

LIST OF PAPERS BY TOPICS

- Plenary Session
- Session A - Nanomaterials for Electronic, Magnetic and Optic Applications. Carbon Nanostructures, Quantum Dots
- Session B - Industrial and Environmental Applications of Nanomaterials
- Session C - Bionanotechnology, Nanomaterials in Medicine
- Session D - Monitoring and Toxicity of Nanomaterials
- Session E - Advanced Methods of Preparation and Characterization of Nanomaterials
- Workshop
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- Publication of paper on CD (without attendance)

Plenary Session

Chairmen:

Prof. RNDr. Radek ZBORŮIL, Ph.D.

Ing. Jiřina SHRBENÁ

PS1 BRUS Louis E.

Columbia University, Chemistry Department, New York, United States

Size, Dimensionality and Strong Electron Correlation in Nanoscience (./papers/4512.pdf) - INVITED LECTURE

PS2 SCHMUKI Patrik

Friedrich-Alexander University of Erlangen-Nürnberg, Erlangen, Germany, EU

Formation and Functional Features of Self-ordered TiO₂ Nanotube Arrays (./papers/4488.pdf) - INVITED LECTURE

Session A - Nanomaterials for Electronic, Magnetic and Optic Applications. Carbon Nanostructures, Quantum Dots

Chairmen:

Prof. Ing. Eduard HULICIUS, CSc.

RNDr. Ing. Martin KALBÁČ, Ph.D.

Ing. Oldřich SCHNEEWEISS, DrSc.

A1 LINNROS Jan

Royal Institute of Technology (KTH), Department of Materials and Nano Physics, Stockholm, Sweden, EU

The Physics of Silicon Quantum Dots from Single Dot Studies (./papers/4489.pdf) - INVITED LECTURE

A2 VALENTA Jan

Charles University in Prague, Prague, Czech Republic, EU

Absorption of Light by Nanomaterials (the Case of Silicon): Do we Lose or Gain by Dispersing Bulk Material into Nanoparticles? (./papers/4256.pdf)

Co-authors: GREBEN Michael, FUCIKOVA Anna

A3 HULICIUS Eduard

Institute of Physics of the AS CR, v.v.i., Prague, Czech Republic, EU

InGaN/GaN Multiple Quantum Well Structures for Detectors (./papers/4379.pdf)

Co-authors: HOSPODKOVÁ Alice, NIKL Martin, PACHEROVÁ Oliva, OSWALD Jiří, BRŮŽA Petr, PÁNEK Dalibor, FOLTYNSKI Bartosz, BEITLEROVÁ Alena, HEUKEN Michael

A4 KOTI Mahesh

P.E.S. College of Engineering, Mandya, India

Parametric Evaluation of Quantum Dot Fluorescence and Intermittence (./papers/4338.pdf)

Co-authors: KOHIR Vinayadatta V., KRISHNAMURTHY Kumar N.

A5 KARLICKÝ František

Palacky University Olomouc, Olomouc, Czech Republic, EU

Adsorption of Small Organic Molecules on Graphite, Graphene and its Derivatives (./papers/4358.pdf)

Co-authors: LAZAR Petr, OTYEPKOVÁ Eva, BANÁŠ Eva, KOČMAN Mikuláš, OTYEPKA Michal

A6 SCHUETTE Kai

IOLITEC Ionic Liquids Technologies GmbH, Heilbronn, Germany, EU

Size Controlled Preparation of Nanoparticles and Safe-to-handle Nanoparticle Dispersions by the use of Ionic Liquids (./papers/4317.pdf) - COMMERCIAL PRESENTATION

Co-authors: SCHUBERT Thomas J. S.

A7 MARTÍN-GAGO José Angel

Institute of Material Science of Madrid (ICMM), Madrid, Spain, EU

New Routes for Rational Synthesis of Nanostructures: On-surface Synthesis at Work (./papers/4260.pdf) - INVITED LECTURE

A8 KALBÁČ Martin

J. Heyrovsky Institute of Physical Chemistry AS CR, v.v.i., Prague, Czech Republic, EU

Creation and Quantification of Defects in Multilayered Graphene Samples (./papers/4225.pdf)

A9 DATTA Kasibhatta Kumara Ramanatha

Palacky University Olomouc, Olomouc, Czech Republic, EU

Superhydrophobic / superoleophilic Highly Fluorinated Graphene Oxide and ZIF-8 Composites for Oil-Water Separation (./papers/4463.pdf)

Co-authors: JAYARAMULU K., RÖSLER C., PETR M., OTYEPKA M., ZBORIL R., FISCHER R. A.

A10 VEJPRAVOVA Jana

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Charge-strain Engineering in Graphene by Nanoparticles (./papers/4222.pdf)

Co-authors: PACAKOVA Barbara, VERHAGEN Tim, VALES Vaclav, FRANK Otakar, KALBAC Martin

A11 KROMKA Alexander

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Technological Aspects in Fabrication of Micro- and Nano-sized Carbon-based Structures: Nanorods, Periodical Arrays and Self-standing Membranes (./papers/4323.pdf)

Co-authors: IŽÁK Tibor, DOMONKOS Mária, BABCHENKO Oleg, VARGA Marian, JURKA Vlastimil, HRUŠKA Karel

A12 BOUŠA Milan

Charles University in Prague, Faculty of Science, Department of Inorganic Chemistry, Prague, Czech Republic, EU

Experimental Study of PIB-based CVD Graphene Transfer Efficiency (./papers/4316.pdf)

Co-authors: KALBÁČ Martin, JIRKA Ivan, KAVAN Ladislav, FRANK Otakar

A13 OLEJNÍK Kamil

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Nuclear Spin Transistor prepared by Electron Beam Lithography (./papers/4401.pdf) - INVITED LECTURE

A14 FRANK Otakar

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Strain Engineering of the Electronic Structure of 2D Materials (./papers/4212.pdf)

Co-authors: DEL CORRO Elena, PEÑA-ÁLVAREZ Miriam, MORALES-GARCÍA Ángel, BOUŠA Milan, ŘÁHOVÁ Jaroslava, KAVAN Ladislav, KALBÁČ Martin

A15 JAKUBEC Petr

Palacky University Olomouc, Olomouc, Czech Republic, EU

An Application of Iron Oxide Nanoparticles in Electrochemistry at RCPTM (./papers/4482.pdf)

Co-authors: ZBOŘIL Radek

A16 ELDESSOUKI Mohamed

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Mechanical Properties of Epoxy Nanocomposites (.papers/4302.pdf)

Co-authors: SHADY Ebraheem, GOWAYED Yasser

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5microns GmbH, Ilmenau, Germany, EU

5microns – Microsystem Professionals at Your Service (.papers/4505.pdf) - COMMERCIAL PRESENTATION

Co-authors: DITTRICH Lars, GOJ Boris, HEBEL Robert, BERTKO Michael

A18 MORALES María Del Puerto

Institute of Material Science of Madrid (ICMM), Superior Council for Scientific Research (CSIC), Madrid, Spain, EU

Prospects for Magnetic Nanoparticles in in Vivo Biomedical Applications: Synthesis, Biodistribution and Degradation (.papers/4371.pdf) - INVITED LECTURE

Co-authors: GAVILÁN Helena, RUIZ Amalia, LUENGO Yurena, COSTO Rocío, GUTIÉRREZ Lucia, MARCIELLO Marzia, GONZÁLEZ-CARREÑO T., VEINTEMILLAS-VERDAGUER Sabino, SERNA Carlos J.

