
WEDNESDAY MORNING SESSIONS

ORAL SESSION #1A

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

- 8:30 – 9:00AM **Invited Talk 28 (Session Chair – Salvador)**
Dr. Oleksandr Pylypovskyi, *Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany*
Nanomagnetism and Strain Effects in Magnetolectric Antiferromagnet Cr₂O₃ (ID #551) (in Zoom)
- 9:00 – 9:30AM **Invited Talk 29 (Session Chair – Salvador)**
Prof. Kostyantyn Gusliyenko, *University of the Basque Country, Spain*
Nutation Modes in the Gyrotropic Vortex Dynamics in Circular Magnetic Nanodots (ID #539)
- 9:30 – 10:00AM **Invited Talk 30 (Session Chair – Salvador)**
Dr. Oleksii Volkov, *Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany*
Local and Non-Local Effects in Curvilinear Micromagnetism (ID #510)
- 10:00 – 10:15AM **Contributed Talk 30 (Session Chair – Salvador)**
Yelyzaveta Borysenko, Denis Sheka, Kostiantyn Yershov, Juergen Fassbender, Jeroen van den Brink, Denys Makarov, Oleksandr Pylypovskyi / Curvilinear Antiferromagnetic Spin Chains: Interplay Between Geometry and External Magnetic Field (ID #598)
- 10:15 – 10:30AM **Contributed Talk 31 (Session Chair – Salvador)**
Svitlana Kondovych, Igor Lukyanchuk / Topological Chirality in the Absence of Antisymmetric Exchange (ID #852)
- 10:30 – 10:45AM **Contributed Talk 32 (Session Chair – Salvador)**
Jaroslav Tobik / Dynamical Symmetry Breaking in Magnetic Systems (ID #550)
- 10:30 – 11:00AM *Coffee break (Conference room “Rome”)*
- 11:00 – 11:30AM **Invited Talk 31 (Session Chair – Palotas)**
Dr. José A. Fernandez-Roldan, *Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany*
Chiral domain walls in cylindrical nanowires (ID #796)
- 11:30 – Noon **Invited Talk 32 (Session Chair – Palotas)**
Dr. Mauro Fanciulli, *CY Cergy Paris University, France*
Mauro Fanciulli, Matteo Pancaldi, Emanuele Pedersoli, Bernard Dieny, Giovanni De Ninno, Flavio Capotondi, Maurizio Sacchi, Thierry Ruchon / Magnetic Helicoidal Dichroism in Resonant Scattering with XUV Light Vortices (ID #750)
- Noon – 12:30PM **Invited Talk 33 (Session Chair – Palotas)**
Prof. Xiangrong Wang, *The Hong Kong University of Science and Technology, Hong Kong*
A Theory of Unusual Anisotropic Magnetoresistance in Bilayer Heterostructure (ID #824)
- 12:30 – 12:45PM **Contributed Talk 33 (Session Chair – Palotas)**
Holly Holder, Kilian Stenning, Xiaofei Xiao, Alex Vanstone, Jack Carter-Gartside, Oscar Kennedy, Rupert Oulton, Will Branford / All-Optical Magnetic Switching of Ferromagnetic Nano-islands with a Low-power, Continuous-wave Laser (ID #754)
- 12:30 – 2:00PM *Lunch break (at your own expense)*

