER, R.: Vibrational Properties of Nanograins and Interfaces in Nanocrystalline Materials. In: Physical Review Letters. - ISSN 0031-9007. - Vol. 100 (2008), p. 235503.1-4. (in English)
- [34] STRAŠÍK, I., MUSTAFIN, E., FERTMAN, A., HINCA, R., PAVLOVIČ, M., SCHARDT, D., SOBOLEVSKIY, N., GOLUBEV, A., SHARKOV, B., FEHRENBACHER, G., HOFMANN, I., IWASE, H., KOZLOVA, E., MUSTAFINA, G.: Experimental Study of the Residual Activity Induced by 950 Me V/u Uranium in Stainless Steel and Copper. In: Nuclear Instruments and Methods in Physics Research B. - ISSN 0168-583X. - Vol. 266 (2008), p. 3443-3452. (in English)
- [35] VLASÁK, G., PAVÚK, M., MRAFKO, P., JANIČKOVIČ, D., ŠVEC, P., BUTVINOVÁ, B.: Influence of Heat Treatment on Magnetostrictions and Electrical Properties of (Fe₁Co₁)₇₆Mo₈Cu₁B₁₅. In: Journal of Magnetism and Magnetic Materials. - ISSN 0304-8853. - Vol. 320 (2008), p. 837-840. (in English)
- [36] VLASÁK, G., ŠVEC, P., KAŇUCH, T., PAVÚK, M., MIGLIERINI, M.: The Influence of Heat Treatment on Magnetostriction of Fe₇₄Mo₈Cu₁B₁₇ Metallic Glass. In: Reviews on Advanced Materials Science. - ISSN 1606-5131. - Vol. 18 (2008), p. 513-517. (in English)
- [37] ZELENÁKOVÁ, A., ZELENÁK, V., DEGMOVÁ, J., KOVÁČ, J., SEDLAČKOVÁ, K., KUSÝ, M., SITEK, J.: The Iron-Gold Magnetic Nanoparticles: Preparation, Characterization and Magnetic Properties. In: Reviews on Advanced Materials Science. - ISSN 1606-5131. - Vol. 18. Iss. 6 (2008), p. 501-504. (in English)
- [38] ZEMAN, A., NOVOTNÝ, R., UCA, O., KRŠJAK, V., MACÁK, J., DEBARBERIS, L.:

Behavior of Cold-Worked AISI-304 Steel in Stress-Corrosion Cracking Process: Microstructural Aspects. In: Applied Surface Science. - ISSN 0169-4332. - Vol. 255 (2008), p. 160-163. (in English)

VIII.2 Conference Proceedings

- [1] BEZÁK, P., NEČAS, V.: Methodology of Dismantling and Demolition Evaluation within Code OMEGA for Calculation of Parameters of Nuclear Installations. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [2] BREZA, J., DAŘÍLEK, P., NEČAS, V.: Advanced Fuel Cycles Options for LWRs and IMF Benchmark Definition. In: Proceedings of 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 723-728. (in English)
- [3] BREZA, J., ČUDRNÁK, P., DAŘÍLEK, P.: Gd Benchmark Calculations in VUJE. In: Proceedings of 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 805-807. (in English)
- [4] BREZA, J., DAŘÍLEK, P., NEČAS, V.: Study of Thorium Advanced Fuel Cycle Utilization in Light Water Reactor VVER-440. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [5] BREZA, J., DAŘÍLEK, P., NEČAS, V.: Thorium and Inert Matrix Fuel - Advanced Options for LWRs. In: 11th Regional Seminar on Radioactive Waste Disposal: Piešťany, Slovak Republic, 21.-23.9.2008. - Trnava: Decom, 2008. - CD-Rom. (in English)
- [6] DANIŠKA, M., NEČAS, V.: Characterisation in Development of Miniature X-Ray Tubes Noxtek. In: ŠVOČ 2008: Proceeding of winning works. Bratislava, Slovak Republic, 23.4.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2865-2. - CD-Rom. (in Slovak)
