Smart Nano-2026
JUNE 22–24, 2026 | BALI, INDONESIA

PRISM

2ND INTERNATIONAL CONFERENCE ON

NANOTECHNOLOGY AND SMART MATERIALS

JUNE 22–24, 2026 | HOTEL HOLIDAY INN RESORT
BARUNA, BALI, INDONESIA

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INSTRUCTIONS FOR SPEAKERS

1. **Keynote Talks:** Keynote speakers will be allotted 35 minutes to present their results, followed by a 5 minutes discussion period.
2. **Invited Talks:** Invited speakers will be allotted 17 minutes to present their results, followed by a 3-minute discussion period.
3. **Oral Talks:** Oral speakers will be allotted 12 minutes to present their results, followed by a 3-minute discussion period.
4. Please do not exceed the allotted time slot.
5. Speakers should have their presentations saved on a USB memory stick.
6. It is suggested to email a copy of the presentations to us as back up.
7. Please prepare the presentation in PPT files, PDF is not recommended.
8. **Basic AV setup will be provided:** laser pointer, cordless mike, desktop mike, sound system.
9. Laptops equipped with Windows 10, Office 2010 Pro English (Word, Powerpoint, Excel) and Adobe Reader are provided.
10. If your presentation files contain movies, please make sure that they are well formatted and connected to the main files. You may check your slides during the breaks.
11. Projectors are equipped with standard VGA connection ports. Mac users should bring their own adapter cord.
12. Please re-check this program prior to the conference to confirm if any changes have been made to your session.
13. Conference volunteers will move the mic during Q&A. Audience with questions may raise hand to receive the mic.

INSTRUCTIONS FOR E-POSTER

1. Poster must be prepared in PowerPoint (Max 2 slides).
2. Use high-resolution images and readable fonts.
3. Each presenter will have 7 minutes to briefly explain their poster during the poster session, Followed by 3 minutes for Q&A.

DAY-1 JUNE 22, 2026

08:30-09:15 **Registrations**

09:15-09:30 **Opening and Welcome**

Keynote Talks

09:30-10:10 **Keynote Talk:** Bridging the Scale-Up Gap for Solvothermally Synthesized Nanomaterials: The Bicontinuous Concentric Lamellar (bcl) Silica Case
Veinardi Suendo, Institut Teknologi Bandung, Indonesia

10:10-10:50 **Keynote Talk:** Directed Nanomaterials Assembly for Post AI Era
Sang Ouk Kim, Korea Advanced Institute of Science and Technology, South Korea

10:50-11:20 **COFFEE BREAK AND GROUP PHOTO**

11:20-12:00 **Keynote Talk:** Polymer-Conjugated Hemoglobins as Red Blood Cell Substitutes
Teruyuki Komatsu, Chuo University, Japan

12:00-12:40 **Keynote Talk:** Configurational Entropy–induced Lattice Distortion in High-entropy Prussian Blue Analogues Derived Transition Metal Phosphide Accelerates Electrocatalytic Hydrogen Evolution in Alkaline Media
Min-Hsin Yeh, National Taiwan University of Science and Technology, Taiwan

12:40-13:30 **LUNCH BREAK**

Session: Nanoelectronics, Photonics and Emerging Smart Materials

13:30-13:50 **Invited Talk:** Freestanding Superconducting Membranes Fabricated *via* a Water-Soluble Sacrificial Buffer Layer
Kazumasa Iida, Nihon University, Japan

13:50-14:10 **Invited Talk:** Plasma Electrolytic Oxidation of Biodegradable Nanocomposite Mg-Zn-Y/ZrO_2 at Variation of ZrO_2 Concentration
Anawati, University of Indonesia, Indonesia

14:10-14:30 **Invited Talk:** Hybridization of Metal Nanostructures with Molecular Upconversion Systems for Enhanced Upconversion Emission Brightness
Kosuke Sugawa, Nihon University, Japan

14:30-14:50 **Invited Talk:** A Study of Nano Silica and Eggshell Powder Substitutions in Cement and the Effect on Physical and Mechanical Properties of the Cement Mortars
Ariadne L Juwono, Universitas Indonesia, Indonesia

14:50-15:10 **Invited Talk:** Enzyme-Functionalized Angle-Based SPR Biosensor for Non-Invasive Detection of Salivary Creatinine
Ahmad Ashrif A Bakar, Universiti Kebangsaan Malaysia, Malaysia

15:10-15:30 **Invited Talk:** Sustainable Synthesis of Nanocrystalline Dicalcium Phosphate Dihydrate using Phosphoric Acid and Calcium Derived from Green Mussel Shells
Athanasius P. Bayuseno, Diponegoro University, Indonesia

