- **Publications**

SCI Journal Papers:

1. Ajay Pratap Singh, **Sumit Tiwari**, Harender Sinhmar. Modelling and analysis of photovoltaic-thermal-thermoelectric-cooler air collector integrated mixed-mode greenhouse dryer with heat storage material. Journal of Energy Storage, Volume 95, 2024, 112369, https://doi.org/10.1016/j.est.2024.112369. **(SCI/SCIE, Impact Factor = 8.9)**
2. Manigandan Sidhareddy, **Sumit Tiwari**. Performance investigation on dual bed adsorption chiller integrated with a partially covered N-PVT collector. Applied Thermal Engineering, 248, Part A; 2024; 123187. https://doi.org/10.1016/j.applthermaleng.2024.123187. **(SCI/SCIE, Impact Factor = 6.1)**
3. Vivek Singh, Rakesh Kumar, Abhishek Saxena, Ritvik Dobriyal, **Sumit Tiwari**, Desh Bandhu Singh. An analytical study on the effect of different photovoltaic technologies on enviro-economic parameter and energy metrics of active solar desalting unit. Energy Volume 294, 2024, 130851. https://doi.org/10.1016/j.energy.2024.130851. **(SCI/SCIE, Impact Factor = 9)**
4. Manigandan Sidhareddy, **Sumit Tiwari**. Experimental investigation for enhancement of heat and mass transfer during regeneration of zeolite 13X-water pair. International Journal of Refrigeration, 159, 2024, 297-308, ISSN 0140-7007. https://doi.org/10.1016/j.ijrefrig.2023.12.041. **(SCI/SCIE, Impact Factor = 3.5)**
5. Arshad Ali, Deepak Chhabra, Meena Kumari, Manisha, Pinkey, **Sumit Tiwari**, Ravinder Kumar Sahdev. Optimization and characterization of hybrid bio-briquettes produced from the mixture of sawdust, sugarcane bagasse, and paddy straw. Environmental Science and Pollution Research 2024; 31:15467–15490. https://doi.org/10.1007/s11356-024-32171-x. **(SCI/SCIE, Impact Factor = 5.8)**
6. Arshad Ali, Meena Kumari, Manisha, **Sumit Tiwari**, Mahesh Kumar, Deepak Chhabra, Ravinder Kumar Sahdev. Insight into the Biomass-Based Briquette Generation from Agro-Residues: Challenges, Perspectives, and Innovations. Bioenerg. Res. 17, 816–856, (2024). (2024). https://doi.org/10.1007/s12155-023-10712-5. **(SCI/SCIE, Impact Factor = 3.1)**
7. Manigandan Sidhareddy, **Sumit Tiwari**, Evangelos Bellos, Investigation on regeneration of zeolite 13X-water adsorbent bed under vacuum condition: A computational approach, Thermal Science and Engineering Progress, 46, 2023, 102243. ISSN 2451-9049, https://doi.org/10.1016/j.tsep.2023.102243. **(SCI/SCIE, Impact Factor = 5.1)**
8. Singh AP, **Tiwari S**, Pal G. Effect of PCM and nano-embedded PCM on the solar pond performance as sensible heat storage: An experimental approach. Energy Storage.2024;6(1):e561. doi:10.1002/est2.561. **(SCI/SCIE, Impact Factor = 2.9)**
9. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**, Suresh Kumar, Performance analysis and environmental feasibility of bifacial photovoltaic thermal dryer with heat

storage, Energy Conversion and Management, Volume 288, 2023, 117150, ISSN 0196-8904, https://doi.org/10.1016/j.enconman.2023.117150. **(SCI/SCIE, Impact Factor: 9.9)**

