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Present Affiliation

Position: Postdoctoral Researcher

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Department of Mechanical Engineering,
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Research and Professional Experience

- 2023.02 – Current: ***Postdoctoral Researcher***, Department of Mechanical Engineering, Hanbat National University, South Korea
- 2021.11 – 2023.02: **Tenure-track Researcher** at Ho Chi Minh City Institute of Physics, National Institute of Applied Mechanics and Informatics, Vietnam Academy of Science and Technology, Vietnam
- 2021.10 – 2009.09: **Tenure-track Researcher** at Ho Chi Minh City Institute of Physics, Vietnam Academy of Science and Technology, Vietnam
- 2016.12 – 2016.09: **Visiting Ph.D. student** in Dr. Giusy Scalia's group at Physics and Materials Science Research Unit, Luxembourg University, Luxembourg
- 2016. 03 – 2016.02: **Visiting Ph.D. student** in Dr. Giusy Scalia's group at Physics and Materials Science Research Unit, Luxembourg University, Luxembourg

Education

- ***2014 – 2019 Sungkyunkwan University, South Korea***
  Doctor of Philosophy in Science (Energy Science), 2019 March
  Research topic: "Aligned carbon nanotube sheet and yarn for liquid crystal display and smart actuators," supervised by Prof. Dongseok Suh

- ***2011 – 2013 Sungkyunkwan University, South Korea***
  Master of Science in Engineering (Advanced Material Science and Engineering), 2013 August
  Research topic: "Reduced graphene oxide field-effect transistor for proton-sensing," supervised by Prof. Nae-Eung Lee

- ***2005 – 2009 Science University, Vietnam National University in Ho Chi Minh City, Vietnam***
  Bachelor of Science (Material Science, first-class honor), 2009 August
  Research topic: "Synthesis, characterizations, and photoluminescence studies of Mn-doped ZnS nanoparticles, the potential for applications in bio-image diagnostics," supervised by Prof. Hoang Hai Tran

- ***2005 – 2002 Thot Not High School, Can Tho city, Vietnam***
  Ranked first in the national high school graduation exam in Thot Not District, Can Tho

Journal Publications (H index: 13, Time cited: 330 (Web of Science))