- [7] DEKAN, J., MIGLIERINI, M., STAŠŠÍKOVÁ-ŠTUKOVSKÁ, D.: Mössbauer Study of Archaeological Slag. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [8] DEKAN, J., MIGLIERINI, M., FILIP, J., DOLNÍČEK, Z., STAŠŠÍKOVÁ-ŠTUKOVSKÁ, D.: Origin of Slag from Early Medieval Age Furnaces in Nitra. In: Mössbauer Spectroscopy in Materials Science MSMS '08: Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008. - Olomouc: Palacký University, 2008. - p. 66. (in English)
- [9] DUBECKÝ, F., RYČ, L., KACZMARCZYK, J., SCHOLZ, M., ZAŤKO, B., BOHÁČEK, P., HURAN, J., LADZIANSKY, M.: Registration of Fast Neutrons Emissions from Hot Plasmas by Bulk Semi-Insulating GaAs Detectors. In: ASDAM 2008. The 7th International Conference on Advanced Semiconductor Devices and Microsystems: Smolenice, Slovak Republic, 12.-16.10.2008. - Piscataway: IEEE, 2008. - ISBN 978-1-4244-2325-5. - p. 299-302. (in English)
- [10] FARKAS, G., HAŠČÍK, J., PETRISKA, M.: Calculation of the Change in Power Distribution around the Joining Structure of the Absorber and Fuel Part of the WVER-440 Control Assembly Using MCNP5 Code. In: Proceedings of the 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 799-804. (in English)
- [11] FARKAS, G., PETRISKA, M., MICHÁLEK, S., SLUGENĚ, V., VANKOVÁ, A.: WVER-440

- Criticality Calculations Using MCNP5 Code. In: Proceedings of the 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 121-130. (in English)
- [12] FEDOREK, P., PAVLOVIČ, M.: Application of CVD Detectors in Medical Use. In: ŠVOČ 2008: Proceeding of Winning Works. Bratislava, Slovak Republic, 23.4.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2865-2. - CD-Rom. (in Slovak)
- [13] HAŠČÍK, J., MICHÁLEK, S., FARKAS, G., SLUGENĚ, V.: Delayed Neutron Fraction (Beff) Calculation for VVER 440 Reactor. In: Nuclear Option in Countries with Small and Medium electricity Grids. 7th International Conference: Dubrovnik, Croatia. 25.-29.5.2008. - Dubrovnik: HND, 2008. - p. 70. (in English)
- [14] HÍVEŠ, J., UHER, D., BENOVÁ, M., SITEK, J.: The Strongest 'Green' Oxidant - Ferrate (VI). In: 50th International Galvanic Conference: Smolenice, Slovak Republic, 3.-4.6.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2882-9. - p. 52-57. (in Slovak)
- [15] KLUČÁROVÁ, K., NEČAS, V.: Coolant Flow in Fuel Assemblies Used in VVER-440 Reactor Type. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [16] KOPÁNI, M., WEIS, M., DEKAN, J., JAKUBOVSKÝ, J., MIGLIERINI, M.: Analysis of Iron Forms in the Human Spleen. In: Proceedings of the 3rd Slovak Biophysical Symposium, Bratislava, 18.-20.4.2008. - ISBN 978-80-89186-31-0. - p. 32-33. (in English)
- [17] KOPÁNI, M., DEKAN, J., WEIS, M., MÁLEK, T., MIGLIERINI, M., JAKUBOVSKÝ, J.: Analysis of Iron Particles in the Human Spleen. In: TOXCON 2008. Integration of Toxicological Research within V4: 13th Interdisciplinary Toxicology Conference. Trenčianske Teplice, Slovak Republic, 27.-30.5.2008. (in English)
