

# CURRICULUM-VITAE

## **Buthainah Ali Abed AL-Timimi**

Chemical and Process Engineering, PhD



### **PERSONAL INFORMATION:**

**Passport Number:** A20069057  
**Date of Birth:** 05/10/1973  
**Address:** Iraq - Baghdad  
**Nationality:** Iraqi  
**Marital Status:** Single  
**Sex:** Female  
**Religion:** Muslim  
**Language:** Arabic (Native tongue), English  
**Mobile:** +9647727777948  
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**Orcid ID:** <https://orcid.org/0000-0001-5763-8396>  
**Google Scholar:** <https://scholar.google.com/citations?user=r2HwHgYAAAAJ&hl=en>  
**Web of Science:** <https://www.webofscience.com/wos/author/record/N-6139-2017>  
**Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=57193929119>

### **EDUCATION:**

#### **Post-doctoral Research Fellow, Chemical and Process Engineering**

Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [January 2020 - December 2020]

**Research Topic:** Favorable Mesoporous Catalysts Design for The Simultaneous Production of Syngas and Carbon Nanofilaments via a Biogas Decomposition Approach

**Advisors:** Prof. Dr. Ir. Zahira Yaakob (Main Supervisor)

#### **PhD, Chemical and Process Engineering**

Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [August 2015 - October 2019]

**Research Topic:** Nickel Based Metallic Catalysts for The Simultaneous Production of Syngas and Carbon Nanofilaments via Catalytic Decomposition of Biogas

**Advisors:** Prof.Dr. Siti Masrinda Tasirin (Main Supervisor)

Prof. Dr. Ir. Zahira Yaakob (Co-Supervisor)

Dr. Nur Tantiyani Ali Othman (Co-Supervisor)

### **MSc, Chemical Engineering**

Department of Chemical and Environment Engineering, Faculty of Engineering, Universiti Putra Malaysia, Serdang, Malaysia [April 2012 - November 2015]

**Research Topic:** Production of Polycarbonate and Multi-walled Carbon Nanotubes Nano-composites at Low Filler Loadings

**Advisors:** Dr. Dayang Radiah Binti Awang Biak (Main Supervisor)

Prof. Dr. Ir. Mohd Sapuan bin Salit (Co-Supervisor)

Prof. Dr. Zaidan Abdul Wahab (Co-Supervisor)

### **BSc, Chemical Engineering**

Department of Chemical Engineering, Faculty of Engineering, University of Technology, Baghdad, Iraq [September 2002 - October 2006]

**Research Topic:** Thermodynamics and economic feasibility of CO<sub>2</sub> production using Reactive Distillation Column

**Advisors:** Prof. Dr. Najat Jumaah Saleh (Main Supervisor)

## **WORK EXPERIENCE:**

### **Lecturer, Chemical and Process Engineering**

Chemical Process Engineering Branch, Department of Chemical Engineering, Technology University, Iraq-Baghdad [February 2023 - Present]

**Researcher** – Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [January 2021 - December 2021]

### **Nature of Employment**

- ❖ Creating research proposals.
- ❖ Planning and conducting experiments.
- ❖ Prepare and Presentation of research reports.
- ❖ Supervising junior and senior students.
- ❖ Monitoring experiments.
- ❖ Analyzing data.

- ❖ Develop new techniques and products.
- ❖ Administrative duties (e.g. purchase of chemicals and equipment and Coordinate collaborations).

**Postgraduate Research Fellow** - Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [August 2015 - October 2019]

#### **Nature of Employment**

- ❖ Carry out teaching, researching, and administrative tasks.
- ❖ Supervise students and junior research staff.
- ❖ Write scientific articles and grant proposals.
- ❖ Prepare and Presentation of research reports.
- ❖ Administrative duties (e.g. purchase of chemicals and equipment and Coordinate collaborations).

#### **Researches Achieved**

- ❖ Drying of Wet Sago Waste in the Fluidized Bed Dryer.
- ❖ Vacuum Drying for Belalia Ghj Leaves: Moisture Measurement and Texture.
- ❖ Catalytic Decomposition of Biogas to Produce Syngas and Carbon Nanofilaments.

