INTELLECTUAL PROPERTY RIGHTS (IPR) – 27 GRANTED PATENTS

National:

1. Design of Clamping Pulley [Patent No. 350143-001, **Granted**- 25/01/2023]: **INDIA**
2. Electrochemical Membrane Bioreactor [Patent No. 350145-001, **Granted**- 27/06/2023]: **INDIA**
3. Municipal Wastewater Treatment Device [Patent No. 350144-001, **Granted**- 17/02/2023]: **INDIA**
4. A Method of Treatment of Domestic Wastewater by Electrochemical Membrane Bioreactor and Generation of Bioelectricity [Patent No. 202311010019, **Granted**- 22/05/2024]: **INDIA**
5. Removal of Chromium from Industrial Wastewater Using Magnetic Nanoparticles [Patent No. 202311027431, **Granted**-21/02/2025]: **INDIA**
6. Thermal Catalytic Cracking Unit [Patent No. 388557-001, **Granted**- 02/02/2024]: **INDIA**
7. Microbial Fuel cell Set-up for Continuous Process [Patent No. 404283-001, **Granted**- 4/05/2024]: **INDIA**
8. An Electrospinning Set-up for Wound Patches [Patent No. 407680-001, **Granted**- 09/04/2024]: **INDIA**
9. An electrochemical device for measuring current and voltage in electrochemical membrane bioreactor [Patent No. 425141-001, **Granted** - 24/10/2024]: **INDIA**
10. Biofilm reactor for multiple substratum [Patent No. 432264-001, **Granted**- 09/12/2024]: **INDIA**
11. Adsorption Column for Dye Removal from Textile Wastewater [Patent No. 383691-001 **Granted**- 12/06/2025]: **INDIA**
12. Hybrid Reactive Distillation with Side Draw for the Selective Production of Dehydrated Adol [Patent No. 461397-001, **Granted** - 11/09/2025]: **INDIA**
13. Biochemical reactor for production of biofuel [Patent No. 439728-001, **Granted** - 01/07/2024]: **INDIA**
14. Magnetic Chemical Pump for Waste Water Treatment Using Nano Technology [Patent No. 463915-001, **Granted** - 01/07/2024]: **INDIA**
15. Hybrid Axial Centrifugal Compressor for Interdisciplinary Industrial Applications [Patent No. 463915-001, **06/02/2026**]: **INDIA**
16. Herbal Formulation Infused Catheter Design for Inhibiting CAUTIs [Patent No. 472589-001, **Granted** - 01/01/2026]: **INDIA**

International:

1. Electrochemical Biosensor Device for Measuring Water Quality Parameter [Patent No.- 6275686, **Granted**- 26/04/2023]: **UNITED KINGDOM**
2. Integrated Anaerobic Sludge Reactor having Microbial Fuel Cell for Wastewater Treatment [Patent No.- 6310988, **Granted**- 25/09/2023]: **UNITED KINGDOM**
3. Semi-Continuous Biochemical Reactor for Biodiesel [Patent No.- 6310987, **Granted**- 25/09/2023]: **UNITED KINGDOM**
4. Artificial Intelligence Based Membrane Bioreactor for Treatment of Wastewater [Patent No.- AMCZ-2312907656, **Granted**- 31/01/2024]: **AUSTRALIA**

5. Thermal Catalytic Cracking Unit for Biofuel Production [Patent No.- 6338387, **Granted**-19/01/2024]: **UNITED KINGDOM**
6. A Process for Treatment of Municipal Wastewater and Generation of Bioelectricity by Electrochemical Membrane Bioreactor [Patent No.- 2023/10692, **Granted-** 26/06/2024]: **SOUTH AFRICA**
7. An electrochemical device for measurement of current and voltage [Patent No.- 6387517, **Granted**-06/09/2024]: **UNITED KINGDOM**
8. A Superparamagnetic Fe_3O_4 Nanoparticles from *Hibiscus rosa-sinensis* Leaf Extract and Application Thereof [Patent No.- 202411040955, **Granted-**15/11/2024]: **GERMAN**
9. A hybrid membrane biochemical reactor for wastewater treatment [Patent No.- 6472288, **Granted**-25/09/2025]: **UNITED KINGDOM**
10. Electrochemical Process for Monitoring Membrane Fouling in Bioreactors for Wastewater Treatment [Patent No.- 202511004650, **Granted-**26/11/2025]: **SOUTH AFRICA**
11. A Artificial Intelligence Based Heat Exchanger for Controlling Bioreactor Temperature [Patent No.- 6491218, **Granted**- 06/02/2026]: **UNITED KINGDOM**

