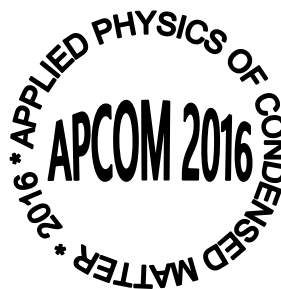


SCIENTIFIC PROGRAM



Wednesday, June 22, 2016

OPENNING CEREMONY 15:00 Congress Hall

Plenary sessions and sessions marked "A": Congress Hall

Sessions marked "B": Hunting Salon

PLENARY SESSION *Introductory lectures* 15:05

Hricovini K., Richter M. C., Heckmann O., Djukic U., Nikolai L., Ndiaye, Mariot J.-M., Wang W., Leandersson W. M., Balasubramanian T., Sadowski J., Kanski J., Vobornik I., Fujii J., Feyer V., Barrett N., Minár J.

Growth and dynamics of Bi thin films on InAs (111) surfaces

Kollár P., Olekšáková D., Vojtek V., Fúzer J., Birčáková Z., Fáberová M., Bureš R.

Magnetic properties of iron-phenolformaldehyde resin soft magnetic composites in dc and ac magnetic fields

Flaska M.

Development of a high-efficiency fast-neutron detector

Áč V., Kasala J., Hujová E., Ličková M.

Practical experiences in AFM diagnostics of selected non-ferrous metal alloy

COFFEE BREAK 16:15

SESSION 1(A) *New materials and structures (incl. nanostructures and thin films), their analysis and specific applications I.* 16:45

Sitek J., Dekan J., Sedláčková K., Novák P., Gokhman A.

Analysis of minerals from Antartica

Váry T., Nádaždy V., Čík G., Cirák J.

Density of states of poly(3-alkylthiophene)s determined using energy resolved electrochemical impedance spectroscopy

Neilinger P., Žemlička M., Reháč M., Grajcar M.

Evidence of Little–Parks oscillations in an array of μm -sized MoC loops with nanowires, detected by gigahertz resonator response method

Sečianska K., Šoltýs J., Truchlý M., Dérer J., Cambel V.

Fabrication of double cantilever sensor for study of magnetic microstructures

Skákalová V.

Graphene versus Graphene Oxide: Synthesis, characterization and properties

SESSION 1(B) *Nuclear science and technology, influence of irradiation on physical properties of materials, radiation detection I.* 16:45

Dujčíková L., Vrban B., Haščík J., Slugeň V.

Stability analysis of nuclear reactor with change in eigenvalue – cylindrical geometry

Čerba Š., Vrban B., Lüley J., Nečas V., Haščík J.

Development of multigroup neutron cross section library for fast reactor calculations

Zaňko B., Šagátová A., Boháček P., Sekáčová M., Arbet J., Nečas V.

The thermal neutron detection using 4H-SiC detectors with ⁶LiF conversion layer

Jakubec J., Kutiš V., Gálik G., Paulech J.

Parametric study of bypass influence on mixing processes of VVER440 fuel assembly

Šagátová A., Zaňko B., Sedlačková K., Nečas V., Darážová L.

Gallium arsenide detectors with ⁶LiF layer for thermal neutron detection

SHORT BREAK

SESSION 2(A) *Nuclear science and technology, influence of irradiation on physical properties of materials, radiation detection II.* 18:00

Veterníková J. Š., Degmová J., Slugeň V., Pekarčíková M., Šimko F., Petriska M., Skarba M.

Hot corrosion study of stainless steels for nuclear reactors

Paulech J., Jakubec J., Gálik G., Kutiš V., Murín J., Gogola R., Hrabovský J., Sedlár T.

Thermo-hydraulic behaviour of coolant in nuclear reactor VVER-440 during outage

Degmová J., Fedorov A., Magielsen L.

SEM study of ferritic-martensitic and austenitic steels irradiated in contact with lead bismuth eutectic

Darážová L., Šagátová A., Fülöp M., Hybler P., Šiplák D., Nečas V., Čonka K., Chovancová J.

Radiation degradation of polychlorinated biphenyls

Osuský F., Čerba Š., Lüley J., Vrban B., Farkas G., Slugeň V.

Multi-group transient numerical analysis of slab nuclear reactor

Kutiš V., Jakubec J., Paulech J., Gálik G., Sedlár T.

The influence of orifice diameter on coolant mass flow through fuel assembly of nuclear reactor VVER 440

Snopek J., Slugeň V.

Non-destructive characterization of the materials for future nuclear reactors

Holková D., Sitek J., Novák P., Dekan J.

Radiation influence on properties of nanocrystalline alloys

Brodziansky T., Sojak S., Slugeň V.

