

Nano Singapore 2021 Virtual Conference Program

23 - 25 November 2021 (GMT + 1 Time Zone)

November 23, 2021		
Nano Singapore session I: Nanomaterials Fabrication / Synthesis / Characterisation		
Session's Chairs: Prof. Jacques Jupille, Institut des Nanosciences de Paris, France Prof. Fengzhou Fang, University College Dublin, Ireland		
09:00 - 09:30	Nano-structured composite materials for environmental benign antimicrobial technology Y. Zhang	Prof. Yugen Zhang , Institute of Bioengineering and Nanotechnology (IBN), A-Star, Singapore
09:30 - 10:00	Development of a next generation ion microscope aiming at single digit nanometer lithography, 3D imaging at the nanoscale and deterministic ion implantation J. Anton van Kan	Dr. Jeroen Anton van Kan , National University of Singapore, Singapore
10:00 - 10:30	Single-chain Knot/cyclized polymers from Controlled Multivinyl Monomer Polymerisation and Their Biomedical Applications W. Wang	Prof. Wenxin Wang , University College Dublin, Ireland
10:30 - 10:45	Nanosensor Detection of Synthetic Auxins in planta using Corona Phase Molecular Recognition M.C.Y. Ang , N. Dhar, D.T. Khong, T.T.S. Lew, M. Park, S. Sreelatha, J. Cui, A. Dehadrai, G.P. Singh, M.B. Chan-Park, S. Rajani and M.S. Strano	Dr. Mervin Chun-Yi Ang , Singapore-MIT Alliance for Research and Technology, Singapore
10:45 - 11:00	Understanding Active Site for Methanol Synthesis on CuZn and PdZn Nanoalloys U. Anjum and S.M Kozlov	Dr. Uzma Anjum , National University of Singapore, Singapore
11:00 - 11:30 Morning Break		
Session's Chairs: Prof. Jacques Jupille, Institut des Nanosciences de Paris, France Dr. Jeroen Anton van Kan, National University of Singapore, Singapore		
11:30 - 11:45	Crosslinked polypeptide films via RAFT mediated continuous as-sembly of polymers N.J. Chan , S. Lentz, P.A. Gurr, S. Tan, T. Scheibel and G. G. Qiao	Mr. Nicholas J. Chan , University of Melbourne, Australia
11:45 - 12:00	Field-induced nanoparticle-based diaphragms X. Tang and W. Wen	Ms. Xingwei Tang , Hong Kong University of Science & Technology, Hong Kong
12:00 - 12:15	Defect minimized hBN flake embedded Al ₂ O ₃ thin film for flexible moisture barrier W. Jang , S. Han, T. Gu, H. Chae and D. Whang	Mr. Wonseok Jang , Sungkyunkwan University, Rep. of Korea
12:15 - 12:30	Impact of the Addition of Mixed Chlorinated Rubber, Graphene Oxide and Silicone Oil in Polyurethane as Anti-fouling Coatings O. F. Muslim , A. L. Juwono and Tulus	Dr. Opa Fajar Muslim , University of Indonesia, Indonesia
12:30 - 12:45	Growth of Patterned Vertically Aligned Carbon Nanotube Arrays With Marker Pen Stencilling L. Lum , Z. K. Ng, C. F. Siah, C. W. Tan, E. H.T. Teo and B. K. Tay	Mr. Lucas Lum , Nanyang Technological University, Singapore
12:45 - 13:30 Mid-Day Break		
Session's Chairs: Prof. Wenxin Wang, University College Dublin, Ireland Dr. Jean-Luc Bubendorff, University of Haute Alsace, France		
13:30 - 14:00	Plasmonics at the nanoscale J. Jupille	Prof. Jacques Jupille , Pierre et Marie Curie University CNRS Paris, France

14:00 - 14:30	Manufacturing III: Atomic and close-to-atomic scale manufacturing F. Fang	Prof. Fengzhou Fang , University College Dublin, Ireland
14:30 - 15:00	Graphene Oxide and Graphene-like Materials: Finding Their Place in the World of Commercial Carbon Materials E. Polyakova	Prof. Elena Polyakova , Graphene Laboratories Inc, NY, USA
15:00 - 15:15	A sustainable approach towards wood-based composites manufacturing by nanobiopolymer application P. Hochmańska-Kaniewska , D. Janiszewska and W. Bałęczny	Dr. Patrycja Hochmańska-Kaniewska , Łukasiewicz Research Network- Wood Technology Institute-Poznan, Poland
15:15 - 15:30	Application potential of multifunctional inorganic nanoparticles in textile and paper industries. M. Skwierczyńska , M. Runowski, A. Szczeszak, P. Kulpiński and S. Lis	Ms. Małgorzata Skwierczyńska , Adam Mickiewicz University-Poznan, Poland
15:30 - 15:45	2D Fluorographyne: Synthesis and Properties G. Abdi , A. Alizadeh, P. J. Leszczynski, Z. Mazej, W. Grochala and A. Szczurek	Dr. Gisy Abdi , University of Warsaw, Poland

