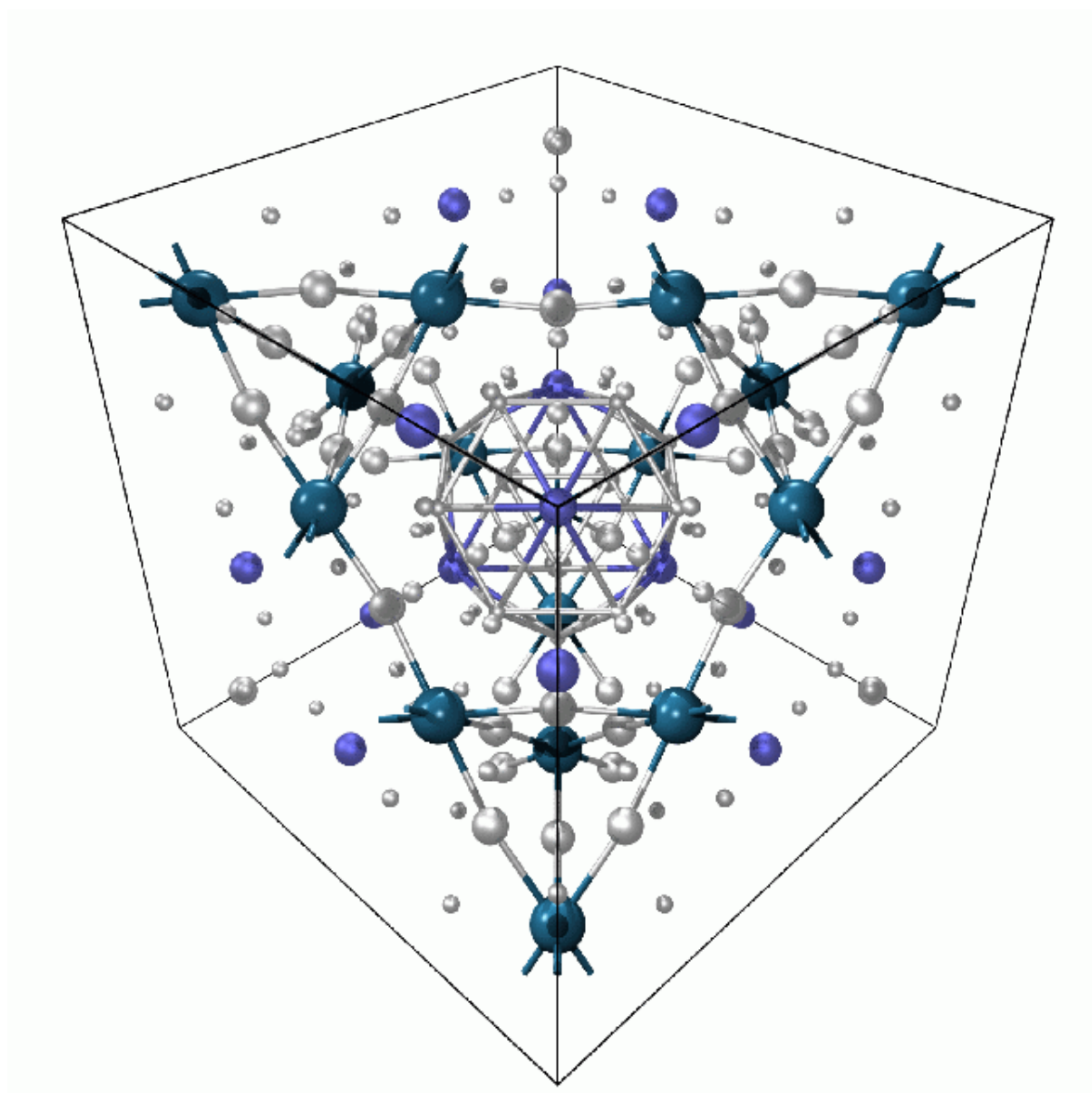


NANOVED & NANOTECH & TECHTRANSFER 2010

**5th International Conference
on Nanosciences, Nanotechnologies, Nanomaterials,
Nanomedicine and Technology Transfer**



Program and Abstracts

Bratislava, Slovakia, May 16 – 19, 2010

NANOVED & NANOTECH & TECHTRANSFER 2010
5th International Conference
on Nanosciences, Nanotechnologies, Nanomaterials,
Nanomedicine and Technology Transfer

