

2nd International Summit on **MATERIALS SCIENCE** **AND ENGINEERING**

March 19-20, 2026

& March 21, 2026 (Virtual Via Zoom Platform)

Venue: Ambassador Hotel Bangkok, Thailand

Theme:

**“Innovations
& Advanced
Technologies in
Materials Science”**



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GLOBAL

Graphene Solutions

The Foundation for a New Industrial Generation

VGG is an advanced materials technology company specializing in the research, production, and supply of high-quality graphene derivatives for industrial and scientific applications. The company focuses on developing stable and scalable production processes while maintaining high material quality. VGG aims to deliver high-quality graphene derivatives products that support the advancement of high-tech industries and next-generation advanced materials.

Danh Tien Nguyen,
CEO-VIETNAM GRAPHENE
GLOBAL JSC.

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08:00 - 08:30 Onsite Registration & Seating Arrangement

08:30 - 08:45 Introduction & Opening Ceremony

08:45 - 09:00 Recognition of Our Esteemed Sponsors

Plenary Presentations

09:00 - 09:30 **Title: Why and How Soft, Solution Processing (=Low Energy Production) Advanced Nano-Materials is Difficult but Necessary for Sustainable Society?**
Prof. Masahiro Yoshimura, Tokyo Institute of Technology, Japan

09:30 - 10:00 **Title: Transfer-Free N- and P-Channel Graphene Field-Effect Transistors Using Graphene Grown Directly Via Plasma-Assisted Thermal CVD at 100oC for Digital Logic Devices**
Dr. Soon-Gil Yoon, Chungnam National University, Republic of Korea

Refreshment & Coffee - 10: 00 - 10:15

Keynote Presentations

10:15 - 10:40 **Title: Flexible Organic Electrochromic Devices Having Multicolored, Low-Voltage Driven and High Contrast, and Organic Photovoltaic Properties Based on Oligomers and Viologen Derivatives**
Prof. Ping Liu, Key Laboratory of Luminescent Materials and Devices, China

10:40 - 11:05 **Title: 3D Graphene: Plasma Synthesis and Electrode Application**
Prof. Mineo Hiramatsu, Meijo University, Japan

11:05 - 11:30 **Title: Smart Processing: The Key to High-Quality Components Made of Polymer Fiber Reinforced Polymers Using Extrusion-Based 3D-Printing**
Prof. Alois K. Schlarb, Rhineland-Palatinate University of Technology Kaiserslautern-Landau (RPTU), Germany

11:30 - 11:55 **Title: Next-Generation Environmental In Situ System for Correlative Research Across TEM, SEM, and Synchrotrons**
Dr. Hugo Pérez-Garza, DENSSolutions BV, The Netherlands

11: 55 - 12:25 Exhibitor Spotlight Session by Vietnam Graphene Global JSC.

Oral Presentations

12:25 - 12:45 **Title: A Smart Textile Sensor System Providing an Intelligent Floor**
Assoc. Christl Lauterbach, Future-Shape GmbH, Germany

12:45 - 13:05 **Title: Mechanical Performance of Unidirectional CFRP Materials Under Varying Environmental Conditions Applicable to Composite Wind Turbine Blades**
Prof. Glen Bright, University of KwaZulu-Natal, South Africa

13:05 - 13:25 **Title: Superheating Phenomena of REBa₂Cu₃O_x Nano-films, Mechanisms & Applications**
Prof. Xin Yao, Shanghai Jiao Tong University, China

Memorable Group Photo & Tempting Buffet lunch - 13:25 - 14:15

Keynote Presentations

- 14:15 - 14:40 **Title: Nanomaterials and Nanostructures for the Next Generation of Rechargeable Batteries**
Prof. Jonas Örtengren, Mid Sweden University, Sweden
- 14:40 - 15:05 **Title: Harnessing advanced algorithms to improve automated, telescoped chemical reactions; Performance directed self-optimisation of bimetallic nanoparticle catalysts**
Prof. Thomas Chamberlain, University of Leeds, USA
- 15:05 - 15:30 **Title: Inkjet-Printing For Flexible Hybrid Electronics (FHE)**
Prof. Martin Bolduc, Université du Québec à Trois-Rivières, Canada
- 15:30 - 15:55 **Title: Biomimetic Coatings Exhibiting Multifunctional Properties**
Prof. Atsushi Hozumi, National Institute for Advanced Industrial Science and Technology, Japan
- 15:55 - 16:20 **Title: Revealing the Structure and Dynamics of Nano-Materials Via Atomic Scale Transmission Electron Microscopy, Including In-Situ Imaging and Spectroscopy Method**
Prof. Ursel Bangert, University of Limerick, Ireland