WEDNESDAY AFTERNOON SESSIONS

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

- 2:00 – 2:30PM **Invited Talk 34 (Session Chair – Milivojevic)**
Dr. María Salvador, *University of Oviedo, Spain*
María Salvador, José Luis Marqués-Fernández, Alexander Bunge, Juan Carlos Martínez-García, Rodica Turcu, Davide Peddis, María del Mar García-Suárez, María Dolores Cima Cabal, Diana Leitao, Montserrat Rivas / How Magnetism Can Improve Rapid Diagnostic Tests: Pneumococcal Pneumonia Detection (ID #833)
- 2:30 – 3:00PM **Invited Talk 35 (Session Chair – Milivojevic)**
Prof. Gleb Kakazei, *Institute of Physics for Advanced Materials, Nanotechnology and Photonics, Portugal*
Artem Bondarenko, Sergey Bunyaev, Kostyantyn Gusliyenko, Adekunle Adeyeye, Gleb Kakazei / Gigahertz Gyrotropic Excitations in Vortex-State Magnetic Nanodots (ID #883)
- 3:00 – 3:30PM **Invited Talk 36 (Session Chair – Milivojevic)**
Dr. Krisztián Palotás, *Wigner Research Center for Physics, Hungary*
Magnetic Skyrmions Probed by Spin-polarized STM: Topology Imprinted on the Charge Current and Spin Transfer Torque (ID #828)
- 3:30 – 4:00PM *Coffee break (Conference room “Rome”)*
- 4:00 – 4:15PM **Contributed Talk 34 (Session Chair – Chumak)**
Anatoliy Lapchuk, Alexander Prygun, **Ivan Gorbov**, Dmytro Manko / Module Trap for Magnetic Nanoparticles Concentration (ID #561) (in Zoom)
- 4:15 – 4:30PM **Contributed Talk 35 (Session Chair – Chumak)**
Marko Milivojević, Martin Gmitra, Marcin Kurpas, Ivan Štich, Jaroslav Fabian / Stacking Control of Spin-Orbit Proximity Effect in a WSe₂-P-WSe₂ Heterostructure (ID #618)
- 4:30 – 4:45PM **Contributed Talk 36 (Session Chair – Chumak)**
Dovydas Karoblis, Agne Kizalaite, Tomas Murauskas, Aleksej Zarkov, Aivaras Kareiva, Sarah Stoll / Molten Salt Synthesis of Manganese Pyrochlores (R₂Mn₂O₇, R = Y, Ho-Lu) at Ambient Pressure (ID #603)
- 4:45 – 5:00PM **Contributed Talk 37 (Session Chair – Chumak)**
Oksana Koplak, Federico Maspero, Alejandro Plaza, Riccardo Bertacco / Tuning of the Contributions of the Magnetically Hard and Magnetically Soft Phases in W/SmCo/W Films (ID #689)
- 5:00 – 5:15PM **Contributed Talk 38 (Session Chair – Chumak)**
Viktor Bratus', Bela Shanina, Igor Vorona, Valentyn Lysakovskiy, Sergii Ivakhnenko / Magnetic Resonance Study of Disordered Nanoparticle Ensembles in Synthetic Diamond (ID #755) (in Zoom)
- 5:30 – 7:30PM **e-POSTERS SESSION (in Discord Platform)**
- 8:00 – 12:00AM **CONFERENCE GALA DINNER (HRADNÁ Reštaurácia)**
<https://hradna.com>

WEDNESDAY MORNING SESSIONS

ORAL SESSION #2A
MULTIFUNCTIONAL THIN FILMS & COATINGS
(CONFERENCE HALL B – “LONDON II” & in ZOOM)

- 8:30 – 9:00AM **Invited Talk 37 (Session Chair – Krasheninnikov)**
Prof. Vitaliy Bilanych, *Uzhhorod National University, Ukraine*
Vitaliy Bilanych, Oleg Shylenko, Serhii Vorobiov, Serhii Soroka, Vasyl Bilanych, Vasyl Rizak, Alexander Feher, Vladimir Komanicky / Nano-Structuring Chalcogenide Semiconductor Thin Films with Electron Beam (ID #486)
- 9:00 – 9:30AM **Invited Talk 38 (Session Chair – Krasheninnikov)**
Prof. Milan Ťapajna, *Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia*
Milan Ťapajna, Andrii Kozak / Tribological Properties of Few-layer $Ti_3C_2O_x$ MXenes (ID #740)
- 9:30 – 10:00AM **Invited Talk 39 (Session Chair – Krasheninnikov)**
Prof. Martin Hulman, *Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia*
Martin Hulman, Michaela Sojkova, Marián Precner, Lenka Pribusová Slušná, Tatiana Vojteková, Jana Hrdá, Jozef Kačmarčík, Martin Mosko, Edmund Dobročka / Optical and Transport Properties of Polycrystalline Thin Layers of 2D-TMDC Semimetals (ID #803)
- 10:00 – 10:15AM **Contributed Talk 39 (Session Chair – Krasheninnikov)**
Silvia Ďurišová, Mariana Pajtašová, Róbert Janík, Katarína Moricová, Ivan Labaj / The Influence of Plasma Treatment on Thermal, Dynamic-Mechanical and Rheological Properties of Polymeric Material (ID #602)
- 10:15 – 10:30AM **Contributed Talk 40 (Session Chair – Krasheninnikov)**
Sung Woo Hong, In Park, Dohoon Lee / Highly Transparent, Colorless Optical Film with Outstanding Mechanical Strength and Folding Reliability using Mismatched Charge-transfer Complex Intensification (ID #782)
- 10:30 – 10:45AM **Contributed Talk 41 (Session Chair – Krasheninnikov)**
Andrii Kozak, Markéta Ilčíková, Nafiseh Babaei, Nikolaos Konios, Marián Precner, Josef Osička, Jaroslav Mosnáček, Milan Tapajna / Graphene Oxide Modified by Fluoropolymer Brushes as a Promising Lubricant in Ambient Air and Vacuum (ID #882)
- 10:30 – 11:00AM *Coffee break (Conference room “Rome”)*
- 11:00 – 11:30AM **Invited Talk 40 (Session Chair – Tapajna)**
Dr. Marian Mikula, *Comenius University Bratislava, Slovakia*
Marian Mikula, Marek Vidiš, Marek Gocník, Tomáš Fiantok, Viktor Šroba, Vitalii Izai, Martin Truchlý, Leonid Satrapinskyy, Stefan Nagy, Branislav Grančič, Peter Kúš / The Concept of Improving Mechanical Properties and Fracture Toughness in Multilayered Coatings Based on Transition Metal Diborides (ID #811)
- 11:30 – Noon **Invited Talk 41 (Session Chair – Tapajna)**
Prof. Volodymyr Ivashchenko, *Frantsevich Institute for Problems of Materials Science, NAS of Ukraine, Ukraine*
Volodymyr Ivashchenko, Petro Scrynskyy, Aleksey Onoprienko, Alexander Pogrebnjak, Andrii Kozak, O.K. Sinelnichenko, D.V. Vedel, Pavlo Mazur / High-Entropy Diboride Films: Experimental and First-principles Investigations (ID #834)
- Noon – 12:30PM **Invited Talk 42 (Session Chair – Tapajna)**
Prof. Arkady Krasheninnikov, *Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany*
Engineering the Structure and Properties of 2D Materials by Defect Creation and Intercalation (ID #844)
- 12:30 – 2:00PM *Lunch break (at your own expense)*