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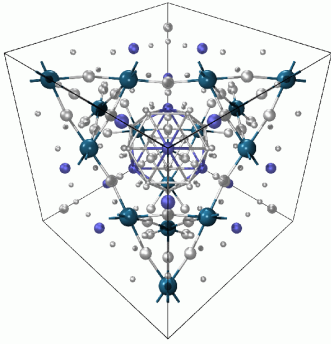
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NANOVED & NANOTECH & TECHTRANSFER 2010

5th International Conference on Nanosciences, Nanotechnologies, Nanomaterials, Nanomedicine and Technology Transfer

Bratislava, Slovakia, May 16 – 19, 2010

Premises of SUZA, Drotárska cesta, 46, 811 04 Bratislava, Slovakia

Programme

Sunday, May 16, 2010

16:00 - 20:00 Registration

19:00 - 21:00 Welcome and refreshments

Monday, May 17, 2010

08:00 - 09:00 Registration (continued)

Opening ceremony

Chairperson: F. Čiampor

09:00 - 09:10 F. Čiampor: Welcome to the participants

09:10 - 10:00 Inaugural addresses

**Pavel Holík, Section for European Policy and Knowledge
Society, Office of the Government of the Slovak Republic**

Ján Mikolaj, deputy prime minister and minister of education

Jaromír Pastorek, president of the Slovak Academy of Sciences

Bibiána Remiarová, director of APVV

Vladimír Bálež, rector of the Slovak Technical University

10:00 - 10:30 Coffee Break

Session 1: Nanomaterials, Nanotechnologies

Chairperson: Peter Švec

10:30 - 11:15 E. Hristoforou: Behavior of magnetic structures in the nano-scale (invited lecture)

11:15 - 12:00 F. Prima: Nanostructuring strategies in titanium alloys (invited lecture)

12:30 – 14:00 Lunch Break

Session 2: 7th FP and NMP Projects

Chairperson: Jozef Kadlečík

14:00 - 14:45 P. Lobotka: 7th Framework Programme: PPP Projects and the New Call for Proposals for 2011 in the theme 4 - Nanosciences, Nanotechnologies, Materials and New Production Technologies (NMP) (invited lecture)

14:45 - 15:15 A. Siupa: NanoSight – uniquely valuable particle sizing...with potential as a biodiagnostic platform

15:15 - 15:40 F. Uherek: Advancement of the nanostructures technology and diagnostics within NANONET project

15:40 - 16:00 A. Bízik: Nanotechnology health risks

16:00 – 16:30 Coffee Break

Session 3: 7th FP and NMP Projects, Technology Transfer

Chairperson: Ivo Vávra

16:30 - 17:00 S. Sališ: Prenos poznatkov a technológií z akademického prostredia do praxe

17:00 – 17:20 J. Turňa: Role of the Slovak Centre of Scientific and Technical Information in the support of the research, development, innovation and technology transfer

17:20 - 17:40 J. Poledna: Support of innovation

17:40 - 18:00 V. Švač: Slovakia – a country with extensive R&D potential

18:00 - 18:20 J. Kadlečík: University technology transfer – expectation and reality

18:20 - 19:20 Poster Session and 7th FP Project Preparation Workshop (Lobotka, Turňa, Kadlečík, Remiárová, Danková)

19:30 – 21:00 Dinner

Tuesday May 18, 2010

Session 4: Nanomedicine and Health Risks

Chairperson: Fedor Čiampor

09:00 - 09:45 J. Boczkovski: The state of art on the toxicity knowledge of manufactured nanomaterials (invited lecture)

09:45 - 10:30 P. Zavodszky: Biological nanomachines – Self-assembling nanostructures based on proteins (invited lecture)

10:30 - 10:50 M. Drgoňová: Life cycle thinking and nanotechnology

10:50 - 11:20 Coffee Break

Session 5: Nanoparticles - Preparation and Processing

Chairperson: Evangelos Hristoforou

11:20 - 12:05 O. Schneeweiss: Metallic nanoparticles: preparation and properties (invited lecture)

12:05 - 12:25 P. Uhlík: Natural mineral nanomaterials and relevance of their knowledge

12:25 - 12:45 V. Šepelák: Flexibility of structure and variability of properties of nanostructured spinel oxides

12:45 – 14:00 Lunch Break

Session 6: Magnetic Nanomaterials – Properties and Applications

Chairperson: Vladimír Kompiš

14:00 - 14:45 R. Varga: Nanocrystalline microwires for spintronic applications (invited lecture)