1. Chu Duc Thanh, Geun Tak Yuk, Chang-Min Yoon, Jeoung Han Kim, **Thuy-Kieu Truong (co-corresponding)**, and Jinsung Rho* (2025), Super black coating on Al(2139), in preparation.
2. To Thi Tu Linh, **Thuy-Kieu Truong**, Ly Thi Trinh, Pyeongsam Ko, Kyoohee Woo, Sin Kwon, Jinsung Rho, HongSeok Youn, (2025), Photocatalytic-Assisted Silver Reduction via ZnO Nanoparticles for High-Resolution, Flexible, and Etch-Free Printed Electronics, **Small** (accepted).
3. Yuk, Geun Tak, Lee, Byeong Ryong, Kim, Geon Hee, **Truong, Thuy-Kieu (co-corresponding)**, & Rho, Jinsung, (2025). *Direct CVD Growth of Robust Carbon Nanofiber-Based Super Black Coatings on Complex-Curvature and Commercial Anodized Al (6061) for Enhanced Stray-Light Suppression in Optical Baffle Systems.* **ACS Applied Engineering Materials,** 3 (9), 3049-3064.
4. **Truong, Thuy-Kieu**, To Thi Tu Linh, Yoon, Chang-Min, Kim, Jeoung Han, Park, Young-Durk, Youn, Hongseok, & Rho, Jinsung. (2025). *Highly Stretchable, Robust, and Floatable Broadband Light Absorber of Carbon Nanotubes–Ecoflex Composite on 3D Mogul-Pattern for Photothermal Conversion.* **Energy Technology**, 13(9), 2402169.
5. Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Yu, Jianmin, Peng, Lishan, Liu, Xinghui, Nguyen, Linh Ho Thuy, Park, Sungkyun, Kawazoe, Yoshiyuki, Phan, Thang Bach, Tran, Nhu Hoa Thi, & others. (2024). *Dopant-Induced Charge Redistribution on the 3D Sponge-Like Hierarchical Structure of Quaternary Metal Phosphides Nanosheet Arrays Derived from Metal–Organic Frameworks for Natural Seawater Splitting.* **ACS Applied Materials & Interfaces**, 16(2), 2270–2282.
6. Tran, Thuy Tien Nguyen, Le, Thi Anh, Dinh, Nguyen Thi Thu, Hai, Nguyen Duy, **Truong, Thuy-Kieu**, Yu, Jianmin, Peng, Lishan, Nguyen, Cuong Chi, & Tran, Ngoc Quang. (2024). *Crystalline Ru-Decorated MOF-Derived Amorphous CoMo-LDH Nanosheet Arrays as Bifunctional Catalysts for Overall Natural Seawater Electrolysis.* **ACS Applied Materials & Interfaces**, 16(40), 53675–53687.
7. Tran, Ngoc Quang, Vu, Nam Hoang, Yu, Jianmin, Nguyen, Khanh Vy Pham, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Peng, Lishan, & Le, Thi Anh. (2024). *Generating Highly Active Oxide–Phosphide Heterostructure Through Interfacial Engineering to Break the Energy Scaling Relation Toward Urea-Assisted Natural Seawater Electrolysis.* **Journal of Energy Chemistry**, 97, 687–699.
8. Tran, Ngoc Quang, Truong, Thuong Thuong, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Yu, Jianmin, Nguyen, Tuan Dung, Le, Thi Anh, Nguyen, Cuong Chi, Nguyen, Linh Ho Thuy, Vu, Nam Hoang, & others. (2024). *Multi-Metallic Metal–Organic Framework Nanosheets with 3D Flower-Like Nanostructure-Based Natural Seawater Splitting Toward Stable Industrial-Scale Current Density.* **ACS Sustainable Chemistry & Engineering**, 12(2), 1038–1050.
9. Tran, Ngoc Quang, Le, Quang Manh, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Yu, Jianmin, Peng, Lishan, Le, Thi Anh, Doan, Tan Le Hoang, & Phan, Thang Bach. (2024). *Boosting Urea-Assisted Natural Seawater Electrolysis in 3D Leaf-Like Metal–Organic Framework Nanosheet Arrays Using Metal Node Engineering.* **ACS Applied Materials & Interfaces**, 16(22), 28625–28637.
10. Le, Duy Tan, Le, Thi Anh, Ngo, Hai Dang, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Le, Thu Bao Nguyen, Ha, Le Tien, Nguyen, Ngoc, & Tran, Ngoc Quang. (2024). *Crystalline-to-Amorphous Transformation and Charge*

Redistribution Induced by Anion–Cation Double Substitution on 3D Ni(OH)$_2$ Ultrathin Nanosheet Arrays Enable Urea-Assisted Energy-Saving Hydrogen Production. **ACS Sustainable Chemistry & Engineering**, 12(31), 11638–11649.