- [18] KOPÁNI, M., WEIS, M., DEKAN, J., MÁLEK, T., JAKUBOVSKÝ, J., MIGLIERINI, M., MISTINOVÁ, J., POLÁK, Š.: Iron Particles in the Human Spleen. In: The 9th Asia-Pacific Microscopy Conference in Conjunction with the 39th Annual Meeting of the Korean Society of Microscopy: Jeju, Korea, 2.-7.11.2008. - Seoul: Korean Society of Microscopy, 2008. - p. 173-174. (in English)
- [19] KOPÁNI, M., MIGLIERINI, M., LANCOK, A., DEKAN, J., MELNIK, M., MIKULA, M., MAŇKA, J., SKRATEK, M.: Structural Characterization of Iron in Human Spleen. In: MRS Fall Meeting 2008: Boston, USA, 1.-5.12.2008. - Boston: Materials Research Society, 2008. (in English)
- [20] KRŇÁČ, Š.: Comparison WSP Vs. PNA - Application to Fastscan Whole Body Counter. In: XXX Days of Radiation Protection: Liptovský Ján, Slovak Republic, 10.-14.11.2008. - Bratislava: Slovak Medical Association, 2008. - ISBN 978-80-89384-01-3. - p. 103-106. (in English)
- [21] KRŇÁČ, Š.: New Trends in the Gamma Ray Spectrometry - Whole Spectrum Processing. In: 19th Slovak-Czech Spectroscopic Conference. Častá-Papiernička, Slovak Republic, 12.-16.10.2008. - Bratislava: Comenius University, 2008. - ISBN 978-80-223-2557-8. - p. 51. (in English)
- [22] KRŇÁČ, Š., STACHO, M.: On High Energy Calibration of the Gamma Ray Spectrometer Using the Whole Spectrum Processing Approach. In: XXX Days of Radiation Protection: Liptovský Ján, Slovak Republic, 10.-14.11.2008. - Bratislava: Slovak Medical Association, 2008. - ISBN 978-80-89384-01-3. - p. 103-106. (in English)
- [23] KRŠJAK, V., SOJAK, S., SLUGENĚ, V., PETRISKA, M., TROEV, T.: Ion Implantation Induced Defects in Fe-Cr Alloys Studied by Conventional Positron Annihilation Lifetime

- Spectroscopy. In: Positron Studies of Defects: International Workshop. Prague, Czech Republic, 1.-5.9.2008. - Prague: Charles University, 2008. - p. 64. (in English)
- [24] KRŠJAK, V., MIKLOŠ, M.: Non-Destructive Techniques Study of the Fe-Cr Based Alloys. In: Structural Materials for Innovative Nuclear Systems (SMINS). Karlsruhe, Germany 4.-6.6.2007. - Paris: OECD Publishing, 2008. - ISBN 9789264048065. - on-line. (in English)
- [25] KUSÝ, M., MORAVČÍK, R., GRGAČ, P., LANČOK, A., MIGLIERINI, M.: Influence of Particle Size on the Amount of Phase Components in the Rapidly Solidified Powder of High Speed Steel. In: 13th International Conference on Rapidly Quenched & Metastable Materials (RQ13): Dresden, Germany, 24.-29.8.2008. - p. 69. (in English)
- [26] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., DUBECKÝ, F., NEČAS, V.: Changes in Deep Level States of Neutron Damaged Semi-Insulating GaAs Detectors. In: APCOM 2008. Applied Physics of Condensed Matter: Proceedings of the 14th International Workshop. Bystrá, Slovak Republic, 25.-27.6.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2902-4. - p. 125-128. (in English)
- [27] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., NEČAS, V.: Changes in Semi-Insulating GaAs Detectors after Neutron Bombardment. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [28] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., DUBECKÝ, F., LINHART, V., NEČAS, V.: Deep Trap Study of Neutron Damaged Semi-Insulating GaAs Detectors. In: 10th International Workshop on Radiation Imaging Detectors - IWORID: Helsinki, Finland, 29.6.-3.7.2008. - Helsinki: University of Technology, 2008. (in English)
