
TUESDAY, SEPTEMBER 12, 2023

TUESDAY MORNING SESSIONS**ORAL SESSION #1A**
NANOMAGNETISM & MAGNETIC MATERIALS
(CONFERENCE HALL A – “LONDON I” & in ZOOM)

- 8:30 – 9:00 AM **Invited Talk 1 (Session Chair – Urbánek)**
Prof. Andrii Chumak, University of Vienna, Austria
Magnon Transport in YIG/GGG at Millikelvin Temperatures (ID #825)
- 9:00 – 9:30 AM **Invited Talk 2 (Session Chair – Urbánek)**
Dr. Michal Mruczkiewicz, Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia
 Michal Mruczkiewicz, Mateusz Zelent, Zhiwang Zhang, Johan Christensen, Tomas Scepka, Juraj Feilhauer / Unidirectional spin-wave edge modes in magnonic crystal (ID #529)
- 9:30 – 9:45 AM **Contributed Talk 1 (Session Chair – Urbánek)**
Sergei Krylov, Tetiana Kalmykova, Vladimír Cambel, Tomáš Ščepka / Nanostructures for Topological Magnonics (ID #565)
- 9:45 – 10:00 AM **Contributed Talk 2 (Session Chair – Urbánek)**
Oksana Yastrubchak, Nataliia Tataryn, Tadeusz Wosinski, Janusz Sadowski, Maciej Sawicki, Volodymyr Romanyuk, Sergii Mamykin, Lukasz Gluba, Olga Kondratenko / Investigation of Valence Band Dispersion in (Ga, Mn)(Bi, As) Epitaxial Nanolayers (ID #675)
- 10:00 – 10:15 AM **Contributed Talk 3 (Session Chair – Urbánek)**
Juraj Mnich, Martin Gmitra / Magnetic Properties of Two-Dimensional 1T-NiI₂ (ID #589)
- 10:15 – 10:30 AM **Contributed Talk 4 (Session Chair – Urbánek)**
Konstantin Bublikov, Milan Tapajna, Sergei Krylov, Dagmar Gregušová, Michal Kučera, Filip Gucmann, Michal Mruczkiewicz / Optically Controllable Magnonic Crystal Based on Ferrit-Semiconductor Bilayer (ID #537)
- 10:30 – 11:00 AM *Coffee break (Conference room “Rome”)*
- 11:00 – 11:30 AM **Invited Talk 3 (Session Chair – Mruczkiewicz)**
Dr. Michal Urbánek, CEITEC Nano Group, Czech Republic
 Ondřej Wojewoda, Martin Hrtoň, Meena Dhankhar, Jakub Krčma, Kristyna Davidkova, Jan Klíma, Jakub Holobrádek, Filip Ligmajer, Tomáš Šikola, Michal Urbánek / Phase-resolved Optical Characterization of Spin Waves (ID #635)

- 11:30 – Noon **Invited Talk 4 (Session Chair – Mruczkiewicz)**
Prof. Sorin Cotofana, *Delft University of Technology, The Netherlands*
Spin Wave Based Computing: Promises and Hurdles on the Road
(ID #899)
- Noon – 12:15 PM **Contributed Talk 5 (Session Chair – Mruczkiewicz)**
Maedeh Rassekh, Marko Milivojević, Martin Gmitra / Stochastic
Proximity Induced Spin Currents and Spin-Orbit Torques in Graphene on
1T-TaS₂ (ID #571)
- 12:15 – 12:30 PM **Contributed Talk 6 (Session Chair – Mruczkiewicz)**
Sergey Polevoy / Increasing of the Photon-Magnon Coupling Strength
in a System of Coupled Microwave Resonators with a Magnetic Sample
(ID #538) (*in Zoom*)
- 12:30 – 2:00 PM *Lunch break (at your own expense)*

TUESDAY AFTERNOON SESSIONS

ORAL SESSION #1B

NANOMAGNETISM & MAGNETIC MATERIALS

(CONFERENCE HALL A – “LONDON I” & in ZOOM)