**Postgraduate Research Assistant** - Department of Chemical and Environment Engineering, Faculty of Engineering, Universiti Putra Malaysia, Serdang, Malaysia [July 2012 - June 2013]

#### **Nature of Employment**

- ❖ Write scientific articles and grant proposals.
- ❖ Prepare and Presentation of research reports.
- ❖ Administrative duties (e.g. purchase of chemicals and equipment and Coordinate collaborations)

#### **Researches Achieved**

- ❖ Applications of Nano-composites in Industrial Systems.
- ❖ Gasoline Diffusivity of Polypropylene-Polycarbonate Composites.
- ❖ Evaluation of Different Materials for Biodiesel Production.

**Teaching Assistant & Lab Demonstrator** - Chemical Industries Department, Institute of Technology- MARDI , Serdang , Malaysia [November 2007 - February 2009]

#### **Nature of Employment**

- ❖ Teaching Units Operations for undergraduate students.
- ❖ Planning lessons and activities that facilitate students acquisition of basic and advanced research skills.
- ❖ Instructing in a manner that develops students' confidence in their abilities.
- ❖ Observing and managing classroom dynamics.
- ❖ Invigilating and grading projects, quizzes, and examinations.

- ❖ Tracking and communicating students advancement throughout the course.
- ❖ Attending institute conferences.

**Lecturer (Computer Training)** - Al- Mustansiriya institute, Baghdad, Iraq [August 2002 - July 2004]

#### **Nature of Employment**

- ❖ Planning lessons and activities that facilitate student acquisition of basic and advanced computer skills.
- ❖ Instructing in a manner that develops students' confidence in their abilities.
- ❖ Observing and managing classroom dynamics.
- ❖ Invigilating and grading projects, quizzes, and examinations.
- ❖ Tracking and communicating student advancement throughout the course.
- ❖ Downloading important software updates and maintaining hardware.

#### **TEACHING INTERESETS:**

I am well equipped to instruct introductory and advanced courses on the:

- ❖ Chemical and Process Engineering
- ❖ Renewable Energy
- ❖ Equipment Design
- ❖ Chemical Kinetics
- ❖ Heat and Mass Transfer
- ❖ Catalysis & Catalytic Engineering
- ❖ Material and Energy Balance
- ❖ Research Methodology
- ❖ Transport Phenomenon
- ❖ Fluid Flow
- ❖ Reactor Design
- ❖ Fuel Technology
- ❖ Process Control
- ❖ Thermodynamics
- ❖ Separation Process
- ❖ Management and Engineering economic
- ❖ Nanotechnology
- ❖ Applied Mathematics.

#### **RESEARCH INTERESETS:**

- ❖ Renewable Energy and Sustainability, Hydrogen production, Syngas Production, and Biofuels.
- ❖ Catalytic Engineering, Heterogeneous catalysis, Environmental catalysis, Novel catalyst (design, synthesis methods, and characterization).
- ❖ Biogas / Methane decomposition, Catalytic / dry reforming of biogas/Methane.

- ❖ Carbon nanotubes, Graphene, Nanocomposites, Carbon Nanofilaments, Novel Two-dimensional materials (design, synthesis methods, and characterization).
- ❖ Nanotechnology, Chemical Kinetics, Reactor Design, Fluid Flow, Inorganic transformations.
- ❖ Chemical and Industrial Process Engineering, Drying Process Technology, and Computer Training.