A19 GAWANDE Manoj

Palacky University in Olomouc, Regional Centre of Advanced Technologies and Materials, Olomouc, Czech Republic, EU

Fast Growing Field of Nanomaterials - Applications in Catalysis (.papers/4508.pdf)

Co-authors: VARMA S. Rajender, ZBOŘIL Radek

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AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Cracow, Poland, EU

The Influence of Flake-shaped Nanofillers on Microstructure, Mechanical, Thermal and Biological Properties of Biopolymer-based Nanocomposites for Application in Tissue Engineering (.papers/4444.pdf)

Co-authors: STODOLAK-ZYCH Ewa, TUREK Anna, RAPACZ-KMITA Alicja, DUDEK Magdalena

A21 MRÁZEK Jan

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Laser-induced Crystallization of Nanocrystalline Rare-earth Doped Yttrium Titanates (RExY1-x)2Ti2O7 Thin Films (.papers/4275.pdf)

Co-authors: VYTYKÁČOVÁ Soňa, AUBRECHT Jan, TODOROV Filip, KAŠÍK Ivan

A22 ZAJÍČKOVÁ Lenka

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Ti(1-x)SixO Films prepared by Plasma Enhanced CVD and Atomic Layer Deposition (.papers/4464.pdf)

Co-authors: GOULLET Antoine, ELISABETH Stephane, ELIÁŠ Marek, RICHARD Mireille, ONDRAČKA Pavel, NEČAS David, GAUTIER Nicolas, GRANIER Agnes

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High-aspect Ratio Anodic TiO2 Nanotubes: Unprecedented Ability of ALD to add a Functionality (.papers/4284.pdf)

Co-authors: PRIKRYL Jan, SOPHA Hanna, HROMADKO Ludek, KRBAL Milos

A24 FREUNBERGER Stefan

Graz University of Technology, Institute for Chemistry and Technology of Materials, Graz, Austria, EU

Post Li-Ion Batteries: Materials and Mechanistic Aspects (.papers/4166.pdf) - INVITED LECTURE

A25 JIRÁSEK Vít

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Calculations of Nanocrystalline Diamond-covered Waveguides based on Amorphous Silicon (.papers/4349.pdf)

Co-authors: PRAJZLER Václav, REMEŠ Zdeněk

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Enhanced PEC Water Splitting Activity of Hematite Photoanodes deposited by Advanced Plasma-assisted Method

(./papers/4440.pdf)

Co-authors: SCHMUKI Patrik, HUBICKA Zdenek, MACHALA Libor, LIU Ning, KIRCHGEORG Robin, SEKORA Derek, ZBORIL Radek

A27 DEL CORRO Elena

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Experimental and Theoretical Comparative Study of Monolayer and Bulk MoS₂ under Compression (./papers/4219.pdf)

Co-authors: MORALES-GARCIA Ángel, PEÑA-ALVAREZ Miriam, KAVAN Ladislav, KALBAC Martin, FRANK Otakar

A28 PETRUF Kristián

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Specification of Emission Colour of Li-doped ZnO Colloids (./papers/4459.pdf)

Co-authors: PANÁK Ondrej, DRŽKOVÁ Markéta, NĚMEC Petr

A29 LEZHNEV Sergey

Rudny Industrial Institute, Temirtau, Kazakhstan

Research of Obtaining of Composite Materials based on Aluminum Matrix (./papers/4170.pdf)

Co-authors: NAIZABEKOV A., KUIS D., VOLOCHKO A., SHEGIDEVICH A., SVIDUNOVICH N., VOLOKITINA I., PANIN E.

Session B - Industrial and Environmental Applications of Nanomaterials

Chairmen:

Prof. RNDr. Radek ZBOŘIL, Ph.D.

Prof. Dr. Ing. Miroslav CERNÍK, CSc.

Prof. Ing. Miloslav PEKAŘ, CSc.

B1 GARDEA-TORRESDEY Jorge

University of Texas at El Paso, El Paso, United States

Environmental Implications of Nanotechnology: Locating Metal Oxide Nanoparticle Transformation in Plants Using Synchrotron Techniques (./papers/3591.pdf) - INVITED LECTURE

B2 ČERNÍK Miroslav

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Oxidic Shield and its Influence to Reactivity and Migration of Air-Stable Iron Nanoparticles (./papers/4286.pdf)

Co-authors: PEŠKOVÁ Kristýna, RIBAS David, PARMA Petr, FILIP Jan, ZBOŘIL Radek, MARTI Vicens, BENITO Jose Antonio

B3 VOJS Marian

Slovak University of Technology, Faculty of Electrical Engineering and Information Technology, Institute of Electronics and Photonics, Bratislava, Slovakia, EU

Electrochemical Degradation of Drugs in Waste Water by Boron Doped Diamond Electrode (./papers/4369.pdf)

Co-authors: MACKULÁK Tomáš, HANUSOVÁ Anna, BEHÚL Miroslav, PERUTKA Michal, MARTON Marian, GRABIČ Roman

B4 WANG Yan

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Study on the Acid Dye Removal by Polyamide 6 Nanofibrous Membrane (./papers/4355.pdf)

Co-authors: MAREK Jaromír, WIENER Jakub, ZHU Guocheng

B5 VELLORA THEKKAE PADIL Vinod

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Activated Carbon Nanofibres from Gum Kondagogu for Remediation of Toxic Metals (./papers/4521.pdf)

Co-authors: WACŁAWEK Stanisław & ČERNÍK Miroslav

B6 LEWINSKA Marzena

CS CLEAN SYSTEMS AG, Ismaning, Germany, EU

Exhaust Gas Treatment in the Production of Nanomaterials (./papers/4496.pdf) - COMMERCIAL PRESENTATION

B7 OBALOVÁ Lucie

VSb - Technical University of Ostrava, Ostrava, Czech Republic, EU

Modification of Cobalt Spinel Catalyst for Removal of N₂O from Nitric Acid Plant Tail Gases (./papers/4163.pdf) - INVITED LECTURE

B8 FRIESS Karel

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Tailor-made Nano-scale Additives for CO₂/CH₄ Gas Separation Mixed Matrix Membranes (./papers/4221.pdf)

Co-authors: LANČ Marek, PILNÁČEK Kryštof, ČÍHAL Petr, VOPIČKA Ondřej, RADOTÍNSKÝ Daniel, FÍLA Vlastimil, ZAMIDI Ahmad, ŠTĚPÁNEK František, ŠOLTYS Marek, SARVAŠOVÁ Nina, VU Nguyen Hong, SYSEL Petr, MALÝ David, VYŠOHLÍD Jan, IZÁK Pavel, KÁRÁSZOVÁ Magda, SEDLÁKOVÁ Zuzana

B9 BRAUN Adelina

Sigma-Aldrich Chemie GmbH, Taufkirchen, Germany, EU

Nanomaterials for different Applications at Sigma - Aldrich (./papers/4261.pdf) - COMMERCIAL PRESENTATION

B10 TOKARSKÝ Jonáš

VSB - Technical University of Ostrava, Ostrava, Czech Republic, EU

Photoactive Nanocomposites of ZnO/clay Type (./papers/4298.pdf)

Co-authors: MAMULOVÁ KUTLÁKOVÁ Kateřina

B11 ČERNÁK Mirko

ROPLASS Ltd., Brno, Czech Republic, EU

ROPLASS – Plasma Systems for Nanotechnology (./papers/4490.pdf) - COMMERCIAL PRESENTATION

B12 BELGACEM Ahmed

University of Science and Technology Houari Boumediene, Algiers, Algeria

Characterization and Analysis of an Activated Carbon Issued from the Cryogenic Grinding of Olive Stones and Application in the Adsorption of Basic Dye (./papers/4436.pdf)

Co-authors: HADOUN Hocine

Session C - Bionanotechnology, Nanomaterials in Medicine

Chairmen:

Assoc. Prof. Ing. Anton FOJTIK, CSc.