Refreshment & Coffee - 16:20 -16:40

Oral Presentation

- 16:40 - 17:00 **Title: Investigation of the Effects of Electromagnetic Radiation on the Optical Properties of Monolayer Iron Borides (MBenes/FexBy): Based on Ab-Initio Methods**
Dr. Hakan Usenti, Düzce University, Turkey
- 17:00 - 17:20 **Title: Designing New 2D Nano-Materials Using Computational Intelligence**
Prof. Tadeusz Burczyński, Silesian University of Technology, Poland
- 17:20 - 17:40 **Title: Biomimetic Chemistry: Principles of Molecular Recognition and Enzyme Mimicry**
Prof. Abraham Shanzer, Weizmann Institute of Science, Israel
- 17:40 - 18:00 **Title: Effects of TiO₂ Nanoparticle on the Formation of Bioactive Glass Ceramics in the CaO–Al₂O₃–SiO₂–P₂O₅–CaF₂–ZrO₂ System**
Dr. Sudip Kumar Das, University of Calcutta, India

***** End of Day 1 Conference *****

8:30 - 09:00 Onsite Registration & Seating Arrangement

Keynote Presentations

09:00 - 09:25 **Title: Green Synthesis of Silver Nanoparticles Using Endophytic Fungi: A Sustainable Antimicrobial Approach**

Prof. Bita Zaferanloo, Swinburne University of Technology, Australia

09:25 - 09:50 **Title: Strategic Protection of Graphene Technologies Through Patents and Intellectual Property**

Prof. Tyson Winarski, Arizona State University, USA

09:50 - 10:15 **Title: Joining of nanometer thick diamond-like carbon films using laser irradiation**

Prof. Hiroki Akasaka, Institute of Science Tokyo, Japan

10:15 - 10:40

Title: Chemical Lithography and Nanofabrication with Self-Assembled Monolayers

Prof. Michael Zharnikov, Heidelberg University, Germany

10:40 - 11:10 Exhibitor Spotlight Session by Vietnam Graphene Global JSC.

Refreshment & Coffee - 11:10 - 11:30

Keynote Presentations

11:30 - 11:55 **Title: A Theoretical Investigation of the Selectivity of Aza-Crown-Ether Structures Chelating Alkali Metal Cations for Potential Biosensing Applications**

Dr. Mark Hoffmann, University of North Dakota, U.S.A

11:55 - 12:20 **Title: Adsorption of Pollutants by 2D Carbon Materials - Modelling Study**

Dr. Eva Scholtzová, Institute of Inorganic Chemistry, Slovakia

12:20 - 12:45 **Title: Low-Cost and Highly Efficient Nano-Electrocatalyst Development for Brine Valorization with CO₂ Capture**

Prof. Yan Liu, Agency for Science, Technology and Research (A*STAR), Singapore

12:45 - 13:10 **Title: Synthesis of Butterfly-shaped gold nanorod toward biological reaction field**

Dr. Tomohiro Nobeyama, Kyoto University, Japan

Memorable Group Photo & Tempting Buffet Lunch - 13:10 - 14:00

Keynote Presentations

14:00 - 14:25 **Title: Engineering 3D printed bone scaffolds for craniofacial and musculoskeletal tissues**

Prof. Styliani Alimperti, Georgetown University, USA

14:25 - 14:50 **Title: Cryogenic Properties of 2D Materials and Their Devices**
Dr. Farzan Gity, Tyndall National Institute, Ireland

14:50 - 15:15 **Title: Micro and nanofluidics in the nanoworld**
Prof. Patrick Tabeling, IPGG - Pierre-Gilles de Gennes Institute, France