## **RESEARCH SKILLS**

- ❖ Catalyst preparation: Sol-gel, impregnation, deposition-precipitation, co-precipitation and Fusion methods.
- ❖ Nanomaterials preparation: Synthesis and characterization of Two-dimensional materials, Carbon nanostructures, Metal nanoparticles, and Sustainable Nanocomposites.
- ❖ Catalyst and Nanomaterial characterization: hands-on experience with XRD, FTIR, FESEM, TEM, TPR, DSC, TGA, BET, EDX, VSM and Raman.
- ❖ Chemical/Instrumental analyses: hands-on experience with the Gas Chromatograph (SRI GC8610C GC & Agilent Technologies 7890A) with TCD.
- ❖ Catalyst activity screening: hands-on experience with the construction and operation of lab-scale and industrial-scale fixed bed reactor systems.
- ❖ Expertise in utilizing Microsoft Office applications and high-level programming software like Chemdraw, Expert Design (RSM), and Origin.

## **OTHER SKILLS:**

- ❖ Capable of carrying out both independent and collaborative research.
- ❖ Good interpersonal and communication skills along with the management skill.
- ❖ Good experience in writing and editing technical papers, presentations and reports.
- ❖ Supervision of PhD, masters and bachelor's students for their research works.
- ❖ High level of drive and flexibility to work in a rapidly development environment.

## **LIST OF PUBLICATIONS IN REPUTED JOURNALS:**

1. **Buthainah** A., Dayang Radiah A.B., Alnuami W., Shiva. G, Noor Hazira .H, Chandima.G, Review article: Applications of Nano-composites in Industrial Systems, Journal of Purity, Utility Reaction and Environment, ISSN: 2232-1179, (**CAS, American Chemical Society**), Volume -2, No.5, October 2013, 92-114.
2. S.M.C. Fairuz, M.Y. Sulaiman, C.H. Lim, S. Mat, **B. Ali**, O. Saadatian, M.H. Ruslan, E. Salleh, K. Sopian, Long term strategy for electricity generation in Peninsular Malaysia – Analysis of cost and carbon footprint using MESSAGE, Energy Policy, **SCI (Q1)**, Volume 62, November 2013, 493-502.
3. **Buthainah** A., Dayang Radiah A. B., Alnuami W., Ethar Y. Salih, Mohammed. A. Jawad, Gasoline Diffusivity of Polypropylene-Polycarbonate Composites, International Journal of Innovative Technology and Exploring Engineering, **SCOPUS**, ISSN: 2278-3075, Volume-3, Issue-8, January 2014.

4. Alnuami W., **Buthainah** A., Etti C. J., Jassim L. I., Gomes G. A. C., Evaluation of Different Materials for Biodiesel Production, International Journal of Innovative Technology and Exploring Engineering, **SCOPUS** , ISSN: 2278-3075, Volume-3, Issue-8, January 2014.
5. W. Alnuami, R. B. Janius, D. Ahmad, MD. Akhir, A. **Buthainah**, Factors Affecting the Mechanical Strengths of Oil Palm Fronds, Journal of Purity, Utility Reaction and Environment, ISSN: 2232-1179, (**CAS, American Chemical Society**), Volume-4, No.3, June 2015, 138-149.
6. Alyaa. K. Mageed, Dayang Radiah.A.B., A. Salmiaton, Shamsul Izhar, Musab Abdul Razak, H.M.Yusoff,F.M. Yasin, Suryani Kamarudin, **Buthainah**. A. Preparation and Characterization of Nitrogen Doped Reduced Graphene Oxide Sheet, International Journal of Applied Chemistry, Elsevier: **SCOPUS**, ISSN: 0973-1792, Volume 12, Number 1 (2016), 104-108.
7. **Buthainah**.A, Dayang Radiah. A.B, Sapuan S.M., Zaidan.AW., Alnuami. W, Mohamed Yusoff.H, Siti Masrinda.T, Preparation of Carbon Nanotubes via Chemical Technique (modified Staudenmaier method), journal of Nanoscience & Nanotechnology-Asia, **SCOPUS**, ISSN: 2210-6820, Volume 7, Issue-1 (2017), 113-122.
8. Yuhai Zhang, Makhsud I. Saidaminov, Ibrahim Dursun, Haoze Yang, Banavoth Murali, Erkki Alarousu, Emre Yengel, **Buthainah** A. Ali, Osman M. Bakr, and Omar F. Mohammed, Zero-Dimensional Cs<sub>4</sub>PbBr<sub>6</sub> Perovskite Nanocrystals, The Journal of Physical Chemistry Letters, **SCI (Q1)** 2017, 8(5), 961-965.
9. Michele De Bastiani, Ibrahim Dursun, Yuhai Zhang, **Buthainah** A. Ali, Xiao-He Miao, Jun Yin, Emre Yengel, Erkki Alarousu, Bekir Turedi, Jawaher M. Almutlaq, Makhsud I. Saidaminov, Somak Mitra, Issam Gereige, Ahmed AlSaggaf, Yihan Zhu, Yu Han, Iman S. Roqan, Jean-Luc Bredas, Omar F. Mohammed, and Osman M. Bakr, Inside Perovskites: Quantum Luminescence from Bulk Cs<sub>4</sub>PbBr<sub>6</sub> Single Crystals, Chemistry of Materials, **SCI (Q1)** 2017, 29(17), 7108-7113.
10. **Buthainah** Ali, Siti Masrinda Tasirin, Payam Aminayi, Zahira Yaakob, Nur Tantiyani Ali and Wadhah Noori, Non-Supported Nickel-Based Coral Sponge-Like Porous Magnetic Alloys for Catalytic Production of Syngas and Carbon Bio-Nanofilaments via a Biogas Decomposition Approach,,Nanomaterials, **SCI (Q1)** 2018, 8(12), 1053.