JOURNALS

1. **Suantak Kamsonlian**, Surresh S., Majumder C.B. and Chand S. (2011). Characterisation of banana and orange peels: biosorption mechanism. International Journal of Science Technology and Management, Vol. 2(4), pp. 1-7.
2. **Kamsonlian S.,** Venkat R., Surresh S., Majumder C.B. Chand S. and Arvind K. (2012). Biosorptive behavior of mango leaf powder and rice husk for arsenic (III) from aqueous solutions. *International Journal of Environmental Science and Technology,* Vo.9 (3), pp.165-57*8.* doi10.1007/s13762-012-0054-6.
3. **Suantak Kamsonlian**, Chandrajit Balomajumder and Shri Chand (2012). A potential of biosorbent derived from banana peel for removal of As(III) from contaminated water. International Journal of Chemical Sciences and Applications, Vol.3 (2), pp. 2278-6015.
4. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand (2012). Process parameter optimization and isotherm modeling: Removal of arsenic(V) from contaminated water using palm bark biomass. International Journal of Engineering Research and Applications, Vol. 2(4), pp. 2334-2339.
5. **Suantak Kamsonlian**, Chandrajit Balomajumder and Shri Chand (2012). Studies on surface characterization and isotherm modelling: Biosorption of arsenic (III) onto low cost biosorbent derived from orange peel. *Journal of Scientific and Industrial Research,* Vol. 71, pp. 810-816.
6. **Suantak Kamsonlian,** Surresh S., Majumder C.B. and Chand S. (2012). Biosorption of arsenic from contaminated water onto solid psiduimguajava leaf surface: equilibrium, kinetics and desorption study. *Bioremediation Journal,* Vol.16 (2), pp. 97-112.

7. **Suantak Kamsonlian**, Surresh S., Majumder C.B. and Chand S. (2012). Biosorption of As(III) from contaminated water onto low cost palm bark biomass. International Journal of Current Engineering and Technology, Vol.2 (1), pp. 153-158.

8. **Suantak Kamsonlian**, Surresh S., Majumder C.B. and Chand S. (2013). Biosorption of arsenic by mosambi (ciruslimetta) peel: equilibrium, kinetics, thermodynamics and desorption stud*y. Asian Journal of Chemistry,* Vol. 25(5), pp. 2409-2417.

9. Sushil Kumar, **Suantak Kamsonlian** and Neha Chomal (2014). Equilibrium Study on Reactive Extraction of Nicotinic Acid from Aqueous Solution. *International Journal of Chemical Engineering and Applications*, Vol. 5, pp. 6.

10. Shashi Bala Gautam, Siraj M. Alam and **Suantak Kamsonlian** (2015). Adsorption of As (III) on Iron Coated Quartz Sand: Influence of Temperature on the Equilibrium Isotherm, Thermodynamics and Isosteric Heat of Adsorption Analysis. *International Journal of Chemical Reactor Engineering,* Vol. 14 (1), pp. 289-298.

11. Kajal Gautam, Kanhaiya Kumar Singh, Sushil Kumar, **Suantak Kamsonlian** (2016). Bio-Degradation and De-Colorization of Reactive Orange ME2RL Dye by Mixed Bacterial Culture Isolated from Municipal Wastewater, *International Journal for Technological Research in Engineering,* Vol. 3 (8), pp. 2347-4718.

12. Kajal Gautam, Kanhaiya Kumar Singh, Sushil Kumar, **Suantak Kamsonlian** (2016). Bio-degradationand De-Colorization of Reactive Orange ME2RL Dye By Mixed Bacterial Culture Isolated From Municipal Wastewater, International Journal for Technological Research In Engineering, Vol. 3 (8), pp. 2347 – 4718.

13. Shashi Bala Gautam, Siraj Alam and **Suantak Kamsonlian** (2017). Adsorptive removal of As(III) from aqueous solution by raw coconut husk and iron impregnated coconut husk: kinetics and equilibrium analyses, *International Journal of Chemical Reactor Engineering,* Vol. 15(2).*DOI 10.1515/ijcre-2016-0097*

14. Shitanshu Pandey, Neha Chomal, **Suantak Kamsonlian,** and Sushil Kumar (2018). Theoretical and Experimental Studies on Extraction of Carboxylic Acids from Aqueous Solution Using Ionic Liquids, *International Journal of Chemical Engineering and Applications*, Vol. 9, pp. 1.