- [29] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., DUBECKÝ, F., NEČAS, V.: Neutron Damage Study of Detectors Based on Bulk Semi-Insulating GaAs. In: 9th International Conference on Applications of Nuclear Techniques: Crete, Greece, 8.-14.6.2008. - CD-Rom. (in English)
- [30] LADZIANSKÝ, M., ŠAGÁTOVÁ, A., NEČAS, V.: The Investigation of Semi-Insulating GaAs Detectors Properties after Neuron Irradiation. In: ASDAM 2008. The 7th International Conference on Advanced Semiconductor Devices and Microsystems: Smolenice, Slovak Republic, 12.-16.10.2008. - Piscataway: IEEE, 2008. - ISBN 978-1-4244-2325-5. - p. 179-182. (in English)
- [31] LANČOK, A., KLEMENTOVÁ, M., BEZDIČKA, P., MIGLIERINI, M.: Characterization of Magnetic Iron Oxide Nanoparticles. In: ISIAME 2008. International Symposium on the Applications of Mössbauer Effect: Budapest, Hungary, 17.-22.8.2008. - p. 47-48. (in English)
- [32] LANČOK, A., FENDRYCH, F., MIGLIERINI, M., KOHOUT, J.: Study of Hyperfine Interactions in Fe-Co Nanocomposite Films by Mössbauer Spectroscopy and NMR. In: 9th International Workshop on Non-Crystalline Solids: Porto, Portugal, 27-30.4.2008. - Porto, 2008. - p. 44-45. (in English)
- [33] MICHÁLEK, S., HAŠČÍK, J., FARKAS, G.: Delayed Neutron Fraction (β_{eff}) Calculation and Measurement in Training Reactor VR-1. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [34] MICHÁLEK, S., HAŠČÍK, J., FARKAS, G.: Possibilities of Delayed Neutron Fraction (β_{eff}) Calculation and Measurement. In: Proceedings of 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 391-400. (in English)
- [35] MIGLIERINI, M., LANČOK, A., KUSÝ, M.: Characterization of Rapidly Solidified Powder of High-Speed Steel. In: ISIAME 2008. International Symposium on the Applications of

- Mössbauer Effect: Budapest, Hungary, 17.-22.8.2008. - p. 93-94. (in English)
- [36] MIGLIERINI, M.: Crystallisation of Nanoperm Type Alloys. In: 9th International Workshop on Non-Crystalline Solids: Porto, Portugal, 27-30.4.2008. - Porto, 2008. - p. 30. (in English)
- [37] MIGLIERINI, M.: Hyperfine Interactions in Nanocrystalline Alloys. In: 50 Years after - The Mössbauer Effect Today and in the Future: Garching, Germany, 9.-10.10.2008. - München: Technische Universität, 2008. - p. 91. (in English)
- [38] MIGLIERINI, M., LANČOK, A., PAVLOVIČ, M.: Ion Bombardment of Fe-Based Amorphous Metallic Alloys. In: ISIAME 2008. International Symposium on the Applications of Mössbauer Effect: Budapest, Hungary, 17.-22.8.2008. - p. 175-176. (in English)
- [39] MIGLIERINI, M., LANČOK, A., KOHOUT, J.: Mössbauer and NMR Study of Fe₉₀Zr₇B₃ Nanoperm Alloy. In: Mössbauer Spectroscopy in Materials Science MSMS '08: Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008. - Olomouc: Palacky University, 2008. - p. 52. (in English)
- [40] MIGLIERINI, M.: Nuclear Resonance with Synchrotron Radiation. In: 19th Slovak-Czech Spectroscopic Conference: Častá-Papiernička, Slovak Republic, 12.-16.10.2008. - Bratislava: Comenius University, 2008. - ISBN 978-80-223-2557-8. - p. 59. (in English)
