Curriculum Vitae

Personal Profile

Sanjay Kumar Singh
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Areas of Interest

Process Development, Optimization, Interfacial Science, Development and Application of Green Surfactants and Refining of Edible Oils

Academic Qualifications

Examination	Year	Institute	Board / Univ.	Percentage/ CGPA
M. Tech (Chemical Engg.)	2017	IIT, Bombay	IIT, Bombay	9.64/10
B. Tech Chemical Technology (Oil Technology)	2015	HBTI, Kanpur	Dr. A.P.J. Abdul Kalam Technical University, Lucknow	83.20

1. Secured 10/10 CGPA in project as well as third and fourth semesters of M.Tech.
2. Secured **first position** in the department of "Oil and Paint Technology" in B. Tech.

Work Experience

1. Working as **Assistant Professor,** Oil Technology in the Department of Oil Technology,H.B.T.U., Kanpur from October 12, 2023 to till date.
2. Worked as **Junior Technical Officer (Gazetted)** at Directorate of Sugar & Vegetable Oils, Department of Food and Public distribution, Ministry of Consumer Affairs, Government of India, New Delhi from 12th July 2022 to 11th October 2023.
3. Worked as **Deputy General Manager (Operations)** at M/s B.L. Agro Industries Ltd., Bareilly, UP from 1st April 2019 to 29th June 2019.
4. Worked as **Manager Technical** at M/s B.L. Agro Industries Ltd., Bareilly, UP from 5th July 2017 to 31st March 2019.

Awards and Fellowship

1. Recipient of **first prize** in poster presentation on "Study on Frying Stability of the Blends of Soybean and Palmolein Oils" in international conference organized by OTAI-FSSAI in 2017 as RLRC, Pvt. Ltd. team member presented the poster.
2. Awarded **"Tata Center for Technology and Design (TCTD) Fellowship"** with another 16 students in theentire institute in M. Tech program at IIT Bombay.
3. Awarded "**Silver Medal"** at HBTI Kanpur.
4. Awarded "**Dr. K. T. Achaya Memorial Medal"** by Oil Technologists' Association of India, in 2015.
5. Recipient of "**Dinesh Shahra Merit Award"** with cash prizes in 1st, 2nd and 3rd year of B. Tech.
6. Received "Akikrit Scholarship" for two years from 2004-2006.

Member(s) and Editor(s)

1. Member of **Industry Consultancy Committee, AKTU, Lucknow** for designing of syllabus of Chemical Engineering and Food Technology from 2017 to till date.
2. Worked as Assistant Editor, Journal of lipid Science and Technology during 2017-2019.

Research Papers and Book Chapter

1. **Research Paper 1:** Patel, S., Singh, S. K., & Singh, R. P. (2015). Microwave heating stability of multi oil blends of rice bran oil and linseed oil with other oils. *Journal of Lipid Science & Technology (JLST)*, vol. 47, page no. 18-22.

2. **Research Paper 2: Prachi Srivastava**, Surabhi Gupta, Sanjay Kumar Singh and R. P. Singh (2017). Study on Frying Stability of the Blends of Soybean and Palmolein Oils. *Journal of Lipid Science & Technology (JLST)*, vol. 49 No. 3, page no. 73-80.

3. **Book Chapter**: Proceedings of UGC Sponsored Refresher Course on FOOD SAFETY AND PUBLIC HEALTH, Chapter: 22. Innovative Practices in Vegetable Oil Processing, Publisher: Arvind Prakashan, 15/131, Shoro Katra, Sahaganj, Agra, Editors: Dr. Neelam Yadav, pp. 121-140.

International Research Experience

Visited Massachusetts Institute of Technology, Cambridge, USA under the MIT-IITB research programs and methods, to understand their research techniques and approach of research there ***and also*** presented a talk on “Pyrolysis of Plastic for Fuel Production” .

Projects Completed/ Undertaken

M. Tech Thesis | Prof. Yogendra Shastri & Prof. Srinivas Seethamraju *[May’2016-June'2017]*

Topic: Conversion of plastic into fuel oil through pyrolysis | Recycling & Waste Management

Brief: *Development of an indigenous process to convert mixed plastic (predominantly PE, PP and PS) waste into fuel oil through pyrolysis by using suitable catalysts with the aim of improving the accessibility of this technology.*

Some other Important Projects during *M. Tech*

1. Developed a prototype of an ecofriendly electrically driven bicycle, which can run

at a speed of 20-25km/hr costing approximately Rs.18000-20000

2. Calculated the optimum number of heat exchanger in HEN using minimum utility target and Pinch Technology method with MILP formulation in GAMS.
3. Simulated a Cyclohexane Plant using Aspen Plus simulator for production cyclohexane from dehydrogenation of cyclohexane plant.
4. Optimized drying conditions by solving a set of non-linear ODEs using finite element method and MATLAB programming.

B. Tech Projects

1. **Up-gradation of Rice Bran Wax (RBW) |** By-product Utilization | Prof. R. K. Trivedi *[Jan'15-May'15]*
2. **Production of Alternative Fuels |** Energy | Prof. P. K. S. Yadav

Industrial Trainings

1. Worked as Intern at M/s Marico Ltd., Jalgoan, Maharashtra from June 2014 to July 2014.
2. Worked as Intern at M/ Farelabs Pvt. Ltd., Gurgram, Haryana from June 2013 to July 2013.

Seminar / Conferences / Training programmes/Software skills

1. Attended two training of ISO 17025:2005 and ISO 17025:2017 I 2017 and 2018, respectively.
2. Software Skills- Aspen Plus, HYSYS, MATLAB, GAMS, AutoCAD P & ID, Edraw and COMSOL.
3. Participated in "2nd International Workshop on Micronutrient and Child Health (MCHWS-2014)" organized by by AIIMS in New Delhi to update the participants about advancement in Micronutrients and Child Health on 3rd November, 2014.
4. Participate in "National workshop on Advances in Soaps & Detergents" at HBTI-Kanpur from 27 – 28 March, 2014.
5. Participated in "National Workshop on Advances in Vegetable Oil Processing"

at HBTI-Kanpur during September 28-29, 2013.

6. Delivered power point presentations on "Bleaching Process in vegetable Oil Processing", and "Role of Pumpsin Vegetable Oils processing" at HBTI, Kanpur.

Hands on Analytical Equipment

Refractometer, Gas Chromatography, UV-Spectrophotometer, Gas Chromatography-Mass Spectrophotometry (GC-MS), Karl Fisher, Rancimat for oxidative stability, HPLC, Inductively coupled plasma mass spectrometry (ICP-MS), etc.

Social Work

Attended 11-day camp organized by **NIRMAAN (NGO)** Gadchiroli, Maharashtra to understand the people's life and income status in naxalite affected areas and performed a **field survey** to study the feasibility of a small scale pyrolysis plant to provide some forms of fuel for their household application.