#### **LIST OF UNDER CONSIDERATION OF REPUTED JOURNALS:**

1. **Buthainah** Ali, Faris Jasim Al-Doghachi , Yun Hin Taufiq-Yap, Zahira Yaakob ,Jamal M. Ali ,Aswar A. Alwasiti , Saif Saad Mahdi, Optimization of Syngas Production from Catalytic Decomposition of Biogas over Al<sub>2</sub>O<sub>3</sub> Supported Nickel based Lobe Coral Sponge Catalysts using Response Surface Methodology, International Journal of Molecular Sciences **SCI (Q1)**, Under Review.
2. **Buthainah** Ali, Faris Jasim Al-Doghachi , Yun Hin Taufiq-Yap, Zahira Yaakob ,Jamal M. Ali ,Aswar A. Alwasiti , Saif Saad Mahdi , Carbon nanofilaments-based magnetic materials: Challenges and advantages. International Journal of Molecular Sciences, **SCI (Q1)**, under review.
3. **Buthainah** Ali, Faris Jasim Al-Doghachi , Yun Hin Taufiq-Yap, Zahira Yaakob, Ru, La, and Zr promoted nickel based coral sponge-like porous alloys for the production of syngas and carbon nanofilaments via catalytic decomposition of biogas. Nanomaterials Journal, **SCI (Q1)**, Under Process.

4. **Buthainah** Ali, Faris Jasim Al-Doghachi , Yun Hin Taufiq-Yap, Zahira Yaakob, Kinetics Study of The Catalytic Decomposition of Biogas over Ru modified lobe coral sponge catalysts", International Journal of Hydrogen, **SCI (Q1)**, Under Process.

## **ORAL PRESENTATIONS**

1. **Buthainah.A**, Dayang Radiah. A. B, Sapuan.M.S., Zaidan.Aw., Review article: Effects of Carbon Nanotubes Fillers on Nanocomposites Properties, The Postgraduate Symposium on Composites Science and Technology 2014 & 4th Postgraduate Seminar on Natural Fibre Composites 2014, university Putra Malaysia & INTROP. (**Best Paper**)
2. **Buthainah** Abed Al-Timimi , Siti Masrinda Tasirin , Zahira Yaakob , Nur Tantiyani Ali and Noor Humam Sulaiman, "Ceria Modified Spinel Supported Lobe Coral Sponge Catalysts Applied to Catalytic Decomposition of Biogas for Syngas Production and Carbon Nanofilaments", In-person oral presentation in Session: Chemical and Catalytic Conversions and Processes for Renewable Feedstocks II on November 11, 2021 at the 2021 AIChE Annual Meeting in Boston, Massachusetts , United States.