Prof. Jiri HOMOLA, CSc.

C1 NGUYEN T.K. Thanh

Univeristy College London, UCL Healthcare Biomagnetic and Nanomaterials Laboratories, London, United Kingdom, EU

Nanoparticles for Biomedical Applications (./papers/4372.pdf) - INVITED LECTURE

C2 VIANELLO Fabio

University of Padua, Padua, Italy, EU

Protein Corona for Proteome Fingerprinting (./papers/4460.pdf)

Co-authors: MAGRO Massimiliano, BARATELLA Davide, BONAIUTO Emanuela, COZZA Giorgio, MIOTTO Giovanni, ZBORIL Radek

C3 KARPÍŠKOVÁ Jana

Technical University of Liberec, Liberec, Czech Republic, EU

Polycaprolactone Micro-Nanofibrous Scaffolds Loaded with Amide-Amine Functionalised Carbon Particles and Their Effect on 3T3 Mouse Fibroblasts (./papers/4169.pdf)

Co-authors: PILAŘOVÁ Kateřina, JENČOVÁ Věra, STIBOR Ivan, CHVOJKA Jiří, MIKEŠ Petr

C4 SHABALINA Anastasiia

Tomsk State University, Tomsk, Russian Federation

ZnO Nanoparticles obtained by Pulsed Laser Ablation as an Antibacterial Agent (./papers/4292.pdf)

Co-authors: SVETLICHNYI Valery, LAPIN Ivan, GONCHAROVA Daria, NEMOYKINA Anna

C5 ŠPAŇHEL Lubomír

Technical University of Liberec, Liberec, Czech Republic, EU

Remarks to Future Design of Multifunctional Nanoparticles and Structure-tuned Materials (./papers/4493.pdf)

C6 BAČÁKOVÁ Lucie

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Human Osteoblast-like MG-63 Cells on Surface-modified Metallic and Polymeric Materials developed for Artificial Joint Replacements (./papers/4324.pdf)

Co-authors: ALI Chadi, ČEJKA Zdeněk, STAŇKOVÁ Lubica, VANDROVCOVÁ Marta, KOPOVÁ Ivana, PAŘÍZEK Martin

C7 SÁNCHEZ Samuel

Max Planck Institute for Intelligent Systems, Stuttgart, Germany, EU

Catalytic Nano-bots: Self-powered Nano-tools in Nano-bio-technology (./papers/4491.pdf) - INVITED LECTURE

C8 URBANOVÁ Veronika

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Graphene Derivatives Toward Advanced Electrochemical Biosensing (./papers/4471.pdf)

Co-authors: OTYEPKA Michal, ZBOŘIL Radek

C9 ŠPRINGER Tomáš

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Functionalized Nanoparticles for Highly Sensitive Optical Detection of Cancer Biomarkers in Blood Plasma Samples (./papers/4470.pdf)

Co-authors: ERMINI Maria Laura, CHADTOVÁ SONG Xue, HOMOLA Jiří

C10 ISAKOVA Alexandra

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The Ultrathin Polymer Films based on Polyaniline as SPR Sensitive Diagnostic Systems (./papers/4522.pdf)

Co-authors: OMELCHENKO Olga, GARINA Ekaterina, INDENBOM Andrey

C11 RANC Václav

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Magnetic Assisted Surface Enhanced Raman Spectroscopy (MA-SERS) as a Promising Tool in a Detection of Physiologically Active Compounds at Ultra-trace Concentration Levels (./papers/4476.pdf)

Co-authors: ZBOŘIL Radek

C12 NOVIKOV Andrei

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Detection of Bacterial Cells and Spores by SERS: Towards the Automated Rapid Analysis (./papers/4446.pdf)

Co-authors: KOPITSYN Dmitry S., BOCHKOVA Ekaterina A., TIUNOV Ivan A., KOTELEV Mikhail S.

C13 ETRYCH Tomáš

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Polymer Nanotherapeutics for Overcoming Drug Resistance during Cancer Treatment (./papers/4246.pdf) - INVITED LECTURE

Co-authors: BRAUNOVÁ Alena, CHYTIL Petr, ŠÍROVÁ Milada, HEINRICH Anne Kathrin, MÜLLER Thomas, MÄDER Karsten

C14 LAFFLEUR Flavia

University of Innsbruck, Innsbruck, Austria, EU

Nanoparticulate Systems for Intraoral Drug Delivery (./papers/4296.pdf)

Co-authors: BERNKOP-SCHNÜRCH Andreas

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Nanomaterials for Noninvasive Sublingual Vaccines (./papers/4525.pdf)

Co-authors: MAŠEK Josef, LUBASOVÁ Daniela, LUKÁČ Róbert, TURÁNEK-KNOTIGOVÁ Pavlína, KULICH Pavel, PLOCKOVÁ Jana, MAŠKOVÁ Eliška, PROCHÁZKA Lubomír, KOUDELKA Štěpán, BARTHELDYOVÁ Eliška, HUBATKA František, RAŠKA Milan, MILLER Andrew D.

C16 DI MARTINO Antonio

Center of Polymer System , Zlin, Czech Republic, EU

Star-shaped Nanoparticles based on Carboxy-terminated Polylactide and Chitosan for Controlled Release Applications

(./papers/4243.pdf)

C17 KNOTKOVÁ Kateřina

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Cinnamoyl-hyaluronan and Nanofibers prepared thereof (./papers/4230.pdf)

Co-authors: BOBULA Tomáš, KNOTEK Petr, VELEBNÝ Vladimír

Session D - Monitoring and Toxicity of Nanomaterials

Chairmen:

Ing. Jan TOPINKA, DrSc.

