



# APURAV KRISHNA KOYANDE

PhD, AMIChemE



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Seri Iskandar, Perak,  
MALAYSIA.

## PROFESSIONAL SUMMARY

Enthusiastic and results-oriented educator deeply committed to innovating engineering curriculum. My expertise centers around Environment and Energy, where I leverage extensive experience collaborating with diverse international teams. I am also focused on advancing initiatives in carbon sequestration and environmental engineering. I am eager to apply this specialised knowledge and collaborative spirit to your esteemed organisation.

## Link profile

**LinkedIn:** [Apurav Krishna Koyande](#)

**ORCID:** 0000-0002-6129-6154

**Scopus Profile:** [Apurav Krishna Koyande](#)

**Researchgate:** [Apurav Krishna Koyande](#)

**Google scholar:** [Apurav Krishna Koyande](#)

## WORK EXPERIENCE

### UNIVERSITI TEKNOLOGI PETRONAS, SERI ISKANDAR, MALAYSIA

#### Lecturer in Department of Chemical Engineering

Oct 2024 – Present

- Supervised 2 FYP students, 5 CAPSTONE students and 10 Engineering Team Project students
- Secured RM 20k Short Term Internal Research Fund (STIRF) Grant & RM 20k International Collaborative Research Fund in collaboration with University of Nottingham Malaysia & Institut Teknologi Sepuluh Nopember (ITS) Indonesia
- Currently teaching Chemical Engineering Fluid Mechanics & Advanced Process Control modules
- Presented an article titled “Fostering Collaborative Learning through Gamification Tools” in NCENT conference at KPTM, Ipoh
- Published an article in Times Higher Education Campus on *Test Students' Understanding, Not Their Memory*.
- Delivered a LCA tool to Paper Packaging company as a consultancy-based project

### UNIVERSITY OF NOTTINGHAM MALAYSIA, SEMENYIH, MALAYSIA

#### Postdoctoral Research Fellow

May 2022 – Feb 2024

- An interdisciplinary project funded by Cquestr8 Sdn Bhd.
- This project focuses on the enhanced weathering of minerals for carbon sequestration
- Experimental hypothesis and modelling of potential gigatonne carbon sequestration
- Co-supervised a two teams of 2 Master's students in completing their final-year project on passive radiative cooling by emissive coatings for academic year 2022-23 and 2023-24.
- Supervised Master's of Philosophy student on ambitious project based on carbon negative concrete

### BIOLINA CORPORATION SDN BHD

#### Farm Manager Cum Scientist (Part-time)

Jan 2024 – Mar 2024

- Large scale cultivation and harvest of *Spirulina* in raceway ponds.
- Research and Development for optimum growth of microalgae biomass.

## WORK EXPERIENCE

### UNIVERSITY OF NOTTINGHAM MALAYSIA, SEMENYIH, MALAYSIA

#### Research Assistant

Apr 2018 – Apr 2022

- Supervised postgraduate and undergraduate final-year research students in their respective research projects
- Laboratory demonstrations and lab report marking for Chemical Engineering undergraduate students
- Assisted research group members in writing and editing quality publications in high-impact factor journals
- Invited as the reviewer to top journals such as Bioresource Technology, Bioengineered and Chemosphere, *etc.*

### PHD CLINICUS

#### Co-founder, Content Creator

Aug 2021 – Present

- Research, brainstorm and create motivational/educational video content for the audience
- Involved in video production and publication

### VISION EARTHCARE PVT LTD, MUMBAI, INDIA

#### Business Development Executive

Oct 2017 – Jun 2018

- Commercialised patented Continuous Aerobic Multi-Stage Soil Biotechnology of IIT, Bombay
- Technical supervision of the “NAMAMI CHANDRABHAGA” project funded by the Government of Maharashtra, for the rejuvenation of Chandrabhaga rivers. Procurement and design of a \$7.5m sewage treatment plant at Pandharpur, Maharashtra, India

### AQURA ENVIRO PROJECTS PVT LTD, MUMBAI, INDIA

#### Intern

Jun 2016 – Aug 2016

- Assisted with EIA report preparation for Virar-Bolinj CHS Ltd. and Palghar CHS Ltd.
- Familiarised with EIA notification 2006 of EPA in India and the EIA industry in India in real estate