## **CHAPTER IN BOOK**

1. **Buthainah Ali** Al-Timimi and Zahira Yaakob (January 3rd 2022). Catalysts for the Simultaneous Production of Syngas and Carbon Nanofilaments Via Catalytic Decomposition of Biogas, IntechOpen (**SCI**), DOI: 10.5772/intechopen.101320.
2. **Buthainah Ali** Al-Timimi , Zahira Yaakob, Dayang Radiah. A.B, Sapuan S.M., Zaidan.AW., Production of Nanocomposites at Low Filler Loadings. Intech Open publisher (**SCI**), Under Process.

## **MEMBERSHIP OF LEARNED AND PROFESSIONAL SOCIETIES**

- ❖ Senior Member of Iraqi Engineers Union (Member ID: 122834).
- ❖ Member of International Association of Engineers (IAENG) (Member ID: 272449).
- ❖ Senior Member of American Institute of Chemical Engineers (AIChE) (Member ID: 009905408842).
- ❖ Affiliate Member of Institution of Chemical Engineers (IChemE) (Member ID: 200019882).
- ❖ Associate Member of Industrial Engineering and Operation Management (IEOM Society) Society (Member ID: 1439323).
- ❖ Graduate Technologist Member (Chemical Technology (CM)) of Malaysia Board of Technologists (MBOT) (Member ID: GT22060583).

## **COURSES TAUGHT**

### **Taught undergraduate courses:**

1. Chemical Industries Department, Institute of Technology- MARDI, Serdang, Malaysia [November 2007 - February 2009]

CHE 414 Units Operations - Second year

2. Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [August 2015 - December 2016]

Final Year Project – Fourth year

3. Chemical Process Engineering Branch, Department of Chemical Engineering, Technology University, Iraq-Baghdad [February 2023 - Present]

Equipment Design – Third Year

Final Year Project – Fourth year

### **Taught Postgraduate courses:**

Department of Chemical & Process Engineering and Research Center for Sustainable Process Technology (CESPRO), Faculty of Engineering and Built Environment , Universiti Kebangsaan Malaysia , Bangi , Malaysia [January 2017 - December 2019]

KKKR4742 Research Methodology

KKKR5922 Heterogeneous Catalysis and Catalytic Process

### **AWARDS AND HONORS**

- ❖ Excellent grade, Computer Training Certificate, Al- Mustansiriya institute, Iraq-Baghdad, 2002.
- ❖ Best final year project Award, Studying the Effect of Gas Oil on The (pp/pc and pp/pc carbon black), University of Technology, Iraq-Baghdad, 2006.
- ❖ Bachelor thesis - honors award, Thermodynamics and economic feasibility of CO<sub>2</sub> production using Reactive Distillation Column, University of Technology, Iraq-Baghdad, 2006.
- ❖ Passed “The Certified Intensive English Programme – CIEP” conducted by ELS Language Centre, University Putra Malaysia, 2012.
- ❖ Excellent Presentation of the Paper Award, postgraduate symposium on composites science and technology, universiti Putra Malaysia & INTROP, 2014.
- ❖ Best Paper Award, postgraduate symposium on composites science and technology, universiti Putra Malaysia & INTROP, 2014.
- ❖ Excellent grade, Teaching Methods certificate, Continuous Education Center, University of Technology, Iraq-Baghdad, 2021.
- ❖ Passed The Teaching Validity Course, Continuous Education Center, University of Technology, Iraq-Baghdad, 2021.