15:30-16:00 **COFFEE BREAK**

16:00-16:15	**Oral Talk:** Excitonic Absorption Edge Reshaping in $CsPbBr_3$ Thin Films: Interplay of Electrostatic Fields and Phonon Coupling **Sudirman,** Institut Teknologi Bandung, Indonesia
16:15-16:30	**Oral Talk:** Optical and Vibrational Properties of Single Crystal of Mix Halide Perovskite **Nabila Aris Muhammad,** Institut Teknologi Bandung, Indonesia
16:30-16:45	**Oral Talk:** Influence of Nickel: Cobalt Composition on the Photoluminescence Properties of NiCo-TEP Nanoparticles **Firda Apriyani,** Institut Teknologi Bandung, Indonesia
16:45-17:00	**Oral Talk:** Effects of Salt, pH, and Protein Adsorption on Pegylated Graphene Oxide Functionalized Gold Nanoparticles Stability: Comparing Seed-Mediated and Turkevich Methods **Zainab N. A. Matar,** Institut Teknologi Bandung, Indonesia
From 17:00	**COCKTAILS AND WELCOME DRINKS**

DAY-2 JUNE 23, 2026

Keynote Talks

09:00-09:40 **Keynote Talk:** Flattening the Risley Prism using Metasurfaces
Karu Esselle, University of Technology Sydney, Australia

09:40-10:20 **Keynote Talk:** AI-Guided Engineering of Biomimetic Nanovesicles: From Natural Exosomes to Scalable Smart Nanotherapeutics
Hyo-Il Jung, Yonsei University, South Korea

10:20-11:00 **Keynote Talk:** Advanced Functional Materials: Driving the Next Revolution in Healthcare and Industry
Ahmad Rifqi Md. Zain, Universiti Kebangsaan Malaysia, Malaysia

11:00-11:30 **COFFEE BREAK**

Session: Nanomaterials Synthesis and Characterization

11:30-11:50 **Invited Talk:** ConvexVersus Concave Noble Metal Nanostructures for Electrocatalytic Applications
Muhammad Iqbal, Institut Teknologi Bandung, Indonesia

11:50-12:10 **Invited Talk:** Microstructural and Mechanical Evidence for Strength Degradation of Carbon Nanotube Yarns in Polymer Matrices
Go Yamamoto, Tohoku University, Japan

12:10-12:30 **Invited Talk:** Spin-Caloritronic Properties of Two-Dimensional Fe_3GaTe_2: A First-Principles Study
Mohammad Kemal Agusta, Institut Teknologi Bandung, Indonesia

12:30-13:30 **LUNCH BREAK**

Session: Smart Materials for Energy and Environment

13:30-13:50 **Invited Talk:** Confinement of Quantum Dots within Covalent Organic Frameworks for Enhanced Photocatalytic Performance: Size Effects and Interfacial Interactions
Beata Bajorowicz, University of Gdansk, Poland

13:50-14:10 **Invited Talk:** Nanophase-Separated AuErOx: A Novel Class of Nanomaterial for Superior Electrochemical Reduction of CO_2 to CO
Paskalis Sahaya Murphin Kumar, Dongguk University, South Korea

14:10-14:30 **Invited Talk:** Vanadium Phosphate-Based Nano-Networks Formulation as Binder Free Electrode for High Performance Li-Ion Supercapacitors
Ramu Manikandan, Dongguk University, South Korea

14:30-14:50 **Invited Talk:** Interface-Engineerd MXene-Based Electrocatalyst for Efficient Noble-Metal-Free Hydrogen Hydrogen Evolution
Grandprix Thomryes Marth Kadja, Institut Teknologi Bandung, Indonesia

14:50-15:10 **Invited Talk:** Computational Design of Transition Metal-Doped Bimetallic Nickel Phosphates for Green Hydrogen Generation
Adhitya Gandaryus Saputro, Institut Teknologi Bandung, Indonesia

15:10-15:30 **Invited Talk:** Computational Quantum Chemistry for Elucidating the Mechanism of Methane Conversion to Methanol over Heterogeneous Catalysts
Muhammad Haris Mahyuddin, Institut Teknologi Bandung, Indonesia

