

# **Workshop Program**

## **Ninth Annual International Workshop on Advanced Materials (IWAM 2018)**

**Al Hamra Convention Center, Ras Al Khaimah, UAE**

*Sunday, February 18 – Tuesday, February 20*

### **Saturday 17<sup>th</sup> February**

<b>14:00 onwards</b>	<b>Check-in at Hilton Al Hamra Beach &amp; Golf Resort</b>
<b>18:00-22:00</b>	<b>IWAM Registration &amp; Reception</b> <i>Hilton Al Hamra</i> <i>Le chalet garden (weather permitting)</i>

## Day 1: Sunday 18<sup>th</sup> February 2018

<b>Session I</b>	<b>Opening Session</b>	<b>Start time: 08:30</b> <b>End time: 10:00</b>
<b>08:30</b>	<b>Welcome &amp; Overview of RAK CAM</b>  Professor Anthony Cheetham Chairman, Ras Al Khaimah Centre for Advanced Materials	
<b>09:00</b>	<b>Keynote Address</b>  His Highness Sheikh Saud bin Saqr Al Qasimi Member of the Supreme Council of UAE and Ruler of Ras Al Khaimah	
<b>09:30</b>	<b>Regional Topic</b>  Ras Al Khaimah, United Arab Emirates	
<b>10:00</b>	<b>Coffee Break</b>	

<b>Session II</b>	<b>Nanomaterials</b>	<b>Start time: 11:00</b> <b>End time: 12:20</b>
	<b>Chair: Cheetham</b>	
<b>11:00</b>	<b>Inorganic Graphene Analogues: Recent Results</b>  C. N. R. Rao International Centre for Materials Science Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) Bangalore, India	

<b>11:40</b>	<p><b>Synthesis and Applications of Conducting Polymer Nanofibers</b></p> <p><b>Richard B. Kaner</b>  Department of Chemistry and Biology  University of California, Los Angeles (UCLA)  Los Angeles, California, United States of America</p>
<b>12:20</b>	<p><b>Lunch</b>  <i>Al-Jazeera Restaurant</i></p>

<b>Session III</b>	<b>Nanomaterials and Energy</b>	<p><b>Start time: 14:00</b>  <b>End time: 16:50</b></p>
	<b>Chair: Herring</b>	
<b>14:00</b>	<p><b><i>Desselhaus Memorial Lecture</i></b></p> <p><b>Nanostructured Materials for Electrochemical Energy Storage: The Positives and Negatives</b></p> <p><b>Linda Nazar</b>  University of Waterloo, Waterloo Institute for Nanotechnology and the Waterloo Institute for Sustainable Energy, Waterloo Ontario Canada</p>	
<b>14:50</b>	<p><b>“Throwing Light” on Nanomaterials</b></p> <p><b>A. K. Sood</b>  Department of Physics  Indian Institute of Science  Bangalore, India</p>	
<b>15:30</b>	<p><b>Plasmonic Graphene Polyurethane Nanocomposites for Efficient Solar Water Desalination</b></p> <p><b>Samy El-Shall</b>  Department of Chemistry  Virginia Commonwealth University  Richmond, Virginia, United States of America</p>	

<b>16:10</b>	<b>Large Area Printed Solar Cells</b>  <b>Andrew Holmes</b> School of Chemistry and Bio21 Institute University of Melbourne Vic 3010, Australia
<b>16:50</b>	<b>Coffee Break</b> <b>Free time for informal discussions</b>

<b>Session IV</b>	<b>Graduate Student and Post-Doctoral Researcher Talks</b>	<b>Start time: 17:30</b> <b>End time: 18:30</b>
	<b>Chair: Liu Bin</b>	
<b>17:30</b>	<b>Introduction of a Redox-Responsive Switch into calix[4]arene-based Covalent Organic Nanosheets for Environmental Applications</b>  <b>Tina Skorjanc</b> New York University Abu Dhabi, United Arab Emirates	
<b>17:40</b>	<b>Using Magnetostructural Transitions for Magnetic Refrigeration</b>  <b>Jason Grebenkemper</b> University of California, Santa Barbara Santa Barbara, United States of America	
<b>17:50</b>	<b>First Principles Investigations on NdN Thin Films</b>  <b>Assa Aravindh Sasikaladevi</b> King Abdullah University of Science and Technology (KAUST) Jeddah, Kingdom of Saudi Arabia	