11. **Truong, Thuy-Kieu**, Yuk, Geun Tak, Kim, Joong Bae, Youn, Hongseok, & Rho, Jinsung. (2024). *Super Black Coating on the Commercial Black Anodized Al (6061) by Direct and Scalable CVD–Growth of Carbon Nanofibers.* **Advanced Materials Interfaces**, 11(18), 2400032.
12. Nguyen, Chi Nghia, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Le, Thi Anh, Le, Thong Nguyen-Minh, Nguyen, Linh Ho Thuy, Nguyen, Chi Cuong, & Tran, Ngoc Quang. (2023). *MOF-Templated Synthesis of Three-Dimensional B-Doped NiCoP Hollow Nanorod Arrays for Highly Efficient and Stable Natural Seawater Splitting.* **ACS Applied Energy Materials**, 6(20), 10713–10722.
13. Phan, Le Phuc, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Yu, Jianmin, Nguyen, Hanh-Vy Tran, Phan, Thang Bach, Thi Tran, Nhu Hoa, & Tran, Ngoc Quang. (2023). *Highly Efficient and Stable Hydrogen Evolution from Natural Seawater by Boron-Doped Three-Dimensional Ni$_2$P–MoO$_2$ Heterostructure Microrod Arrays.* **The Journal of Physical Chemistry Letters**, 14(32), 7264–7273.
14. Nguyen, Ngoc Tuan, Tran, Thuy Tien Nguyen, **Truong, Thuy-Kieu**, Yu, Jianmin, Le, Thong Nguyen-Minh, Phan, Thang Bach, Doan, Tan Le Hoang, Nguyen, Linh Ho Thuy, Luong, Tin Dai, Nguyen, Thi-Hiep, & others. (2023). *Promoting High-Oxidation-State Metal Active Sites in a Hollow Ternary Metal Fluoride Nanoflake Array for Urea Electrolysis.* **Inorganic Chemistry**, 62(26), 10298–10306.
15. Tran, Ngoc Quang, Le, Bao Thu Nguyen, Le, Thong Nguyen-Minh, Duy, Le Thai, Phan, Thang Bach, Hong, Yeseul, **Truong, Thuy-Kieu**, Doan, Tan Le Hoang, Yu, Jianmin, & Lee, Hyoyoung. (2022). *Coupling Amorphous Ni Hydroxide Nanoparticles with Single-Atom Rh on Cu Nanowire Arrays for Highly Efficient Alkaline Seawater Electrolysis.* **The Journal of Physical Chemistry Letters**, 13(34), 8192–8199.
16. **Truong, Thuy-Kieu**. (2022). *Robust Joule-Heating Induced Transmittance Modulation of CNT-Sheet–Paraffin Based Smart Window.* **Advances in Natural Sciences: Nanoscience and Nanotechnology**, 13(1), 015001.
17. Le, Thi Suong, **Truong, Thuy-Kieu**, Huynh, Van Ngoc, Bae, Joonho, & Suh, Dongseok. (2020). *Synergetic Design of Enlarged Surface Area and Pseudo-Capacitance for Fiber-Shaped Supercapacitor Yarn.* **Nano Energy**, 67, 104198.
18. **Truong, Thuy-Kieu**, Park, Ji Hyun, Rahman, Md Asiqur, Urbanski, Martin, Kim, Eun Sung, Scalia, Giusy, & Suh, Dongseok. (2019). *Dynamic Operation of Liquid Crystal Cell with Inherently Nanogroove-Featured Aligned Carbon Nanotube Sheets.* **Current Applied Physics**, 19(2), 162–167.
19. Park, Ji Hyun, **Truong, Thuy-Kieu (co-first)**, Rahman, Md Asiqur, Urbanski, Martin, Agha, Hakam, Suh, Dongseok, & Scalia, Giusy. (2019). *Alignment of Nematic Liquid Crystal by Carbon Nanotube Sheets on Substrates with Hexamethyldisilazane and Silicon Dioxide Co-Adjuvant Layers.* **Physica Status Solidi (b)**, 256(8), 1800689.
20. Rahman, Md Asiqur, Agha, Hakam, **Truong, Thuy-Kieu**, Park, Ji Hyun, Suh, Dongseok, & Scalia, Giusy. (2018). *Incorporation and Orientational Order of Aligned Carbon Nanotube Sheets on Polymer Films for Liquid Crystal-Aligning Transparent Electrodes.* **Journal of Molecular Liquids**, 267, 363–366.
21. Kim, Jeong-Gyun, Kang, Haeyong, Lee, Yourack, Park, Jeongmin, Kim, Joonggyu, **Truong, Thuy-Kieu**, Kim, Eun Sung, Yoon, Doo Hyun, Lee, Young Hee, & Suh, Dongseok. (2017). *Carbon-Nanotube-Templated, Sputter-Deposited, Flexible Superconducting NbN Nanowire Yarns.* **Advanced Functional**

Materials, 27(30), 1701108.

