

Resume

DHARMINDER SINGH

Ph.D. in Chemical Engineering

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<https://scholar.google.com/citations?user=wBk9zUEAAAAAJ&hl=en>

SUMMARY ABOUT PROFILE

https://www.researchgate.net/profile/Dharminder_Singh2

I have doctorate in Chemical Engineering from Shiv Nadar University, India, entitled “Air and Steam Gasification of Food Waste”. My field of research has related to waste material to value added chemicals, Waste to Energy, Renewable Energy, Biofuels, Bioenergy. Expert in developing new materials by thermo-chemical processes: Torrefaction, Pyrolysis and Gasification, in Packed/Fixed bed gasifier and Bubbling Fluidization bed gasifier. Expert in material characterization with different standard methods (ASTM, TAPPI, NERAL (LAP) and in handling different instruments: X-ray diffraction (XRD), Thermogravimetric Analysis (TGA) and DTGA, Fourier transform infrared spectroscopy (FTIR), Ultraviolet-Visible (UV-Vis or UV/Vis) spectrophotometry, Gas chromatography (GC).

EDUCATION

Aug. 2016 – May 2021	8.63 (CGPA)	Ph.D. in Chemical Engineering from Shiv Nadar University, Greater Noida, India.
Aug. 2011 – Oct. 2014	63.45 %	M. Tech in Energy Engineering from Guru Nanak Dev Engineering Collage, Ludhiana (Punjab Technical University), India.
Aug. 2007 – May 2010	72.78 %	B. Tech in Electronic & Communication Engineering from GGS College of Modern Technology, Kharar, (Punjab Technical University), India.
Aug. 2003 – Sept. 2006	54.9 %	Polytechnic Diploma in Electronic & Communication Engineering from Adesh Polytechnic College, Muktsar, Punjab (PSBTE&IT), India.

PROJECT EXPERIENCE

Jan. 2014 – July 2014 Project titled “Evaluation of fluidized bed gasifier using different biogenic waste” in Thermo-Chemical Conversion Division at Sardar Patel Renewable Energy Research Institute, Gujrat, India.

SKILLS & CERTIFICATES

March – 2021	“GC–MS Analysis of Complex Samples” certification from JEOL C&EN.
Sept. – 2020	“High Resolution GC–MS” certification from JEOL C&EN
July – 2020	“Excel Skills for Business: Intermediate” certification from COURSERA (Macquarie University, Australia)
July – 2020	“Excel Skills for Business: Essentials” certification from COURSERA (Macquarie University, Australia)
March – 2020	“Waste to Energy Conversion” certification from NPTEL online certification (IIT, Roorkee) (MHRD, Govt. of India)

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EMPLOYMENT EXPERIENCE

- Dec. 2014 – July 2016 Senior Executive in Business Development Department at Serendipity Infolabs Pvt. Ltd., Chandigarh, India.
- Nov. 2011 – March 2012 Assistant Professor in Department of Computer Science at Mata Gujri College, Fatehgarh Sahib, Punjab, India.
- Aug. 2010 – Sep. 2011 RF Engineer in Planning and Designing Department at Toshniwal Enterprises Controls Pvt. Ltd., Chennai, India.
- May 2006 – April 2007 Installation Engineer in BTS Commissioning Department at Trilok Communication & Networking, Chandigarh, India.

PUBLICATIONS

- [1] **Dharminder Singh**, Aayush Raizada, Sanjeev Yadav. “*Syngas production from fast pyrolysis and steam gasification of mixed food waste*” Waste Management & Research (2022). (IF: 3.549) <https://doi.org/10.1177%2F0734242X221093948>
- [2] Sanjeev Yadav, **Dharminder Singh**, Pravakar Mohanty, Sarangi P. K. “*Biochemical and Thermochemical Routes of H₂ Production from Food Waste: A Comparative Review*” Chemical Engineering & Technology, 2020. (IF: 1.728) <https://doi.org/10.1002/ceat.202000526>
- [3] **Dharminder Singh**, Yadav S. “*Steam gasification with torrefaction as pretreatment to enhance syngas production from kitchen food waste.*” Journal of Environmental Chemical Engineering 2020. (IF: 5.909) <https://doi.org/10.1016/j.jece.2020.104722>
- [4] **Dharminder Singh**, Sanjeev Yadav, Nitish Bharadwaj, Rishabh Verma, “*Low Temperature Steam Gasification to Produce Hydrogen Rich Gas from Kitchen Food Waste: Influence of Steam Flow Rate and Temperature*”, International Journal of Hydrogen Energy (2020), (IF: 5.816) <https://doi.org/10.1016/j.ijhydene.2020.05.168>
- [5] **Dharminder Singh**, and Sanjeev Yadav. “*Evaluation of the physico-chemical development of kitchen food waste through torrefaction - a biodiversity case study.*” Biomass Conv. Bioref. (2019): (1-10). (IF: 4.987) <https://doi.org/10.1007/s13399-019-00526-x>
- [6] **Dharminder Singh**, Sanjeev Yadav, V. M. Rajesh, and Pravakar Mohanty. “*Groundnut shell gasification performance in a fluidized bed gasifier with bubbling air as gasification medium.*” Environmental technology (2018): 1-13. (IF: 3.247) <https://doi.org/10.1080/09593330.2018.1476592>
- [7] Makwana, J. P., Asim Kumar Joshi, Gaurav Athawale, **Dharminder Singh** and Pravakar Mohanty. “*Air gasification of rice husk in bubbling fluidized bed reactor with bed heating by conventional charcoal.*” Bioresource technology 178 (2015): 45-52. (IF: 9.642)
DOI: [10.1016/j.biortech.2014.09.111](https://doi.org/10.1016/j.biortech.2014.09.111)

