



**Nguyễn Xuân Viên, Ph.D.**  
*Faculty of Vehicle and Energy Engineering*  
 HCMC University of Technology and  
 Education

## Personal Information

First Name	Xuan Vien
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## Education

2017	Ph.D.	Mechanical Engineering, Yuan Ze University, Taiwan.
2014	M.Sc.	Renewable Energy Engineering, Yuan Ze University, Taiwan.
2012	B.Eng.	Thermal-Refrigeration Technology, HCMC University of Technology and Education, Vietnam.

## **Research Interests**

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- Renewable Energy
- Hydrogen Energy
- Refrigeration and Air-conditioning Engineering
- Energy Saving
- The solid oxide fuel cell (SOFC), the solid oxide electrolysis cell (SOEC), and reversible solid oxide cell (rSOC).
- Biofuels production through gasification processes, Contaminants influence on SOFC.
- Proton Exchange Membrane Fuel Cell (PEMFC).

## **Honors and Awards**

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- 2013      Awarded good ideal with entitled “Micro PEM Fuel Cell Application for Mobile Phone” Clean Energy Competition, celebrated in National Central University, Taiwan.
- 2013      Scholarship for outstanding students from College of Engineering, Yuan Ze University, Taiwan.
- 2011      Güntner Scholarship from Güntner Company, Vietnam.
- 2010      Scholarship for outstanding students from Faculty of Vehicle Engineering , HCMC University of Technology and Education, Vietnam.

## Professional Experience

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- 2017 to Present      Lecturer at Renewable Energy Department, HCMC University of Education and Technology  
Deputy Director of Renewable Energy Research Center  
Head of Renewable Energy Department,  
HCMC University of Education and Technology
- 2012 to 7/2017      Research assistant in SOFC Group, Fuel Cell Center, Yuan Ze University, Research and Development Center-Far Eastern Group, Taiwan.
- 2013 to 2016      Research assistant at Taiwan Power Company (TaiPower), National Taiwan Power Institute.
- 2014 to 2017      Teaching assistant with courses: Thermodynamic, Heat Transfer Mechanical Engineering, Yuan Ze University, Taiwan.  
Reviewed for Applied Energy, Energies, Journal of Applied Physical Science International

## Teaching

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- Introduction to Renewable Energy
- Fluid Mechanics
- Thermodynamics and Heat Transfer
- Fuel Cells
- Energy Measurement
- Heat Exchangers

## Projects

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- [6] **NAFOSTED; 2019-2022:** Study on Multi–Cells Stack Technology for Solid Oxide Fuel Cell in The Development of Clean Energy Sources (**Principal Investigator**)
  
- [5] **Vietnam Ministry of Education and Training; 2019-2021:** Study-Design-Fabrication of The Cold Thermal Energy Storage Tank Using Phase Change Material To Operate in Water Chiller System of 360000 BTU/h Refrigeration Capacity (**Principal Investigator**).
  
- [4] **HCMC University of Technology and Education-2019:** Study on The Solid Oxide Fuel Cell Stack Technology (**Principal Investigator**).
  
- [3] **HCMC University of Technology and Education-2018 (HCMUTE University distinguished project Code: T2018-23TĐ):** Experimental study on improving coefficient of performance for split air conditioning system by using flash gas bypass device (**Key member**).
  
- [2] **HCMC University of Technology and Education-2017 (HCMUTE University distinguished project Code: T2017-34TĐ):** Study on heat transfer efficiency of square microchannels on condenser (**Key member**).
  
- [1] **Development of multi-layer stack technology and establishment of evaluation system for solid oxide fuel cell, 2013 to 2015.** The financial support by National Science Council (NSC) of Taiwan under contracts NSC 99-2221-E-155-063 and NSC 100-3113-E-155-001, and the Taiwan Power Company. (**Key member**).

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**Publications in International Journals**