November 24, 2021

Nano Singapore session II.A: Nanoscale Electronics/Nano Electronics and Photonics

Session's Chairs:

Dr. Kavitha Palaniappan, Newcastle Australia Institute of Higher Education, Singapore
Dr. Jean-Luc Bubendorff, University of Haute Alsace, France
Prof. Renaud Bachelot, UTT Troyes, France

09:30 - 10:00	Road to Future Possibilities through Printed Electronics S. Agarwala	Prof. Shweta Agarwala, Aarhus University, Denmark
10:00 - 10:30	Plasmonic nanocavity for light manipulation and energy conversion L. Danyuan	Dr. Lei Danyuan, City University of Hong Kong, Hong Kong
10:30 - 11:00 Morning Break		
11:00 - 11:30	Enhanced Biodiesel Production through Nanocatalysts and Nano-material bound Microbial Enzymes K. Palaniappan	Dr. Kavitha Palaniappan, Newcastle Australia Institute of Higher Education, Singapore
11:30 - 11:45	Performance Improvement of Residue-free Graphene Field-Effect Transistor Using Au-assisted transfer Method Y.Jang, Y-M. Seo, H-S. Jang, K. Heo and D. Whang	Mr. Yamujin Jang, Sungkyunkwan University, Rep. of Korea
12:00 - 13:00 Mid-Day Break		

Nano Singapore session II.B: Nanoscale Electronics/Nano Electronics and Photonics/ environmental applications

Session's Chairs:

Prof. Jacques Jupille, Institut des Nanosciences de Paris, France
Dr. Annarosa Gugliuzza, Institute on Membrane Technology (CNR-ITM), Italy

13:00 - 13:30	Electrically switchable plasmonic nanoantennas H.W. Giessen	Prof. Harald W. Giessen, University of Stuttgart, Germany
13:30 - 14:00	Hybrid plasmonic nano-emitters: on the importance of controlling the spatial distribution of the active medium R. Bachelot	Prof. Renaud Bachelot, UTT Troyes, France
14:00 - 14:30	Graphene and bismuth telluride few layers entangled in nanostructured porous membranes for more sustainable water desalination A. Gugliuzza	Dr. Annarosa Gugliuzza, Institute on Membrane Technology (CNR-ITM), Italy
14:30 - 14:45	A new growth process for crystalline ultra-thin layers of conjugated oligomers used in field-effect transistor applications J.L. Bubendorff, S. Renkert, S. Fall, T. Heiser, S. Motamen, L. Simon and G. Reiter	Dr. Jean-Luc Bubendorff, University of Haute Alsace, France

Nano Singapore 2021 - Session II.C: Nanomaterials for life science/ medical applications

Session's Chairs:

Prof. Luigi Pasqua, University of Calabria, Italy
Prof. Antonella Leggio, University of Calabria, Italy

14:45 - 15:00	Engineered nanoparticles for targeted delivery of the anticancer drug Bortezomib A. Leggio, L. Pasqua and C. Morelli	Prof. Antonella Leggio, University of Calabria, Italy
15:00 - 15:15	Physical state of doxorubicin in Doxil® liposomal formulation: effect of temperature D.R. Perinelli, G. Bonacucina, M. Cespi and G.F. Palmieri	Dr. Diego Romano Perinelli, University of Camerino, Italy
15:15 - 15:30	Fundamental Chronobiological Changes and Charge Regulation Effects in Nanostructure of Bone Tissue A. A. Pavlychev, X.O. Brykalova and N.N. Kornilov	Prof. Andrey Pavlychev, Department of Physics, St.Petersburg State Univ., Russia
15:30 - 15:45	Nanostructured Mesoporous Silica-Based Devices for Smart Chemotherapy L. Pasqua, C. Morelli and A. Leggio	Prof. Luigi Pasqua, University of Calabria, Italy

15:45 - 16:00	Virus-based nanoparticles as multifunctionalized and targeted enzymatic nanoreactor for treatment of breast cancer K. Chauhan and R. Vazquez-Duhalt	Prof. Rafael Vazquez-Duhalt , The National Autonomous University of Mexico, Mexico
16:00 – 16:15	A Qualitative Comparison between Two Different Microfluidic Devices with Roughened Surfaces Regarding Cavitation Inception M. Ghorbani	Dr. Morteza Ghorbani , Sabanci University, Turkey

November 25, 2021

Nano Singapore 2021 - Session III: Nanomaterials for life science/ medical applications

Session's Chairs:

Dr. Kavitha Palaniappan, Newcastle Australia Institute of Higher Education, Singapore
Prof. Wenxin Wang, University College Dublin, Ireland