D1 DUSINSKA Maria

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Impact of Size and Surface Properties on Genotoxicity of Nanosilver (./papers/4359.pdf) - INVITED LECTURE

Co-authors: HUK Anna, IZAK-NAU Emilia, REIDY Bogumila, EL YAMANI Naouale

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Identifying the Lipid Wrap around Nanotubes (./papers/4422.pdf)

Co-authors: GARVAS Maja, URBANČIČ Iztok, TESTEN Anže, UMEK Polona, ŠKARABOT Miha, ARSOV Zoran, KOKLIČ Tilen, MUŠEVIČ Igor

D3 JASKÓOVÁ Zuzana

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Comparison of the Cytotoxicity and DNA Damage induced by CeO₂ and TiO₂ Nanoparticles in A549 Cell Line

(./papers/4453.pdf)

Co-authors: MALACHOVÁ Kateřina

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The Deposition of inhaled Manganese Nanoparticles in Mice Organs (./papers/4533.pdf)

Co-authors: KULICH Pavel, SERÝ Omar, DOCEKAL Bohumil, VECERA Zbynek, ZEMAN Tomas, MISEK Ivan

D5 RÖSSNER Pavel

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Toxic Effects of Organic Extracts Bound to Ultrafine Fraction of Size-segregated Aerosol in Acellular and Cellular Models

(./papers/4311.pdf)

Co-authors: LIBALOVÁ Helena, MILCOVÁ Alena, SCHMUCZEROVÁ Jana, PAVLÍKOVÁ Jitka, ŠTOLCPARTOVÁ Jitka, CIGANEK Miroslav, NEČA Jiří, PĚNČÍKOVÁ Kateřina, RÖSSNEROVÁ Andrea, AMBROŽ Antonín, BENDL Jan, HOVORKA Jan, MACHALA Miroslav, TOPINKA Jan

D6 PUZYŃ Tomasz

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Computational Modeling in Nanotoxicology (./papers/4373.pdf) - INVITED LECTURE

D7 BRZICOVÁ Táňa

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Cytotoxicity of TiO₂ Nanomaterials as a Function of their Physico-chemical Properties – Generation of Data for Computational Modelling (./papers/4328.pdf)

Co-authors: ŠTOLCPARTOVÁ Jitka, VRBOVÁ Kristýna, TOPINKA Jan

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Modeling the Toxicity of Metal Nanomaterials by the Means of Relational Machine Learning (./papers/4336.pdf)

Co-authors: KLÉMA Jiří, TOPINKA Jan

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QSPR Modelling for Predicting Toxicity of Nanomaterials (.papers/4206.pdf)

Co-authors: PEIJNENBURG Willie, KOPERNYK Iryna, ABRAMENKO Natalia, METELYTSIA Larysa

D10 MAT AZMI Intan Diana

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Modulatory Effect of Human Plasma on Nanostructural and Morphological Features of Liquid Crystalline Nanocarriers (.papers/4257.pdf)

Co-authors: JESPER Østergaard, STEFAN Stürup, BENTE Gammelgaard, SEYED MOEIN Moghimi, ARTO Urtti, ANAN Yaghmur

D11 DANIHELKA Pavel

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NANoREG Highlights: Current Achievements and Further Challenges in Risk Assessment and Risk Management of Manufactured Nanomaterials (.papers/4366.pdf)

Co-authors: SIKOROVÁ Lucie, TOPINKA Jan, LACH Karel

Session E - Advanced Methods of Preparation and Characterization of Nanomaterials

Chairmen:

Ing. Pavel JELÍNEK, Ph.D.

Mgr. Petr KLAPETEK, Ph.D.

E1 GIESSIBL Franz Josef

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Frontiers of Atomic Force Microscopy (.papers/4182.pdf) - INVITED LECTURE

E2 SUN Yu

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Identification of Metalloporphyrin-containing Coordination Polymer Particles by Surface-enhanced Raman Scattering through Surface Metallization (.papers/4297.pdf)

Co-authors: CARAVELLA Alessio

E3 KLAPETEK Petr

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Scanning Thermal Microscopy: from Nanometers to Millimeters (.papers/4427.pdf)

Co-authors: VALTR Miroslav, ŠPERKA Jiří, HORTVÍK Václav, MARTINEK Jan

E4 KRENTÍK Rudolf

Carl Zeiss spol. s r.o., Prague, Czech Republic, EU

Extending Synchrotron X-ray Microscopy to the Laboratory - Correlative Imaging Technique for Industrial and Environmental Application (.papers/4171.pdf) - COMMERCIAL PRESENTATION

E5 ZYBIN Alexander

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Surface Plasmon Microscopy as a Tool for Measurements of Nanoparticle Concentrations and Investigation of Binding Processes (.papers/4389.pdf)

Co-authors: KUZMICHEV Alexey, SKOLNIK Julija

E6 NOVOTNÝ Dušan

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Highest Resolution Imaging in Bio-AFM (.papers/4499.pdf) - COMMERCIAL PRESENTATION

E7 JIRSÁK Jan

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Molecular Simulation of Electrospinning (.papers/4233.pdf)

Co-authors: MOUČKA Filip, NEZBEDA Ivo

E8 FERRANDO Riccardo

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Core-shell and Janus Structures in Nanoalloys (./papers/4326.pdf) - INVITED LECTURE

E9 BENDOVA Maria

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Formation of TiO₂-based Columnlike Nanostructured Anodic Films on Pure and Doped Titanium Layers (./papers/4362.pdf)

Co-authors: KOLAR Jakub, HUBÁLEK Jaromír, MOZALEV Alexander

E10 KOLÁŘ Jakub

Brno University of Technology, CEITEC - Central European Institute of Technology, Brno, Czech Republic, EU

Effect of the Aluminium Surface Morphology on the Barrier Type Anodic Film Growth (./papers/4442.pdf)

Co-authors: SVATOŠ Vojtěch, HUBÁLEK Jaromír, MOZALEV Alexander

E11 KÁŇA Tomáš

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The Surface Stress and Phase Diagrams of Nanoalloys designed for Lead Free Solders (./papers/4198.pdf)

Co-authors: KROUPA Aleš, BURŠÍK Jiří, ZEMANOVÁ Adéla, ŠOB Mojmir

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Synthesis of Gold Nanoparticles via Chemical Reduction Method (./papers/4231.pdf)

Co-authors: FRIEDRICH Bernd, XIE Zhaowan

E13 ARTEMENKO Anna

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In Situ XPS Characterization of Diamond Films after Ar⁺ Cluster Ion Beam Sputtering (./papers/4276.pdf)

Co-authors: BABCHENKO Oleg, KOZAK Halyna, UKRAINTSEV Egor, IZAK Tibor, ROMANYUK Olexander, KROMKA Alexander

E14 PRAUS Petr

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Contribution to Synthesis of Zinc Oxide Nanoparticles by UV Irradiation-assisted Precipitation (./papers/4339.pdf)

Co-authors: TOKARSKÝ Jonáš, SVOBODA Ladislav

Workshop

W1 NOWAK Andreas

Leica Mikrosysteme Vertrieb GmbH – DSA, Wien, Austria, EU

High-quality Surface Preparation of Material Samples using a Combination of Mechanical and Ion Beam Milling Methods

(./papers/4320.pdf) - COMMERCIAL PRESENTATION

W2 NOVOTNÝ Dušan

Measurement Technic Moravia Ltd., Zastavka, Czech Republic, EU

BioScope Resolve - Highest Resolution Bio-AFM (./papers/4556.pdf) - COMMERCIAL PRESENTATION

W3 HOLÁŇ Jakub

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AFM and Electrochemistry (./papers/4557.pdf) - COMMERCIAL PRESENTATION

Poster Session A

Chairmen:

Prof. Ing. Eduard HULICIUS, CSc.