- 2:00 – 2:30 PM **Invited Talk 5 (Session Chair – Stadler)**
Dr. Roman Khymyn, *University of Gothenburg, Sweden*
Roman Khymyn, Roman Ovcharov, Boris Ivanov, Johan Akerman /
Antiferromagnetic Self-Localized Structures Driven by Spin Current
(ID #657)
- 2:30 – 3:00 PM **Invited Talk 6 (Session Chair – Stadler)**
Prof. David Carroll, *Wake Forest University, USA*
David Carroll, Kamil Burak Ucer, Vojislav Krstic / Time Crystals Using
Topological States? (ID #832)
- 3:00 – 3:30 PM **Invited Talk 7 (Session Chair – Stadler)**
Prof. Goran Mihajlović, *San Jose Research Center, Western Digital
Corporation, United States*
Physical Mechanisms Affecting Performance of Perpendicular
STT MRAM Cells (ID #890) (*in Zoom*)
- 3:30 – 4:00 PM *Coffee break (Conference room “Rome”)*
- 4:00 – 4:30 PM **Invited Talk 8 (Session Chair – Prokopenko)**
Prof. Bethanie Stadler, *University of Minnesota Twin Cities, USA*
Roman Kolisnyk, Allison Harpel, Yicong Chen, Bethanie Stadler / Using
Magnetic Nanowires for Localized Heating (ID #840)

- 4:30 – 5:00 PM **Invited Talk 9 (Session Chair – Prokopenko)**
Prof. Atsufumi Hirohata, *University of York, United Kingdom*
 Yuan Ding, David C. Lloyd, Masaki Mizuguchi, Masaru Ikeda, Atsufumi Hirohata / Development of a Magnetic Sensor Using Co:MgO Antidots (ID #888)
- 5:00 – 5:15 PM **Contributed Talk 7 (Session Chair – Prokopenko)**
Jiandong Man, Jiamin Chen, Zhenhu Jin / Flexible Hair Tactile Array Based on Micro Magnetic Particles (ID #500)
- 5:15 – 5:30 PM **Contributed Talk 8 (Session Chair – Prokopenko)**
Yulan Chen, Karthik Srinivasan, Marcus Choates, Ludovico Cestarollo, Amal El-Ghazaly / Unraveling Interactions Between Magnetic Nanochains for Reconfigurable Soft Actuators (ID #847)
- 5:30 – 7:30 PM **Poster Session #1 (Conference room “Rome”)**

TUESDAY MORNING SESSIONS

ORAL SESSION #2A

NANOMATERIALS SYNTHESIS & SELF-ASSEMBLY (CONFERENCE HALL B – “LONDON II” & in ZOOM)

- 8:30 – 9:00 AM **Invited Talk 10 (Session Chair – Richter)**
Prof. Albano Cavaleiro, *University of Coimbra, Portugal*
 Sputtering as a Versatile Technique for the Production of Nanomaterials for Diverse Applications (ID #821)
- 9:00 – 9:30 AM **Invited Talk 11 (Session Chair – Richter)**
Prof. Viera Skákalová, *Institute of Electrical Engineering and CEMEA SAS, Slovakia*
 Viera Skákalová, Kimmo Mustonen, Peter Kotrusz, Christoph Hofer, Thuy An Bui, Peter Hutár, Marián Precner / Simple Chemical Approach to 2D Metal Iodides/Graphene Heterostructures and their Properties (ID #829)
- 9:30 – 10:00 AM **Invited Talk 12 (Session Chair – Richter)**
Dr. Kimmo Mustonen, *University of Vienna, Austria*
 Kimmo Mustonen, Christoph Hofer, Peter Kotrusz, Alexander Markevich, Martin Hulman, Clemens Mangler, Toma Susi, Timothy J. Pennycook, Jannik C. Meyer, Jani Kotakoski, Viera Skákalová
 New Approaches for New Materials: Exotic 2D Crystals from Table-Top Chemistry (ID #875)