WEDNESDAY AFTERNOON SESSIONS

ORAL SESSION #2B
MULTIFUNCTIONAL THIN FILMS & COATINGS
(CONFERENCE HALL B – “LONDON II” & in ZOOM)

- 2:00 – 2:30PM **Invited Talk 43 (Session Chair – Hulman)**
Dr. Benjamin Borie, ATLANT 3D Nanosystems, Denmark
Maksym Plakhotnyuk, Atilla Varga, Karolis Parfeniukas, Ivan Kundrata, Julien Bachmann/ Direct Atomic Layer Processing on Complex Surface Morphologies (ID #578)
- 2:30 – 3:00PM **Invited Talk 44 (Session Chair – Hulman)**
Dr. Mathieu Salaün, Université Grenoble Alpes, France
Mathieu Salaün, Benoit Boulanger / Epitaxial RTP Thin Films: The Rb⁺ Diffusion Problem (ID #728)
- 3:00 – 3:15PM **Contributed Talk 42 (Session Chair – Hulman)**
Ivana Sara Skrobakova / Application of Acoustic Emission Testing to Evaluate Properties of Al-Ti-N Coatings (ID #593)
- 3:15 – 3:30PM **Contributed Talk 43 (Session Chair – Hulman)**
Leonid Shaginyan, Mikhail Mironov, Vladimir Kremenetsky, Vadim Novichenko / Transformations in Composition and Structure in Multicomponent Alloy Targets Occurring During their Exploitation (ID #532) (In Zoom)
- 3:30 – 4:00PM *Coffee break (Conference room “Rome”)*
- 4:00 – 4:15PM **Contributed Talk 44 (Session Chair – Salaun)**
Antonica Valeria Montefusco, Margherita Izzi, Maria Chiara Sportelli, Rosaria Anna Picca, Nicola Cioffi / Silver Nanoparticles Entrapped in Zein Films as Biocompatible Coatings for Food Preservation (ID #584)
- 4:15 – 4:30PM **Contributed Talk 45 (Session Chair – Salaun)**
Anjana Nair V J, **Deepa Kummattummam Govindan** / Shaping the Band Structure of *n*-Type Cs₂SnI₆ Thin Films using Electron Spectroscopy (ID #513) (in Zoom)
- 4:30 – 4:45PM **Contributed Talk 46 (Session Chair – Salaun)**
Vitalii Chornii, Volodymyr Boyko, Maksym Lazarenko, Mykola Slobodyanyk, Serhii Nedilko, Kateryna Terebilenko, Petro Teselko, Valeriia Zozulia, Yaroslav Zhydachevskyy, Andrzej Suchocki / Development of K₂Eu(PO₄)(WO₄) – based Luminescent Phospho-Tungstate Glass-Ceramics (ID #619) (in Zoom)
- 4:45 – 5:00PM **Contributed Talk 47 (Session Chair – Salaun)**
Volodymyr Korzhyk, Petro Stukhliak, Olena Berdnikova, Junjun Zhao, **Kseniia Lepilina**, Ihor Skachkov / Metal-Ceramic and Epoxy Composite Materials Nanostructure Coatings (ID #493) (in Zoom)
- 5:00 – 5:30PM **Invited Talk 45 (Session Chair – Salaun)**
Evan Piano
Low Temperature Alternatives for Reactive Sputtering High Quality Stoichiometric Metal Nitride Films (ID #904) (in Zoom)
- 5:30 – 7:30PM **e-POSTERS SESSION** (in Discord Platform)
- 8:00 – 12:00AM **CONFERENCE GALA DINNER (HRADNÁ Reštaurácia)**
<https://hradna.com>