22. Rahman, Md Asiqur, Park, Ji Hyun, **Truong, Thuy-Kieu**, & Suh, Dongseok. (2017). *Anisotropic Light Transmission of Aligned Carbon Nanotube Sheets Coated Substrates.* **Photonics Letters of Poland**, 9(1), 26–28.
23. Dang, Dang Xuan, **Truong, Thuy-Kieu (co-first)**, Lim, Seong Chu, & Suh, Dongseok. (2017). *In Situ Multi-Dimensional Actuation Measurement Method for Tensile Actuation of Paraffin-Infiltrated Multi-Wall Carbon Nanotube Yarns.* **Review of Scientific Instruments**, 88(7), 075007.
24. **Truong, Thuy-Kieu**, Lee, Yourack, & Suh, Dongseok. (2016). *Multifunctional Characterization of Carbon Nanotube Sheets, Yarns, and Their Composites.* **Current Applied Physics**, 16(9), 1250–1258.
25. Suh, Dongseok, **Truong, Thuy-Kieu**, Suh, Daniel G., & Lim, Seong Chu. (2016). *Torsional Actuator Powered by Environmental Energy Harvesting from Diurnal Temperature Variation.* **ACS Sustainable Chemistry & Engineering**, 4(12), 6647–6652.
26. Kang, Haeyong, Yun, Yoojoo, Park, Jeongmin, Kim, Joonggyu, **Truong, Thuy-Kieu**, Kim, Jeong-Gyun, Park, Nahee, Yun, Hoyeol, Lee, Sang Wook, Lee, Young Hee, & others. (2015). *Quantum Hall Conductance of Graphene Combined with Charge-Trap Memory Operation.* **Nanotechnology**, 26(34), 345202.
27. Yoon, Ok Ja, Kim, Insu, Sohn, Il Yung, **Kieu, Truong Thuy**, & Lee, Nae-Eung. (2014). *Toxicity of Graphene Nanoflakes Evaluated by Cell-Based Electrochemical Impedance Biosensing.* **Journal of Biomedical Materials Research Part A**, 102(7), 2288–2294.
28. **Truong, Thuy-Kieu**, Nguyen, TNT, Trung, Tran Quang, Sohn, Il Yung, Kim, Duck-Jin, Jung, Jin-Heak, & Lee, N-E. (2014). *Reduced Graphene Oxide Field-Effect Transistor with Indium Tin Oxide Extended Gate for Proton Sensing.* **Current Applied Physics**, 14(5), 738–743.
29. Hai, Tran Hoang, Phuc, Le Hong, Vinh, Le Khanh, Long, Bui Duc, **Truong, Thuy-Kieu**, Bich, Nguyen, Lan, Tran, Hien, Nguyen, Khoa, Le, & Tam, Nguyen. (2011). *Immobilising of Anti-HPV18 and E. coli O157:H7 Antibodies on Magnetic Silica-Coated Fe_3O_4 for Early Diagnosis of Cervical Cancer and Diarrhoea.* **International Journal of Nanotechnology**, 8(3–5), 383–398.

Patents

1. Rho Jinsung, More Vivek Mohan, Yuk Geun Tak, and **Truong Thuy-Kieu**. *LDH–MXene Nanocomposite and Method for Preparing the Same.* **Korean** Patent Application 10-2025-0020869, filed 18 Feb. 2025.
2. Rho Jinsung, **Truong Thuy-Kieu**, and Yuk Geun Tak. *Light-absorbing Composite and Its Preparation Method.* **Korean** Patent Application 10-2024-0050134, filed 15 Apr. 2024.