- 10:00 – 10:15 PM **Contributed Talk 9 (Session Chair – Richter)**
Filip Zechel, Peter Hutár, Viliam Vretenár, Karol Végső, Peter Šiffalovič, Milan Sýkora / Green Colloidal Synthesis of MoS₂ Nanoplatelets (ID #647)
- 10:15 – 10:45 AM **Invited Talk 13 (Session Chair – Richter)**
Dr. Georg Duesberg, University of the Bundeswehr Munich, Germany
2D Material Based Sensors (ID #753) (in Zoom)
- 10:30 – 11:00 AM *Coffee break (Conference room “Rome”)*
- 11:00 – 11:30AM **Invited Talk 14 (Session Chair – Skakalova)**
Prof. Peter Šiffalovič, Institute of Physics, Slovak Academy of Sciences, Slovakia
Nada Mrkyvkova, Vladimir Held, Karol Vegso, Peter Nadazdy, Martin Ledinsky, Matej Jergel, Frank Schreiber, Peter Siffalovic / Development of Defects in the Growth of Lead-Halide Perovskite Films (ID #751)
- 11:30 – Noon **Invited Talk 15 (Session Chair – Skakalova)**
Prof. Maria Christine Richter, CY Cergy Paris University, France
Maria Christine Richter, Olivier Heckmann, Jan Minar, Jean-Michel Mariot, Johan Adell, Mats Leandersson, Janusz Sadowski, Jurgen Braun, Hubert Ebert, Jonathan Denlinger, Ivana Vobornik, Jun Fujii, Pavol Sutta, Gavin Bell, Martin Gmitra, Karol Hricovini / Surface Termination Dependent Topological States on InBi(001) (ID #765)
- Noon – 12:15PM **Contributed Talk 10 (Session Chair – Skakalova)**
Amin Farhadi, Gilles R. Bourret / Dewetting-Assisted Patterning: A Lithography-Free Route to Synthesize Black and Colored Silicon (ID #779)
- 12:15 – 12:30PM **Contributed Talk 11 (Session Chair – Skakalova)**
Vivek Chaudhary, Sri Sivakumar / Photodynamics of Temperature Tuned Dual Colour Emission in Mn-Doped ZnS-CdSe Janus Coupled Quantum Dot (ID #597)
- 12:30 – 12:45PM **Contributed Talk 12 (Session Chair – Skakalova)**
Divya Gupta, Sanjeev Aggarwal / Structural and Optical Properties of Nano-Phases in Ar⁺ Sputtered SiC Surfaces (ID #741) (in Zoom)
- 12:30 – 2:00PM *Lunch break (at your own expense)*

TUESDAY AFTERNOON SESSIONS

ORAL SESSION #2B**NANOMATERIALS SYNTHESIS & SELF-ASSEMBLY
(CONFERENCE HALL B – “LONDON II” & in ZOOM)**

- 2:00 – 2:30PM **Invited Talk 16 (Session Chair – Mustonen)**
Dr. Roman Kolisnyk, *University of Minnesota Twin Cities, United States*
Roman Kolisnyk, Bethanie Stadler, Morgen Smith, Placidus Amama,
Jeanne Riga / Magnetic nanowires as growth catalysts for carbon
nanotubes (ID #769)
- 2:30 – 3:00PM **Invited Talk 17 (Session Chair – Mustonen)**
Prof. Hidehito Asaoka, *Advanced Science Research Center, Japan*
Atomic Energy Agency, Japan
Uniaxial Stress-driven Reconstructed Si (110)-“16×2” Surfaces (ID #631)
- 3:00 – 3:30PM **Invited Talk 18 (Session Chair – Mustonen)**
Dr. Rui Xu, *Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany*
Rui Xu, Denys Makarov / Geometrically well-defined nanostructure
arrays replicated from designable anodic aluminum oxide templates for
optoelectronic application (ID #801)
- 3:30 – 3:45 PM **Contributed Talk 13 (Session Chair – Mustonen)**
Xoliswa Cingo, *Odwa Mapazi, Luthando Nyaba, Philiswa Nosizo*
Nomngongo / Fabrication and Application of Meso-Porous Activated
Carbon @ZSM-5 Composite Derived from Coal Gasification Slag and Fly
Ash for the Adsorptive Removal of Pharmaceuticals in Aqueous Media
(ID #595)
- 3:30 – 4:00PM *Coffee break (Conference room “Rome”)*
- 4:00 – 4:15PM **Contributed Talk 14 (Session Chair – Kolisnyk)**
Shaked Ashkenazi, **Iris Weitz** / Effect of Nanoconfining PLGA Shell on
the Self-Assembly of Indigo Carmine (ID #767)
- 4:15 – 4:30PM **Contributed Talk 15 (Session Chair – Kolisnyk)**
Katerina Lebedeva, *Anna Cherkashina, Tetyana Tykhomyrova, Victor*
Moiseev, Volodimir Lebedev, Andrij Masikevych / Researching of
biologically active polymeric hydrogel transdermal nanomaterials
modification by humic acid (ID #653) (in Zoom)