WEDNESDAY MORNING SESSIONS

ORAL SESSION #3A

NANOPHOTONICS & NANOMATERIALS FOR ENERGY & ENVIRONMENT

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

- 8:30 – 8:45AM **Contributed Talk 48 (Session Chair – Shifa)**
Namrata Pachauri, Sri Sivakumar / Luminescence Alteration of Converted Trivalent Europium Ions Doped Tungsten Sulfide Semiconductor Nanomaterials for Optical Applications (ID #[541](#))
- 8:45 – 9:00AM **Contributed Talk 49 (Session Chair – Shifa)**
Oleksandr Sorokin, Iryna Grankina, Oleksandr Samoilo, Natalia Kasian, Svitlana Hrankina, Longin Lisetski, Svetlana Yefimova / Influence of Dispersion in Liquid Crystal on Optical Properties of Carbocyanine Dye J-Aggregates (ID #[534](#))
- 9:00 – 9:30AM **Invited Talk 46 (Session Chair – Shifa)**
Prof. Thierry Pauporté, Institut de Recherche de Chimie Paris, France
Thierry Pauporté, Daming Zheng / Unveiling the Mechanism of 2D, Quasi-2D and 3D Halide Perovskite Thin Films Formation (ID #[524](#))
- 9:30 – 10:00AM **Invited Talk 47 (Session Chair – Shifa)**
Prof. Fabien Dubois, Université Grenoble Alpes, CNRS, France
Pierre Bauer, Aude Barbara, Ali Dabbous, Vincent Maurel, Fabien Dubois / Hybrid CdSe/ZnS Quantum Dots-Gold Nanoparticles Composites Assembled by Click Chemistry for Redox Photocatalysts Applications (ID #[907](#))
- 10:00 – 10:30AM **Invited Talk 48 (Session Chair – Shifa)**
Prof. Alberto Vomiero, Foscari University of Venice, Italy
Kassa Belay Ibrahim, Tofik Ahmed Shifa, Elisa Moretti, Alberto Vomiero / Tuning Optoelectronic Properties of 0-Dimensional Nanostructures toward High-Efficiency Luminescent Solar Concentrators (ID #[831](#)) (in Zoom)
- 10:30 – 11:00AM *Coffee break (Conference room “Rome”)*