Conference Presentations

- *Oral presentations*

1. **Thuy-Kieu Truong** et al. (November 2024). Facile Design of Robust and Flexible Light Absorber of CNT Ecoflex Composite on Mogul Structure for Photothermal Effect. Presentation at the 2024 Fall Conference of the Korean Society of Mechanical Engineers, Jeju International Convention Center. [CNT]

2. **Thuy-Kieu Truong** et al. (July 2024). A Synergistic Approach for Broadband Optical Absorbers: Utilizing Carbon Nanostructures on Hierarchically Textured Substrates. Presentation at the 2024 Spring Conference of the Korean Society for Manufacturing Engineering, St. John's Hotel, Gangneung, Korea. [CNT]
3. **Thuy-Kieu Truong** et al. (March 2018). Superior Electro-thermo-optical Properties of Homogeneous Liquid Crystals Aligned on Transparent Carbon Nanotube Sheet. Presentation at the March meeting of the American Physical Society, Los Angeles, CA, USA. [CNT]
4. **Thuy-Kieu Truong** et al. (October 2017). Aligned carbon nanotube sheets with polymer dispersed liquid crystal for the photo-electro-thermal actuator. Presentation at the Fall meeting of the Korean Physical Society, Gyeongju, Gyeongbuk, Korea. [CNT]
5. **Thuy-Kieu Truong** et al. (June 2017). A study on a solid phase to liquid phase change effect in coupling with electromechanical actuators based on polyethylene glycol infiltrated carbon nanotube neat yarn, Presentation at the 2017 International Forum on Functional Materials, Jeju, Korea. [CNT]

- *Poster presentations*

1. **Thuy-Kieu Truong** et al. (December 2024), Engineering Aluminum Alloy Substrates for CVD-Grown Carbon Nanofiber-Based Super Black Coatings, The 2nd International Symposium on Micro & Nano Manufacturing 2024, Jeju Ramada Hotel, Jeju, Korea. [CNF][Anodized]
2. **Thuy-Kieu Truong** et al. (July 2018). Multi Responsive Bilayer Actuator by Stacking Aligned-CNT-Sheets with PVA. At the International Conference on Science and Technology of Synthetic Metals 2018, Busan, Korea. [CNT]
3. **Thuy-Kieu Truong** et al. (March 2015). Magneto-resistance of multiwall carbon nanotube Fermat yarn and coil yarn. At the March meeting of the American Physical Society, San Antonio, TX, USA. [CNT]
4. **Thuy-Kieu Truong** et al. (November 2015). Electromechanical actuation of paraffin infiltrated fully coiled multiwalled carbon nanotube yarns. In a presentation at the 6th A3 symposium on Emerging Material, Kyushu University, Japan. [CNT]
5. **Thuy-Kieu Truong** et al. (February 2013). ITO Extended Gate Reduced Graphene Oxide Field Effect Transistor For Proton Sensing Application. In a presentation at the 44th Winter Annual Conference of the Korean Vacuum Society, Phoenix Park, in Pyeongchang, Korea. [rGO; FET]

Research Summary

Postdoc. Research - Carbon Nanostructure–Based Super-Black & Photothermal Materials

- Developed a direct and scalable CVD process for carbon nanofiber (CNF) super-black coatings on commercial anodized Al(6061), achieving >99% broadband absorption from UV to IR for optical stray-light suppression.
- Engineered catalyst-integrated anodized aluminum substrates that enable in-situ Ni-assisted CNF growth without external catalyst deposition and ensure conformal coating on complex and curved geometries.
- Demonstrated mechanically robust, electrically conductive, and hydrophobic super-black CNF coatings, validated under ultrasonic agitation, UV exposure, adhesion testing, and antistatic measurements.
- Applied CNF super-black coatings to optical baffle systems, achieving over 10 dB reduction in stray light compared to conventional black anodization through BRDF-based simulations and experiments.
- Designed highly stretchable and floatable CNT–Ecoflex photothermal absorbers with 3D micro-cavity architectures, delivering ~98% UV–vis–NIR absorption and efficient light-to-heat conversion.
- Demonstrated multifunctional photothermal applications, including solar desalination, de-icing, and environmental energy harvesting, with stable performance under mechanical deformation and harsh environments.
- **Orientation:** Advancing scalable carbon-nanostructured optical and photothermal platforms that integrate hierarchical light trapping, mechanical durability, and environmental resilience for aerospace and energy systems.