- 4:30 – 4:45PM **Contributed Talk 16 (Session Chair – Kolisnyk)**
Asma Tadj, Mokhtar Zerdali, Saad Hamzaoui / Morphological, Structural and Optical Changes of 2D ZnO Nanostructures Upon Addition of Sodium Nitrate (NaNO₃) (ID #615)
- 4:45 – 5:00PM **Contributed Talk 17 (Session Chair – Kolisnyk)**
Yuliia Shlapa, Veronika Sarnatskaya, Serhii Solopan, Bogdan Gerashchenko, Oleksii Sydorenko, Dmytro Klymchuk, Anatolii Belous / Fabrication of Nanocomposites Based on the Activated Carbon and CeO₂ Nanoparticles for Biomedical Application (ID #498) (in Zoom)
- 5:00 – 5:15PM **Contributed Talk 18 (Session Chair – Kolisnyk)**
Anatolii Belous, Ivan Lisovskyi, Pavlo Torchyniuk, Yuliia Shlapa / Synthesis of Functional Nanocomposites and Nanohybrids Based on the Nanoscale Oxide Materials (ID #497) (in Zoom)
- 5:15 – 5:30PM **Contributed Talk 19 (Session Chair – Kolisnyk)**
Serhii Kopylov, Volodimir Lebedev, Maksym Riabchenko, Anna Cherkashina, Denis Miroshnichenko, Oleksii Shestopalov, Alina Hrubnik / Polymer Inorganic Nanocomposites For Electromagnetic Radiation Absorption Using Potassium Titanates (ID #667) (in Zoom)
- 5:30 – 7:30PM **Poster Session #1 (Conference room “Rome”)**

TUESDAY MORNING SESSIONS

ORAL SESSION #3A

NANOBIOMEDICAL RESEARCH & APPLICATIONS (CONFERENCE HALL C – “LONDON III” & in ZOOM)

- 8:30 – 9:00AM **Invited Talk 20 (Session Chair – Celinski)**
Dr. Iaroslav Gnilitskyi, "NoviNano Lab" LLC, Ukraine
 Towards Femtosecond Laser-induced Periodic Surface Structures in Developing Functional Surface Properties (ID #873)
- 9:00 – 9:30AM **Invited Talk 21 (Session Chair – Celinski)**
Prof. Maksym Pogorielov, University of Latvia, Latvia
 Kateryna Diedkova, Alexander Pogrebnjak, Sergiy Kyrylenko, Pawel Zukowski, Yevheniia Husak, Wojciech Simka, Viktoriia Korniienko, Ivan Baginskiy, Veronika Zahorodna, Una Riekstina, Oleksiy Gogotsi, Yury Gogotsi, Maksym Pogorielov
 MXenes as a Promising Materials for Conductive Biomaterials Development (ID #906)

- 9:30 – 9:45AM **Contributed Talk 20 (Session Chair – Celinski)**
Yevheniia Husak, Anna Skoczylas, Natalia Waloszczyk, Maksym Pogorielov, Wojciech Simka / Impact of Silicates and Phosphates on The Properties of Anodized Magnesium Implants (ID #761)
- 9:45 – 10:00AM **Contributed Talk 21 (Session Chair – Celinski)**
Klaudia Kowalska, Viktoriia Paientko, Evgeny Demianenko, Ewa Skwarek / Synthesis and Analysis of Selected Physicochemical Properties of Clay/Hydroxyapatite/Clitoria Ternatea Composites with Doped SiO₂, TiO₂, ZnO₂ as an Additive to Cosmetics (ID #613)
- 10:00 – 10:15AM **Contributed Talk 22 (Session Chair – Celinski)**
Zulema Vargas Osorio, Andrés Da Silva Candal, Yolanda Piñeiro, José Rivas, Martin Michálek, Dušan Galusek / Injectable Theranostic Platforms Based on Amino-Functionalized Magnetic SBA-15 Nanorods for Neurological Diseases (ID #610)
- 10:15 – 10:45AM **Invited Talk 19 (Session Chair – Celinski)**
Prof. Açelya Yilmazer, Ankara University, Stem Cell Institute, Turkey
Maksym Strikha, Anna Morozovska / From Cancer Research to Antiviral Research: a Journey with 2D Materials (ID #820)
- 10:30 – 11:00AM *Coffee break (Conference room “Rome”)*
- 11:00 – 11:30AM **Invited Talk 22 (Session Chair – Pogorielov)**
Prof. Zbigniew Celinski, University of Colorado Colorado Springs, USA
Zbigniew Celinski, Josh Stoll, Yu Hao, Robert Camley, Dorota Lachowicz, Angelika Kmita, Marek Przybylski, Janusz Hankiewicz / Use of Magnetic Particles in MRI Thermometry (ID #813)
- 11:30 – Noon **Invited Talk 23 (Session Chair – Pogorielov)**
Dr. Svitlana Kopyl, University of Aveiro, Portugal
Development of Biocompatible Piezoelectric Thin Films: Towards a Wearable Sensor Devices (ID #480)
- Noon – 12:30PM **Invited Talk 24 (Session Chair – Pogorielov)**
Prof. Attila Bonyár, Budapest University of Technology and Economics, Hungary
Attila Bonyár, Tomáš Lednický, Rebeka Kovács, Shereen Zangana / Tightly Packed Gold Nanoparticle Ensembles for Plasmonic Sensing Applications (ID #872)