- [41] MIGLIERINI, M., LANČOK, A., PAVLOVIČ, M., STANČEK, S.: Proton and Nitrogen Ion Irradiation of Fe₇₆Mo₈Cu₁B₁₅ Metallic Glass. In: Mössbauer Spectroscopy in Materials Science 2008: International Conference MSMS '08. Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008. - Melville: AIOP, 2008. - ISBN 978-0-7354-0601-8. - p. 1-9. (in English)
- [42] MUSTAFIN, E., PAVLOVIČ, M.: Ion Irradiation Studies of Construction Materials for High-Power Accelerators. In: Recent Developments in the Study of Radiation Effects in Matter: 2nd International Meeting. Crete, Greece, 7.-11.9.2008. - p. 15. (in English)
- [43] NÉMETH, Z., NEČAS, V., DAŘÍLEK, P.: Neutronic Properties of Molten Salt in the MSR Fuel Channel. In: Nuclear Power Engineering in the Young Generation Works -2007: Nicolaus Meeting of Young Generation CNS. Brno, Czech Republic, 6.12.2007. - Prague: Czech Nuclear Society, 2008. - ISBN 978-80-02-01991-6. - p. 99-105. (in Slovak)
- [44] ONDRA, F., NEČAS, V.: Methods of Control of Uncertainties in Calculation of Nuclear Power Plant Decommissioning Parameters. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [45] ORAVEC, I., VITÁZEK, K.: Realisation of PC Cluster for MCNP Code. In: ŠVOČ 2008: Proceeding of winning works. Bratislava, Slovak Republic, 23.4.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2865-2. - CD-Rom. (in Slovak)
- [46] PALUGA, M., ŠVEC, P., JANIČKOVIČ, D., MRAFKO, P., MIGLIERINI, M.: Surface and Volume Effects in Rapidly Quenched Fe-Mo-Cu-B System. In: 13th International Conference on Rapidly Quenched & Metastable Materials (RQ13): Dresden, Germany, 24.-29.8.2008. - Dresden, 2008. - p. 73. (in English)
- [47] PAVLOVIČ, M., STRAŠÍK, I.: Beam Transport with Scattering Using SRIM Supporting Software Routing Code. In: Proceedings of EPAC 2008: 11th European Particle Accelerator Conference. Genoa, Italy, 23.-27.6.2008. - p. 1767-1769. (in English)
- [48] PAVLOVIČ, M., STRAŠÍK, I.: Improvements to SRIM Simulations. In: Recent Developments in the Study of Radiation Effects in Matter: 2nd International Meeting. Crete, Greece, 7.-11.9.2008. - p. 17-18. (in English)
- [49] PAVLOVIČ, M., MIGLIERINI, M., STRAŠÍK, I., HINCA, R., STANČEK, S.: STU Research Activities in Accelerator Physics. In: 16th Conference of Slovak Physicists: Žilina, Slovak Republic, 10.-13. 9. 2007. - Košice: Slovak Physical Society, 2008. - ISBN 978-80-969124-5-

-
2. - p. 43-44. (in English)
- [50] PAVÚK, M., MIGLIERINI, M.: Surface Nanostructure Evolution and in Situ Crystallization of Amorphous Fe₇₉Mo₈Cu₁B₁₂ Alloy. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [51] PETRISKA, M., SLUGENŇ, V., KRŠJAK, V., ZEMAN, A.: Experiences with Software for Digital Positron Lifetime Spectrometer. In: Positron Studies of Defects: International Workshop. Prague, Czech Republic, 1.-5.9.2008. - Prague: Charles University, 2008. - p. 73. (in English)