15. Shashi Bala Gautam, **Suantak Kamsonlian** Siraj Alam M. (2019). Equilibrium and thermodynamic aspects of As(III) with temperature onto raw coconut husk and iron impregnated coconut husk, *Research Journal of Chemistry and Environment,* Vol. 23 (4), pp. 57-69.

16. Kajal Gautam, Sushil Kumar, **Suantak Kamsonlian** (2019). Decolorization of Reactive Dye from Aqueous Solution using Electrocoagulation: Kinetics and Isothermal Study, *International Journal of Research in Physical Chemistry and Chemical Physics*, pp. 1-22. DOI: https://doi.org/10.1515/zpch-2017-1044

17. Kajal Gautam, **Suantak Kamsonlian,** Sushil Kumar (2019). Removal of Reactive Red 120 dye from wastewater using electrocoagulation: Optimization using multivariate approach, economic analysis, and sludge characterization, *Separation Science and Technology,* pp. 1-15, DOI: https://doi.org/10.1080/01496395.2019.1677713

18. Harish Kumar, Kanhaiya Lal Maurya, Avneesh Kumar Gehlaut, Deepshikha Singh, Sanjeev Maken, Ankur Gaur, and **Suantak Kamsonlian** (2019). Adsorptive removal of chromium (VI) from aqueous solution using binary bio-polymeric beads made from bagasse, *Applied Water Science,* Springer, Vol.10(21), DOI: https://doi.org/10.1007/s13201-019-1101-y

19. Kajal Gautam, Sushil Kumar, **Suantak Kamsonlian** (2020). Decolorization of Azo Dyes by Electrocoagulation Process with Response Surface Methodology, *Research Journal of Chemistry and Environment,* Vol. 24 (3), pp. 31-40.

20. S. B. Gautam, **S. Kamsonlian** and M. Siraj Alam (2020). Adsorption of As(III) on surface modified coconut husk in fixed bed column, *Journal of the Indian Chemical Society*, Vol. 97, No. 10a, , pp. 1662-1667.

21. Kajal Gautam, Rishi K. Verma, **Suantak Kamsonlian** and Sushil Kumar (2021). Decolorization of Reactive Black B from wastewater by electro-coagulation: optimization using multivariate RSM and ANN, Chemical Product and Process Modeling, Vol. 16(2), doi: https://doi.org/10.1515/cppm-2020-0043

22. Harish Kumar, Avneesh Kumar Gehlaut, Himanshu Gupta, Ankur Gaur, **Suantak Kamsonlian**, Devender Kumar (24 April 2021). Facile synthesis and application of aluminum oxide nanoparticle based biodegradable film, *Polymer Composites, Wiley*, DOI: 10.1002/pc.26102

23. Shabnam Dana, Jishnu Naskar, **Suantak Kamsonlian**, Amit Chattree (2021). Comparative study of ferromagnetic behaviour in bare and PMMA modified Manganese Ferrite (MnFe2O4) nanoparticles, International Nano Letters, Vol.12, pp. 79–89. https://doi.org/10.1007/s40089-021-00353-x

24. Saurabh Yadav, **Suantak Kamsonlian**, Shubham Pal (2022). Treatment of domestic wastewater by the application of electrochemical membrane bioreactor and generation of bioelectricity, Applied Chemistry for Engineering, Vol. 33(5), pp.1-6. https://doi.org/10.14478/ace.2022.1088

25. Saurabh Yadav, Suantak Kamsonlian (2022). A review of electrochemical methods for treatment of wastewater, Materials Today: Proceedings, Vol. 78, pp. 36–39. https://doi.org/10.1016/j.matpr.2022.11.036

26. Shabnam Dan, Amit Chattree, Jishnu Naskar, **Suantak Kamsonlian** (2022). Comparative study of ferromagnetic behaviour in bare and DDMAB-PMMA-PEG modified Manganese Ferrite (MnFe2O4) nanoparticles, Materials Today: Proceedings, Vol. 78, pp. 62–68. https://doi.org/10.1016/j.matpr.2022.11.036