## **LIST OF CONFERENCES, WORKSHOPS/SEMINARS/WEBINAR/FORUM PARTICIPATED**

1. WAMN 2013, Two day on Advanced Materials and Nanotechnology 2013, organized by Advanced Materials and Nanotechnology for a Better Future, sponsored by university Putra Malaysia, Serdang, (10 - 11 September 2013).
2. The Postgraduate Symposium on Composites Science and Technology 2014 & 4th Postgraduate Seminar on Natural Fiber Composites, university Putra Malaysia& INTROP, 2014. (Excellent Presentation)
3. MTS Lab Expert Seminar Series Leveraging Material Testing for Academic Research 2014, , organized by Aerospace Engineering-University Putra Malaysia, Malaysian Society of Structural Health Monitoring(MSSHM),and Aerospace Manufacturing Research Center(AMRC) (2nd April 2014).
4. WNS2016,4Th UKM-Flinders Nanotechnology, Winter School 2016 nanotechnology for greener future, three days' seminar organized by Flinders University-Australia and Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia. (25-27 January 2016).
5. WITec 2016, Two-day Workshop on Combining Confocal Raman-AFM-Scanning near Field Optical Microscopy with applications in material science, semiconductors nanotechnology, geology, pharmaceuticals, food and life sciences, organized by WITec Wissenschaftliche Instrumente und Technologie GmbH Lise- Meitner-Straße 6, D-89081 Ulm, Germany, May 23 & 24,2016, X-Ray Data Processing Lab, Lvl 3, CRIM Research Complex, UKM.
6. "Web of Science for Research Discovery", One-day seminar organized by Thomson Reuters Solution Consultant, Southeast Asia and Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia. (1 January 2016).
7. Nanomaterials Asia-Pacific Academic Forum 2020 organized by MDPI - Multidisciplinary Digital Publishing Institute, St. Alban-Anlage 66, CH-4052 Basel, Switzerland, 20 December 2020.
8. High purity synthetic carbon adsorbents for challenging separations Forum organized by Wiley-VCH GmbH, Boschstraße 12,69469 Weinheim, Germany, 2 February 2021.
9. 1st International Conference (Virtual) on Sustainable Energy and Catalysis (ICSEC) 2021 conference organized by Universiti Teknologi Malaysia (UTM) and National University of Sciences & Technology (NUST) in which the Chemical Reaction Engineering Group and School of Chemical & Energy Engineering, UTM together with U.S-Pakistan Center for Advanced Studies in Energy (USPCAS-E), 16th – 17th February 2021.
10. Libraries - From crisis to opportunity Webinar organized by Wiley Research , John Wiley & Sons Pte Ltd 1 Fusionopolis Walk,#07-01 Solaris South Tower, Singapore 138628 9th March 2021.
- 11.EUBCE, The Leading Platform for Global Biomass Innovation Conference organized by ETA-Florence Renewable Energies, online 26-29 April 2021.
12. Residential Wood Combustion – Towards Low Emission Systems organized by ETA-Florence Renewable Energies Via A. Giacomini 28, Firenze, 50132 Italy, online 6 May 2021.
- 13.The role of clean hydrogen for a climate-neutral industry organized by Wiley-CHEManager, Boschstraße 12, 69469 Weinheim, Germany, online May 25, 2021.
- 14.Innovation in Libraries: Accelerating Digital Transformation organized by Wiley, John

Wiley & Sons Pte Ltd 1 Fusionopolis Walk, #07-01 Solaris South Tower | Singapore 1 June 2021.