Prolongation of nuclear power plant lifetime

SESSION 2(B) *Nuclear science and technology, influence of irradiation on physical properties of materials, radiation detection III.* 18:00

Vrban B., Čerba Š., Lüley J., Osuský F., Dujčíková L., Haščík J.

Measurement of the neutron emission rate with manganese sulphate bath technique

Barátová D., Nečas V.

Process-level modelling related to geological disposal of the spent nuclear fuel

Sedlačková K., Zaňko B., Šagátová A., Nečas V.

Simulation of the thermal neutron semiconductor detector response using MCNPX code

Lüley J., Vrban B., Čerba Š., Haščík J., Osuský F., Kim S. J.

Validation of higher harmonics calculation methodology

Pecko S., Petriska M., Slugeň V.

Comparison of lifetime and Doppler broadening PAS techniques of irradiated and annealed JRQ steel

Gálik G., Kutíš V., Jakubec J., Paulech J., Sedlár T.

Thermo-hydraulics of spent fuel storage pool of nuclear reactor VVER 440

Hornáček M., Nečas V.

Modelling of nuclear power plants decommissioning tasks – issues and their solution

Sojak S., Degmová J., Veterníková J. Š., Snopek J., Slugeň V., Petriska M.

Study of oxide dispersion strengthened steels

Dekan J., Degmová J., Slugeň V.

Examination of corrosion layers in feed water dispersion box using Mössbauer spectroscopy

SESSION 2(C) *Computational physics and theory of physical properties of matter; interdisciplinary physics of condensed matter I.* 18:00

Racko J., Benko P., Mikolášek M., Grmanová A., Harmatha L., Breza J.

The effect of temperature on trap-assisted and direct tunnelling currents

Charubin T., Nowak P.

Analysis of reference magnetic fields homogeneity generated by a Helmholtz-like coil measurement system for magnetic field sensors testing

Drahoš P.

Shape memory alloy vs smart material actuators

Fodran T., Fodran P., Minnaard A. J., Chlpík J., Cirák J.

Thermomechanical properties of Langmuir-Blodgett monolayers of (R)- and (S)-tuberculostearic acid

WELCOME PARTY (VATRA CLUB) 20:00

Thursday, June 23, 2016

BREAKFAST 07:00

SESSION 3(A) *New materials and structures (incl. nanostructures and thin films),
their analysis and specific applications II.* 08:30

Szewczyk R.

Thin layer oriented magnetostatic calculation module for ELMER FEM, based on the method of the moments

Jurečka S., Matsumoto T., Imamura K., Kobayashi H.

Morphological properties of nanotextured structures prepared on Si surface

Dubecký F., Hubík P., Kindl D., Gombia E., Boháček P., Sekáčová M., Nečas V.

Unexpected current lowering of Mg contact on SI-GaAs

Minár J.

First principles investigations of magnetically doped topological insulators and ferroelectric materials

SESSION 3(B) *Optical phenomena in materials, photovoltaics and photonics,
new principles in sensors and detection methods* 08:30

Müllerová J., Kaiser M., Nádaždy V., Mikula M., Ladányi L., Scholtz L.

Broadband spectral study of the impact of the photo-oxidation on absorption strength of P3HT:PCBM

Scholtz L., Ladányi L., Müllerová J.

Numerical simulations of all optical switching in nonlinear FBGs using XPM and SPM effects

Ladányi L., Scholtz L., Müllerová J.

Numerical analysis of first-order temporal solitons

Jasenek J., Kaplan N., Červeňová J., Korenko B. **Optical fibre long-Bragg grating sensors for space distribution of induced birefringence**

COFFEE BREAK 09:30

SESSION 4(A) *Physical properties and structural aspects of solid materials and their influencing I.* 10:00

Weisze A., Ďuračková D., Kukučka M., Krajčušková Z.

Measurements of pressure influence using pneumatic mapping probe

Kmječ T., Maryško M., Kohout J., Závěta K., Bezdička P., Plocek J., Štěpánková H., Laguta V. V.

Ba(Fe_{0.5}Nb_{0.5})O₃ studied by Mössbauer spectroscopy and SQUID magnetometry

Horváth Z. J.

Possible physical origins of non-ideal temperature dependence of current-voltage characteristics of Schottky junctions

Murín J., Goga V., Hrabovský J., Podešva P., Gogola R.

Numerical analysis of the artificial muscle made of fishing line

Ďáková L., Füzser J., Dobák S., Lauda M., Strečková M., Stoica M.

Influence of pressing time on the magnetic properties of iron-phenolphormaldehyde resin composites

Jackiewicz D., Szewczyk R., Bieńkowski A.

Possibility of stress monitoring in steel structures with magnetoelastic effect

Salach J., Jackiewicz D., Krześniak M.