12:30 – 12:45PM **Contributed Talk 23 (Session Chair – Pogorielov)**
Iryna Ivasechko, Olga Klyuchivska, Volodymyr Vasylechko, Olga Vyviurska, Yaroslav Kalychak, Rostyslav Stoika / Effect of Clinoptilolite Doped with Cations of *d*- and *f*-Metals on Viability of Tumor Cells Depends on Density of Intercellular Contacts and Rate of their Growth (ID #485) (in Zoom)

12:30 – 2:00PM *Lunch break (at your own expense)*

TUESDAY AFTERNOON SESSIONS

ORAL SESSION #3B

NANOBIOMEDICAL RESEARCH & APPLICATIONS (CONFERENCE HALL C – “LONDON III” & in ZOOM)

- 2:00 – 2:30PM **Invited Talk 25 (Session Chair – Sulaieva)**
Prof. Natalia Beshchasna, *Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany*
 Nanostructured Materials and Surfaces for Biomedical Applications (ID #876)
- 2:30 – 3:00PM **Invited Talk 26 (Session Chair – Sulaieva)**
Dr. Agata Sotniczuk, *National Center of Nuclear Research, Poland*
 Exploring the Evolution of Nanometric Titanium Oxide Layers in Real-time During Immersion of Titanium Alloys in the Physiological Fluids (ID #885)
- 3:00 – 3:15PM **Contributed Talk 24 (Session Chair – Sulaieva)**
Andrzej Kudelski / Various Strategies for DNA Identification Using Surface Enhanced Raman Scattering (ID #471)
- 3:15 – 3:30PM **Contributed Talk 25 (Session Chair – Sulaieva)**
Vladyslav Seminko, Pavel Maksimchuk, Vladimir Klochkov, Yevhen Neuhodov, Svetlana Yefimova / RE³⁺-doped Ceria Nanoparticles with Spectroscopically Controlled ROS Scavenging Activity (ID #501) (in Zoom)
- 3:30 – 4:00PM *Coffee break (Conference room “Rome”)*
- 4:00 – 4:30PM **Invited Talk 27 (Session Chair – Sotniczuk)**
Prof. Martin Balog, *Institute of Materials and Machine Mechanics, Slovak Academy of Sciences, Slovakia*
 Martin Balog, Moara Marques de Castro, Jaroslav Capek, Peter Svec, Martina Takacova, Lucia Csaderova, Eva Sedlackova, Eliska Svastova, Andrea Skolakova, Drahomir Dvorsky, Jan Pinc, Vojtech Hybasek, Jiri

Kubasek, Peter Krizik, Jacek Skiba / Ultrafine-grained bioabsorbable Zn composite stabilized by nanometric ZnO dispersoids (ID #809)

4:30 – 4:45PM

Contributed Talk 26 (Session Chair – Sotniczuk)

Meng-Long Wang, Deng-Guang Yu, **Sim Wan Annie Bligh** / Side-by-Side Electrospun PCL-Ag NPs/CA-Lavender Oil Janus Nanobelt as Potential Wound Dressing (ID #805)

4:45 – 5:00PM

Contributed Talk 27 (Session Chair – Sotniczuk)

Anton Tkachenko, Anatolii Onishchenko, Volodymyr Yurievich Prokopiuk, Pavlo Virych, Nataliya kutsevol / Dextran-Graft-Polyacrylamide/Zinc Oxide Nanosystem does not Trigger Eryptosis (ID #731)

5:00 – 5:15PM

Contributed Talk 28 (Session Chair – Sotniczuk)

Volodymyr Prokopiuk, Anatolii Onishchenko, Nataliya kutsevol, Pavlo Virych, Anton Tkachenko / Cultured Fibroblasts-Based Assays Reveal Good Biocompatibility of Dextran-Graft-Polyacrylamide/Zinc Oxide Nanosystems (ID #732) (*in Zoom*)

5:15 – 5:30PM

Contributed Talk 29 (Session Chair – Sotniczuk)

Supriya Nambiar, Dilip G. Naik, Arun M. Isloor, Ethel Suman / Surface Characterisation and Anti Biofouling Properties of Polydopamine Based Zwitterion Nano-coatings on Titanium (ID #519) (*in Zoom*)

5:30 – 7:30PM

Poster Session #1 (Conference room “Rome”)