27. Kirti, **Suantak Kamsonlian**, Vishnu Agarwal (2022). Review on Synthesis of Plant-Mediated Green Iron Nanoparticles and Their Application for Decolorization of Dyes, Materials Today: Proceedings, Vol. 78, pp. 99–107. https://doi.org/10.1016/j.matpr.2022.11.308

28. Saurabh Yadav, **Suantak Kamsonlian**, Deepak Gola, Shubham Pal (2023). Reduction of Contaminants from Municipal Wastewater of STP Salori Using Electrochemical Membrane Bioreactor and Bioelectricity Generation, Ecological Engineering and Environmental Technology, 24(1), pp. 264–271. https://doi.org/10.12912/27197050/154921

29. Saurabh Yadav, Suantak Kamsonlian (2023) Progress on the development of Techniques to remove contaminants from wastewater: A review, *Applied Science and Engineering Progress*, Vol. 16 (3), pp.1-14 (Special Issue). http://dx.doi.org/10.14416/j.asep.2023.02.001

30. Kirti, **Suantak Kamsonlian**, Vishnu Agarwal, Ankur Gaur, Jin-Won Park (May 2023). Fe-nanoparticles amalgamation using Lagenaria siceraria leaf aqueous extract with focus on dye removal and antibacterial efficacy, Korean Chemical Engineering Research, Vol. 61(2), pp. 287-295. doi: https://doi.org/10.9713/kcer.2023.61.2.287

31. Satish Kumar Singh, Sweety Verma, Himanshu Gupta, Avneesh Kumar Gehlaut, **Suantak Kamsonlian**, Surya Narain Lal, Ankur Gaur, Sanjeev Makin (2023). Facile synthesis of Bio-Composite films obtained from sugarcane bagasse and cardboard waste*, Korean Chem. Eng. Res.,* 61(4), 1-7. DOI: https://doi.org/10.9713/kcer.2023.61.4.1

32. Kirti, **Suantak Kamsonlian**, Vishnu Agarwal, Saurabh Yadav, Ankur Gaur (2024). Eco-friendly synthesis of superparamagnetic Fe_3O_4 nanoparticles from Hibiscus rosa-sinensis leaf extract and their application in RB4 dye removal, Letters in Applied NanoBioScience, Vol.13 (3), 1-20. DOI: https://doi.org/10.33263/LIANBS133.122

33. Sai Bharadwaj AVSL, Ilangovan A, Kameswari KSB, Patle DS, **Kamsonlian S** (2024). Ultrasound-assisted synthesis of biodiesel in the presence of a novel catalyst recovered from waste effluent/water: A mini-review, *Environmental Progress & Sustainable Energy (AIChE)* – Vol. 43 (3), pp. 1-12. DOI: 10.1002/ep.14450

34. Saurav Kandpal, Mohammad Anas, Saurabh Yadav, Sachin R. Geed, **Suantak Kamsonlian**, Ashish N. Sawarkara (2025). Machine Learning Models for Co-gasification of Petcoke with Biomass/Coal: A Comparative Analysis of Bagging, Boosting, and Neural Networks with Model Interpretation using SHapley Additive and Local Interpretable Model-Agnostic Explanations, *Journal of Environmental Chemical Engineering (Elsevier),* Vol.13 (5), 1-15. DOI: https: https://doi.org/10.1016/j.jece.2025.118206

35. Shabnam Dan, Amit Chattree, Jishnu Naskar, **Suantak Kamsonlian** (2026). Polymer Blend Functionalization of $MnFe_2O_4$ Nanoparticles: Magnetic, Structural and Photocatalytic Impacts, *Chinese Journal of Analytical Chemistry (Elsevier),* Vol.54 (2), 1-8. DOI: https://doi.org/10.1016/j.cjac.2025.100636

CONFERENCES

1. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Removal of Cd (II) and As (V) ions from liquid media by biosorption process using tea waste biomass.* The 7th SEAWE on October 28-30, 2009 at Bangkok. Thailand.

2. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Removal of As (III) from aqueous solution by Tea waste biomass: Characterization of biosorbent and optimum parameters study*. Young Researchers Conference on January 13-14, 2011 at ICT, Mumbai.

3. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Sorption parameters optimization and equilibrium studies: biosorption of As (III) from contaminated water onto low cost palm bark (PB) biomass.* The 6th Uttarakhand State Science and Technology Congress on 14-16 November, 2011 at Almora.

4. **Suantak Kamsonlian**, Chandrajit Balomajumder and Shri Chand. *Removal of As (III) from solid waste (fly ash) by kitchen garden (KG) waste: Studies on parameter optimization and isotherm model.* The Twenty Sixth International Conference on Solid Waste Technology and Management on March 27-30, 2011 at Philadelphia, USA.

5. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Adsorptive Removal of Arsenic from Water Using Kitchen Garden: Parameter Optimization.* Nanotech Conference and Expo 2012 on 18 -21 June Santa Clara, California, USA.

6. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Sorption of As(V) ion from Contaminated Water onto Activated Carbon Derived from Palm Bark (PB) biomass: Studies on Process Parameter Optimization and Isothermal Modeling*. The 2012 International Conference on Advances in Environmental Science and Technology (AEST-12) on 26 - 30 August 2012 at COEX in Seoul, Korea.

7. **Suantak Kamsonlian,** Chandrajit Balomajumder and Shri Chand. *Surface Characterization, parameter optimization and equilibrium studies: Biosorption of arsenic from contaminated water using orange peel biomass.* The International Conference on Environment 2012 (ICENV 2012), Penang, Malaysia, 11-13 December 2012.

8. Sushil Kumar, **Suantak Kamsonlian** and Neha Chomal. *Equilibrium Study on Reactive Extraction of Nicotinic Acid from Aqueous Solution*, 3rd International Conference on Chemical and Process Engineering (ICCPE 2014) held on June 9-11, 2014, Bangkok, Thailand.

9. Kajal Gautam, Sushil Kumar, **Suantak Kamsonlian**.*Investigations on Removal of Reactive Black B Dye from Aqueous Solution using Electro-coagulation*, 69th International Conference on CHEMCON 2016 held at Anna University, Chennai Regional Centre of IIChE, Tamil Nadu during 27th to 30th December 2016.

10. Sushil Kumar, Neha Chomal, Shitanshu Pandey, and **Suantak Kamsonlian**.*Investigation of green solvents (ionic liquids) for extraction of carboxylic acids from aqueous solution*, international conference ILSEPT- 2017 held on 8-11 January 2017 at Kuala Lumpur, Malaysia.

11. Shitanshu Pandey, Neha Choma, **Suantak Kamsonlian** and Sushil Kumar.*Theoretical and experimental studies on extraction of carboxylic acids from aqueous solution using ionic liquids*, International Conference on Chemistry and Chemical Engineering (ICCCE-2017) held on 14-17 July 2017 at Barcelona, Spain.

12. Kajal Gautam, Sushil Kumar, **Suantak Kamsonlian**. *RSM with BBD Approach for Optimization of Electrocoagulation Process to Remove Reactive Black 5 Dye from Wastewater: Isothermal and Kinetics Study with Economical Analysis*, TECHNOSCAPE 2018, An International Conference on Sustainable Water Resources: Innovations and Impacts, organised by the School of Chemical Engineering, Vellore Institute of Technology (VIT), Vellore (Tamil Nadu) during September 6-8, 2018.

13. Anubhav Sarmah, AayushiShanker, Ashutosh Pandey, Sameer Srivastava, **Suantak Kamsonlian.** *Harvesting of Algae from Wastewater Using Electrocoagulation Process*, 14thAnnual Session of Students Chemical Engineering Congress (SCHEMCON-2018) held at Institute of Chemical Technology (ITC), Mumbai during October 26-27, 2018.

14. Praveen Dubey, **Suantak Kamsonlian** and Ankur Gaur, *Ecotoxicological Impacts of Green Synthesized Iron Nanoparticles,* a two days TEQIP-III sponsored National Conference on "Industrial Application Of Nanoscience & Nanotechnology (IANN - 2019)" during November 15-16, 2019 organised by the Department of Chemical Engineeringand Department of Physics, MNNIT Allahabad.