ORAL SESSION #3A

NANOBIOMEDICAL RESEARCH & APPLICATIONS

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

- 11:00 – 11:30AM **Invited Talk 49 (Session Chair – Pauporte)**
Dr. Oksana Sulaieva, Medical Laboratory CSD, Ukraine
Ethical Issues of Nanomedical Research (ID #[680](#))
- 11:30 – Noon **Invited Talk 50 (Session Chair – Pauporte)**
Dr. Sergiy Kyrylenko, Sumy State University, Ukraine
Sergiy Kyrylenko, Oksana Sulaieva, Zhanna Klishchova, Mykola Lyndin, Volodymyr Deineka, Tetiana Shapochka, Anton Roshchupkin, Ilya Yanko, Yevheniia Husak, Oleksiy Gogotsi, Maksym Pogorielov / Immunological Properties of T₂C₃T_x MXene (ID #[752](#))
- Noon – 12:15PM **Contributed Talk 50 (Session Chair – Pauporte)**
Meng-Long Wang, Deng-Guang Yu, Sim Wan Annie Bligh / Side-by-Side Electrospun PCL-Ag NPS/Ca-Lavender Oil Janus Nanobelt as a Potential Wound Dressing (ID #[843](#))
- 12:15 – 12:30PM **Contributed Talk 51 (Session Chair – Pauporte)**
Murtaza Najabat Ali, Amna Aleem Khawaja, Bakhtawar Ghafoor, Zunaira Qureshi, Mariam Mir / Design and Development of Curcumin-based Nano Fibrous Mats as Drug Eluting Stent Grafts for the Treatment of Coronary Diseases (ID #[756](#))
- 12:30 – 12:45PM **Contributed Talk 52 (Session Chair – Pauporte)**
Deepa Garg, Abhay Sachdev, Ishita Matai / Silver Nanotriangles Incorporated Gum Tragacanth / Sodium Alginate Hydrogels for Biofilm Inhibition (ID #[505](#)) (in Zoom)
- 12:30 – 2:00PM *Lunch break (at your own expense)*
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WEDNESDAY AFTERNOON SESSIONS

ORAL SESSION #3B
ELECTROCHEMISTRY OF NANOMATERIALS
(CONFERENCE HALL C – “LONDON III” & in ZOOM)

- 2:00 – 2:15PM **Contributed Talk 53 (Session Chair – Hudec)**
Gurjeet Kaur, Saloni Sharma, Manoj Nayak Kumar, Akash Deep / Synthesis of Water-Stable MoS₂-Tb-MoF Based Nanocomposite for Highly Sensitive Electrochemical Detection of Anthrax Biomarker Dipicolinic Acid (DPA) (ID #788)
- 2:15 – 2:30PM **Contributed Talk 54 (Session Chair – Hudec)**
Kwena Desmond Modibane / Metal-Organic Framework Composites for Hydrogen Energy Applications: Advances and Challenges (ID #739)
- 2:30 – 2:45PM **Contributed Talk 55 (Session Chair – Hudec)**
Takeshi Ito / Analysis of Interaction of Liposomes and Nanopillar Array (ID #542)
- 2:45 – 3:00PM **Contributed Talk 56 (Session Chair – Hudec)**
Manjeet Mor, Manish Kumar Vishwakarma, Puneet Jain / Effect of N⁺ Ion Implantation on Structural, Optical Properties and Dielectric Behavior of ZnO Thin Films (ID #540)
- 3:00 – 3:15PM **Contributed Talk 57 (Session Chair – Hudec)**
Mariia Lopachak, Lidiya Boichyshyn, Viktor Nosenko / Electrochemical Behavior of Cobalt-Based Nanostructured Amorphous Alloys in Alkaline Solution (ID #659) (in Zoom)
- 3:30 – 4:00PM *Coffee break (Conference room “Rome”)*

ORAL SESSION #3B
NANOSCALE CHARACTERIZATION & IMAGING
(CONFERENCE HALL C – “LONDON III” & in ZOOM)

- 4:00 – 4:30PM **Invited Talk 51 (Session Chair – Asaoka)**
Dr. Boris Hudec, Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia
Boris Hudec, Che-Chia Chang, Tuo-Hung Hou / Looking Under the Hood – Probing Degradation Mechanisms of Analog Memristive Devices by Combination of Thin Film Spectroscopy Techniques (ID #714)
- 4:30 – 5:00PM **Invited Talk 52 (Session Chair – Asaoka)**
Dr. Larysa Khomenkova, V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Ukraine
Larysa Khomenkova, Nadiia Korsunskaya, Semyon Ponomaryov, Yuliia Polishchuk, Kostiantin Kozoriz, Maryna Khrypko, Lyudmyla Melnichuk, Oleksandr Melnichuk / Scanning Auger Microscopy as a Tool for the Direct Characterization of 3D Elemental Distribution in Multicomponent Materials and Structures (ID #781)
- 5:00 – 5:15PM **Contributed Talk 58 (Session Chair – Asaoka)**
Ján Šoltýs, Iuliia Vetrova, Juraj Feilhauer, Sergey Krylov, Ján Fedor, Tomáš Ščepka, Vladimír Cambel / Novel MFM Probe with a Disk-Shaped Magnetic Tip Apex (ID #699)
- 5:30 – 7:30PM **e-POSTERS SESSION (in Discord Platform)**
- 8:00 – 12:00AM **CONFERENCE GALA DINNER (HRADNÁ Reštaurácia)**
<https://hradna.com>