15. Advanced Manufacturing and Processing Conference organized Advanced Manufacturing and Processing Society (AMPs) and supported by the AIChE, 1-3 June 2021.
16. Digital Manufacturing and Processing pre-conference Workshop organized Advanced Manufacturing and Processing Conference and supported by the AIChE, 3 June 2021.
17. Resilient Biomass Supply Chains in the Post-COVID Recovery organized by ETA-Florence Renewable Energies via A. Giacomini 28, Firenze, 50132 Italy, online 3 June 2021.
18. Additive Manufacturing & Advanced Materials pre-conference Workshop organized Advanced Manufacturing and Processing Conference and supported by the AIChE, 9 June 2021.
19. Green Manufacturing and Processing pre-conference Workshop organized Advanced Manufacturing and Processing Conference and supported by the AIChE, 15 June 2021.
20. AIChE ENV Div Webinar by Heriberto Cabezas organized by AIChE Environmental Division, online 28 June 2021.
21. Small Scale LNG - Is it a deal breaker? Webinar by Aparna Subramanian /Matrix PDM engineering organized by AIChE Institute for Learning & Innovation, online 30 June 2021.
22. India Bioenergy Workshop - Current status in India and international experience in deploying biogas and Municipal Solid Waste (MSW)-to-energy organized by The Ministry of New and Renewable Energy (MNRE), International Energy Agency (IEA) and Council on Energy, Environment and Water (CEEW), online 13 July 2021.
23. IEA Bioenergy Webinar - Sustainable aviation fuel/biojet technologies - commercialisation status, opportunities and challenges organized by ETA-Florence Renewable Energies Via A. Giacomini 28, Firenze, 50132 Italy, online 13 July 2021.
24. Trends in Invigoration of Manufacturing and Engineering (TIME) Workshop organized by AIChE and the United Engineering Foundation (UEF), online 13-14 July 2021.
25. Data Management Tools for Researchers Webinar organized by Wiley, John Wiley & Sons Pte Ltd 1 Fusionopolis Walk, #07-01 Solaris South Tower | Singapore , online 13 July 2021.
26. Journal Citation Reports (JCR) 2021 Overview Webinar organized by Clarivate - Web of Science, online 13 July 2021.
27. IEA Webinar - Hydropower Special Market Report organized by International Energy Agency 9 rue de la Fédération 75739 Paris Cedex 15 France, online 20 July 2021.
28. Global Hydrogen Safety Codes and Standards Webinar organized by AIChE Institute for Learning & Innovation, online 21 July 2021.
29. Allyship and Advocacy: Becoming an Advocate for Women Webinar organized by AIChE Women in Chemical Engineering (WIC), online 21 July 2021.
30. Fresh Look, New Features: What's new on the New Web of Science? Webinar organized by Clarivate - Web of Science, online 2 August 2021.
31. How to write a scientific abstract Webinar organized by Wiley, 333 Summer Street | Boston, MA 02210, online 18 August 2021.
32. Ultrapure Water for Liquid Chromatography and Mass Spectrometry Webinar organized by Merck Millipore-BESS Scientific Sdn Bhd 6E-1st Floor, Desa University Commercial Complex, Jalan Sungai Dua, 11700, Gelugor, Penang, Malaysia , online 9 September

2021.