15. Shashi Bala Gautam, Siraj Alam and **Suantak Kamsonlian**, *Sorption of As (III) ion onto the surface of raw and modified coconut husk in fixed bed column* for oral presentation at CHEM-CONFLUX20, an International Conference on Energy and Environmental Technologies For Sustainable Development organized by Department of Chemical Engineering, MNNIT, Allahabad during February 14-16, 2020

16. Kajal Gautam, Sushil Kumar, **Suantak Kamsonlian***, Optimization of Reactive Black B Decolourization by Electrocoagulation using RSM and ANN* for oral presentation at 'CHEM-CONFLUX20, an International Conference onEnergy and Environmental Technologies For Sustainable Development organized by Department of Chemical Engineering, MNNIT, Allahabad during February 14-16, 2020.

17. Shashi Bala Gautam, Siraj Alam and **Suantak Kamsonlian,** *Sorption of As(III) ion onto surface of raw and modified coconut husk in fixed bed column* for oral presentation at CHEM-CONFLUX20, an International Conference onEnergy and Environmental Technologies For Sustainable Development organized by Department of Chemical Engineering, MNNIT, Allahabad during February 14-16, 2020.

18. Kirti, **Suantak Kamsonlian** and Vishnu Agarwal. *Superparamagnetic Fe3O4 nanoparticles: green production by Hibiscus rosa-sinensis leaf aqueous extract and its characterization* for poster presentation at BioSangam-2022, an International Conference on Emerging Trends in Biotechnology organized by Department of Biotechnology, MNNIT Allahabad during March 10-12, 2022.

19. Saurabh Yadav and **Suantak Kamsonlian**. *A Review of Electrochemical Methods for Treatment of Wastewater,* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

20. Saurabh Yadav, **Suantak Kamsonlian** and Shubham Pal. *Treatment of Municipal Wastewater Using Electrochemical Membrane Bioreactor,* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

21. Kirti, **Suantak Kamsonlian** and Vishnu Agarwal. *Review on Synthesis of Plant-Mediated Green Iron Nanoparticles and their Application for Decolourisation of Dyes,* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

22. Kirti, **Suantak Kamsonlian** and Vishnu Agarwal. *Synthesis of Fe_3O_4 Nanoparticles from Hibiscus Rosa-Sinensis Leaf Aqueous Extract and Its Application in Dye Removal,* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

23. Shabnam Dan, Amit Chattree, Jishnu Naskar, **Suantak Kamsonlian**. *Comparative study of ferromagnetic behaviour in bare and DDMAB-PMMA-PEG modified Manganese Ferrite ($MnFe_2O_4$) nanoparticles* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

24. Kajal Gautam, **Suantak Kamsonlian,** Yatindra Kumar, Sushil Kumar. *Electrochemical Treatment of Wastewater containing Reactive Blue-4 (RB4) Dye by using Airlift Electrocoagulation and Optimization of Multivariate Parameters* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

25. Sajal Agarwal, Himanshu Gupta, Ankur Gaur, **Suantak Kamsonlian.** *Synthesis and Characterization of Carboxy-Methyl Cellulose Obtained from Different Bio Waste Material* for oral presentation at CHEM-CONFLUX22, an International Conference on Technological Interventions for Sustainability, jointly organised by Chemical Engineering Department, Motilal Nehru National Institute of Technology and School of Chemical Engineering, Universiti Sains Malaysia which was held at Motilal Nehru National Institute of Technology Allahabad, Prayagraj during April 14-16, 2022.

26. Kirti, **Suantak Kamsonlian** and Vishnu Agarwal. *Removal of MB and CV dyes from aqueous solutions by adsorption on iron oxide nanoparticles synthesized by Hibiscus Rosa-Sinensis leaf aqueous extract: Kinetics, equilibrium and thermodynamics*, CHEMCON 2022 and 75th Annual Session of Indian Institute of Chemical Engineers with a conference theme: Sustainability in Chemical Processes through Digitalization, Artificial Intelligence and Green Chemistry held at HBTU Kanpur during 27th to 30th December 2022.

27. Saurabh Yadav and **Suantak Kamsonlian**. *Removal of BOD, COD and TDS from municipal wastewater by application of electrochemical methods and generation of bioelectricity simultaneously*, CHEMCON 2022 and 75th Annual Session of Indian Institute of Chemical Engineers with a conference theme: Sustainability in Chemical Processes through Digitalization, Artificial Intelligence and Green Chemistry held at HBTU Kanpur during 27th to 30th December 2022.

