

# Nanotech Middle East 2020 Conference Program

Feb. 24 - 25, 2020 - Dubai, U.A.E

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| <div>Feb. 24, 2020</div> <div>Nanotech ME 2020 Session I:<br/>Nanomaterials Fabrication, Characterization and Properties</div>                                                                                                                           |                                                                                                                                                                                                                                                       |                                                                                |
| Conference Room : Al Ain B                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                       |                                                                                |
| <div>Session Chairs:</div> <div>Prof. Tahar Laoui, University of Sharjah, UAE</div> <div>Dr. Maguy Abi Jaoude, Khalifa University of Science and Technology, UAE</div> <div>Prof. Daniel Choi, Khalifa University of Science and Technology, UAE</div>   |                                                                                                                                                                                                                                                       |                                                                                |
| 09:00 - 10:30                                                                                                                                                                                                                                            | Registration + Welcoming Coffee - Al Multaqua Ballroom                                                                                                                                                                                                |                                                                                |
| 10:30 - 11:00                                                                                                                                                                                                                                            | What makes lattice and spin dynamical together<br>J. Fransson                                                                                                                                                                                         | Prof. Jonas Fransson, Uppsala University, Sweden                               |
| 11:00 -11:30                                                                                                                                                                                                                                             | Advanced Carbon-based Nanomaterials: Present and Future<br>M. Al Fahim, L. Burchfield, R. Al Fahim, F. Delodovici, N. Manini, K. Askar and D. Choi                                                                                                    | Prof. Daniel Choi, Khalifa University of Science and Technology, UAE           |
| 11:30 -11:45                                                                                                                                                                                                                                             | Using Femtosecond Pulse Laser Nanomachining to Increase Surface Area and Emissivity to Values that Significantly Accelerate Cooling of Electronics by Radiative Heat Transfer<br>V. Rivas and D. Zimmerman                                            | Dr. Delore Zimmerman, Praxis Strategy Group, USA                               |
| 11:45 - 12:00                                                                                                                                                                                                                                            | Ultra-High Precision Diamond Machining of Nanostructured Rapidly Solidified Aluminium Alloys for Optical Applications<br>K. Abou-El-Hossein                                                                                                           | Prof. Khaled Abou-El-Hossein, Nelson Mandela University, South Africa          |
| 12:00 - 14:00                                                                                                                                                                                                                                            | Lunch Break / Posters Session I : Al Multaqua Ballroom                                                                                                                                                                                                |                                                                                |
| <div>Session Chairs:</div> <div>Prof. Jonas Fransson, Uppsala University, Sweden</div> <div>Prof. Junais Mekkath, Kuwait College of Science And Technology, Kuwait</div> <div>Prof. Daniel Choi, Khalifa University of Science and Technology, UAE</div> |                                                                                                                                                                                                                                                       |                                                                                |
| 14:00 - 14:30                                                                                                                                                                                                                                            | Effects of synthesis parameters on the structure, optical properties and photocatalytic activity of TiO2-CeO2-Bi2O3 nanocomposites for solar-driven water disinfection<br>M. Abi Jaoude, S. Sood, K. Polychronopoulou, E. Alhseinat and M. Stefancich | Dr. Maguy Abi Jaoude, Khalifa University of Science and Technology, UAE        |
| 14:30 - 15:00                                                                                                                                                                                                                                            | Advanced photocatalysts for water treatment and antifouling/self-cleaning coatings<br>G. Palmisano                                                                                                                                                    | Dr. Giovanni Palmisano, Khalifa University of Science and Technology, UAE      |
| 15:00 - 15:15                                                                                                                                                                                                                                            | A Simulation Study for ABS 3D Filament Doped with Nanoparticles for Thermal Neutrons Applications<br>E. Banoqitah, E. Elmoujarkach, F. Nadwi and A. Alhawsawi                                                                                         | Mr. Ezzat Elmoujarkach, King Abdulaziz University, Saudi Arabia                |
| 15:15 - 15:30                                                                                                                                                                                                                                            | Different charge ordering states in Niobium diselenide under strain and with metal adsorbates<br>F. Cossu, I. di Marco, and A. Akbari                                                                                                                 | Dr. Fabrizio Cossu, Asia Pacific Center for Theoretical Physics, Rep. of Korea |
| 15:30 - 16:00                                                                                                                                                                                                                                            | Coffee Break / Posters Session I - Al Multaqua Ballroom                                                                                                                                                                                               |                                                                                |
| 16:00 - 16:15                                                                                                                                                                                                                                            | Electrosprayed Aerogel/PCM Embedded PTFE Microporous Materials for Thermal Protection<br>M.Venkataraman, J. Militký, X. M. Xiong and M. Petrú                                                                                                         | Dr. Mohanapriya Venkataraman, Technical University of Liberec, Czech Republic  |
| 16:15 - 16:30                                                                                                                                                                                                                                            | Integration of functional oxides on silicon<br>A. Benamar, G. Agnus, G. Saint-Girons, C. Magen, S. Schamm-Chardon and P. Lecoeur                                                                                                                      | Mr. Abdelnour Benamar, Paris-Saclay University, France                         |
| 16:30 - 16:45                                                                                                                                                                                                                                            | Challenges for High Performance of Polyaniline / Nanocomposite as Super Hydrophobic Coatings via Electrochemical Polymerization Technique                                                                                                             | Prof. Zeinab abdel Hamid, CMRDI, Cairo, Egypt.                                 |