### RECRON POLYESTER SDN BHD, NILAI, MALAYSIA

#### Intern

Jun 2015 – Aug 2015

- Conducted daily plant inspection at Phase 2, poly AB, and nylon & weaving waste-water treatment plant
- Addressed plant glitches and resolved issues and worked on plant optimisation

## EDUCATION

### UNIVERSITY OF NOTTINGHAM MALAYSIA, SEMENYIH, MALAYSIA

#### PhD in Chemical Engineering

Apr 2018 – Aug 2021

- Research area: Biochemical Engineering with a focus on microalgae downstream processing
- Thesis title: Biorefinery of *Chlorella sp.* using integrated multiphasic systems for biofuel, feed and wound healing application

### UNIVERSITY OF NOTTINGHAM MALAYSIA, SEMENYIH, MALAYSIA

#### Master in Engineering (Honours) in Chemical and Environmental Engineering

Sept 2013 – Jul 2017

- Graduated with second-division upper-class honours
- Research title: Evaluation of novel bio-coagulants and bio-flocculant for coagulation-flocculation process of palm oil mill effluent treatment and further optimisation with response surface method

### IHE DELFT INSTITUTE FOR WATER EDUCATION, DELFT, NETHERLANDS

#### Online course

Jul 2017 – Sept 2017

- Biological wastewater treatment: Principles, modelling and design

### CENTRE FOR SCIENCE AND ENVIRONMENT, DELHI, INDIA

#### Online course

Jul 2017 – Aug 2017

- Faecal sludge management in collaboration with UNESCO-IHE, Delft and EAWAG, Switzerland

## EDUCATION

### OUR OWN ENGLISH HIGH SCHOOL, FUJIARAH, UAE

#### Higher Secondary Education in Central Board of Secondary Education

Apr 2011 – Mar 2013

- Graduated with distinction (89.6%) in Science Major (Physics, Chemistry, Biology and Mathematics)

## PROFESSIONAL MEMBERSHIPS

- Associate member (AMIChemE) of the Institution of Chemical Engineers, UK (since 2017)
- Graduate Member of the Board of Engineers, Malaysia (since 2022)
- Associate Member of the Institution of Environmental Management and Assessment (UK) (2016-2020)
- Student Member of DWA - German Association for Water, Wastewater and Waste (2016-2018)

## SPECIAL AWARDS/HONOURS/CERTIFICATION

### Year 2025

- Enlisted as Top 2% Scientists in the world verified by ELSEVIER and Stanford University
- Won 3<sup>rd</sup> place in Men's Open International category at Gunung Jerai Night Half Marathon, Kedah

### Year 2024

- Enlisted as Top 2% Scientists in the world verified by ELSEVIER and Stanford University
- Vice Chancellor's Medal 2024 at University of Nottingham Malaysia for contribution to U-12 Pentangular Cricket Championship

### Year 2023

- Captained the Nottingham Cricket Club to runners up in Malaysia's biggest intervarsity tournament of 2023

### Year 2021

- Awarded IKM Research Prize in Polymer and Materials Science 2021 (organised by Institute Kimia Malaysia)

### Year 2020

- Vice-chancellor's Medal 2020
- Postgraduate Award 2020
- Participated in the production of a video on Chemical Security for Laboratories (co-hosted by NACWC, Ministry of Foreign Affairs, Malaysia and University of Nottingham Malaysia)

### Year 2019

- Best Oral Presenter in the 5th Postgraduate Colloquium for Environment Research (POCER) (organised by the University of Nottingham Malaysia)
- Participated in Three-Minute Thesis (3MT) competition 2019 (organised by Graduate school)
- Participated in the Faculty of Science and Engineering Postgraduate Research Showcase 2019

### Year 2017

- Won the Best Paper Award at International Conference on wastewater management (ICWW-2017) (organised by Kumaraguru College of Technology, Coimbatore, Tel Aviv University, Israel, and Technical University of Liberec, Czech Republic)