Influence of stresses on magnetic properties of 2714A type amorphous alloys

Hujová E., Áč V., Ličková M., Kasala J.

Study of the CuZn30 alloy microstructure by AFM

Kovaľaková M., Fričová O., Hronský V., Hutníková M., Olčák D.

Characterization of poly(3-hydroxybutyrate) and its modifications using ¹H NMR

Kachniarz M., Petruk O., Szewczyk R., Bieńkowski A.

Application of graphene in development of high-sensitivity Hall-effect sensors

Janotová I., Švec P., Švec P. Jr., Zigo J., Matko I., Janičkovič D.

Preparation and phase formation of Al-Mn alloys

Vrábel P., Baran A., Olčák D.

Study of morphology and molecular mobility of polyhydroxybutyrate using ¹³C NMR spectroscopy

Pavúk M., Narges Amini, Miglierini M., Degmová J.

Surface morphology of Fe₇₈Si₉B₁₃ ribbons

SESSION 4(B) *New materials and structures (incl. nanostructures and thin films),
their analysis and specific applications III.* 10:00

Halaszova S., Velic D.

Preparation of cyclodextrin-iron nanostructures

Kadlečíková M., Breza J., Kolmačka M., Jesenák K., Hubeňák M., Bálintová M.

Synthesis of carbon nanotubes on colloidal residues after ore mining at the sites near Rudňany and Smolník

Szundiová B., Zaťko B., Boháček P., Sekáčová M., Nečas V.

Electrical and detection properties of bulk semi-insulating GaAs detectors

Kohout J., Kmječ T., Kučera M., Závěta K.

CuFe₂O₄ thin films: hyperfine interactions of ⁵⁷Fe nuclei and distribution of cations

Zigo J., Janotová I., Švec P. Jr., Maťko I., Janičkovič D., Švec P.

Kinetics of phase transformations in Si-rich aluminum alloys

Petrus M., Szobolovszky R., Harmatha L., Kosa A., Stuchlikova L., Kovac J.

Characterization of AlGaN/GaN HEMT structures by deep level transient Fourier spectroscopy with optical excitation

Iliť T., Valko P., Vojs M., Behúl M., Marton M., Skuratov V.

Electrical measurement of an ion induced thermomagnetic effect on a nanosecond time scale

Nowicki M., Nowak P., Szewczyk R.

Exemplary magnetic properties of bilayered amorphous alloy core

Zehetner J., Vanko G., Dzuba J., Lalinsky T., Lucki M., Kraus S.

Micro structuring of bulk SiC substrates by femtosecond laser ablation

Juś A., Kamiński M., Radzikowska-Juś W.

Influence of graphene nanoflakes addition on grease tribological properties

LUNCH 12:00

SOCIAL PROGRAMME 13:00

DINNER AND FRIENDSHIP PARTY (KOLIBA PATRIA) 19:30

Friday, June 24, 2016

BREAKFAST 07:00

SESSION 5 (PLENARY) *Physical properties and structural aspects of solid materials
and their influencing II.* 08:30

Švec P. Jr., Janotova I., Matko I., Zigo J., Marcin J., Janičkovič D., Škorvánek I.,
Švec P.

Selected new rapidly quenched soft magnetic systems

Lančok A., Štíbr B., Volfová L., Kmječ T., Bakardijev M.

Structural characterization of $[\text{Fe}(\eta^6\text{-C}_6\text{H}_6\text{-nMe}_n)_2]^{2+}$ dications

Hristoforou E. V., Švec P.

Magnetic steel health monitoring: advances and current state of the art

Olekšáková D., Kollár P., Füzér J.

Structure and magnetic properties of powdered and compacted FeNi alloys

Onderko F., Dobák S., Kollár P., Kurek P., Bureš R., Fáberová M., Saks K.

Magnetic properties of VITROVAC/resin composites

Narges Amini, Dekan J., Novák P., Habibi S., Miglierini M.

**Structural properties of amorphous ribbons prepared with different velocities of the
quenching wheel**

COFFEE BREAK 10:00

SESSION 6 (PLENARY) *Computational physics and theory of physical properties of matter;
interdisciplinary physics of condensed matter II.* 10:30

Vitkovská E., Ballo P.

Grain boundary sliding in iron: effect of vacancy

Hrabovský J., Gogola R., Murín J., Gálik G.

Modal analysis of overhead power lines at different ambient temperatures

Gogola R., Goga V., Murín J., Hrabovský J., Bohuš J.

**Numerical analysis and experimental measurement of eigenfrequencies
of ACSR power lines**

Bogár J., Neilinger P., Grajcar M.

Landau-Zener-Stückelberg interference in qubit-resonator system

CONCLUDING REMARKS (PLENARY SESSION) 11:30

LUNCH 11:45

DEPARTURE 13:00