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|                      | <b>Z. Abdel Hamid</b> , M. Hasan Gomaa, S. S. Abd El Rehim, M. Abdel Hamid and A. Ibrahim                                                                                                                            |                                                                                  |
| <b>16:45 - 17:00</b> | Mechanically-induced doping of MgH <sub>2</sub> powders with 5 wt% zirconium nickel-based nanocomposite for enhancing the kinetics behavior and storage capacity<br><b>A. Alduweesh</b> and M. Sherif El-Eskandarany | <b>Dr. Ahmad Alduweesh</b> ,<br>Kuwait Institute for Scientific Research, Kuwait |

| <b>Feb 25, 2020</b><br><b>Nanotech ME 2020 Session II:</b><br><b>Nanomaterials for Energy and Environment / Nano Electronics</b><br><b>Conference Room : Al Ain B</b>                                     |                                                                                                                                                    |                                                                                        |
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| <b>Session Chairs:</b><br><b>Prof Ali Bumajdad, Kuwait University, Kuwait</b><br><b>Prof. Tahar Laoui, University of Sharjah, UAE</b><br><b>Prof . Taleb Ibrahim, American University of Sharjah, UAE</b> |                                                                                                                                                    |                                                                                        |
| <b>09:30 - 10:00</b>                                                                                                                                                                                      | Application of Graphene Oxide Derivatives in Industrial Pharmaceutical Wastewater Treatment<br>M.Khamis and <b>T.Ibrahim</b>                       | <b>Prof . Taleb Ibrahim</b> , American University of Sharjah, <b>UAE</b>               |
| <b>10:00 - 10:30</b>                                                                                                                                                                                      | Modified graphene oxides as efficient electrode for Capacitive deionization<br><b>K.A.Khalil</b> , N.A. M. Barakat, M. Motlak and F.S. Al-Mubaddel | <b>Prof. Khalil Abdelrazek Khalil Abdelmawgoud</b> , University of Sharjah, <b>UAE</b> |
| <b>10:30 - 11:00</b>                                                                                                                                                                                      | <b>Coffee Break / Posters Session II</b>                                                                                                           |                                                                                        |
| <b>11:00 - 11:30</b>                                                                                                                                                                                      | Nano-Additives for Green and Sustainable Construction Materials<br><b>A. Bumajdad</b>                                                              | <b>Prof Ali Bumajdad</b> , Kuwait University, <b>Kuwait</b>                            |
| <b>11:30 - 12:00</b>                                                                                                                                                                                      | Surface Deposited Copper Particles on Composite Nonwovens<br><b>J. Militký</b> , M. Venkataraman, J. Večerník and M. Petrů                         | <b>Prof. Jiri Militky</b> , Technical University of Liberec, <b>Czech Republic</b>     |
| <b>12:30 - 13:45</b>                                                                                                                                                                                      | <b>Lunch Break / Posters Session II : Al Multaqua Ballroom</b>                                                                                     |                                                                                        |