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- [21] **XuanVien Nguyen\***, BaSon Nguyen, ThiNhung Tran. Effects of via hot-pressing loads and co-sintering temperature on anode–electrolyte substrate expansion in solid oxide fuel cells, **Materials Letters**, Volume 314, 131867. (Q1, SCIE).
- [20] Quang Quoc Viet Thieu, Nhung Thi Tran, **Xuan Vien Nguyen**, et. al. Spinel Ni-ferrite advanced high-capacity anode for Li-ion batteries prepared via coprecipitation route, **Ceramics International**, 2022, (Q1, SCIE).
- [19] **Xuan Vien Nguyen\***, An Quoc Hoang, Hong Son Nguyen Le, Simulation Study on the Effects of Operating Temperature on Cell Electrodes in Solid Oxide Fuel Cells, **JST: Engineering and Technology for Sustainable Development**, Volume 32, Issue 3, July 2022, 017-024.
- [18] **Xuan-Vien Nguyen\***, Fabrication and Performance Evaluation of Cold Thermal Energy Storage Tanks Operating in Water Chiller Air Conditioning System, **Energies 2021 (Q2, SCIE)**.
- [17] **Xuan-Vien Nguyen\***, 3D Numerical Simulation Study of a Pre-Heater Used in Solid Oxide Fuel Cell Technology, **IEEE 2020 (Scopus)**.
- [16] Minh-Hung Doan, Thanh-Trung Dang, **Xuan-Vien Nguyen\***, The Effects of Gravity on Pressure Drop and Heat Transfer Characteristics of Steam in Microchannels: An Experimental Study, **Energies 2020 (Q2, SCIE)**.
- [15] **Xuan-Vien Nguyen\***, Study on the Operating Characteristics of Cell Electrodes in a Solid Oxide Fuel Cell (SOFC) Through the Two-Dimensional Numerical Simulation Method, **Advances in Intelligent Systems and Computing 2020 (Scopus)**.
- [14] **Xuan-Vien Nguyen\***, Thanh-Hau Nguyen, Trang-Doanh Nguyen, The Effect of Heat Transfer Fluid Velocity on Heat Exchange Efficiency in Cold Energy Storage Tank: A Numerical Simulation Study, **Journal of Energy and Natural Resources 2020**.

- [13] **Xuan-Vien Nguyen\***, Thanh-Huy Tran, Experimental Study on Phase Change Materials for Cold Energy Storage System, **Journal of Energy and Natural Resources 2020**.
- [12] **Xuan-Vien Nguyen\***, Fabrication and Performance Evaluation of Six-Cell Two-Dimensional Configuration Solid Oxide Fuel Cell Stack Based on Planar  $6 \times 6$  cm Anode-Supported Cells, **Energies 2019 (Q2, SCIE)**.
- [11] **Xuan-Vien Nguyen\***, Guo-Bin Jung, Shih-Hung Chan, Innovative Design and Fabrication of a two-dimensional model in SOFC Stack with Planar Anode-Supported Cells, **International Journal of Electrochemical Science 2019 (Q3, SCIE)**.
- [10] **Xuan-Vien Nguyen\***, Chang-Tsair Chang, Guo-Bin Jung, Shih-Hung Chan, Chia-Chen Yeh, Jyun-Wei Yu, Chi-Yuan Lee, Improvement on the design and fabrication of planar SOFCs with anode-supported cells based on modified button cells, **Renewable Energy 2018 (Q1, SCI)**.
- [9] Minh-Hung Doan\*, TrongTuan NguyenTran, **Xuan-Vien Nguyen**, Thanh-Trung Dang, Experimental Study on Improving Coefficient of Performance for Split Air Conditioning System by Using an Innovative Separated-Vapor Device, **IEEE 2018 (Scopus)**.
- [8] Chuang-Yu Hsieh, **Xuan-Vien Nguyen**, Fang-Bor Weng, Tzu-Wei Kuo, Chi-Yuan Lee, Ay Su\*, Developing Hybrid-Power Fuel Cells with a Low-Pressure Hydrogen-Storage System used in an Electric Forklifts, **International Journal of Electrochemical Science 2017 (Q3, SCIE)**.
- [7] Jyun-Wei Yu\*, Guo-Bin Jung, Chi-Wen Chen, Chia-Chen Yeh, **Xuan-Vien Nguyen**, Chia-Ching Ma, Innovative anode catalyst designed to reduce the degradation in ozone generation via PEM water electrolysis, **Renewable Energy 2017 (Q1, SCI)**.
- [6] **Xuan-Vien Nguyen\***, Chang-Tsair Chang, Guo-Bin Jung, Shih-Hung Chan, Wilson Chao-Wei Huang, Kai-Jung Hsiao, Win-Tai Lee, Effect of Sintering Temperature and Applied Load on Anode-Supported Electrodes for SOFC Application, **Energies 2016 (Q2, SCIE)**.