33. Time Saving in Microbiological QC Testing of Liquid Samples virtual seminar organized by Wiley- Wiley Analytical Science, Wiley-VCH GmbH, Boschstraße 12, 69469 Weinheim, Germany, online 29 September 2021.
34. IEA Webinar - India Hydropower Virtual Webinar -The future of hydropower and its role in system integration, flexibility and storage: Global outlook and implications for India organized by International Energy Agency (IEA) and Center for Study of Science, Technology and Policy (CSTEP) 9 rue de la Fédération 75739 Paris Cedex 15 France, online 12 October 2021.
35. Combatting Corrosion 2021 – A Thought Leadership Event organized by Elsevier, 13 October 2021.
36. IEA Bioenergy Webinar - Sustainable Lignin Valorisation organized by ETA-Florence Renewable Energies ,Via A. Giacomini 28, Firenze, 50132 Italy, 4 November 2021.
37. COMSOL Day: Battery Technology organized by COMSOL, Inc. 100 District Avenue Burlington, MA 01803 USA, 8 November 2021.
38. Elsevier Net Zero Forum: Transport Electrification Pathways to Net Zero organized by Elsevier BV, Radarweg 29, 1043NX Amsterdam, The Netherlands Reg. no. 33156677, VAT no. NL 005033019B01, 17 November 2021.
39. Agrivoltaico and Crowdfunding: the involvement of local communities in energy choices and landscape transformations Webinar organized by ETA-Florence Renewable Energies, Via A. Giacomini 28, Firenze, 50132 Italy, 19 November 2021.
40. Rigorous and Accurate Electrolyte Simulation for Industrial Water and Wastewater Treatment Webinar organized by OLI Systems, Inc.'s, 2 Gatehall Drive, Suite 1D, Parsippany NJ 07054 USA, 30 November 2021.
41. IEA Bioenergy Triannual Online Conference 2021: Bioenergy – A critical part of the path to carbon neutrality organized by ETA-Florence Renewable Energies ,Via A. Giacomini 28, Firenze, 50132 Italy, 29 November- 9 December 2021.
42. Accurate Elemental Analysis and Micro Mapping With Fusion and WDXRF organized by i-CRIM Centralised Laboratory, Universiti Kebangsaan Malaysia & RGS Corporation Sdn Bhd, 21 December 2021.
43. EU-INDIA-BCE 2022 Conference - Progress in Advanced Biofuels by ETA-Florence Renewable Energies ,Via A. Giacomini 28, Firenze, 50132 Italy, 2- 4 March 2022.
44. Material Compatibility Considerations for Hydrogen Webinar organized by AIChE Academy, CHS - Center for Hydrogen Safety, 30 March 2022.
45. Environmental Justice Implications for PSM and RMP Programs Webinar organized by AIChE Academy, Provenance Consulting is a Trinity Consultants Company, 30 March 2022.
46. An introduction to quantifying the climate effects of bioenergy Webinar organized by IEA Bioenergy, Floor van der Hilst, Utrecht University, Netherlands, 31 March 2022.
47. Choosing The Right Particle Sizing Method for Your Samples Webinar organized by Nexus Analytics Sdn Bhd and i-CRIM Centralised Laboratory (Universiti Kebangsaan Malaysia), 6 April 2022.
48. Live Webcast: TERS and TEPL Imaging for 2D Materials Research organized by Spectroscopy, an MJH Life Sciences® Brand, 2 Clarke Drive, Cranbury, NJ, 08512 US, 6 April 2022.

49. Development of Sustainable Catalysts Lecture organized by the Asian American Academy of Science and Engineering ([www.AAASE.org](http://www.AAASE.org)), 04 May 2022.
50. Improve Productivity of Catalytic Processes Webinar organized by AIChE Academy, 05 May 2022.
51. IEA Bioenergy e-Workshop: Bioenergy and Sustainable Development organized by IEA Bioenergy, in collaboration with the Global Bioenergy Partnership (GBEP) and the Biofuture Platform, 23-24 May 2022.
52. Renewable Energy Market Update 2022 Webinar organized by IEA Renewables Market Report team, 25 May 2022.
53. Advanced Manufacturing and Processing Conference organized by Advanced Manufacturing and Processing Society (AMPs) and supported by the AIChE, 1-3 June 2022.
54. Live Webinar: Rapid FTIR analysis of Biodiesel with ECOANALYTIX organized by PerkinElmer, 30 June 2022.
55. IEA Bioenergy Webinar - Integration of gasification processes in biorefineries organized by ETA-Florence Renewable Energies, 30 June 2022.
56. Regulation of Plastic Waste and Pollution: Present and Future Policy for Chemical Engineers Webinar organized by AIChE Academy, AIChE Environmental Division, 25 July 2022.
57. Optimize Your Safety Instrumented System Webinar organized by AIChE Academy, 27 July 2022.
58. Net-Zero INL: Leading by Example to Change the World's Energy Future Webinar organized by Catalysis and Reaction Engineering Division, AIChE Academy, 4 August 2022.
59. SDG7 Seminar Affordable and Clean Energy: A Journey Towards Energy Transition organized by Economic Planning Unit, Prime Minister's Department (EPU) & Tenaga Nasional Berhad, 9 August 2022.
60. IEA Bioenergy - ExCo90 Workshop "Technology advances in liquid biofuels and renewable gas" organized by IEA Bioenergy Alternate Delegate for Austria, 17 October 2022.
61. Workshop - Production of low ILUC risk biomass feedstock organized by ETA-Florence Renewable Energies Via A. Giacomini 28, 50132 Firenze, Italy, 30 March 2023.