

2ND INTERNATIONAL CONGRESS ON

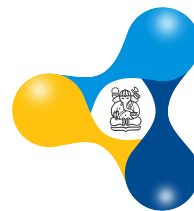
# NANOTECHNOLOGY AND SMART MATERIALS

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<sub>2</sub> at Variation of ZrO<sub>2</sub> 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:** Next-Generation Optical Sensing: Quantum-Enhanced SPR Platforms for Chemical and Biosensing Applications  
**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<sub>3</sub> 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-II Jung**, Yonsei University, South Korea
- 10:20–11:00** **Keynote Talk:** Enzyme-Functionalized Angle-Based SPR Biosensor for Non-Invasive Detection of Salivary Creatinine  
**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:** Convex Versus 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  $\text{Fe}_3\text{GaTe}_2$ : 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  $\text{CO}_2$  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-Engineered MXene-Based Electrocatalyst for Efficient Noble-Metal-Free 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:** Interplay Between Redox Behavior and  $\text{Na}^+$  Diffusion in 3d Transition-Metal-Doped  $\text{Na}_{4-x}\text{V}_{1.5}\text{M}_{0.5}(\text{PO}_4)_3$  Cathode Material  
**Ganes Shukri**, Institut Teknologi Bandung, Indonesia

**15:30–16:00** COFFEE BREAK

**16:00–16:20** **Oral Talk:** Computational Quantum Chemistry for Elucidating the Mechanism of Methane Conversion to Methanol over Heterogeneous Catalysts  
**Muhammad Haris Mahyuddin**, Institut Teknologi Bandung, Indonesia

**16:20–17:00** E-POSTER PRESENTATIONS

**Session: Nanomaterials Synthesis and Characterization**

**16:20–16:30** 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

**16:30–16:40** 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

**16:40–16:50** Synthesis of Polymer-Based Tubular Micromotors Capturing Virus-Shaped Nanoparticles  
**Yuki kiuchi**, Chuo University, Japan

**16:50–17:00** 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  
**Gllang 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 Peritoneal 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- $\beta$ 1 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 CoxOy/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 TiCTx 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

**12:45–13:45** **Closing and Lunch**



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



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