<b>18:00</b>	<b>Microstructures and Mechanical Properties of a 3D Printed Ti Alloy</b>  <b>Punit Kumar</b> Indian Institute of Science Bangalore, India
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<b>Session V</b>	<b>Poster Session</b>	<b>Start time: 18:30</b> <b>End time: 20:30</b>
<b>18:30</b>	<b>Poster Session I</b> <i>At Hamra Convention Center</i>	

*End of Day 1*

## **Day 2: Monday 19<sup>th</sup> February 2018**

<b>Session VI</b>	<b>Organic Materials</b>	<b>Start time: 09:00</b> <b>End time: 11:00</b>
	<b>Chair: Holmes</b>	
<b>09:00</b>	<b>Mapping Charge Carrier Dynamics in Real-space and Time on Semiconductor Material Surfaces and Interfaces using Ultrafast Spectroscopy and Four-dimensional Electron Microscopy</b>  <b>Omar Mohamed</b> Physical Science and Engineering Division King Abdullah University of Science and Technology (KAUST) Thuwal, Kingdom of Saudi Arabia	
<b>09:40</b>	<b>Aggregation-induced Emission: Materials and Biomedical Applications</b>  <b>Liu Bin</b> Department of Chemical and Biomolecular Engineering National University of Singapore Singapore	
<b>10:20</b>	<b>Techniques to Predict Reliability and Follow Degradation in Hybrid Perovskite Solar Cells</b>  <b>K. S. Narayan</b> Jawaharlal Nehru Centre for Advanced Scientific Research Jakkur, Bangalore 560064 India	
<b>11:00</b>	<b>Coffee Break</b>	

<b>Session VII</b>	<b>Framework Materials</b>	<b>Start time: 11:30</b> <b>End time: 12:50</b>
	<b>Chair: Attfield</b>	
<b>11:30</b>	<b>MOF Design to Applications: Impact of Pore System Control on Gas Separations and Storage</b>  <b>Mohammed Eddaoudi</b> Advanced Membranes and Porous Materials Centre Functional Materials Design, Discovery and development (FMD <sup>3</sup> ) Research Group King Abdullah University of Science and Technology (KAUST) Thuwal, Saudi Arabia	
<b>12:10</b>	<b>Hemilability in Metal-Organic Frameworks and its Role in Increasing Hydrolytic Stability</b>  <b>Russell Morris</b> School of Chemistry University of St Andrews KY16 9ST, United Kingdom	
<b>12:50</b>	<b>Lunch</b> <i>Al-Jazeera Restaurant</i>	

<b>Session VIII</b>	<b>Inorganic Materials</b>	<b>Start time: 14:30</b> <b>End time: 16:30</b>
	<b>Chair: Ramamurty</b>	
<b>14:30</b>	<b>Reactivity of Solids – Chemistry of Inorganic Materials</b>  <b>Barbara Albert</b> Eduard Zintl-Institute of Inorganic and Physical Chemistry Technische Universität Darmstadt Alarich-Weiss-Str. 12, 64287 Darmstadt, Germany	

<b>15:10</b>	<p><b>Materials Discovery using High Pressure</b></p> <p><b>Paul Attfield</b>  Centre for Science at Extreme Conditions and School of Chemistry  University of Edinburgh  Mayfield Road, Edinburgh EH9 3JZ, United Kingdom</p>
<b>15:50</b>	<p><b>New Concept in 3D lattice Engineering to Achieve Enhanced Functionalities in Strongly Correlated Oxides</b></p> <p><b>Judith L. MacManus-Driscoll</b>  Department of Materials Science and Metallurgy  University of Cambridge  Cambridge, United Kingdom</p>
<b>16:30</b>	<p><b>Coffee Break</b>  <b>Free time for informal discussions</b></p>

<b>Session IX</b>	<b>Graduate Student and Post-Doctoral Researcher Talks</b>	<b>Start time: 17:30</b> <b>End time: 18:30</b>
	<b>Chair: Driscoll</b>	
<b>17:30</b>	<p><b>The Impact of Au Doping on the Charge Carrier Dynamics at the Interfaces Between Cationic Porphyrin and Silver Nanoclusters</b></p> <p><b>Abdulkhaleq Almnsaf</b>  King Abdullah University of Science and Technology (KAUST)  Thuwal, Kingdom of Saudi Arabia</p>	



