

2nd International Conference on Nanoscience and Nanotechnology (ICONN)
Nov.1-2, 2019
Lahore University of Management Sciences (LUMS)
Lahore 54792, Pakistan

Day - 1 (November 1, 2019)

8:00 am to 9:00 am Reception and Registration

Inauguration

9:00 am to 9:05 am	ICONN Introduction (<i>Irshad Hussain, Principal Organizer, ICONN-19</i>)
9:05 am to 9:10 am	Welcome address (<i>Shahid Masud, Dean SBASSE, LUMS</i>)
9:10 am to 9:15 am	Nanotechnology status in Pakistan (<i>N. M. Butt (SI), Fellow, Pakistan Academy of Sciences (PAS)</i>)
9:15 am to 9:25 am	Inaugural address (<i>Syed Babar Ali, Founder & former Pro-Chancellor of LUMS</i>)

Session – I Biomedical applications of nanomaterials

Chair: N.M. Butt Co-Chair: Arshad Hussain

9:30 am to 10:00 am	The nanotechnology gold rush <i>Mathias Brust (University of Liverpool, UK)</i>
10:00 am to 10:30 am	Sequence-specific “Peptoids” for bionano science and engineering <i>K. H. Aaron Lau (Strathclyde University, Glasgow, UK)</i>
10:30 am to 10:50 am	Multi-dimensional materials in health-related applications <i>Najam-ul-Haq (Bahauddin Zakariya University, Multan)</i>
10:50 am to 11:05 am	Tea break

Session – II Biomedical applications of nanomaterials

Chair: Arshad Saleem Bhatti Co-Chair: Najam-ul-Haq

11:05 am to 11:25am	Smart surfaces and drug delivery systems <i>Basit Yameen (Lahore University of Management Sciences, LUMS)</i>
11:25 am to 11:45 am	Metallic nanoparticles and de-oxy sugar containing pro-angiogenic synthetic grafts to accelerate healing in burns and diabetic foot ulcer wounds <i>Muhammad Yar (COMSATS University Islamabad, Lahore campus)</i>
11:45 am to 12:00 pm	TiO₂ based nanocomposite hydrogel for solar disinfection <i>Anam Safri (Strathclyde University, Glasgow, UK)</i>

12:00 pm to 12:15 pm	<i>The use of gold nanoparticles as novel photodynamic cancer therapy sensitizers</i> Matthew Broadbent (University of Liverpool)
12:15 pm to 12:30 pm	<i>Chiral metamaterials for biological sensing: The role of optical chirality and interference</i> Cameron Gilroy (University of Glasgow, UK)
12:30 pm to 12:45 pm	<i>In-vitro and in-vivo characterization of PVA/Starch/g-C₃N₄/Ag-TiO₂ nanocomposite hydrogel membranes for wound dressings</i> Arooj Ahmed (National University of Science and Technology)
12:45 pm to 2:30 pm	Lunch Break

Session – III Nanomaterials for renewable energy technologies

Chair: **Walther Schwarzacher** Co-Chair: **Zakir Hussain**

2:30 pm to 3:00 pm	<i>Nanotechnology: key to synthetic fuels for a sustainable energy transition</i> Asif Ansar (German Aerospace Center, Germany)
3:00 pm to 3:20 pm	<i>Tailoring and tuning of optical properties of wide band gap semiconductor nanostructures</i> Arshad Saleem Bhatti (COMSATS University Islamabad)
3:20 pm to 3:40 pm	<i>Fused ring small molecule acceptors for high-performance fullerene-free polymer solar cells</i> Raja Shahid Ashraf (Government College University Lahore)
3:40 pm to 4:00 pm	<i>Advanced functional nanoscale materials: Thin-films, electrocatalysis, solar and chemical energy conversion applications</i> Khurram S. Joya (King Fahd University of Petroleum and Minerals, KSA)
4:00 pm to 4:15 pm	<i>Tuning metal chalcogenide molecular catalysts for the hydrogen evolution reaction: Electronic effects and mechanistic insights</i> James McAllister (University of Glasgow, UK)
4:15 pm to 4:30 pm	<i>Controlled development of electrode materials for water splitting</i> Akhtar Munir (Lahore University of Management Sciences)
4:30 pm to 6:00 pm	Tea and Poster session
7:00 pm to 10:00 pm	Cultural night