28. Pankaj Kumar, **Suantak Kamsonlian** and Saurabh Yadav. *Application of an electrochemical membrane bioreactor to treat pharmaceuticals and personal care products from municipal wastewater for poster presentation at* International Conference on Advancements in Diagnostic Technologies (ADT-2024), organised by Department of Biotechnology, MNNIT Allahabad during November 15-17, 2024.

29. Saurav Kandpal, Mod. Anas, **Suantak Kamsonlian** and Ashish N. Sawarkar. Hydrogen-rich syngas production through co-gasification of biomass and petcoke in a horizontal tubular furnace and modelling the intricate process through machine learning, International Conference on Health and Agriculture Biotechnology: Interdisciplinary Trends (HABIT-2025) organised by Department of Biotechnology, MNNIT Allahabad during February 28 – March 02, 2025.

BOOK PUBLICATIONS

S. No.	Title	Editor's/ Author's Name	Publisher	Year of Publication
1.	Environmental Management in Hostel	Saurabh Yadav, Rohit Kumar Singh, **Suantak Kamsonlian**, Manoj Kumar Yadav, MS Karuna	1st Edition, P.K Publishers and Distributors, New Delhi *ISBN 978-93-92239-30-4*	2022
2.	Thermal Catalytic Cracking of Jatropha Oil	Saurabh Yadav, **Suantak Kamsonlian,** Neeru Anand, Dinesh Kumar	1st Edition, P.K Publishers and Distributors, New Delhi *ISBN 978-93-92239-48-9*	2022
3.	Treatment of Domestic Wastewater by Electrochemical Membrane Reactor	Shubham Pal, Anant Prakash Agarwal, **Suantak Kamsonlian,** Saurabh Yadav	1st Edition, P.K Publishers and Distributors, New Delhi *ISBN 978-93-92239-81-6*	2023
4.	Emerging Trends in Chemical and Biochemical Engineering - Volume - 1	Mr. Saurabh Yadav **Dr. Suantak Kamsonlian** Dr. Karthick S Ms. Niharika Dutt	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-456-2*	2023
5.	Emerging Trends in Chemical and Biochemical Engineering - Volume - 2	**Dr. Suantak Kamsonlian** Dr. Vishnu Agarwal Dr. Saurabh Yadav	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-457-9*	2023
6.	Application of Plant Based Nano-particles for Dye Removal from Contaminated Wastewater	Dr. Kirti **Dr. Suantak Kamsonlian** Dr. Vishnu Agarwal	1st Edition, P.K Publishers and Distributors, New Delhi *ISBN 978-81-19428-78-6*	2024

7.	Emerging Trends in Chemical and Biochemical Engineering-Volume - 3	**Dr. Suantak Kamsonlian** Dr. Arvind Kumar Gautam Dr. Sanjay Singh Mr. Ankit Kumar Dr. Saurabh Yadav	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-503-3*	2024
8.	Current Trends in Engineering and Technology - Volume - 1	**Dr. Suantak Kamsonlian** Dr. Arvind Kumar Gautam Ms. Niharika Dutt Dr. Saurabh Yadav	P.K Publishers and Distributors, New Delhi *ISBN 978-81-19428-37-3*	2024
9.	Current Trends in Engineering and Technology - Volume - 2	Dr. Saurabh Yadav Dr. M.S. Karuna Er. Thejus Jacob **Dr. Suantak Kamsonlian**	P.K Publishers and Distributors, New Delhi *ISBN 978-93-49060-14-2*	2025
10.	From Concept to Innovation: A Systematic Methodology for Engineering Research and Development	Dr. Saurabh Yadav **Dr. Suantak Kamsonlian** Dr. Arvind Kumar Gautam	1st Edition, IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-627-6*	2025