| <b>Nanotech ME 2020 Session III</b><br><b>Nanomaterials for Energy and Environment:</b><br><b>Conference Room: Al Ain B</b>                                                                                                          |                                                                                                                                                                                        |                                                                                                  |
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| <b>Session Chairs:</b><br><b>Prof. Khalil A.K. Abdelmawgoud, University of Sharjah, UAE</b><br><b>Prof. Francesco P. La Mantia, University of Palermo, Italy</b><br><b>Prof . Taleb Ibrahim, American University of Sharjah, UAE</b> |                                                                                                                                                                                        |                                                                                                  |
| <b>14:00 - 14:30</b>                                                                                                                                                                                                                 | Optimized wet graphene transfer on SiO <sub>2</sub> /Si substrate using chemical surface treatment for potential solar cell application<br>A.F. Abdelaal, B. Salhi and <b>T. Laoui</b> | <b>Prof. Tahar Laoui</b> , University of Sharjah, <b>UAE</b>                                     |
| <b>14:00 - 15:00</b>                                                                                                                                                                                                                 | Electric field hotspots of all-inorganic APbX <sub>3</sub> (A = Cs, Rb and X = Cl, Br, I) perovskite quantum dots<br><b>J.H. Mekkath</b>                                               | <b>Prof. Junais Mekkath</b> , Kuwait College of Science And Technology, <b>Kuwait</b>            |
| <b>15:00 - 15:15</b>                                                                                                                                                                                                                 | Polymer and Nanoparticles as a New Method for Chemical Enhanced Oil Recovery<br><b>P. Druetta</b> and F. Picchioni,                                                                    | <b>Dr. Pablo Druetta</b> , University of Groningen, <b>The Netherlands.</b>                      |
| <b>15:15 - 15:30</b>                                                                                                                                                                                                                 | Antioxidant Gold nanoconjugates for the treatment of neurodegenerative diseases<br><b>M.E. Piersimoni</b> , T. Casd and L. Ying                                                        | <b>Ms. Maria Elena Piersimoni</b> , Imperial College London, <b>UK</b>                           |
| <b>15:30 - 15:45</b>                                                                                                                                                                                                                 | Shape-Stabilized Phase Change Materials for Solar Energy Storage: MgO doped CaCO <sub>3</sub> mixed with Polyethylene Glycol<br>S.K.S. Basamad, <b>M. Hasan Zahir</b> and M.M. Hossain | <b>Dr. Md. Hasan Zahir</b> , King Fahd University of Petroleum and Minerals, <b>Saudi Arabia</b> |
| <b>15:30 - 16:30</b>                                                                                                                                                                                                                 | <b>Coffee Break / Posters Session I - Al Multaqua Ballroom</b>                                                                                                                         |                                                                                                  |

**February 24 and 25, 2020**  
**Posters Session Nanotech ME 2020**

**Posters / Coffee break area - Al Multaqua Ballroom**

| <b>N.</b> | <b>Poster Title</b>                                                                                                                                                            | <b>Author/Affiliation/Country</b>                                         |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| <b>1</b>  | Effect of the Concentration of Graphene Nanoplatelets in the Photo-oxidation of the Polypropylene<br><b>F.P. La Mantia</b> , L. Botta, M.C. Mistretta and M. Ceraulo           | <b>Prof. Francesco P. La Mantia</b> , University of Palermo, <b>Italy</b> |
| <b>2</b>  | Sub-millimeter-scale synthesis of chromium doped CdS nanosheets and their temperature-dependent excitonic emission<br><b>D. J. Lee</b> and D. Y. Kim                           | <b>Dr. Dong Jin Lee</b> , Dongguk University, <b>Rep. of Korea</b>        |
| <b>3</b>  | Activation Energy of Hydrogen Evolution Reaction on Strontium modified TiO <sub>2</sub> nanotubes<br><b>K.M. Emran</b>                                                         | <b>Dr. Khadijah Emran</b> , Taibah University, <b>Saudi Arabia</b>        |
| <b>4</b>  | Efficient hydrogen production electrocatalytic using hydrothermal Synthesized Sn-TNT nanotubes<br>K.M. Emran and <b>RM. A. Alsahli</b>                                         | <b>Ms. Rawan M. A. Alsahli</b> , Taibah University, <b>Saudi Arabia</b>   |
| <b>5</b>  | Synthesis of quaternary chalcogenide CPSS (CuPbSbS <sub>3</sub> ) as a candidate absorber material for solar cells<br><b>Y.T. Alharbi</b> and D.J. Lewis                       | <b>Mr. Yasser T. Alharbi</b> , University of Manchester, <b>UK</b>        |
| <b>6</b>  | Mechanical and electrical properties of GeSn nanowires and their application in NEM switches<br><b>R. Meija</b> , J. Kosmaca, M. Antsov, R. Sondors, J.; D. Holmes and D. Erts | <b>Dr. Raimonds Meija</b> , University of Latvia, <b>Latvia</b>           |