RNDr. Ing. Martin KALBÁČ, Ph.D.

Ing. Oldřich SCHNEEWEISS, DrSc.

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Geopolymer Nanocomposites (.papers/4354.pdf) - POSTER

Co-authors: KOVAČIČ Vladimír

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Polypropylene/graphite Composites and their Thermal Stability (.papers/4340.pdf) - POSTER

Co-authors: TOKARSKÝ Jonáš, PEIKERTOVÁ Pavlína, MAMULOVÁ KUTLÁKOVÁ Kateřina

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Magnetic Nanocomposites – Applications in benign Organic Transformations (.papers/4494.pdf) - POSTER

Co-authors: GAWANDE Manoj B., VARMA Rajender S., ZBOŘIL Radek

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Polymer Composite Nanofibers (.papers/4274.pdf) - POSTER

Co-authors: KUŽELOVÁ-KOŠTÁKOVÁ Eva, NEVYHOŠTĚNÝ Stanislav, HAVLÍČEK Karel

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Nanomechanical Testing of a-C:N Nanolayer prepared by Ion Beam Assisted Deposition on Ti6Al4V Alloy (.papers/4322.pdf) - POSTER

Co-authors: ŠEPITKA Josef, HORAŽDOVSKÝ Tomáš, JIRKA Ivan, GREGORA Ivan, NĚMEC Michal

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Study of Monolayers of Pt Nanoparticles stabilized by Oleylamine prepared by Dipcoating (.papers/4299.pdf) - POSTER

Co-authors: YATSKIV Roman, GRYM Jan, HAMPLOVÁ Marie

PA7 JAŠEK Ondřej

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Growth of Silicon Nanowires by Thermal Annealing of Thick Gold Catalytic Layer on Silicon Substrate under different Atmospheres (.papers/4179.pdf) - POSTER

Co-authors: ŠPERKA Jiří, ZAJÍČKOVÁ Lenka, HAVEL Václav

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Boron Doped Diamond Thin Films on the Structured Silicon Substrates (.papers/4365.pdf) - POSTER

Co-authors: VOJS Marian, MICHNIAK Pavol, MARTON Marián, REDHAMMER Robert, WANG Dong, SCHAAF Peter, IŽÁK Tibor

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Heterojunction based on Boron Doped Diamond and ZnO Thin Films (.papers/4342.pdf) - POSTER

Co-authors: MIKOLÁŠEK Miroslav, VOJS Marian, KOVÁČOVÁ Soňa, NOVOTNÝ Ivan, KOZAK Halyna, IŽÁK Tibor, VARGA Marián, ARTEMENKO Anna, BRUNCKO Jaroslav, KROMKA Alexander

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Influence of Underlayer on Crystallography and Roughness of Aluminum Nitride Thin Film Reactively Sputtered by Ion-Beam Kaufman Source (.papers/4535.pdf) - POSTER

Co-authors: SVATOŠ Vojtěch, PRÁŠEK Jan, HUBÁLEK Jaromír

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Characterisation of Surface and Bulk Properties of Polymer-like Thin Films prepared using PECVD on Various Substrates

(./papers/4536.pdf) - POSTER

Co-authors: BURŠÍKOVÁ Vilma

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Hydrogen-terminated Diamond Surface as Gas Sensing Layer Working at Room Temperature (./papers/4530.pdf) - POSTER

Co-authors: KULHA Pavel, BABCHENKO Oleg, KROMKA Alexander

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Temperature Dependent Photoluminescence Measurements of Si-V Colour Centres fabricated in Diamond Thin Films

(./papers/4375.pdf) - POSTER

Co-authors: IŽÁK Tibor, KROMKA Alexander, POTŮČEK Zdeněk, BRYKNAR Zdeněk, POTOCKÝ Štěpán

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Study of Mechanical Properties of Nanostructured Polymer Coatings prepared using Plasma Enhanced Chemical Vapor

Deposition (./papers/4566.pdf) - POSTER

Co-authors: BURŠÍKOVÁ Vilma, PEŘINA Vratislav

PA15 SVATOŠ Vojtěch

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Novel Effective Simulation Approach for Study of Carbon Nanotube Mechanical Properties Effective Simulation Approach for Study of Carbon Nanotube Mechanical Properties (./papers/4545.pdf) - POSTER

Co-authors: NEUŽIL Pavel, HRSTKA Miroslav, HUBÁLEK Jaromír

PA16 KULHÁNKOVÁ Lenka

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Layered Silicate as a Matrix for Graphene (./papers/4193.pdf) - POSTER

Co-authors: TOKARSKÝ Jonáš, ČAPKOVÁ Pavla, MATĚJKA Vlastimil, PEIKERTO VÁ Pavlína, NEUWIRTHOVÁ Lucie, BEŇO Jaroslav, STÝSKALA Vítězslav

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A Comparison of the Catalytic Efficiency of Natural and Synthetic Montmorillonite for the Growth of Carbon Nanotubes

(./papers/4456.pdf) - POSTER

Co-authors: JESENÁK Karol, KADLEČÍKOVÁ Magdaléna, KOLMAČKA Michal, BREZA Juraj

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The Application of the Scanning Spreading Resistance Microscopy for the Measurement of the Surface Conductivity of

Polypropylene / Graphite Composites (./papers/4216.pdf) - POSTER

Co-authors: PLAČEK Tomáš, TOKARSKÝ Jonáš

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Mechanical Properties of Acrylonitrile Butadiene Styrene Thermoplastic Polymer Matrix with Carbon Nanotubes

(./papers/4234.pdf) - POSTER

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Wrinkles in Graphene (./papers/4227.pdf) - POSTER

Co-authors: DEL CORRO Elena, KAVAN Ladislav, KALBÁČ Martin, FRANK Otakar

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Thermodynamics of Fullerene Nanostructures (./papers/4289.pdf) - POSTER

Co-authors: SMIRNOVA Natalia

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The Sensing Element for Organic Vapors Detection on the base of Styrene-isoprene-styrene (SIS) Block Copolymer / Carbon Nanotubes on the Interdigitate Electrode (./papers/4295.pdf) - POSTER

Co-authors: SLOBODIAN Petr, SPITALSKY Zdenko, MATYAS Jiri

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The Adsorption of Halogen and Hydrogen Atoms on Graphene: the Nature of Bond and Stability (./papers/4370.pdf) - POSTER

Co-authors: KARLICKY Frantisek

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Towards the Interaction between Single-molecule Magnets and modified Graphene (./papers/4434.pdf) - POSTER

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Electro-mechanical Transducer based on Carbon Nanotube Network/Polystyrene Laminate for Deformation Detection (./papers/4374.pdf) - POSTER

Co-authors: OLEJNIK Robert, MATYAS Jiri

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Preparation of Materials by Simultaneous Oxidation of Graphite and Fullerene C60 (./papers/4537.pdf) - POSTER

Co-authors: KLOUDA Karel, WEISHEITLOVÁ Markéta, BRABENCOVÁ Eliška

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Analysis of Carbon Nanowalls prepared by Hot Filament Chemical Vapor Deposition (./papers/4526.pdf) - POSTER