- [52] PRÍTRSKÝ, J., NEČAS, V.: Alternative Nuclear Fuel Cycles Application in VVER Reactors: Assessment of ANF/HLW Geological Repository Long-Term Safety. In: 11th Regional Seminar on Radioactive Waste Disposal: Piešťany, Slovak Republic, 21.-23.9.2008. - Trnava: Decom, 2008. - p. 24-32. (in English)
- [53] ŠAGÁTOVÁ, A.: Si GaAs Detectors for Digital Radiography. In: 16th Conference of Slovak Physicists: Žilina, Slovak Republic, 10.-13. 9. 2007. - Košice: Slovak Physical Society, 2008. - ISBN 978-80-969124-5-2. - p. 35-38. (in English)
- [54] SEBERÍNI, M.: Some Improvements in Design of a CA/CV Mössbauer Velocity Drive. In: Mössbauer Spectroscopy in Materials Science 2008: International Conference MSMS '08. Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008. - Melville: AIOP, 2008. - ISBN 978-0-7354-0601-8. - p. 140-146. (in English)
- [55] SITEK, J.: Half a Century of Mössbauer Spectroscopy. In: 19th Slovak-Czech Spectroscopic Conference: Častá-Papiernička, Slovak Republic, 12.-16.10.2008. - Bratislava: Comenius University, 2008. - ISBN 978-80-223-2557-8. - p. 67. (in English)
- [56] SITEK, J.: Present State and Future of Thermonuclear Fusion. In: APCOM 2008. Applied Physics of Condensed Matter: Proceedings of the 14th International Workshop. Bystrá, Slovak Republic, 25.-27.6.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2902-4. - p. 208-211. (in English)
- [57] SITEK, J., PAVLOVIČ, M., LIPKA, J.: Recent Trends in Applications of Mössbauer Spectroscopy. In: 16th Conference of Slovak Physicists: Žilina, Slovak Republic, 10.-13. 9. 2007. - Košice: Slovak Physical Society, 2008. - ISBN 978-80-969124-5-2. - p. 31-32. (in English)
- [58] SITEK, J.: Recoil-Free Fraction in Amorphous and Nanocrystalline Aluminium Based Alloys. In: Mössbauer Spectroscopy in Materials Science 2008: International Conference MSMS '08. Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008 (2008). - Melville: AIOP. - ISBN 978-0-7354-0601-8. - p. 19-24. (in English)
- [59] SLUGENŇ, V.: Evaluation and Monitoring of Nuclear Fuel Leak Tightness in Condition of Wt Interim Spent Fuel Storage Facility. In: WRFPM 2008. 'New Clear' Fuel - A Green Energy Solution: 2008 Water Reactor Fuel Performance Meeting. Seoul, Korea, 19.-23.10.2008. - Seoul: Korean Nuclear Society, 2008. - CD-Rom. (in English)
- [60] SLUGENŇ, V., KRŠJAK, V., PETRISKA, M., SOJAK, S.: Positron Annihilation Study on the Fe-Cr-Alloys Foreseen for Fusion Reactor DEMO. In: PSE 2008: 11th International Conference on Plasma Surface Engineering. Garmisch-Partenkirchen, Germany, 15.-19.9.2008. - London: Wiley-Interscience, 2008. - p. 437. (in English)
- [61] SLUGENŇ, V.: Positron Annihilation Techniques Applied in Advanced Reactor Steels. In: Positron Studies of Defects: International Workshop. Prague, Czech Republic, 1.-5.9.2008. - Prague: Charles University, 2008. - p. 29. (in English)