14:45 - 15:05 I. Škorvánek: Hard magnetic properties of Fe-(Co)-Pt-Nb-B nanocomposites from melt-spun ribbons

15:05 - 15:25 E. Hristoforou: Magnetic steel health monitoring in the nano-scale

15:25 - 15:45 M. Timko: Magnetic fluids for transformer technology

15:45 - 16:05 P. Kopčanský: Applications of magnetic fluids in medicine

16:05 – 16:30 Coffee Break

Session 7: Nanomaterials – Characterization and Processing

Chairperson: Tibor Kvačkaj

16:30 – 17:15 D. Šimek: Capability of X-ray diffractin and transmission electron microscopy for the microstructure analysis of nanomaterials (invited lecture)

17:15 – 18:00 O. Jašek: Synthesis of carbon nanostructures by plasma enhanced chemical vapour deposition at atmospheric pressure (invited lecture)

18:00 - 19:00 Poster Session and 7th FP Project Preparation Workshop
(Lobotka, Turňa, Kadlečík)

19:00 – 22:00 Conference Banquet

19.30 Best Young Researcher Contribution Award Ceremony

Wednesday May 19, 2010

Session 8: Nanocomposites I – Processing, Technologies and Applications (Session devoted to CEKOMAT Project)

Chairperson: Dušan Janičkovič

9:00 – 9:20 **VI. Kompiš:** Composite materials reinforced by short (nano) fibres – computational simulations

9:20 – 9:40 **T. Kvačkaj:** ECAR processing of OFHP copper material

9:40 – 10:00 **J. Bidulská:** Influence of ECAP on densification behaviour in the PM aluminium Al-Mg-Si-Cu-Fe alloy

10:00 - 10:30 **F. Simančík:** The effect of powder Al₂O₃ skin disruption on properties of subsequent fine Al powder compacts

10:30 – 11:00 Coffee Break

Session 9: Nanocomposites II – Processing, Technologies and Applications (Session devoted to CEKOMAT Project)

Chairperson: František Simančík

11:00 – 11:20 **J. Dusza:** Development of zirconia / carbon nanofiber composites

11:20 – 11:40 **B. Lalinská:** Mineralogy and geochemistry of Fe oxyhydroxides from various abandoned Sb deposits and usefulness of Fe oxides for remediation purposes

11:40 – 12:00 **P. Vitovič:** Physical properties of Calixarene containing monolayers at an air-water interface and their use in detection dopamine

12:00 – 12:20 **I. Vávra:** Nanocomposite films for optical coatings

12:20 – 12:30 Closing remarks

12:30 - 14:00 Lunch

End of the Conference

List of Poster Contributions

P01: M. Balog, M. Qian,

Partial nitridation of fine Al powders

P02: M. Besterčí, O. Velgošová, J. Ivan, T. Kvačkaj,

Damage mechanisms of Cu-Al₂O₃ nanomaterials

P03: Peter Billík, Mária Čaplavičová,

Mechanochemical synthesis of nanostructured materials

P04: E. Bretšnajdrová, L. Svoboda, J. Zelenka,

Determination of particle shape and size distribution of model types of nanomaterials

P05: P. Butvin, B. Butvinová, P. Švec,

Application potential of nanocrystalline ribbons still pending

P06: E. Csehová, J. Andrejovská, A. Limpichaipanit, J. Dusza, R. Todd,

Indentation load-size effect in Al₂O₃ - SiC nanocomposites

P07: M. Čavojský, M. Balog, F. Simančík, K. Iždinský, P. Švec, D. Janičkovič, E. Illeková,

Microstructures and properties of extruded AlCrFe melt-spun ribbons profiles.

P08: J. Degmová, J. Sitek,

Debye temperature of nanocrystalline aluminium based alloys

P09: A. Duszová, P. Hviščová, F. Lofaj, G. Czempura, J. Dusza,

Coefficient of friction vs. surface roughness in nanocomposite WC-C coatings

P10: T. Hatala, M. Pavúk, M. Miglierini,

Co-substituted NANOPERM-type alloys studied by synchrotron radiation

P11: Z. Križanová, I. Vávra, J. Novák,

Structural analysis of semiconducting quantum dots by transmission electron microscopy

P12: M. Marton, M. Vojs, M. Varga, L. Michalíková, T. Ižák, M. Veselý, R. Redhammer,