Day - 2 (November 2, 2019)

8:00 am to 8:30 am **Registration**

Session – IV Synthesis, characterization and properties of nanomaterials

Chair: **Mathias Brust** Co-Chair: **Asif Ansar**

8:30 am to 9:00 am	Classical nucleation theory and electrodeposition <i>Walther Schwarzacher (University of Bristol, UK)</i>
9:00 am to 9:20 am	Magneto-optics of 2D materials <i>Sabieh Anwar (Lahore University of Management Sciences)</i>
9:20 am to 9:40 am	Inorganic materials for electrochemical and catalysis applications <i>Manzar Sohail (National University of Science and Technology)</i>
9:40 am to 10:00 am	Fabrication of triboelectric nanogenerators using template assisted synthesis <i>Ajab K. Kasi (University of Balochistan, Quetta)</i>
10:00 am to 10:15 am	Long wavelength lattice dynamics in morphotropic $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$: the road to large scale electronic structure calculations <i>Jack Baker (University College London, London, UK)</i>
10:15 am to 10:30 am	First principles modeling of anisotropic thermoelectric materials <i>Alban d'Harcourt (University of York, UK)</i>
10:30 am to 10:45 am	Exploiting the structure-property relationship in Bragg stacks: A soft matter approach <i>Faroha Liaquat (Quaid-i-Azam University, Islamabad)</i>
10:45 am to 11:00 am	Tea break

Session –V Synthesis, characterization and properties of nanomaterials

Chair: **Bien Tan** Co-Chair: **Shahab-ud-Din Memon**

11:00 am to 11:30 am	The effect of confinement on the crystallization of soft materials <i>Hatice Duran (TOBB University of Economics and Technology, Turkey)</i>
11:30 am to 11:50 am	Synthesis of ion-channels: Ideal candidates for the drug delivery systems <i>Raza Shah (HEJ Research Institute of Chemistry, International Center for Chemical and Biological Sciences (ICCBS), University of Karachi)</i>
11:50 am to 12:10 pm	The role of calixarenes as nanorobotics in material science <i>Shahab-ud-Din Memon (Center of Excellence in Analytical Chemistry, University of Sindh, Jamshoro)</i>
12:10 pm to 12:30 pm	Graphene and other 2D materials: Fabrication & applications <i>Rashid Jalil (University of Engineering and Technology, Lahore)</i>

12:30 pm to 12:45 pm	Real time STM tip state recognition using neural networks <i>Oliver Gordon (University of Nottingham, UK)</i>
12:45 pm to 1:00 pm	Nano-colloids to understand the nature of the glass transition <i>Levke Ortlieb (University of Bristol, UK)</i>
1:00 pm to 2:00 pm	Lunch break

Session – VI Environmental applications of nanomaterials

Chair: **Raza Shah** Co-Chair: **Hatice Duran**

2:00 pm to 2:30 pm	Porous hypercrosslinked polymer-TiO₂-graphene photocatalysts for visible-light-driven CO₂ conversion <i>Bien Tan (Huazhong University of Science and Technology (HUST), Wuhan, China)</i>
2:30 pm to 2:50 pm	Carbon dioxide capture from methane using mixed matrix membranes <i>Arshad Hussain (National University of Science and Technology, Islamabad)</i>
2:50 pm to 3:10 pm	BioSurfactant stabilised nanomaterials – antimicrobial, cytotoxic activity <i>Mohammed Yaseen (University of the West of Scotland, UK)</i>
3:10 pm to 3:30 pm	Emerging 2D-Mxene and black TiO₂ nanomaterials and their potential for environmental applications <i>Waheed Khan (National Institute of Biotechnology and Genetic Engineering (NIBGE), Faisalabad)</i>
3:30 pm to 3:50 pm	Applications of multinary metal oxides nanocomposites <i>M. Akhyar Farrukh (Forman Christian College, Lahore)</i>
3:50 pm to 4:10 pm	Mesoporous zirconia nanostructures (MZN) for excellent adsorption of As(III) and As(V) from aqueous solutions <i>Khurram Shehzad (University of Science and Technology of China, China)</i>
4:10 pm to 4:40 pm	Closing ceremony and refreshments