- [62] SOJAK, S., KRŠJAK, V., SLUGENĚ, V., PETRISKA, M., VITÁZEK, K., STACHO, M.: Application of the Positron Annihilation Spectroscopy for Study of Chromium Effect in Radiation-Treated Ferritic/Martensitic Steels. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [63] SOJAK, S., KRŠJAK, V., SLUGENĚ, V., STANČEK, S., PETRISKA, M., VITÁZEK, K., STACHO, M.: Application of the Positron Annihilation Spectroscopy for Chromium Effect Investigation in Binary Fe-Cr Alloys. In: International Youth Nuclear Congress 2008: Interlaken, Switzerland, 21.-26.9.2008. - p. 409.1-8. (in English)
- [64] SOJAK, S., KRŠJAK, V., SLUGENĚ, V., STANČEK, S., PETRISKA, M., VITÁZEK, K., STACHO, M.: Study of the Chromium Effect on the Radiation Damage Resistance of the Ferritic/Martensitic Steels. In: NUSIM 2008: 16th Annual Nuclear Seminar and Information Meeting. Častá-Papiernička, Slovak Republic, 24.-25.4.2008. - Bratislava: SNUS, 2008. - CD-Rom. (in English)
- [65] STACHO, M., KRŇÁČ, Š., HINCA, R., SLUGENĚ, V.: Analysis of Gamma-Ray Fields Emitted around Nuclear Reactor in Operation. In: XXX Days of Radiation Protection: Liptovský Ján, Slovak Republic, 10.-14.11.2008. - Bratislava: Slovak Medical Association, 2008. - ISBN 978-80-89384-01-3. - p. 217-220. (in English)
- [66] STACHO, M., FARKAS, G., SLUGENĚ, V., SOJAK, S.: Calculation of the Neutron Flux Density Distribution in VVER 440 Reactor Pressure Vessel Using MCNP5. In: Proceedings of 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 217-223. (in English)
- [67] STACHO, M., FARKAS, G., SLUGENĚ, V., SOJAK, S.: Mapping of the Neutron Flux Density Distribution in Pressure Vessel of Reactor VVER-440/V-213. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [68] STRAŠÍK, I., MUSTAFIN, E., KOZLOVA, E., HOFMANN, I., SMOLYAKOV, A., SOBOLEVSKIY, N., LATYSHEVA, L., PAVLOVIČ, M.: Residual Activity Induced by High-Energy Heavy Ions in Stainless Steel and Copper. In: Proceedings of EPAC 2008: 11th European Particle Accelerator Conference. Genoa, Italy, 23.-27.6.2008. - p. 3551-3553. (in English)
- [69] STRODL, T., PAVLOVIČ, M., SEEMANN, R., MURÍN, J.: Advanced Concepts for Particle-Therapy Accelerators. In: Proceedings of EPAC 2008: 11th European Particle Accelerator Conference. Genoa, Italy, 23.-27.6.2008. - p. 1821-1823. (in English)
- [70] VANKOVÁ, A., FARKAS, G.: Evaluation of β_{eff} Parameter during VVER-440/V213 Reactor Operation Using MCNP5 Transport Code. In: ŠVOČ 2008: Proceeding of Winning Works. Bratislava, Slovak Republic, 23.4.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2865-2. - CD-Rom. (in Slovak)
- [71] VITTEK, R., MIGLIERINI, M., ŠVEC, P., JANIČKOVIČ, D.: Hyperfine Interactions of Fe-Zr/Ti-Cu-B-Alloys. In: Mössbauer Spectroscopy in Materials Science 2008: International Conference MSMS '08. Hlohovec u Břeclavi, Czech Republic, 16.-20.6.2008. - Melville: AIOP, 2008. - ISBN 978-0-7354-0601-8. - p. 25-34. (in English)
- [72] VITTEK, R., MIGLIERINI, M., ŠVEC, P., JANIČKOVIČ, D.: Study of Zr-Ti Substitution on Magnetic Structure of Fe-Zr/Ti-Cu-B Alloys. In: 13th International Conference on Rapidly Quenched & Metastable Materials (RQ13): Dresden, Germany, 24.-29.8.2008. - Dresden, 2008. - p. 113. (in English)