Preparation of nanocrystalline diamond thin films by double bias enhanced HFCVD

P13: B. Matušková, J. Škriniarová,

Zviditeľňovanie kryštalografických defektov v GaP pomocou mokrého chemického leptania

P14: M. Mesárošová, F. Čiampor, I. Vávra, M. Koneracká, M. Timko, V. Závíšová, A. Gábelová,

Cell distribution and cytotoxicity of magnetite nanoparticles in A549 cell line

P15: M. Mičušík, M. Omastová, J. Prokeš, M. M. Chehimi, J. Pionteck,

Preparation and electrical conductivity of nanocomposites based on polypropylene and modified carbon nanotubes

P16: L. Michalíková, J. Škriniarová, M. Marton, E. Regendová, A. Gábelová, M. Veselý,

Interaction of human skin cells with diamond-like carbon surfaces

P17: E. Neubauerová, M. Kuricová, A. Líšková, J. Tulinská, K. Volkovová, L. Wsolová, M. Dušinská,

Immunomodulatory effect of nanoparticles *in vitro*

P18: P. Oslanec,

Magnesium chips recycling

P19: K. Pastorková, M. Kadlečiková, F. Lazišťan, M. Kolmačka, K. Jesenák, J. Breza, M. Michalka,

Carbon nanotube bridges grown on aluminosilicates by hot filament CVD process

P20: M. Pavúk, T. Hatala, M. Miglierini,

Influence of glass-forming element (boron) on surface crystallization of NANPERM-type alloys

P21: Ľ. Šušlik, V. Pira, J. Škriniarová, D. Pudiš, J. Kováč, I. Kubicová, T. Ščepka J. Novák,

Light emitting diode with 2D photonic structure in the surface

P22: A. Poturnayová, M. Šnejdárková, T. Hianik,

Calix[4]arenes: supramolecular structures sensitive to dopamine

P23: V. Puchý, A. Duszová, O. Tapasztó, P. Kun, P. Hvizdoš, J. Dusza, Cs. Balázsi,

Tribological behavior of ZrO₂-CNF and Si₃N₄-CNT nanocomposites

P24: E. Rollerová, S. Scsuková, J. Jurčovičová, A. Mlynarčíková, E. Szabová, J. Kovřížnych, D. Zeljenková,

Neonatal exposure to polymeric nanoparticle PEG-b-PLA interferes with pubertal development in female Wistar rats

P25: T. Ščepka, J. Škriniarová,

Importance of AFM tip properties for observation results

P26: P. Šimon, D. Bakoš, M. Petková, T. Doboly,

Submicronization and nanonization of beta glucan and its application in biologically more efficient forms

P27: J. Tulinská, Z. Kováčiková, A. Líšková, M. Kuricová, E. Neubauerová, M. Dušinská, K. Volkovová, L. Wsolová, E. Tátrai,

Immunomodulatory effect of nickel oxide nanoparticles

P28: M. Vargová, G. Plesch, P. Bačík, M. Záhoran, K. Jesenák,

Photocatalytic activity of titanium dioxide powder precursors for heterogenous photocatalysis

P29: M. Vojs, E. Šípoš, V. Rehaček, M. Marton, M. Varga, M. Veselý, R. Redhammer,

Determination of Zn, Cd AND Pb by bismouth-coated microelectrode array based on nanocrystalline diamond thin film

P30: V. Vretenár, M. Kotlár, M. Marton, M. Vojs, A. Vargová, Z. Križanová, M. Michalka, M. Hulman, V. Skákalová, Š. Bederka, M. Veselý, R. Redhammer,

Synthesis of single- and multi-walled carbon nanotubes by arc discharge method.

P31: K. Zábranský, O. Schneeweiss,

Preparation and properties of FeCo nanoparticles

P32: G. Kováč, P. Blažíček,

Point of care testing (POCT), nanotechnológia a personalizovaná laboratórna diagnostika