09:00 - 09:30	Organic nanoparticles for sensing, imaging, and therapy B. Liu	Prof. Liu Bin , National University of Singapore, Singapore
09:30 - 10:00	Bioinspired Carbon Dots and Bio-templated Metal Nanoparticles for Sensing, Imaging and Nanomedicine Y. Nee Tan	Prof. Yen Nee Tan , Newcastle University, UK/NU International, Singapore
10:00 - 10:30	Genetic engineering of immune cells via nanoneedle array technology N.H. Voelcker	Prof. Nicolas Voelcker , Monash University, Australia
10:30 - 11:00	Morning Break	
11:00 - 11:30	Translational Nanomedicine: Crossing Borders in Drug Delivery M.G. Wacker	Prof. Matthias G. Wacker , National University of Singapore, Singapore
11:30 - 12:00	"Safe-by-Design" of Nanotechnology-Enabled Artificial Hip Joints For whole life use T. A. Wilkins , S. Lal, E.A. Caseley, R.M. Hall, J.L. Tipper	Prof. Terry Wilkins , University of Leeds, UK
12:00 - 12:15	Embedding of Antitumor Enzyme L-Lysine Alpha-Oxidase in the PolyGraphene and Using as Nanomatrixes for Cancer Prevention, Diagnosis and Treatment. A.S. Botin , A.Yu. Arinbasarova, A.G. Medentsev, T.S. Popova and D.V. Andreeva	Dr. Alexander Botin , Peoples' Friendship University of Russia, Moscow, Russia
12:15 - 12:30	Poly (photosensitizers) Nanoparticles for Enhanced in Vivo Photo-dynamic Therapy by Interrupting the π - π Stacking and Extending Circulation Time N. Zheng	Dr. Nan Zheng , Dalian University of Technology, China
12:30 - 12:45	Design of RNA aptamer with highest affinity to a specific long non-coding ribonucleic acid by the coarse-grained molecular mechanics S-P. Ju, H-W. Yang and T-F. Tseng	Mr. Tseng Ta Feng , National Sun Yat Sen University, Taiwan

Nano Singapore 2021 Posters Virtual Session

Posters are being displayed through the Virtual event solution.
Discussions are to be done through the system chat features available to the attendees.

N.	Title	Author/Affiliation/Country
1.	Effect of Counter-ions on plasmonic response of citrate-stabilized gold nanoparticles K. Thammanatpong , S. Plengcharoensirichai and P. Swanglap	Mr. Kittimeth Thammanatpong , Silpakorn University, Thailand
2.	Utilizing of silver nanoparticle for Lead(II) ion detection S. Plengjaroensirichai , K. Thammanatpong and P. Swanglap	Mr. Sarawut Plengjaroensirichai , Silpakorn University, Thailand
3.	Green and eco-friendly synthesized gold nanoparticles with apple extracts for sensitive detection of Al ³⁺ H. Park , W. Kim, M. Kim, J. Park, S. Jo, W. Kim, C. Kim, W. Lee and J. Park	Mr. Hyunjun Park , Korea University, Rep. of Korea
4.	The Formation of Covalently Bonded Aerogel Heterostructures Based on MXenes and Graphene Oxide M. Scheibe , C. Aparicio, K. Tadyszak, B. Peplinska, V. Ranc, M. Otyepka and B. Scheibe	Dr. Magdalena Scheibe , Palacky University Olomouc, Czech Republic
5.	Graphene-enhanced Raman spectroscopy for discrimination of amino acids Z. Chaloupková and V. Ranc	Dr. Zuzana Chaloupková , Palacky University Olomouc, Czech Republic
6.	Indoor-light harvesting of PVSK photovoltaics with double-sided irradiation to increase output power J-H. Lu , M-T. Cheng, T-H. Tsai, H-L. Hsu and C-P. Chen	Prof. Jong-Hong Lu , Ming Chi University of Technology, Taiwan
7.	The design and fabrication of nanoscale thermoelectric detector for near-field characterization of semiconductor lasers A. Piotrowska , A. Broda, A. Łaszcz, M. Zaborowski and D. Szmigiel	Dr. Anna Piotrowska , Institute of Microelectronics and Photonics-Warsaw, Poland
8.	High performance organic-inorganic hybrid encapsulant for smart windows M-J. Kang , D-J. Kang and H-G. Im	Mr. Min-Jung Kang , Korea Electrotechnology Research Institute (KERI), Rep of Korea
9.	Nano-Toxicant Method Using Artemia Franciscana and Multi-Object Tracking Algorithm M. Kim , J. Park, W. Kim, H. Park, S. Jo, W. Kim, C. Kim, W. Lee and J. Park	Mr. Minwoo Kim , Korea University, Rep. of Korea
10.	Zwitterionic Poly-photosensitizers as Carrier-free, Photosensitizer-Self-Delivery System for in Vivo Photodynamic Therapy N. Zheng and W. Song	Prof. Wangze Song , Dalian University of Technology, China