Oral Presentations

15:15 - 15:35 **Title: Size dependence of the catalytic activity of small gold nanoparticles**
Dr. Libor Kvitek, Palacky University Olomouc, Czechia

15:35 - 15:55 **Title: Sustainable Approach for Pavement Rehabilitation**
Prof. G. D Ransinchung R.N., Indian Institute of Technology Roorkee, India

15:55 - 16:15 **Title: Enhancement of Corrosion Resistance on Magnesium Alloys by Steam Coating: Fabrication of Protective Hydroxide-Based Films**
Prof. Takahiro Ishizaki, Shibaura Institute of Technology, Japan

16:15 - 16:35 **Title: Reconfigurable and Nonvolatile Ferroelectric Bulk Photovoltaics based on 3R-WS₂ for Machine Vision**
Prof. Beng Kang Tay, Nanyang Technological University, Singapore

16:35 - 16:55 **Title: The Physics and Application of Quantum Dots/Graphene Nanohybrids Photodetectors**
Dr. Judy Wu, University of Kansas, Lawrence, USA

Refreshment & Coffee - 16:55 - 17:15

Poster Evaluation and Best Poster Awards - 17:15 - 18:00

NW261 **Title: Experimental and numerical investigations of the stability and load-carrying capacity composite columns under axial compression**
Prof. Hubert Debski, Lublin University of Technology, Poland

NW262 **Title: Experimental and numerical study of passive columnar energy absorber with innovative zone-annealed trigger**
Prof. Mirosław Ferdynus, Lublin University of Technology, Poland

NW263 **Title: Multiferroic composite materials sintered by three methods, i.e., pressureless sintering, spark plasma sintering and hot pressing**
Prof. Dariusz Bochenek, University of Silesia in Katowice, Poland

NW264 **Title: Multiferroic ceramic composites obtained from the combination of PLZT and ferrite material**
Dr. Dagmara Brzezińska, University of Silesia in Katowice, Poland

NW265

Title: Comparison of Amino- and Sulfate- terminated Self-Assembled Monolayers for Cu/Porous Low-k Dielectrics Integration **Prof. Yi Lung Cheng**, National Chi-Nan University, Taiwan

MA261

Title: Microbial Production of 2,5-Pyridinedicarboxylate: A Versatile Bio-based Building Block for Next-Generation Bio-polymers
Prof. Shuhei Noda, Kobe University, Japan

***** End of Day 2 & Conference *****



07:50 - 08:00 Introduction & Opening Ceremony

8:00 - 8:30 Exhibitor Spotlight Session by Vietnam Graphene Global JSC.

Plenary Presentations

08:30 - 09:00 **Title: An Overview of High Dielectric Constant Materials as Passivation Layer for 4H-Silicon Carbide Based Metal-Oxide-Semiconductor Devices**
Prof. Quah Hock Jin, Institute of Nano Optoelectronics Research and Technology, Malaysia

09:00 - 09:30 **Title: Design of Nanocomposite Materials for Advanced Energy Field**
Prof. Vladislav A. Sadykov, Boreskov Institute of catalysis, Russia

Oral Presentations

09:30 - 09:50 **Isotopical Creation of Semiconducting Graphene**
Prof. V.G. Plekhanov, Fonoriton Science Lab, Estonia

09:50 - 10:10 **Biopolymer-based hydrogels on coatings for high-performance flexible materials**
Alba Martínez Fernández, Polytechnic University of Catalonia, Spain

Keynote Presentations

10:10 - 10:35 **Title: Fracture Behavior of Biocompatible Cellulose Nanofiber-reinforced Composite Gels**
Prof. Hiroyuki Takeno, Gunma University, Japan

10:35 - 11:00 **Title: Heavy-Metal Loaded Nanocomposites As Novel Photocatalysts for the Degradation of Organic Pollutants**
Prof. Kriveshini Pillay, University of Johannesburg, South Africa

11:00 - 11:25 **Title: Direct observation of dark excitons in a monolayer of 2D ferromagnetic materials**
Prof. Yuan-Ron Ma, Fo Guang University, Taiwan