Ph.D. Research - CNT Sheets, Yarns & Aligned CNT Forests

- Developed macroscopic CNT assemblies (sheets, yarns) derived from vertically aligned CNT forests with high mechanical, electrical, and tunable optical properties.
- Engineered multifunctional CNT–soft-matter hybrid systems by integrating responsive polymers and liquid-crystal materials.
- Demonstrated enhanced electro–thermal–optical performance in CNT-based liquid crystal cells compared to commercial ITO electrodes.
- Applied CNT hybrid structures to intelligent actuators, artificial muscles, and soft-robotics platforms.
- **Orientation:** Advancing flexible, foldable, and multifunctional optoelectronic devices where conventional ITO-based systems are limited.

M.Sc. Research - Reduced Graphene Oxide FET for Proton Sensing

- Fabricated RGO-FET devices with ITO extended-gate architecture for selective proton detection.
- Isolated sensing region from the active FET channel for improved device stability.
- Achieved ambipolar behavior with Dirac-point shifts proportional to pH (43–50 mV/pH, pH 2–12).
- Demonstrated stable operation via TTC encapsulation in electrolytic environments.
- **Orientation:** Platform for high-sensitivity ion sensing with tunable interfaces for diverse chemical/biological analytes.

B.Sc. Research - Mn-Doped ZnS Nanoparticles for Bio-Imaging

- Synthesized Mn-doped ZnS nanocrystals as low-toxicity alternatives to cadmium-based quantum dots.
- Confirmed structural and optical properties using XRD, UV–Vis, TEM, and PL spectroscopy.
- Achieved strong photoluminescence suitable for fluorescent labeling and imaging applications.
- **Orientation:** Development of greener luminescent nanomaterials for bio-imaging diagnostics.

CVD growth of carbon nanotube/carbon nanofiber array:

- Catalyst preparation & activation: Fe/Co/Ni thin films or nanoparticles, thermal pretreatment, particle-size control.
- Substrate engineering: Si/SiO_2, quartz, Invar, stainless steel, Aluminum alloy, anodized Al; buffer layers (Al_2O_3, TiN) for catalyst stability and adhesion.
- Vertical alignment control: Temperature gradients, gas-flow tuning, and catalyst–substrate wetting to form aligned CNT/CNF forests.
- CVD atmosphere optimization: Controlled carbon sources (C_2H_4), carrier gases (Ar), and H_2 for growth quality.
- Growth kinetics tuning: Temperature (650–900°C), gas ratios, reduction steps, and duration to define height, density, and uniformity.
- Post-growth integration: Annealing, densification, and transfer-free or composite embedding for mechanical robustness.

Development, characterization, and measurement of liquid crystal devices: Sandwich-based cell assembly, thermo-electro-optical properties under the cross-polarized microscopy, switching time measurement of liquid crystal cell

Dry–spinning process for CNT yarn fabrication: Carbon nanotube yarn or coiled yarn formation by twist insertion into carbon nanotube sheets.

Carbon nanotube synergistic with soft-matter materials: Aligned CNT sheet plays a dual role of an alignment layer and transparent electrode for liquid crystal display; CNT-sheets combining with moisture responsive to form humidity, light, heat, and Joule-heating activated bilayer actuators; CNT yarn infiltrated with organic phase change materials (paraffin wax, PEG) for artificial muscles.