PA28 YATSKIV Roman

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Influence of H2O2 Treatment on Morphological and Photoluminescence Properties of Hydrothermally Grown ZnO Nanorods (./papers/4237.pdf) - POSTER

Co-authors: GRYM Jan, HAMPLOVA Marie

PA29 HLOSTA Jakub

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Effect of SiO2 Nanoparticles on the Mechanical/Physical Properties of SiO2 Microparticles Mixtures (./papers/4210.pdf) - POSTER

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Round Diamond Nanoparticles (./papers/4282.pdf) - POSTER

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Polymer-based Nucleation for Diamond CVD Growth (./papers/4341.pdf) - POSTER

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PA32 KOŽÁKOVÁ Zuzana

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Tuning the Properties of Iron Oxalate Precursor for Elongated Magnetic Particles (./papers/4438.pdf) - POSTER

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Fe Nano-clusters in Rare Earth Matrix (./papers/4228.pdf) - POSTER

Co-authors: PASSAMANI E.C., BAGGIO-SAITOVITCH E.M., LITTERST F.J.

PA34 HILŠER Ondřej

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Study of Mechanical Properties of Steel and Selected Types of Non-ferrous Alloys after Application of the DRECE Process (./papers/4255.pdf) - POSTER

Co-authors: SALAJKA Michal, RUSZ Stanislav

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Calculation of Ag-Sn Phase Diagram Including the Size Effect (./papers/4393.pdf) - POSTER

Co-authors: BURŠÍK Jiří, SOPOUŠEK Jiří, VŘEŠTÁL Jan, BROŽ Pavel

PA36 HORÁKOVÁ Petra

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Benzofuran End-capped Diketopyrrolopyrroles as a Semiconductive Materials: Synthesis, Spectral and Electrochemical Properties (./papers/4240.pdf) - POSTER

Co-authors: DOKLÁDALOVÁ Lenka, KUBÁČ Lubomir

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Diamond coated AlGaIn/GaN HEMTs - Study on Gate Electrode and Passivation Layer (./papers/4236.pdf) - POSTER

Co-authors: VANKO Gabriel, BABCHENKO Oleg, VOJS Marián, KROMKA Alexander

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Influence of Non-adherent Yeast Cells on Electrical Characteristics of Diamond-based Field-effect Transistors (./papers/4435.pdf) - POSTER

Co-authors: CIFRA Michal, KULHA Pavel, IŽÁK tibor, REZEK Bohuslav, KROMKA Alexander

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Microwave Assisted Solvothermal Synthesis of Cu₂SnS₃ (./papers/4466.pdf) - POSTER

Co-authors: MASAR Milan, KOŽÁKOVÁ Zuzana, URBÁNEK Pavel, KUŘITKA Ivo

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Simulation of Electron Transport in Helicenes (./papers/4475.pdf) - POSTER

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Composition Induced Changes in Optical Response of Ti(1-x)SixO₂ from First Principles Calculations (./papers/4478.pdf) - POSTER

Co-authors: HOLEC David, FRANTA Daniel, KEDROŇOVÁ Eva, ELISABETH Stéphane, ELIÁŠ Marek, GOULLET Antoine, ZAJÍČKOVÁ Lenka

Poster Session B

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Prof. RNDr. Radek ZBORIL, Ph.D.

Prof. Dr. Ing. Miroslav CERNIK, CSc.

Prof. Ing. Miloslav PEKAŘ, CSc.

PB1 BENESOVA Pavla

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Polyhydroxybutyrate Micro- and Nanofibers as Biodegradable Material for Water Decontamination (.papers/4519.pdf) - POSTER

Co-authors: KUNDRAT Vojtech, MAROVA Ivana, MATOUSKOVA Petra, OBRUCA Stanislav

PB2 KRATOCHVÍLOVÁ Romana

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Rheological Approach for Agricultural Hydrogels (.papers/4287.pdf) - POSTER

Co-authors: KLUČÁKOVÁ Martina, SEDLÁČEK Petr, SMILEK Jiří, KRÁČALÍK Milan

PB3 DUTKO Ondřej

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Multi-wall Carbon Nanotubes as Sorbents for Removal of Ibuprofen and Diclofenac from Aqueous Solutions (.papers/4348.pdf) - POSTER

Co-authors: CHOVANEC Ondřej, MIKESKA Marcel, PLACHÁ Daniela

PB4 BRYNYCH Vojtěch

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Sorption Properties of Graphen Oxide and Styrene Composites for Sr-85 and Cs-137 (.papers/4353.pdf) - POSTER

Co-authors: POSPĚCHOVÁ Jana, KOLÁŘOVÁ Markéta, TOLASZ Jakub, ŠTENGL Václav

PB5 DOLINA Jan

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Membrane Surface Modification by Nanosilver for Biofouling Restriction (.papers/4520.pdf) - POSTER

Co-authors: DLASK Ondřej, LEDERER Tomáš, DVOŘÁK Lukáš

PB6 DATTA Kasibhatta Josena

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Micro-Mesoporous Iron Oxides with Record Efficiency for Decomposition of Hydrogen Peroxide: Morphology Driven Catalysis for Degradation of Organic Contaminants (.papers/4467.pdf) - POSTER

Co-authors: DATTA K. J., GAWANDE M. B., DATTA K. K. R., RANC V., VARMA R. S., ASEFA T., ZOPPELLARO G., ZBORIL R.

PB7 BILEK Petr

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Testing of a Nanofibrous Textile by Submicron Monodisperse Particles in a Laser Sheet (.papers/4168.pdf) - POSTER

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Influence of Doping of SiO₂-Cd₂SiO₄@CdS composite by Co²⁺ and Ni²⁺ Ions on its Photocatalytic Activity (.papers/4306.pdf) - POSTER

Co-authors: BIRUKOV Aleksandr, SVETLICHNIY Valeriy

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Size-selective Contrasting of Surface Defects using Photoluminescent Metal Nanoparticles (.papers/4331.pdf) - POSTER

Co-authors: KOTELEV Mikhail, KOPITSYN Dmitry, NOVIKOV Andrei

PB10 SOLNÝ Tomáš

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Preparation and TiO₂ Coating of Nanosized Magnetic Particles (.papers/4303.pdf) - POSTER

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Development of Device for Parallel Structured Nanofibers Yarns Production (./papers/4345.pdf) - POSTER

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A New Gas Phase Photocatalytic Reactor for CO₂ Conversion: Optimal Photoreduction Conditions with P25 Photocatalyst (./papers/4473.pdf) - POSTER

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Catalytic Activity of Cobalt impregnated on Ordered Mesoporous Silica Materials in N₂O Decomposition (./papers/4474.pdf) - POSTER

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Synthesis and Characterization of Fly Ash/TiO₂ Photocatalytic Nanocomposites (./papers/4253.pdf) - POSTER

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Tuning the Microstructure of Hydrogenated TiO₂ for Energy Storage and Conversion (./papers/4229.pdf) - POSTER

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Influence of Sintering Conditions on Resistance of Metallization for Silicon Solar Cells (./papers/4249.pdf) - POSTER