11:25 - 11:50 **Title: Polymer Optical Fiber-Based Luminescent Solar Concentrators for Next-Generation Photovoltaics**
Prof. Nekane Guarrotxena, Spanish National Research Council (ICTP-CS IC), Spain

11:25 - 11:50 **Title: Design, characterization and applications of green, multifunctional, self-assembled materials in biomedicine, cosmetics, and food packaging**
Prof. Jennifer Gubitosa, University of Bari "Aldo Moro", Italy

12:15 - 12:40 **Title: Sustainable adsorbent materials for the removal of pollutants from water: nanotechnology as solution for their regeneration**
Prof. Vito Rizzi, University of Bari "Aldo Moro", Italy

12:40 - 13:00 (Eye Relaxation Break & Breakout Rooms - Greenwich Mean Time)

Oral Presentations

13:00 - 13:20 **Title: Importance of exposure assessment along life cycle of nanocomposites**
Mr. Gunther Van Kerckhove, OCSiAl Group, Luxembourg, Europe

13:20 - 13:40 **Title: The development of DoTPIx based high energy charged particle detectors: From materials to device**
Prof. Nicolas Fouches, EA Saclay, France

13:40 - 14:00 **Title: Advances and opportunities in Cold Spray Deposition of Ceramics**
Prof. John Henao, SECIHTI- CIATEQ A.C., Mexico

14:00 - 14:20 **Title: Opening of band - gap and lepton mass acquisition in graphene by strong interaction**
Prof. V.G. Plekhanov, Fonoriton Science Lab, Estonia

14:20 - 14:40 **Title: Graphene for E-nose and E-tongue**
Prof. Ho Won Jang, Seoul National University, Korea

Keynote Presentations

14:40 - 15:05 **Title: Graphene Oxide-eSiC Hybrid Coating Development - A Liquid Additive Manufacturing Approach**
Prof. Md Abdul Maleque, International Islamic University Malaysia, Malaysia

15:05 - 15:30 **Title: 3D printing of titanium alloy composites**
Prof. Laichang Zhang, Edith Cowan University, Australia

15:30 - 15:55 **Title: Design of a High-strength and Tough Alcrytisin Ceramic Coating with Superior Resistance to Lbe Corrosion**
Dr. Wenyao Li, University of Science and Technology Beijing, China

15:55 - 16:20 **Title: Renewable DME production from green hydrogen and CO₂**
Prof. Rosanna Viscardi, Italian National Agency for New Technology, Italy

16:20 - 16:40 (Eye Relaxation Break & Breakout Rooms - Greenwich Mean Time)

Oral Presentations

16:40- 17:00 **Title: Cradle to Cradle Design Innovations**
Mr. Albin Kaelin, CEO epeaswitzerland gmbh, switzerland

17:00 - 17:20 **Title: From Laboratory Promise to Real-World Adoption: A Governance-Driven Framework for Validating Graphene-Enhanced Cementitious Systems**
Mr. Cecilio Fernando Mills, University of California, Berkeley, United States

Plenary Presentations

17:20 - 17:50 **Title: Chemistry of 2d Materials: Graphene and h-BN on Ni(111)**
Prof. Luca Vattuone, University of Genoa, Italy

17:50 - 18:20 **Title: Materials Science/Technologies Development of Transformational Multifunctional Films for New Generations of Industrial, High-Tech, and Biomedical Devices/Prostheses to Improve Way/Quality of Life**
Prof. Orlando Auciello, Distinguished Research Scientist, Texas State University CEO/Original Biomedical Implants (OBI-USA and OBI-México) USA

Keynote Presentations

18:20 - 18:45 **Title: Engineering 3D printed bone scaffolds for craniofacial and musculoskeletal tissues**
Dr. Stella Alimperti, Georgetown University, USA

18:45 - 19:10 **Title: Ceramic-based composites for severe environments**
Prof. Jon Binner, University of Birmingham, UK

19:10 - 19:35 **Title: Design of Nano copper, copper-palladium and Nickel supported on nano-graphene for selective NO reduction, CO₂ hydrogenation and oxidation of d-glucose to glucaric acid**
Prof. Martin Schmal, University of São Paulo, Brasil

*****End of the Conference*****



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