15:30-16:00	**COFFEE BREAK**
16:00-16:20	**Invited Talk:** Stochastic Thermodynamics in Nanotechnology: Connecting Fluctuations to Energy Device Performance **Nowo Riveli,** Universitas Padjadjaran, Indonesia
16:20-16:35	**Oral Talk:** Interplay Between Redox Behavior and Na^+ Diffusion in 3d Transition-Metal-Doped $Na_{4-x}V_{1.5}M_{0.5}(PO_4)_3$ Cathode Material **Ganes Shukri,** Institut Teknologi Bandung, Indonesia
16:40-17:20	**E-POSTER PRESENTATIONS**
16:40-16:50	Development of Peptide-Loaded Polymeric Nanoparticles for Dual Cytotoxic and Immunomodulatory Effects in Oral Cancer Therapeutics **Bhavesha Chanchlani,** La Trobe Institute of Molecular Sciences, Australia
16:50-17:00	Antimicrobial Activity and Fish Preservation Effect of Nanoemulsified Edible Film Incorporating Lemon Essential Oil **Yung-Hsiang Tsai,** National Kaohsiung University of Science and Technology, Taiwan
17:00-17:10	Synthesis of Polymer-Based Tubular Micromotors Capturing Virus-Shaped Nanoparticles **Yuki Kiuchi,** Chuo University, Japan
17:10-17:20	Synthesis and Biodistribution of Polyoxazoline-Conjugated Porcine Serum Albumin as an Albumin Therapeutic for Animals **Kazuki Saito,** Chuo University, Japan

DAY-3 JUNE 24, 2026

Session: Nanobio Sensors, BioMEMs and Biochips

09:00-09:20 **Invited Talk:** Plasmonic-Based Biosensor Development and Its Integration Into IoT-Enabled Point-of-Care Platforms
GIlang Gumilar, Badan Riset Dan Inovasi Nasional, Indonesia

09:20-09:40 **Invited Talk:** Modification of Metal Organic Frameworks as Modifier Electrode for Dengue Virus Immunosensors
Ni Luh Wulan Septiani, Badan Riset Dan Inovasi, Indonesia

09:40-10:00 **Invited Talk:** Biomedical Flow-Rate Sensing Design and Challanges – A Case Study of Portable Paretoneal Dialysis Prototype Module in Malaysia
Mohd Zulhakimi Ab Razak, Universiti Kebangsaan Malaysia, Malaysia

10:00-10:15 **Oral Talk:** Molecularly Imprinted Polymer/ZIF-67-Derived Nitrogen-Doped Carbon Hybrid Platform for Ultrasensitive TGF-β1 Sensing
Laurenz Yulindry Sihombing, Institut Teknologi Bandung, Indonesia

10:15-10:30 **Oral Talk:** Development of Magneto Silica Optic Material for Biosensor Application Based on Photoelectrochemical Sensor
Falah Azizah Elmaria, Institut Teknologi Bandung, Indonesia

10:30-10:45 **Oral Talk:** High-Performance Co_xO_y/MOF-808-Enhanced Surface Plasmon Resonance Biosensor for Label-Free Detection of Mycobacterium Tuberculosis CFP-10 Antigen
Evan Fajri Mulia Harahap, Institut Teknologi Bandung, Indonesia

10:45-11:00 **Oral Talk:** Effect of Ni: Fe Atomic Ratio on the Oxygen Evolution Reaction Activity of Bimetallic Nickel-Iron Phosphates
Clara Caroline Mariani, Institut Teknologi Bandung, Indonesia

11:00-11:30 **COFFEE BREAK**

Session: Nanomedicine and Healthcare Applications

11:30-11:50 **Invited Talk:** Optimized Ag-ZnO Nanorod Substrates for Hot Electron-Driven SERS Detection of Creatinine
Tengku Hasnan Tengku Abdul Aziz, Universiti Kebangsaan Malaysia, Malaysia

11:50-12:05 **Oral Talk:** Phosphorus-Engineered $Ti_3C_2T_x$ MXene *via* Thermal Treatment for High-Performance Symmetric Supercapacitors
Shah Wali Ullah, Institut Teknologi Bandung, Indonesia

12:05-12:20 **Oral Talk:** Polyoxazoline-Conjugated Porcine Serum Albumin as an Albumin Therapeutic for Cats and Dogs
Junya Fujisawa, Chuo University, Japan

12:20-12:35 **Oral Talk:** Effect of Carbon and Binder Composition in Carbon Oaste as a Carbon Electrode for Perovskite Solar Cells
Muhammad Rayhan Dzulfikaar, Institut Teknologi Bandung, Indonesia

12:35-12:50 **Oral Talk:** Design and Characterization of a Plasma Activated Nanobubble Water Reactor for Medical Sterilization
Anto Tri Sugiarto, Research Centre for Smart Mechatronics, BRIN, Indonesia

13:00-14:00 **Closing and Lunch**

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WE WISH TO SEE YOU AT NANOTECHNOLOGY AND SMART MATERIALS-2027

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