BOOK CHAPTER PUBLICATIONS

S. No.	Title	Author's Name	Chapter Contribute/ Book Name	Page No.	Publisher	Year of Publication
1.	Biosorption of Cd (II) and As (III) Ions from Aqueous Solution by Tea Waste Biomass	**Suantak Kamsonlian**, Chandrajit Balomajumder, Shri Chand and S. Suresh	Chapter 7, Vol. 3 Book: ***Current Perspectives of Environment and Climate Change***	83-91	Book Publisher (BP) International, UK *ISBN 978-93-89816-72-3*	2020
2.	Green synthesis of El-Fe nanoparticle from eucalyptus globulus leaf extract and their usage for methylene blue removal	Praveen Dubey, Satish Kumar Singh, Kirti, Saurabh Yadav, **Suantak Kamsonlian**, Ankur Gaur	Chapter 4, Vol. 1 Book: ***Industrial Application of Nanoscience and Nanotechnology***	19-30	Excel India Publishers, New Delhi *ISBN 9789389947267*	2020
3.	Recent trends in the application of nanoparticles in biopolymer films: A review	Himanshu Gupta, Sadhana Sachan, **Suantak Kamsonlian**, Devender Singh, Ankur Gaur	Chapter 7, Vol. 1 Book: ***Industrial Application of Nanoscience and Nanotechnology***	63-74	Excel India Publishers, New Delhi *ISBN 9789389947267*	2020
4.	Nanoparticle: Synthesis, Characterization and Applications	Shabnam Dan, Amit Chattree, Ankur Gaur, **Suantak Kamsonlian**	Chapter 12, Vol. 1 Book: ***Industrial Application of Nanoscience and Nanotechnology***	136-146	Excel India Publishers, New Delhi *ISBN 9789389947267*	2020

5.	In-situ polymerization for preparation of graphene-based polymer nanocomposites	Saurabh Yadav, Basudha Maurya, Kirti, Vishnu Agarwal, **Suantak Kamsonlian**	Chapter 14, Vol. 1 Book: ***Industrial Application of Nanoscience and Nanotechnology***	147-162	Excel India Publishers, New Delhi *ISBN 9789389947267*	2020
6.	Treatment Of Contaminated Water: Membrane Separation and Biological Processes	**Suantak Kamsonlian**, Saurabh Yadav, Kailas S Wasewar, Ankur Gaur and Sushil Kumar	Chapter 22, Vol. 1 Book: ***Contamination of Water Health Risk Assessment and Treatment Strategies***	339-350	Academic Press, Elsevier Publications, Netherlands *ISBN 9780128240588*	2021
7.	Catalytic Cracking of Jatropha Curcasa Non-Edible Oil to Hydrocarbons of Gasoline Fraction: Optimization Studies through Box-Behenken Method	Saurabh Yadav, Neeru Anand, Dinesh Kumar, **Suantak Kamsonlian**	Chapter 7 Book: ***Utilization of Waste Biomass in Energy, Environment and Catalysis***	143-160	Taylor & Francis (CRC) Publications, Florida, USA *ISBN 9781003196358*	2022
8.	Microbial Fuel Cell Modeling: A Comprehensive Approach for Sustainable Energy	Vivek Maurya, Saurabh Yadav, Karthick Senthilkumar, **Suantak Kamsonlian**	Chapter 1, Vol. 1 Book: ***Emerging Trends in Chemical and Biochemical Engineering***	1-10	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-456-2*	2023
9.	Production of Bio fuels: an Overview on Biodiesel Production from Waste Cooking Oil	Arvind K. Gautam, Nandlal Pingua, Avinash Chandra, **Suantak Kamsonlian**	Chapter 6, Vol. 1 Book: ***Emerging Trends in Chemical and Biochemical Engineering***	62-75	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-456-2*	2023
10.	Environmental Protection by Nanomaterial Based Electrochemical Biosensor for Detecting Chemical and Biochemical Agents	Shailendra Kumar Pandey, Sadhana Sachan**, Suantak Kamsonlian**	Chapter 5, Vol. 2 Book: ***Emerging Trends in Chemical and Biochemical Engineering***	54-74	IIP (Iterative International Publishers) Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-457-9*	2023
11.	Electrochemical Approaches in Treatment of Waste Water	Pankaj Kumar, Saurabh Yadav, Hansnath Tiwari, Arvind Kumar Gautam, **Suantak Kamsonlian**	Chapter 1, Vol. 3 Book:	1-20	IIP (Iterative International Publishers)	2024

			Emerging Trends in Chemical and Biochemical Engineering		Selfypage Developers Pvt. Ltd., Paisley Circle, Novi, Michigan, USA. *ISBN 978-1-68576-503-3*	
12.	Innovative Water Splitting Methods for Sustainable Green Hydrogen	Pankaj Kumar, Saurabh Yadav, Girish Singh, **Suantak Kamsonlian** Arvind Kumar Gautam	Chapter 4, Vol. 1 Book: ***Current Trends in Engineering and Technology***	50-66	P.K Publishers and Distributors, New Delhi *ISBN 978-81-19428-37-3*	2024