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Polymeric Proton Composite of Microcrystalline Cellulose functionalized by Imidazole Molecules: Features of Electrical Conduction (./papers/4268.pdf) - POSTER

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Electrical Performance of InAs/AlSb/GaSb Superlattice Photodetector (./papers/4495.pdf) - POSTER

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PB19 PŘIKRYLOVÁ Kateřina

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Self-organized TiO₂ Nanotube Arrays and the Mechanism of Tube Growth (./papers/4465.pdf) - POSTER

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Optimization of Self-organized Growth of Nanoporous Anodic Alumina Templates for Capacitor Application (./papers/4352.pdf) - POSTER

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Wire Spinner for Coaxial Electrospinning (./papers/4307.pdf) - POSTER

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Increased Production of TiO₂ Nanofibres for Use in Advanced Applications (./papers/4208.pdf) - POSTER

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Biocidal Efficiency on Consortium Algae and Bacteria of Nanofiber Textiles doped by Biocide Substance (./papers/4280.pdf) - POSTER

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Nanosized Polymeric Fibres for Solid-phase Microextraction Sorbents (./papers/4480.pdf) - POSTER

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Initial Study of Structure of Nanofiber Textiles and the Creation of its Model (./papers/4314.pdf) - POSTER

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Atmospheric Pressure Plasma Treatment of Polypropylene Non-woven Textiles for Attachment of Poly(L-lactide) Nanoparticles (./papers/4572.pdf) - POSTER

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Inorganic Electrospun TiO₂ Nanofibers used for Antibacterial Polymer Surfaces (./papers/4315.pdf) - POSTER

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Modeling of Nanofibers Interaction with the Environment (./papers/4278.pdf) - POSTER

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Verification of the Mathematical model of the Rod Electrode in the Electrospinning Process (./papers/4327.pdf) - POSTER

Co-authors: VALTERA Jan, SOUKUPOVÁ Julie, VYSLOUŽILOVÁ Lucie, SKŘIVÁNEK Josef, ŽABKA Petr, BERAN Jaroslav, LUKÁŠ David

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Nanofibers with Magnetic Properties (./papers/4244.pdf) - POSTER

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Mechanically Treated Vermiculite Particles for the Used in the Chemical Industry (./papers/4294.pdf) - POSTER

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Development of PE/PCL Double Layer Films for Food Packaging with Aluminium Oxide and Zinc Oxide Nanoparticles
(./papers/4388.pdf) - POSTER

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Preparation of Periclase-magnesium Aluminate Spinel Ceramics from Raw Amorphous Magnesite and Aluminum Oxide Nanopowders (./papers/4477.pdf) - POSTER

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Plasma Surface Activation of High Density Polyethylene at Atmospheric Pressure (./papers/4452.pdf) - POSTER

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Wettability Enhancement of Polymeric and Glass Micro Fiber Reinforcement by Plasma Treatment (./papers/4376.pdf) - POSTER

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Improvement of Glass Wettability using Diffuse Coplanar Surface Barrier Discharge and Gliding Arc Considering Aging Effect (./papers/4546.pdf) - POSTER

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A Luminescence Study of Plasma Treated Alumina Powders (./papers/4538.pdf) - POSTER

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Thermal Treatment of Organovermiculites used in Sorption Process (./papers/4347.pdf) - POSTER

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Impact of Natural Nanoadditives SiO₂ or TiO₂ on Machining Process Fluids Qualities and Bactericidal Properties (./papers/4290.pdf) - POSTER

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Silver Inhibition Effect of Nanoparticles on Specific Mould Group Growth (./papers/4279.pdf) - POSTER

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Characterization of Hydrogels for Diffusion Experiments (./papers/4364.pdf) - POSTER

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Specific Permeability of Nanoporous Alumina Membranes studied by Diffusion Cell Technique (./papers/4202.pdf) - POSTER

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Study of Nanoporous Alumina Membranes by Electrochemical Method (./papers/4543.pdf) - POSTER

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Extraction of Cellulose Nanocrystals as a Potential Reinforcing Material for Poly(lactic Acid) Biocomposites (./papers/4235.pdf) - POSTER

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The Impregnation Emulsion containing Nanoparticles (TiO₂, SiO₂ and ZrO₂) reducing Wear and Improving the Hydrophobic Properties of Various Surfaces (./papers/4269.pdf) - POSTER

Co-authors: BORŮVKOVÁ Karolína, BAKALOVÁ Totka, KOVAČÍČ Vladimír, LOUDA Petr

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Alkyl Chain Modified Gold Nanoparticles for Catalysis (./papers/4419.pdf) - POSTER

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Multiband Antenna made of a Flexible Polymer Substrate printed with Silver Nanoparticles using Inkjet Print Technology - a Feasibility Study (./papers/4196.pdf) - POSTER

Co-authors: OLEJNÍK Robert, SLOBODIAN Petr, MÜNSTER Lukáš, KRČMÁŘ Petr, STEININGER Andreas

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Physico-mechanical Properties of Epoxy Resin filled with Rice Husk Particles (./papers/4195.pdf) - POSTER

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Rare Earth Elements Oxides Nanoparticles for Ionizing Radiation Attenuation (./papers/4263.pdf) - POSTER

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Preparation and Stability of Cosmetic Emulsions Enriched by Liposome Particles with Natural UV Filters (./papers/4532.pdf) - POSTER

Co-authors: MATOUŠKOVÁ Petra, PAVELKOVÁ Renata, MÁROVÁ Ivana

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Antimicrobial Modification of Packaging Materials (./papers/4399.pdf) - POSTER

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Effect of Cross rolling on the Microstructure of Steel (./papers/4180.pdf) - POSTER

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Bioactive Coating Effect on Degradation Kinetics of Silica Nanofibres (./papers/4487.pdf) - POSTER

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Study of Nanoparticles formed by Cationic Micelles and Hyaluronan (./papers/4232.pdf) - POSTER

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Fluorescence Study of Microviscosity of Hyaluronan Hydrogels containing Hydrophobic Nanodomains during Fourteen Days of Ageing (./papers/4238.pdf) - POSTER

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Inorganic Silica Nanofibers in a Role of Bioactive Compound Carrier (./papers/4485.pdf) - POSTER

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Study of Silica-based Electrospun Nanofibers as a Scaffold for Human Bone Marrow Stem Cells (./papers/4483.pdf) - POSTER

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Functionalisation of Polyamide Nanofibres by Tannin from Oak Bark Extract and Testing of its pH Dependent Stability (./papers/4181.pdf) - POSTER

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Hybrid Silica Nanofibers with Ag Ions for Biomedical Applications (./papers/4455.pdf) - POSTER

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Testing of Collagenase Covalently linked to Chitosan Nanofibers for Biomedical Applications (./papers/4544.pdf) - POSTER

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Iron Oxide-chromate Core-shell Nanostructure for the Electrochemical Biosensing of Polyamines in Liver Cancer Tissues (./papers/4462.pdf) - POSTER

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Circuitry Network Modeling for Prediction of a NanoFET Sensor Behavior using Scaling-law Approach (./papers/4542.pdf) -
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Biogenic and Synthetic Amorphous Silica - Compare and Interaction with Bacterial Systems (./papers/4204.pdf) - POSTER