10. Manisha, **Tiwari, S.**, Chhabra, D. *et al.* Recent developments on photovoltaic thermal drying systems: a clean energy production. *Clean Techn Environ Policy* (2023). https://doi.org/10.1007/s10098-023-02514-2. (**SCI/SCIE, Impact Factor: 4.2)**
11. Ravin Sehrawat, Ravinder Kumar Sahdev, Deepak Chhabra, **Sumit Tiwari**, Rohit Khargotra, Tej Singh, Manisha, Environmental and economic management study of phase change material integrated bifacial photovoltaic thermal-greenhouse drying system: A thermal approach, Energy Conversion and Management, Volume 286, 2023,117065, ISSN 0196-8904, https://doi.org/10.1016/j.enconman.2023.117065. **(SCI/SCIE, Impact Factor: 9.9)**
12. Ravin Sehrawat, Ravinder Kumar Sahdev, Deepak Chhabra, **Sumit Tiwari**, Experimentation and optimization of phase change material integrated passive bifacial photovoltaic thermal greenhouse dryer, Solar Energy, Volume 257, 2023, Pages 45-57, ISSN 0038-092X, https://doi.org/10.1016/j.solener.2023.04.024. **(SCI/SCIE, Impact Factor: 6.7)**
13. **Sumit Tiwari**, Muthukarupan Swaminathan, Santhosh Eashwar S, Harender & Desh Bandhu Singh. Performance enhancement of the photovoltaic system with different cooling methods. Environ Sci Pollut Res 29, 45107–45130 (2022). https://doi.org/10.1007/s11356-022-20330-x. **(SCI/SCIE, Impact Factor = 5.8)**
14. Tunuguntla Arun Sri Sai Krishna, Kesari Ritwin, **Sumit Tiwari**. Performance analysis based on energy and exergy output of double slope passive and active solar still. Environ Prog Sustainable Energy. 2023;42:e13949. https://doi.org/10.1002/ep.13949. **(SCI/SCIE, Impact Factor = 2.824)**
15. Manigandan Sidhareddy, **Sumit Tiwari**, Patrick Phelan, Evangelos Bellos. Comprehensive review on adsorption cooling systems and its regeneration methods using solar, ultrasound, and microwave energy. International Journal of Refrigeration, 2022, ISSN 0140-7007. https://doi.org/10.1016/j.ijrefrig.2022.10.025. **(SCI/SCIE, Impact Factor = 3.5)**
16. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**. Heat storage material: a hope in solar thermal. Environ Sci Pollut Res (2022). https://doi.org/10.1007/s11356-022-24552-x. **(SCI/SCIE, Impact Factor = 5.190)**
17. Danduprolu Purnachandrakumar, Gaurav Mittal, Ram K. Sharma, Desh Bandhu Singh, **Sumit Tiwari** & Harender Sinhmar. Review on **performance assessment of solar stills** using computational fluid dynamics (CFD). Environ Sci Pollut Res (2022). https://doi.org/10.1007/s11356-022-18952-2 **(SCI/SCIE, Impact Factor = 5.8)**
18. **Sumit Tiwari**, Ravinder Kumar Sahdev, Mahesh Kumar, Deepak Chhabra, Prabhakar Tiwari, G.N. Tiwari. Manuscript ID entitled "Environmental and economic sustainability of PVT drying system: A heat transfer approach". Environmental

Progress & Sustainable Energy, 2021, Wiley (American Institute of Chemical Engineers). **(SCI/SCIE, Impact Factor = 2.8)**

19. Prashant Mishra, Mukesh Pandey, Yutaka Tamaura, **Sumit Tiwari**. Numerical analysis of cavity receiver with parallel tubes for cross-linear concentrated solar system. Energy, Volume 220, 2021, 119609, ISSN 0360-5442, https://doi.org/10.1016/j.energy.2020.119609. **(SCI/SCIE, Impact Factor = 9)**

20. Mahesh Kumar, Ravinder Kumar Sahdev, **Sumit Tiwari**, Himanshu Manchanda, Deepak Chhabra, Hitesh Panchal, Kishor Kumar Sadasivuni. Thermal performance and kinetic analysis of vermicelli drying inside a greenhouse for sustainable development. Sustainable Energy Technologies and Assessments, Volume 44, April 2021, 101082. **(SCIE, Impact Factor = 5.353)**

21. Mahesh Kumar, Ravinder Kumar Sahdev, **Sumit Tiwari,** Himanshu Manchanda, Anil Kumar. Enviro-economical feasibility of groundnut drying under greenhouse and indoor forced convection hot air dryers, Journal of Stored Products Research, Volume 93, 2021, 101848, ISSN 0022-474X. **(Impact Factor = 2.7)**

22. **Sumit Tiwari**. ANN and mathematical modelling for moisture evaporation with thermal modelling of bitter gourd flakes drying in SPVT solar dryer. Heat and Mass Transfer (2020). https://doi.org/10.1007/s00231-020-02886-x. **(SCI/SCIE, Impact factor: 1.7)**

23. Hooman Daghooghi-Mobarakeh, Nicolas Campbell, Weston K. Bertrand, Praveen G. Kumar, Sumit Tiwari, Liping Wang, Robert Wang, Mark Miner, Patrick E. Phelan. Ultrasound-assisted regeneration of zeolite/water adsorption pair. Ultrasonics - Sonochemistry 64 (2020) 105042. **(SCI/SCE, Impact Factor: 8.7).** https://doi.org/10.1016/j.ultsonch.2020.105042

24. Sumit Tiwari, Sanjay Agrawal, GN Tiwari. PVT air collector integrated greenhouse dryers. Renewable and Sustainable Energy Reviews (Elsevier), Volume-90, Page-142–159, 2018. **IF-16.3 (SCI)**, https://doi.org/10.1016/j.rser.2018.03.043

25. Sumit Tiwari, GN Tiwari. Energy and exergy analysis of a mixed-mode greenhouse-type solar dryer, integrated with partially covered N-PVT air collector. Energy (Elsevier), Volume-128, Page-183-195, 2017. **IF-9 (SCI)** https://doi.org/10.1016/j.energy.2017.04.022

26. **Sumit Tiwari**, GN Tiwari. Exergoeconomic analysis of photovoltaic-thermal (PVT) mixed mode greenhouse solar dryer. Energy (Elsevier), Volume-114, Page-155-164, 2016. **IF-9 (SCI)**, https://doi.org/10.1016/j.energy.2016.07.132

