

## First Russian-German Virtual Conference on Interdisciplinary Natural Sciences

### Final Program (December 07, 2020)

#### Thursday, 10.12.2020

| Time            | Name of Presenter             | Institution   | Title of Contribution   |
|-----------------|-------------------------------|---|---|
| 9:00 –<br>9:15  | Eckart Rühl<br>Alina Manshina | FU Berlin<br>St. Petersburg State<br>University   | Opening   |
| 9:15-<br>9:45   | Alexei Khokhlov               | Ulm University  | Smart nanocomposites with tunable<br>polymer matrix   |
| 9:45-<br>10:15  | Matthias Epple                | Universität Duisburg-<br>Essen  | Synthesis and surface-<br>functionalization of ultrasmall gold<br>nanoparticles   |
| 10:15-<br>10:30 | Coffee Break                  |   |   |
| 10:30-<br>11:00 | Evgenia Korzhikova-<br>Vlakh  | Institute of<br>Macromolecular<br>Compounds RAS and<br>St. Petersburg State<br>University | Self-assembled nanoparticles based<br>on bio-inspired polymers as delivery<br>systems for various drugs                             |
| 11:00-<br>11:30 | Anna Brichkina                | Universität Marburg   | Transcription of pericentromeric<br>satellite DNA in lung cancer  |
| 11:30-<br>11:45 | Alexei Smirnov                | St. Petersburg State<br>University  | Plasmon resonance-assisted<br>nanolabels for use in the near<br>infrared region of transparency of<br>biological tissues            |
| 11:45-<br>12:00 | Natalia A. Danilkina          | St. Petersburg State<br>University  | Heterocycloalkynes annulated with a<br>heterocyclic core as new reagents<br>for bioconjugation                                      |
| 12:00-<br>12:15 | Alexander Novikov             | St. Petersburg State<br>University  | Computer modeling of non-covalent<br>interactions in chemical systems<br>promising for materials science,<br>catalysis and medicine |
| 12:15-<br>12:30 | Irina Shtangeeva              | St. Petersburg State<br>University  | About significance and phytotoxicity<br>of poorly studied trace elements  |
| 12:30-<br>12:45 | Mariia M. Efremova            | St. Petersburg State<br>University  | Synthesis and fluorescent properties<br>of 5-aryl-4-ethynyl-1H-1,2,3-triazoles  |
| 12:45-<br>14:00 | Lunch Break                   |   |   |
| 14:00-<br>14:30 | Roman A. Surmenev             | Tomsk Polytechnic<br>University   | Different approaches for new<br>materials development with tailored<br>properties for biometical applications                       |
| 14:30-<br>14:45 | Aleksei Murzin                | St. Petersburg State<br>University  | Amplified spontaneous emission and<br>random lasing in MAPbBr <sub>3</sub> Halide<br>perovskite single crystals                     |
| 14:45-<br>15:15 | Lada Yashina                  | Moscow State<br>University  | Photoemission studies of topological<br>insulators  |
| 15:15-<br>15:30 | Coffee Break                  |   |   |
| 15:30-<br>17:00 | Poster Session                |   |   |

## Friday, December 11, 2020

| Time        | Name of Presenter             | Institution   | Title of Contribution  |
|-------------|-------------------------------|---|--|
| 9:00 – 9:30 | Alexander L. Skubachevskii    | RUDN University                                       | Stationary solutions of Vlasov-Poisson system and plasma confinement in magnetic traps   |
| 9:30-10:00  | Vladimir Shabaev              | St. Petersburg State University                       | What is vacuum decay in a supercritical field and how to observe it  |
| 10:00-10:30 | Uwe Iben                      | Robert Bosch GmbH                                     | Taylor maps for dynamical systems - learning from data   |
| 10:30-10:45 | Coffee Break                  |   |  |
| 10:45-11:15 | Viktor Sivkov                 | Komi Scientific Center, Syktyvkar                     | NEXAFS and XPS studies of the carbonized bath sponge scaffold and nanostructured 3D copper-carbon catalyst                                 |
| 11:15-11:30 | Anna Vasileva                 | St. Petersburg State University                       | Metal and metal-carbon NPs contained by laser-induced deposition on polyaniline coverings  |
| 11:30-11:45 | Svetlana Ershova              | St. Petersburg State University                       | Conformational and optical molecular properties of poly (hexyl methacrylate) and poly (stearyl methacrylate)                               |
| 11:45-12:00 | Sofya A. Efimova              | ITMO University                                       | Creating a nanocomposite based on encapsulated growth factor in ZIF-8 and titanium nanotubes   |
| 12:00-12:30 | Andrey V. Bukhtiyarov         | Boresov Institute, Novosibirsk                        | CO oxidation on the bimetallic Pd-Au/HOPG catalysts: NAP XPS and MS study  |
| 12:30-12:45 | Maksim A. Panafidin           | Boresov Institute, Novosibirsk                        | Model bimetallic Pd-Ag/HOPG and Pd-Cu/HOPG catalysts: CO and methanol oxidations   |
| 12:45-13:00 | Ovanes Petrosian              | St. Petersburg State University                       | Inverse Optimal Control with Continuous Updating for Steering Behavior Model   |
| 13:00-14:00 | Lunch Break                   |   |  |
| 14:00-14:15 | Alexander Straumal            | Institute for Solid State Physics, RAS, Chernogolovka | Influence of different grain boundary wetting states on the formation of microstructure after high pressure torsion in Mg-cast alloy EZ33A |
| 14:15-14:30 | Ivan Alekseev                 | Otto-Schmidt-Laboratory, St. Petersburg               | Environmental pollutants in various Antarctic regions: variability across landscapes and behavior  |
| 14:30-14:45 | Olga Shuvalova                | RUDN, Moscow  | Typology of the countries of Central and Eastern Europe including the CIS: features of the use of alternative energy                       |
| 14:45-15:00 | Mariia Bilogub                | Universität Potsdam                                   | Effects of Microplastics on Different Root Traits of Dry Grassland Species   |
| 15:00-15:15 | Eva-Maria Peiffer             | Universität Hamburg                                   | Russian-German Higher Education Projects on Permafrost Science: Master programmes between Universities Saint Petersburg and Hamburg        |
| 15:15-15:30 | Eckart Rühl<br>Alina Manshina | FU Berlin<br>St. Petersburg State University          | Summary and Conclusions  |