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Biocompatible and Bactericidal Coatings on Titanium based Implant Materials by using of PCO and APCVD (./papers/4391.pdf) -
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Preparation of Smooth Polyethylene and Polyethylene / Organo-vermiculite Surface (./papers/4266.pdf) - POSTER

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Growth and Differentiation of Human Osteoblast-like Cells on Ti 6Al 4V Alloy modified with Anodization (./papers/4265.pdf) -
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Growth of Human Adipose-Derived Stem Cells on Ti-6Al-4V Alloy with Various Surface Modifications (./papers/4258.pdf) -
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Detection of Proteins by SPRI Method (./papers/4211.pdf) - POSTER

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On-chip ELISA on Magnetic particles: Isolation and Detection of Specific Antibodies from Serum (./papers/4383.pdf) - POSTER

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The Adsorption of Biomolecules on Graphene and Fluorinated Graphenes (./papers/4344.pdf) - POSTER

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Clay Minerals as Host Matrices for different Antimicrobial Agents: Theoretical Study (./papers/4325.pdf) - POSTER

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Growth of Escherichia Coli on Nanocrystalline Diamond Films (./papers/4318.pdf) - POSTER

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Barrier Effect of DLC Thin Films for Potential Application in Biomedicine (./papers/4281.pdf) - POSTER

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Preparation of Submicron Particles and Nanoparticles of Caffeine using Supercritical Fluid (./papers/4264.pdf) - POSTER

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Nanostructured Surfaces of Solid Substrates for Bioapplications (./papers/4217.pdf) - POSTER

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Magnetite-gold Nanoparticles: Synthesis, Physical-chemical Investigation and Biomedical Application (./papers/4215.pdf) - POSTER

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Cell Adhesion and Proliferation on Amine Functionalized Carbon Nanoparticles Grafted Biopolymer (./papers/4367.pdf) - POSTER

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Characterisation of Magnetic Particles - DNA Interaction for Immobilisation of Viruses and their Subsequent Identification by Zeta Potential and Particle Size Analyses (./papers/4408.pdf) - POSTER

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Synthesis and Characterization of Magnetite Nanoparticles functionalized with Carboxyl and Amino Acids for Biomedical Applications (./papers/4157.pdf) - POSTER

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Study of the Antibacterial Activity of Composite Stevedite/ZnO (./papers/4252.pdf) - POSTER

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Antimicrobial Hybrid Nanolayers prepared by Sol-gel Method (./papers/4454.pdf) - POSTER

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AFM Imaging and Force-distance Curves Analysis of Single Stranded DNA-binding (SSB) Protein Complex and Comparison of kinetic with Surface Plasmon Resonance as Reference Biosensor Method (./papers/4528.pdf) - POSTER

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Quo Vadis Biometrology (.papers/4437.pdf) - POSTER

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Liposomes as Delivery Systems for Complex Source of Caffeine and Vitamins for Food and Cosmetic Applications

(.papers/4517.pdf) - POSTER

Co-authors: HOOVÁ Julie, BOKROVÁ Jitka, BENEŠOVÁ Pavla, MÁROVÁ Ivana

Poster Session D

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Chamber Development for the Exposure Measurement of Nanoparticles released from Products including Nanomaterials

(.papers/4251.pdf) - POSTER

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Preparation and Antimicrobial Activity of Nucleobase-conjugated CdTe/ZnSe Core/shell Quantum Dots (.papers/4407.pdf) -

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How do Nanoparticles of TiO₂, SiO₂ and ZrO₂ Affect Microorganisms in Activated Sludge? (.papers/4458.pdf) - POSTER

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DNA based Tests of Quantum Dots Toxicity under UV Irradiation (.papers/4500.pdf) - POSTER

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Ecotoxicity test of zinc oxide nanoparticles performed in highly viscous environment (.papers/4529.pdf) - POSTER

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Migration and Fate of nZVI in the Groundwater Conditions (.papers/4313.pdf) - POSTER

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Analysis of Nanoparticles released from the Car Brakes (.papers/4441.pdf) - POSTER

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Comparison of the Selected Nanomaterials Usable during the Treatment and Purification of Water (./papers/4101.pdf) - POSTER

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Metal and Carbon-based Particles / Clusters in the Peripheral T - Cell Lymphoma in the Lungs (./papers/4272.pdf) - POSTER

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Carbon Nanomaterials Thermal Degradation: Potential Risk of Nanowaste Combustion (./papers/4301.pdf) - POSTER

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Suitability of Lyophilized Polymers based on CMC for Cell Proliferation (./papers/4190.pdf) - POSTER

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Selenium Nanoparticles and Evaluation of their Antimicrobial Activity on Bacterial Isolates obtained from Clinical Specimens (./papers/4403.pdf) - POSTER

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Synthesis and Characterization of Au-Ni Nanoparticles (./papers/4335.pdf) - POSTER

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Study of Surface Effects on Ag-Cu Nanoparticles by Knudsen Effusion Mass Spectrometry (./papers/4250.pdf) - POSTER

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Magnetic Properties and Interparticle Magnetic Interactions in Powder Samples of Magnetite and Magnesium Oxide Mixtures (./papers/4283.pdf) - POSTER

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Effect of Laser Irradiation on Kevlar Fabric Treated with Nanoporous Aerogel (./papers/4285.pdf) - POSTER

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Dependences of Thermodynamic Properties of Carbosilane Dendrimers from Composition and Structure (./papers/4337.pdf) - POSTER

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Detection of Polyaromatic Hydrocarbons by TLC-SERS Technique (./papers/4445.pdf) - POSTER

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Molecular Organization and Conformational Changes of Humic Acids in Dependence of their Concentration in Various Aqueous Solutions (./papers/4203.pdf) - POSTER

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Comparative Investigation of Nanoparticulate Pd produced by Microorganisms and Colloidal Synthesis (./papers/4479.pdf) - POSTER

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Thermodynamic Analysis of Cu(II) and Pb(II) Ion Binding to Humic Acids isolated from different Origins and Structural Characterization using FTIR and ¹³C NMR Spectroscopy (./papers/4291.pdf) - POSTER

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Quantum Dot-based Fluorosensor for Determination of Cu(II) and Pb(II) Ions (./papers/4539.pdf) - POSTER

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Towards Large Area High Resolution Raman Microscopy (./papers/4450.pdf) - POSTER

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Investigation of Nanodiamonds by Electron-positron Spectroscopy (./papers/4201.pdf) - POSTER

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Surface-enhanced Raman Spectroscopy Substrates based on Natural Ceramic Nanotubes (./papers/4343.pdf) - POSTER

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Numerical Correction of Topography Artifacts in Scanning Thermal Microscopy (./papers/4472.pdf) - POSTER

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Library for Smart Scanning Strategies in Scanning Probe Microscopy (./papers/4447.pdf) - POSTER

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High-speed Atomic Force Microscopy Simultaneous to Advanced Optical Microscopy (./papers/4381.pdf) - POSTER

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Molecular Dynamic Simulation of Thermal Conductivity of Nanomaterials (./papers/4433.pdf) - POSTER

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Nanomorphology and Thermal Conductivity of Commercial Silica Aerogels (./papers/4486.pdf)

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