<b>17:40</b>	<p><b>Development of Integrated Technologies for Conversion of Industrial waste CO<sub>2</sub> to MeOH &amp; other Value-added chemicals via Thermochemical Route</b></p> <p><b>Soumyabrata Roy</b> Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) Bangalore, India</p>
<b>17:50</b>	<p><b>Study the Effect of Thickness on Structure, Optical, Electrical Properties of AgBiSe<sub>2</sub> Thin Films</b></p> <p><b>Talaat El-Desoukey</b> National Research Centre Dokki, Giza, Egypt</p>
<b>18:00</b>	<p><b>A Selective and Sensitive Metal-Organic Framework Sensor for Fluoride Anions with Fast Optical Response</b></p> <p><b>Fatmah Mish Ebrahim</b> Ecole Polytechnique Fédérale de Lausanne (EPFL) Sion, Switzerland</p>
<b>18:10</b>	<p><b>Using of Devulcanized Rubber in Developing of Thermal Insulator Composite</b></p> <p><b>Waseem Hittini</b> United Arab Emirates University Al Ain, United Arab Emirates</p>

<b>Session X</b>	<b>Poster Session</b>	<b>Start time: 18:30</b> <b>End time: 20:30</b>
<b>18:30</b>	<b>Poster Session II</b> <i>Al Hamra Convention Center</i>	

*End of Day 2*

## **Day 3: Tuesday 20<sup>th</sup> February 2018**

<b>Session XI</b>	<b>Computational Materials Science</b>	<b>Start time: 09:00</b> <b>End time: 10:20</b>
	<b>Chair: Sood</b>	
<b>09:00</b>	<b>Wetting-Dewetting Transitions, Nature's Temperature Sensing Machines, and Unveiling Molecular Mechanisms of Pain</b>  <b>Michael L. Klein</b> Institute for Computational Molecular Science Temple University Philadelphia, Pennsylvania, United States of America	
<b>09:40</b>	<b>Computer Predictions on Rh Based Double Perovskites with Novel Magnetic Properties</b>  <b>Tanusri Saha-Dasgupta</b> Indian Association for the Cultivation of Science, Kolkata, India S.N.Bose National Centre for Basic Sciences, Kolkata, India	
<b>10:20</b>	<b>Coffee Break</b>	

<b>Session XII</b>	<b>Computational Materials Science</b>	<b>Start time: 10:50</b> <b>End time: 12:10</b>
	<b>Chair: Narayan</b>	
<b>10:50</b>	<b>Machine Learning and Statistical Analysis for Materials Science: Fingerprint Descriptors and Chemical Insights into Catalysts</b>  <b>Umesh Waghmare</b> Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) Bangalore, India	
<b>11:30</b>	<b>The Nanoporous Materials Genome in Action</b>  <b>Berend Smit</b> Laboratory of Molecular Simulation Institut des Sciences et Ingénierie Chimiques Ecole Polytechnique Fédérale de Lausanne (EPFL) CH-1015 Lausanne, Switzerland	
<b>12:10</b>	<b>Group Photo</b>	
<b>12:30</b>	<b>Lunch</b> <i>Al-Jazeera Restaurant</i>	

<b>Session XIII</b>	<b>Materials Characterization</b>	<b>Start time: 14:30</b> <b>End time: 17:00</b>
	<b>Chair: Morris</b>	
<b>14:30</b>	<b>Fracture in Amorphous Alloys</b>  <b>Upadrasta Ramamurty</b> Department of Materials Engineering Indian Institute of Science Bangalore, India	

<b>15:10</b>	<p><b>Fuels and Value Added Chemicals from Industrial CO<sub>2</sub> Waste: Technology Transfer from Academy to Industry</b></p> <p><b>Sebastian Peter</b>  New Chemistry Unit  Jawaharlal Nehru Centre for Advanced Scientific Research  Bangalore, India</p>
<b>15:50</b>	<p><b>Advanced Techniques for the Structural Characterisation of Polycrystalline Materials</b></p> <p><b>Anthony K. Cheetham</b>  Department of Materials Science and Metallurgy  University of Cambridge  Cambridge, UK</p>
<b>16:30</b>	<p><b>Closing Remarks</b></p> <p><b>Anthony K. Cheetham</b></p>
<b>17:00</b>	<p><b>Coffee Break</b></p>
<b>19:00</b>	<p><b>Dinner Banquet at the Palace hosted by</b></p> <p><b>His Highness Sheikh Saud bin Saqr Al Qasimi</b>  Member of the Supreme Council of UAE and Ruler of Ras Al Khaimah  *All guests must wear nametag to attend banquet</p>

*End of Day 3*