Books:

- [1] Prem Singh and **Dharminder Singh**, “*Review on Biomass*” LAP LAMBERT Academic Publishing, 2020. ISBN: [9783330025936](https://doi.org/10.1080/09593330.2018.1476592)

In Proceedings:

- [1] **Dharminder Singh**, Sanjeev Yadav, Pravakar Mohanty. “*Study of temperature profile in an air bubbling fluidized bed gasifier for rice husk gasification with conventional charcoal as heating medium*”. Proceeding reports of APCEC 2017 Jais, 101-108.

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International Conferences:

- [1] **Dharminder Singh**, Sanjeev Yadav, "*Processing of food waste using thermochemical methods of pyrolysis and gasification for production of syngas,*" World Environment Summit 2021, Environment and Social Development Association (ESDA), Delhi.
- [2] **Dharminder Singh**, Sanjeev Yadav, "*Steam gasification with torrefaction as pretreatment to enhance syngas production from kitchen food waste,*" Renewable Energy 2020, London, U.K. (Longdom virtual conference 2020).
- [3] **Dharminder Singh**, Sanjeev Yadav, "*Low Temperature Steam Gasification of Kitchen Food Waste in A Fixed Bed Reactor*", International Conference on Energy and Environmental Technologies for Sustainable Development, CHEM-CONFLUX20.
- [4] **Dharminder Singh**, Avikar Saberwal, Sanjeev Yadav, "*Development of Activated Carbon from Raw, Torrefied and Pyrolyzed Kitchen Food waste and its Utilization in Wastewater Treatment*", Advances In Chemical Engineering For Industrial Applications, 72nd Annual Session of Indian Institute of Chemical Engineers, CHEMCON-2019.
- [5] Sanjeev Yadav, Avikar Saberwal, Shanjana Ashok Kumar, **Dharminder Singh**, Pravakar Mohanty, "*Evaluation of the physiochemical development of house hold wastes through torrefaction – a biodiversity case study*", 13th International Oil & Gas Conference & Exhibition, New Delhi-NCR, India, PETROTECH-2019.
- [6] **Dharminder Singh**, Avikar Saberwal, Shanjana Ashok Kumar, Sanjeev Yadav, "Change in physio-chemical properties of food waste during torrefaction in a fixed bed reactor," Journal of Basic and Applied Engineering Research (5), issue 4, 2018, pp 341, TECHNOVA-2018.
- [7] **Dharminder Singh**, Sanjeev Yadav, Pravakar Mohanty, "*Gasification of groundnut shell in an air bubbling fluidized bed gasifier,*" International conference on sustainable development for energy and environment, ICSDEE-2017.
- [8] **Dharminder Singh**, Sanjeev Yadav, Pravakar Mohanty, "*Study of temperature profile in an air bubbling fluidized bed gasifier for rice husk gasification with conventional charcoal as heating medium*", International Conference on Advances in Petroleum, Chemical and Energy Challenges, APCEC-2017.
- [9] **Dharminder Singh**, "*Role of women in non-renewable energy conversion special reference to enhance solar energy*", in national seminar at Mata Gujri College, Fatehgarh Sahib, 2012.

Workshops:

- [1] "XRD Theory, Applications and Data Analysis", organized by Malvern Panalytical & Kumaraguru College of Engineering, India, 2020.

Awards:

- [1] Research Fellowship and Teaching Assistant award from Shiv Nadar University, India, Aug. 2016 – July 2020.
- [2] Teaching Assistant award from Shiv Nadar University, India, July 2020 – Dec. 2020.

All information mention above is absolutely correct as per my knowledge.

Dharminder Singh