### Year 2016

- Received Nottingham Advantage Award (NAA) for participating in module: Sustainability in action
- Certificate of Distinction in recognition as one of the Top 5 achievers in students-Continuing Personal Development (s-CPD) scheme (2016-17)

## LEADERSHIP ROLES AND EXTRACURRICULAR ACTIVITIES

### Universiti Teknologi PETRONAS

2024 – Current

Co-ordinator for CAPSTONE (Plant Design Project II) and Adjunct Lectures; Advisor of international students; Project Advisor of ChemRookies; Judge for Science and Engineering Design Exhibition, Engineering Team Project (ETP); Collaborated with University of Nottingham Malaysia, Institut Teknologi Sepuluh Nopember (Indonesia), Tatyasaheb Kore Institute of Engineering & Technology (TKIET), Maharashtra Institute of Technology- Academy of Engineering (MIT-AOE), BITS Pilani (India), Southampton Solent University (UK) and Universidad Carlos III de Madrid (UC3M), Spain

### University of Nottingham Malaysia

2018 – 2021

Tioman Hall of Residence tutor, Student Council chancellor, student helper, Vice-chairperson of Science and Engineering Postgraduate Student Council (SEPSC), President, Vice-President and Captain of Nottingham Cricket Club, Certified First Aider

### University of Nottingham Malaysia

2013 – 2017

Treasurer and Logistic Officer of the Indian Cultural Society

#### Research skills

- Mammalian cell culture
- Life Cycle Analysis
- Wastewater treatment
- Microalgae upstream and downstream processing
- Accelerated mineral weathering
- Data analysis

#### Equipment/Instrument skills

- Atomic-Absorption spectrometry
- UV-Vis spectrophotometer
- GC-MS Spectrometry
- BET/TGA/DTG
- FTIR
- XRD
- SEM/EDX

#### Languages

- English
- Hindi
- Marathi
- Arabic
- Malay

#### IT skills

- Microsoft office
- AutoCAD
- Aspen HYSYS
- Canva, MATLAB
- Design Expert DOE
- ChatGPT & Co-Pilot bots
- SimaPRO

## REFERENCES

#### Prof. Ir. Dr. Dominic Foo

Department of Chemical Engineering  
Faculty of Science & Engineering  
University of Nottingham Malaysia  
Selangor, Malaysia  
Email: Dominic.Foo@nottingham.edu.my

#### Prof. Dr. Andy Chan

Associate Pro-Vice Chancellor  
Solent University  
Southampton, England  
United Kingdom  
Email: andy.chan@solent.ac.uk