- [5] **Xuan-Vien Nguyen\***, Chang-Tsair Chang, Guo-Bin Jung, Shih-Hung Chan, Win-Tai Lee, Shu-Wei Chang, I-Cheng Kao, Study of sealants for SOFC, **International Journal of Hydrogen Energy 2016 (Q1, SCI)**.
- [4] Guo-Bin Jung\*, Chang-Tsair Chang, Chia-Chen Yeh, **Xuan-Vien Nguyen**, Shih-Hung Chan, Cheng-You Lin, Study of reversible solid oxide fuel cell with different oxygen electrode materials, **International Journal of Hydrogen Energy 2016 (Q1, SCI)**.
- [3] Chuang-Yu Hsieh, **Xuan-Vien Nguyen**, Fang-Bor Weng, Tzu-Wei Kuo, Ay Su\*, Design and Performance Evaluation of a PEM Fuel Cell–Lithium Battery–Supercapacitor Hybrid Power Source for Electric Forklifts, **International Journal of Electrochemical Science 2016 (Q3, SCIE)**.
- [2] Guo-Bin Jung\*, Li-Hsing Fang, Cheng-You Lin, **Xuan-Vien Nguyen**, Chia-Chen Yeh, Chi-Yuan Lee, Jyun-Wei Yu, Shih-Hung Chan, Win-Tai Lee, Shu-Wei Chang, I-Cheng Kao, Electrochemical performance and long-term durability of a reversible solid oxide fuel cell, **International Journal of Electrochemical Science 2015 (Q3, SCIE)**.
- [1] Guo-Bin Jung\*, Li-Hsing Fang, Min-Jay Chiou, **Xuan-Vien Nguyen**, Ay Su, Win-Tai Lee, Shu-Wei Chang, Effects of pretreatment methods on electrodes and SOFC performance, **Energies 2014 (Q2, SCIE)**.

### **Publications in Domestic Journals**

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- [2] Trang-Doanh Nguyen, **Xuan-Vien Nguyen\***, Minh-Hung Doan Simulation Study on Heat Transfer Performances of Double Pipe Heat Exchanger to Recover Waste Heat in Water Chiller System, **Journal of Technical Education Science 2021**.
- [1] Thanh-Huy Tran, **Xuan-Vien Nguyen\***, Minh-Hung Doan, Design and Fabrication of The Cold Thermal Energy Storage Tank To Operate in Water Chiller System, **Journal of Technical Education Science 2020**.

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## Conference Presentations

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- [4] **Xuan-Vien Nguyen\***, Guo-Bin Jung, Shih-Hung Chan, Jyun-Wei Yu, Chia-Chen Yeh, Improvement designs and fabrications for planar SOFC with anode supported cells based on button cell device, *The 1<sup>st</sup> International Conference on Bioresource Technology for Bioenergy, Bioproducts & Environmental Sustainability, Sitges, Barcelona, Spain (2016)*.
- [3] **Xuan-Vien Nguyen\***, Guo-Bin Jung, Wilson Chao-Wei Huang Kai-Jung Hsiao, Effects of Firing Temperatures and Compressive Loads on Anode-Supported Electrolyte and Cathode Surfaces of Anode-supported Cells for Solid Oxide Fuel Cell, *The 2015 APEC Conference on Promoting Innovative and High Value-added Bio-product Production Technologies for Sustainable Development and 10th Asia Biohydrogen and Biorefinery Symposium (APEC-BPT/ABBS-2015), Kenting, Taiwan (2015)*.
- [2] **Xuan-Vien Nguyen\***, Guo-Bin Jung, Wilson Chao-Wei Huang Kai-Jung Hsiao, Design and Fabrication of 2D SOFC Stack with Planar 5cm x 5cm Anode-Supported Cells, *The 2015 APEC Conference on Promoting Innovative and High Value-added Bio-product Production Technologies for Sustainable Development and 10th Asia Biohydrogen and Biorefinery Symposium (APEC-BPT/ABBS-2015), Kenting, Taiwan (2015)*.
- [1] Wilson Chao-Wei Huang\*, Guo-Bin Jung, **Xuan-Vien Nguyen**, Kai-Jung Hsiao, The Impact of the Contact Area of Current Collectors, Coatings of Interconnects and Flow Field Design of the Apparatus on the Performance of Solid Oxide Fuel Cells, *The 2015 APEC Conference on Promoting Innovative and High Value-added Bio-product Production Technologies for Sustainable Development and 10th Asia Biohydrogen and Biorefinery Symposium (APEC-BPT/ABBS-2015), Kenting, Taiwan (2015)*.



## **Academic Activities**

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- [6] Speaker of the Masterclass on Integrating Sustainable Energy Innovation in the Curricula, 08-2021, Philippin.
- [5] Session chair of the international Conference on Green Technology and Sustainable Development 2018 (GTSD2018).
- [4] Reviewer for the International Journal of Hydrogen Energy
- [3] Reviewer for Energy
- [2] Reviewer for the International Journal of Renewable Energy
- [1] Reviewer for the Journal of Technical Education Science

**Yours Sincerely,**

*(Signature)*

A handwritten signature in blue ink, consisting of several fluid, connected strokes, is displayed on a light gray background.

**Nguyễn Xuân Viên**