- [73] ZACHAR, M., NEČAS, V.: Distribution of Materials in the Decommissioning Process of Nuclear Facilities. In: Nuclear Power Engineering in the Young Generation Works -2007:

-
- Nicolaus Meeting of Young Generation CNS. Brno, Czech Republic, 6.12.2007. - Prague: Czech Nuclear Society, 2008. - ISBN 978-80-02-01991-6. - p. 47-53. (in Slovak)
- [74] ZACHAR, M., NEČAS, V.: Radioactive Waste Management in the Process of Nuclear Installation Decommissioning. In: ELITECH '08: PhD Students Conference. Bratislava, Slovak Republic, 20.5.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2878-2. - CD-Rom. (in English)
- [75] ZACHAR, M., NEČAS, V.: The Optimization of Radioactive Waste Management in the Nuclear Installation Decommissioning Process. In: International Youth Nuclear Congress 2008: Interlaken, Switzerland, 21.-26.9.2008. - p. 432.1-9. (in English)
- [76] ZAJAC, R., DAŘÍLEK, P., NEČAS, V.: PWR and WWER MOX Benchmark Calculation by HELIOS. In: Proceedings of the 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 299-306. (in English)
- [77] ZAJAC, R., DAŘÍLEK, P., NEČAS, V.: Transmutation of the WWER-440 Spent Fuel in Fast Reactor. In: Proceedings of 18th Symposium of AER on VVER Reactor Physics and Reactor Safety: Eger, Hungary, 6.-10.10.2008. - Budapest: KFKI, 2008. - ISBN 978-963-372-639-6. - p. 715-722. (in English)
- [78] ZAJAC, R., DAŘÍLEK, P., NEČAS, V.: WWER-440 Spent Fuel Transmutation in Fast Reactor. In: 11th Regional Seminar on Radioactive Waste Disposal: Piešťany, Slovak Republic, 21.-23.9.2008. - Trnava: Decom, 2008. - CD-Rom. (in English)

VIII.3 Part of Book

- [1] DANIŠKA, V., REHÁK, I., VAŠKO, M., KRIŠTOFOVÁ, K., BEZÁK, P., ONDRA, F., ZACHAR, M., TATRANSKÝ, P., NEČAS, V.: Comparative Analysis of Decommissioning Technologies Based on Model Calculations and Multi-Attribute Analysis of Specific Decommissioning Cases of Nuclear Facilities. In: Innovative and Adaptive Technologies in Decommissioning of Nuclear Facilities. - Vienna: IAEA, 2008. - ISBN 978-92-0-110008-5. - p. 217-283. (in English)

VIII.4 Textbooks

- [1] BÖCK, H., HAŠČÍK, J.: Manuscript for Periodical Training of Supervising Physicists of NPP EMO at the Experimental Reactor TRIGA Mark II. - Bratislava: KJFT FEI STU, 2008. - 120 p. (in Slovak)
- [2] CZIFRUS, Sz., HAŠČÍK, J., KÓPHÁZI, J., SÜKÜSD, Cs., ZAGYVAI, P., ZSÓLNAY, E.: Manuscript for Periodical Training of Supervising Physicists of NPP EMO and JAVYS at Training Reactor BUTE. - Bratislava: KJFT FEI STU, 2008. - 90 p. (in Slovak)
- [3] HAŠČÍK, J.: Nuclear Reactors. - Bratislava: KJFT FEI STU, 2008. - 158 p. (in Slovak)
- [4] HINCA, R.: Radiation Safety and Protection. - Bratislava: KJFT FEI STU, 2008. - 92 p. (in Slovak)
- [5] LIPKA, J.: Nuclear Physics and Technology. - Bratislava: KJFT FEI STU, 2008. - 69 p. (in Slovak)
- [6] NEČAS, V.: Material Aspects of Nuclear Energy. - Bratislava: KJFT FEI STU, 2008. - 58 p. (in Slovak)
- [7] NEČAS, V., ĎURČEK, E., REMIÁŠ, V.: Radwaste and NPP Decommissioning. - Bratislava: KJFT FEI STU, 2008. - 93 p. (in Slovak)
- [8] SLUGEŇ, V., UHRÍK, P.: Nuclear Safety. - Bratislava: KJFT FEI STU, 2008. - 87 p.

(in Slovak)