1. Chee Yap Chung, Anurita Selvarajoo\*, Vasanthi Sethu, **Apurav Krishna Koyande**, Arvin Arputhan Zhi Chien Lim . (2018) “Treatment of palm oil mill effluent (POME) by coagulation flocculation process using peanut–okra and wheat germ–okra” *Clean Technologies and Environmental Policy*, 20, 1951-1970. DOI: 10.1007/s10098-018-1619-y [accepted: 30 September 2018; IF: 3.636 (Q3)]
2. **Apurav Krishna Koyande**, Chew Kit Wayne, Krishnamoorthy Ramababu, Yang Tao, Dinh-Toi Chu, Pau-Loke Show\*. (2019) “Microalgae: a potential alternative to health supplementation for humans” *Food Science and Human Wellness*, 8 (1), 16-24. DOI: 10.1016/j.fshw.2019.03.001 [Accepted: 1 March 2019; IF: 8.02 (Q1)]
3. **Apurav Krishna Koyande**, Kit Wayne Chew, Jun-Wei Lim, Sze Ying Lee, Man Kee Lam, Pau-Loke Show\*. (2019) “Optimization of protein extraction from *Chlorella Vulgaris* via novel sugaring-out assisted liquid biphasic electric flotation system” *Engineering in Life Sciences*, 19 (12), 968-977. DOI: 10.1002/elsc.201900068 [Accepted: 13 August 2019; IF: 2.678 (Q3)]
4. **Apurav Krishna Koyande**, Pau-Loke Show, Ruixin Guo, Bencan Tang, Chiaki Ogino, Jo-Shu Chang\*. (2019) “Bio-processing of algal bio-refinery: a review on current advances and future perspectives” *Bio-Engineered*, 10:1, 574-592. DOI: 10.1080/21655979.2019.1679697 [Accepted: 3 October 2019; IF: 3.269 (Q2)]
5. **Apurav Krishna Koyande**, Kit Wayne Chew, Jun-Wei Lim, Man-Kee Lam, Yeek-Chia Ho, Pau-Loke Show\*. (2020) “Biorefinery of *Chlorella sorokiniana* using ultra sonication assisted liquid triphasic flotation system” *Bioresource Technology*, 303, 122931. DOI: 10.1016/j.biortech.2020.122931 [Accepted: 27 January 2020; IF: 9.642 (Q1)]
6. **Apurav Krishna Koyande**, Vera Tanzil, Haridharan Murrally Dharan, Manivarman Subramaniam, Ryann Noel Robert, Phei-Li Lau, Ianatul Khoiroh, Pau-Loke Show\*. (2020) “Integration of osmotic shock assisted liquid biphasic system for protein extraction from microalgae *Chlorella vulgaris*” *Biochemical Engineering Journal*, 157, 107532. DOI: 10.1016/j.bej.2020.107532 [Accepted: 7 February 2020; IF: 3.978 (Q1)]
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8. Heli Siti Halimatul Munawaroh, Gun Gun Gumilar, Fina Nurjanah, Galuh Yuliani, Dewi Kurnia, Asri Peni Wulandari, Isman Kurniawan, Andriati Ningrum, **Apurav Krishna Koyande**, Pau-Loke Show\*. (2020) “In-vitro molecular docking analysis of microalgae extracted phycocyanin as an anti-diabetic candidate” *Biochemical Engineering Journal*, 161, 107666. DOI: 10.1016/j.bej.2020.107666 [Accepted: 31 May 2020; IF: 3.978 (Q1)]
9. Doris Ying Ying Tang, Guo Yong Yew, **Apurav Krishna Koyande**, Kit Wayne Chew, Dai-Viet N. Vo, Pau Loke Show\*. (2020) “Green technology for the industrial production of biofuels and bioproducts from microalgae: a review” *Environmental Chemistry Letters*, 18, 1967-1985. DOI: 10.1007/s10311-020-01052-3 [Accepted: 10 July 2020; IF: 9.027 (Q1)]
10. Ting-Yang Lin, Wai Siong Chai, Shu-Jen Chen, Jeng-Ywan Shih, **Apurav Krishna Koyande**, Bing-Lan Liu, Yu-Kaung Chang\*. (2020) “Removal of soluble microbial products and dyes using heavy metal wastes decorated on eggshell” *Chemosphere*, 128615. DOI: 10.1016/j.chemosphere.2020.128615 [Accepted: 12 October 2020; IF: 7.086 (Q1)]
11. Jie Yang, Jing Lu, Qingzheng Zhu, Yang Tao, Qiang Zhu, Changming Guo, Yaowei Fang, Li Chen, **Apurav Krishna Koyande**, Shujun Wang, Pau-Loke Show\*. (2021) “Isolation and characterization of a novel *Lactobacillus plantarum* MMB-07 from traditional Suanyu for *Acanthogobius hasta* fermentation” *Journal of Bioscience and Bioengineering*, 132(2), 161-166. DOI: 10.1016/j.jbiosc.2020.12.016 [Accepted: 28 December 2020; IF: 2.894 (Q2)]