Field effect transistor fabrication (MOSFET):

- Vacuum evaporators: E-beam evaporator, a thermal evaporator for depositing the metal gate, source-drain electrodes, insulators, or semiconductor polymers.
- Atomic layer deposition (ALD): depositing the high quality of high k dielectric materials, for example, Al_2O_3, HfO_2, etc. Those are insulators for MOSFET devices.
- Optical lithography: Using light to transfer a pattern to the wafer.
- Etching techniques: Pattern transfer by dry etching (by plasma) or wet etching (by chemicals).

Proton-sensing Field effect transistor measurement: Using an Ag/AgCl reference electrode as a gate biasing through electrolytes (different pH values) to the ITO extended gate electrode of the rGO FET. All electrical measurements were carried out by a Hewlett-Packard semiconductor analyzer system (HP4145B).

Chemical synthesis of nanomaterials: Sol-gel, co-precipitation, and reduction by reducing agents**.**

Various methods of material characterizations: Raman, X-Ray Diffraction (XRD), Field-effect Scanning Electron Microscopy (FE-SEM), Ultraviolet-Visible Spectroscopy (UV-vis), Thermogravimetric Analysis (TGA), Stress-Strain characterization, Vibrating Sample Magnetometer (VSM), knowledge and interpretation of most basic analysis techniques.

Instrument control/Measurement automation: Labview (Labview core 1 and core 2), python (basic), and Arduino-based Micro-controller.

Finite element method (FEM)based Numerical analysis: Ansys, COMSOL Multiphysics, and FDTD.

Schematic and data presentations: Organization of data set by Origin, ImageJ, and Adobe Illustrator; Schematic illustrations by vector-type Adobe Illustrator or 3D drawing open-source Blender software.

Scientific paper preparation: Writing scientific articles in international journals.

Languages: Vietnamese (mother tongue), English (Full Professional Proficiency), and Korean (Pre-intermediate level)

Interpersonal skills: Efficient, organized, reliable, deeply-learner, well-adapted, highly motivated, open-minded, problem-solving.

Teaching Experiences:

- Spring 2023 - Modern Optics -Teaching Assistant, Advanced Materials for Optical Applications (Covered photonic crystals, plasmonic SERS nanostructures, and super-black photothermal materials).
- Fall 2024 - Modern Optics -Teaching Assistant, Hands-on session on optically responsive bilayer films (lab support, measurement guidance, actuation analysis).

Grants/Projects:

- 2025-2028, Low-Temperature Hybrid Bonding for Advanced Semiconductor Packaging, NRF/BRL, Korea. [Researcher]
- 2025-2027, High-Damage-Threshold EUV/X-ray Coating Technology, Joint Research/NRF, Korea. [Researcher]
- 2022–2026, Proximity Sensor & Docking System for Satellite Maneuvering, ADD/CMCA, Korea. [Researcher]
- 2021 Grant for Scientific Research, Ho Chi Minh City Institute of Physics, Vietnam Academy of Science and Technology, Vietnam. [PI]
- 2021 the Institutional Program for Young Researchers, Vietnam Academy of Science and Technology, Vietnam. [PI]
- 2020 Grant for Scientific Research, Ho Chi Minh City Institute of Physics, Vietnam Academy of Science and Technology, Vietnam. [PI]
- 2020 the Institutional Program for Young Researchers, Vietnam Academy of Science and Technology, Vietnam. [PI]
- 2016 BK21+ Fellowship for Ph.D. Student Research Abroad. [PI]

Awards:

- 2020 Institutional Award for an Excellent Researcher, Ho Chi Minh City Institute of Physics, Vietnam Academy of Science and Technology, Vietnam
- 2009 Excellent Prize for first-class honor of Bachelor of Science, Science University, Vietnam National University in Ho Chi Minh city
- 2008 Odon Vallet Award for outstanding undergraduate student
- 2008 Role model Award of undergraduate students in the Material Science Department, Science University, Vietnam National University in Ho Chi Minh city
- 2007 Odon Vallet Award for outstanding undergraduate student
- 2005 The best high school student in Thot Not High School, Can Tho city

Referees

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