



Workshop “Advanced Humidity to Electricity Converters“ HUNTER

21-22 September, Warsaw, Poland

Advanced Humidity to Electricity Converters (HUNTER) is a satellite workshop of E-MRS Fall 2016 meeting in the framework of H2020-MSCA-RISE-2016 “HUNTER-691010” project. The aim of the workshop HUNTER is to present the state-of-the-art and the future perspectives for nanomaterials applied to the generation of renewable and sustainable energy.

Scope:

Generation of renewable and sustainable energy from humidity requires development of novel, innovative and very efficient materials and components. The goal of the workshop is to attract the most recognized academic experts in the field of nanomaterials and humidity to electricity conversion to share their knowledge and expertise.

This intend in merging of the research activity using knowledge offered by various research fields as physics, chemistry, materials science and engineering to design nanoscale structures for such conversion. Therefore, interdisciplinary approaches integrating different technologies, sciences or disciplines will be particularly emphasized. The 1st“HUNTER”workshop, will be a valuable and motivating forum for the researchers in physics, materials science, chemistry, and engineering to discuss the latest advances and issues in the design and application of nanomaterials-based devices for advanced energy conversion and also to establish their own networks and hence creating the sense of shared European values.

Symposium organizers:

Dr. Andriy Lyubchyk
CEMOP/UNINOVA, CENIMAT/I3N and FCT/UNL

Address:

Quinta da Torre 2829 516 Caparica PORTUGAL

Phone: 351 21 294 8524

Fax: 351 21 294 1365

Mail: andrey.lyubchik@campus.fct.unl.pt



Programme

Wednesday, September 21

14.00-14.30	<p>Opening Address</p> <p><i>Prof. Rodrigo Martins</i>, Director of CEMOP/UNINOVA; Head of MEON group of I3N/CENIMAT, Head of Material Science Department, Faculdade de Ciência e Tecnologia, Universidade Nova de Lisboa, Portugal</p> <p><i>Dr. Andriy Lyubchyk</i>, Project Coordinator, CEMOP/CENIMAT and CENIMAT/I3N, Faculdade de Ciência e Tecnologia, Universidade Nova de Lisboa, Portugal</p>
14:45- 15:30	<p>Keynote Speech:</p> <p>Renewable Energy: Current situation & Perspectives</p> <p><i>Prof. François Béguin</i>, Poznan University of Technology, Poland</p>
15:30- 18:00	<p>Panel 1:</p> <p>Discussion of the HUNTER project results related to the <i>Humidity- As A Potential Renewable Energy Source; Preliminary Finding form HUNTER project</i></p> <p>General topics to be covered by the Panel 1:</p> <ul style="list-style-type: none">• Humidity as a potential renewable energy source• Humidity to electricity conversion. Current and emerging technologies and best practices <p>Chair - <i>Dr. Svilana Lyubchyk</i>, LAQV/REQUIMTE, Faculdade Ciência e Tecnologia, Universidade Nova de Lisboa, PORTUGAL</p> <p><i>Speakers:</i></p> <p><i>Prof. Alexey Evstratov</i>, C2MA- ECOLE NATIONALE SUPERIEURE DES MINES D'ALES, FRANCE</p> <p><i>Dr. Andriy Lyubchyk</i>, CEMOP/UNINOVA and CENIMAT/I3N, Faculdade de Ciência e Tecnologia, Universidade Nova de Lisboa</p> <p><i>Dr. Pavel Geydt</i>, LUT - LAPPEENRANNAN TEKNILLINEN YLIOPISTO, FINLAND</p> <p><i>Dr. Alexander Doroshkevich</i>, DIPE - Donetsk Institute of Physics & Engineering named after O.O. Galkin NAS of UKRAINE</p> <p><i>CEO Jacques Frisonroche</i>, SOLENE-R, FRANCE</p> <p><i>CEO Dr. Mário Boucinha</i>, Blueorizon, PORTUGAL</p>
19:30- 22:00	<p>Conference Dinner</p>

Thursday, September 22

9:00- 9:30 Welcome Tea/Coffee

<p>9:30- 10:15</p>	<p>Keynote Speech:</p> <p>Advance in Nanomaterials for Nanoelectronics</p> <p><i>Prof. Nikolay Poklonski, BSU- BELARUSIAN STATE UNIVERSITY, Department of Semiconductor Physics and Nanoelectronics BELARUS</i></p>
<p>10:15- 12:30</p>	<p>Panel 2:</p> <p>Discussion of the HUNTER project results related to the <i>Synthesis, Characterization and Application of Nanoparticle Assemblies</i></p> <p>General topics to be covered by the Panel 2:</p> <ul style="list-style-type: none"> • Advance on the Synthesis and fabrication of materials for humidity to electricity conversion • Nanomaterials for energy conversion. Various aspects of nanoparticles from synthesis to applications • Carbon nanomaterials (NMs), including graphene, fullerene; carbon nanotubes; nanodiamonds; Semiconductors - Metal oxides, including advanced hybrids NMs and nanoceramics; Polymers-based nanomaterials <p>Chair – <i>Prof. Hugo Aguas, CENIMAT/I3N, Faculdade Ciência e Tecnologia, Universidade Nova de Lisboa, PORTUGAL</i></p> <p><i>Speakers:</i></p> <p><i>Prof. Vitalii Ksenevich</i> Head of the Dept. of Semiconductor Physics and Nanoelectronics, BSU - BELARUSIAN STATE UNIVERSITY, BELARUS <i>Dr. Igor Danilenko, DIPE - Donetsk Institute of Physics & Engineering named after O.O. Galkin NAS of Ukraine, Department of the Material Science, UKRAINE</i> <i>MSc. Aliaksandr Kavaleu</i> Department of Semiconductor Physics and Nanoelectronics, BSU - BELARUSIAN STATE UNIVERSITY, BELARUS <i>MSc. Dzmitry Adamchuk</i> Department of Semiconductor Physics and Nanoelectronics, BSU - BELARUSIAN STATE UNIVERSITY, BELARUS</p>
<p>12:30- 14:00</p>	<p>Lunch</p>
<p>14:00- 15:00</p>	<p>Keynote Speech:</p> <p>Advance in the Adsorption Process for Practical Application</p> <p><i>Prof. Paulo Mota, LAQV/REQUIMTE, Faculdade Ciência e Tecnologia, Universidade Nova de Lisboa, PORTUGAL</i></p> <p><i>Prof. Sergiy Mikhajlovskii, University of Brighton, UK</i></p>
<p>15:00- 15:45</p>	<p>Panel 3:</p> <p>Discussion of the HUNTER project results related to the <i>Gas-phase Water Molecules Adsorption at NMs Solid surface – Air Interface</i></p> <p>General topics to be covered by the Panel 2:</p>



- Gas-phase water adsorption for practical application
- Water adsorption as a key for humidity conversion

Chair - **Dr. Andriy Lyubchyk**, CEMOP/UNINOVA and CENIMAT/I3N, Faculdade de Ciencia e Tecnologia, Universidade Nova de Lisboa

Speakers:

Dr. Rui Ribeiro, LAQV/REQUIMTE, Faculdade Ciência e Tecnologia, Universidade Nova de Lisboa, PORTUGAL

Dr. Oksana Gorban, DIPE - Donetsk Institute of Physics & Engineering named after O.O. Galkin NAS of Ukraine, Department of the Material Science, UKRAINE

15:45- 16:00

Closing Remarks: Looking Ahead