12. **Apurav Krishna Koyande**, Kit Wayne Chew, Pau-Loke Show, Heli Siti Halimatul Munawaroh, Jo-Shu Chang\*. (2021) “Liquid triphasic systems as sustainable downstream processing of *Chlorella* sp. biorefinery for potential biofuels and feed production” *Bioresource Technology*, 333, 125075. DOI: [j.biortech.2021.125075](https://doi.org/10.1016/j.biortech.2021.125075) [Accepted: 25 March 2021; IF: 9.642 (Q1)]
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14. Pham Thi Lanh, Huong Minh Nguyen, Bui Thi Thuy Duong, Nguyen Thi Hoa, Le Thi Thom, Luu Thi Tam, Ha Thi Thu, Vo Van Nha, Dang Diem Hong, Aidyn Mouradov, **Apurav Krishna Koyande**, Pau-Loke Show\*, Dong Van Quyen\*. (2021) “Generation of microalga *Chlamydomonas reinhardtii* expressing VP28 protein as oral vaccine candidate for shrimps against White Spot Syndrome Virus (WSSV) infection” *Aquaculture*, 540, 736737. DOI: [j.aquaculture.2021.736737](https://doi.org/10.1016/j.aquaculture.2021.736737) [Accepted: 4 April 2021; IF: 4.242 (Q1)]
15. Saira Asif, Muhammad Mubashir, Jiří Jaromír Klemeš, Sidra Saqib, Ahmad Mukhtar, Awais Bokhari, Jacqueline Lukose, **Apurav Krishna Koyande**, Kit Wayne Chew, Pau Loke Show\*. (2021) “Enhanced production of non-edible *Xanthium spinosum* based biodiesel using waste biomass under dynamic conditions” *Biomass Conversion and Biorefinery*, DOI: <https://doi.org/10.1007/s13399-021-01804-3> [Accepted: 21 July 2021; IF:4.987 (Q1)]
16. **Apurav Krishna Koyande**, Kit Wayne Chew, Sivakumar Manickam, Jo-Shu Chang, Pau-Loke Show\* (2021) “Challenges and Opportunities in the Emerging Algal Nanotechnology for the Generation of High-value Pharmaceuticals and Nutraceuticals” *Trends in Food Science and Technology*, 116, 290-302. DOI: [10.1016/j.tifs.2021.07.026](https://doi.org/10.1016/j.tifs.2021.07.026) [Accepted: 22 July 2021; IF: 12.563 (Q1)]
17. Nadeem A. Khan, Awais Bokhari, Muhammad Mubashir, Rachida El Morabet, Roohul Abad Khan, Majed Alsubih, Mudassar Azam, Sidra Saqib, Ahmad Mukhtar, **Apurav Krishna Koyande**, Pau Loke Show\* (2022) “Treatment of Hospital wastewater with submerged aerobic fixed film reactor coupled with tube-settler” *Chemosphere*, 131838. DOI: [10.1016/j.chemosphere.2021.131838](https://doi.org/10.1016/j.chemosphere.2021.131838) [Accepted: 6 August 2021; IF: 8.94 (Q1)]
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20. Angela Paul Peter, **Apurav Krishna Koyande**, Kit Wayne Chew, Shih-Hsin Ho, Wei-Hsin Chen, Jo-Shu Chang, Rambabu Krishnamoorthy, Fawzi Banat, Pau Loke Show\*. (2022) “Continuous cultivation of microalgae in photobioreactors as a source of renewable energy: Current status and future challenges” *Renewable and Sustainable Energy Reviews*, 154, 111852, DOI: [10.1016/j.rser.2021.111852](https://doi.org/10.1016/j.rser.2021.111852) [Accepted 29 October 2021; IF: 16.79 (Q1)]
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#### **Book Chapters:**

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2. **Apurav Krishna Koyande**, Mohammad Ameer Abbas, Sze Ying Lee, Pau Loke Show\*. (2020) "Electricity-assisted liquid biphasic system" Liquid Biphasic System: Fundamentals and Applications in Bioseparation Technology, p.187.
3. **Apurav Krishna Koyande**, Vishno Vardhan Devadas, Kit Wayne Chew, Pau Loke Show\*. (2021) "Industrial Perspective of Industry 5.0" The Prospect of Industry 5.0 in Biomanufacturing, p.305.
4. **Apurav Krishna Koyande**, Teoh Rui Hong, Kit Wayne Chew, Pau Loke Show\*. (2023) "Conventional designs for multiphase liquid separation" Principles of Multiple-Liquid Separation Systems, p.171-186.
5. **Apurav Krishna Koyande**, Pau Loke Show\*. (2024) "Microalgae harvest technology" Handbook of Biorefinery Research and Technology: Production of Biofuels and Biochemicals, 705-730.