P33: P. Pacek,

Paving the way for SME-friendly R&D&I programmes

P34: K. Dziendzikowska,

The influence of silver nanoparticles on testes of Wistar rats

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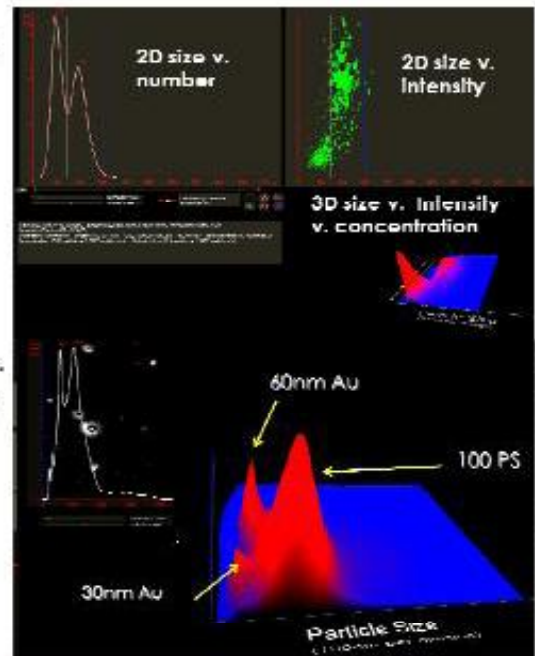
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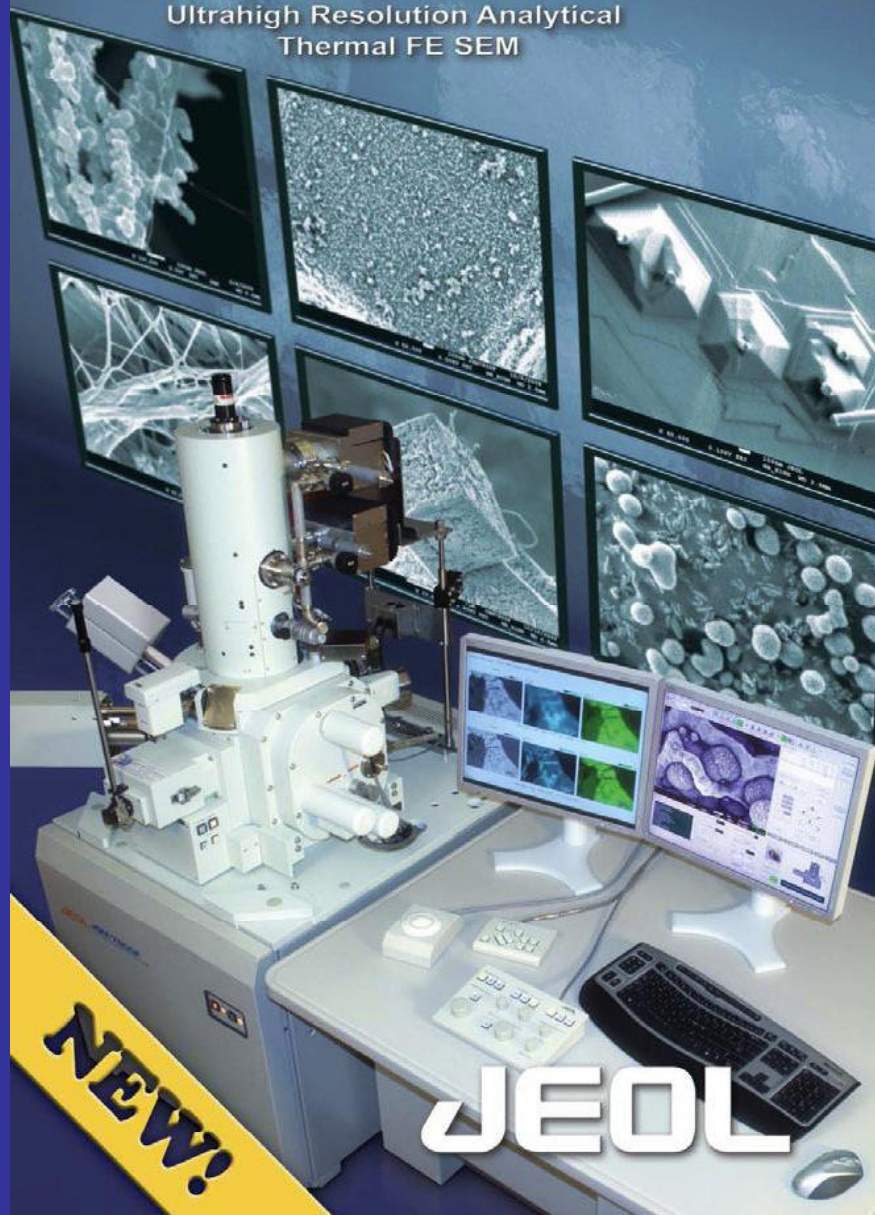
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