27. **Sumit Tiwari**, GN Tiwari, IM Al-Helal. Development and recent trends in greenhouse dryer: A review. Renewable and Sustainable Energy Reviews (Elsevier), Volume-65, Page-1048–1064, 2016. **IF-16.3 (SCI)**, https://doi.org/10.1016/j.rser.2016.07.070

28. **Sumit Tiwari,** GN Tiwari. Performance analysis of photovoltaic–thermal (PVT) mixed mode greenhouse solar dryer. Solar Energy (Elsevier), Volume-133, Page-421–428, 2016. **IF-6 (SCI)**, https://doi.org/10.1016/j.solener.2016.04.033

29. **Sumit Tiwari**, GN Tiwari. Thermal analysis of photovoltaic-thermal (PVT) single slope roof integrated greenhouse solar dryer. Solar Energy (Elsevier), Volume-138, Page-128–136, 2016. **IF-6 (SCI),** https://doi.org/10.1016/j.solener.2016.09.014
30. **Sumit Tiwari**, Jasleen Bhatti, GN Tiwari. Thermal modelling of photovoltaic thermal (PVT) integrated greenhouse system for biogas heating. Solar Energy (Elsevier), Volume-136, Page-639–649, 2016. **IF-6 (SCI),** https://doi.org/10.1016/j.solener.2016.07.048
31. Vineet Saini, **Sumit Tiwari**, GN Tiwari. Environ economic analysis of various types of photovoltaic technologies integrated with greenhouse solar drying system. Journal of Cleaner Production (Elsevier), Volume-156, Page-30-40, 2017. **IF-9.7 (SCI)**, https://doi.org/10.1016/j.jclepro.2017.04.044
32. **Sumit Tiwari**, GN Tiwari. Thermal analysis of photovoltaic thermal integrated greenhouse system (PVTIGS) for heating of slurry in potable biogas plant: An experimental study. Solar Energy (Elsevier), Volume 155 Page-203-211, 2017. **IF-6 (SCI)**, https://doi.org/10.1016/j.solener.2017.06.021
33. Sumit Tiwari, GN Tiwari. Grapes (Vitis vinifera) drying by semitransparent photovoltaic module (SPVM) integrated solar dryer: an experimental study. Heat and Mass Transfer (Springer). Volume-54(6), Page- 1637-1651, 2018. **IF-1.7 (SCI)**, https://doi.org/10.1007/s00231-017-2257-3

Conferences

1. Tunuguntla Arun Sri Sai Krishna, **Sumit Tiwari**, Rakhi Sharma, Desh Bandhu Singh. Performance analysis of double slope passive and active solar still for Indian climatic condition. TUBA World Conference on Energy Science and Technology (TUBA WCEST-2021), Turkey. (ISBN:978- 605-2249-75-8; DOI: 10.53478/TUBA.2021.017)
2. Manigandan Sidhareddy, **Sumit Tiwari**. Mathematical modelling of adsorption isotherms for porous bed with axial dispersion model. TUBA World Conference on Energy Science and Technology (TUBA WCEST-2021), Turkey. (ISBN:978- 605-2249-75-8; DOI: 10.53478/TUBA.2021.017)
3. Raj Vardhan Patel, Ram K Sharma, **Sumit Tiwari**, Anuj Raturi, Desh Bandhu Singh, Navneet Kumar. A sensitivity study of N alike partly enclosed with photovoltaic thermal compound parabolic concentrators having series connection. TUBA World Conference on Energy Science and Technology (TUBA WCEST-2021), Turkey. (ISBN:978- 605-2249-75-8; DOI: 10.53478/TUBA.2021.017)
4. Monesh S, Ashwin Shankar, S Ezhilarasan**, Sumit Tiwari**. Performance evaluation of solar dryer with and without Solar Photovoltaic Heat Extraction (PVHE) duct. TUBA World Conference on Energy Science and Technology (TUBA WCEST-2021), Turkey. (ISBN:978- 605-2249-75-8; DOI: 10.53478/TUBA.2021.017)
5. Pramod Akula, **Sumit Tiwari**, Rajat Saxena. Performance Evaluation of Phase Change Material filled Bricks. In 1st National Conference on “New Frontiers in Energy and

Environmental Sustainability (NFEES-2021)" organized by Department of Chemical Engineering, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India during 27th and 28th February 2021. (By UG student)

6. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**, Mahesh Kumar. Innovations on photovoltaic technology and greenhouse dryer. In 1st National Conference on "New Frontiers in Energy and Environmental Sustainability (NFEES-2021)" organized by Department of Chemical Engineering, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India during 27th and 28th February 2021.

7. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**. Performance analysis PCM integrated greenhouse dryer. 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021) organized by CAPIER, DTU, during June 18-19, 2021.

8. K.S.Muthukarupan, Santhosh Eashwar S, Vr. Subramanian, **Sumit Tiwari**, DB Singh. Performance improvement of PVT module with applications of nano-fluids and phase change materials: A review. International Conference on Electrical and Electronics Engineering (ICE3-2020) at MMMUT, Gorakhpur during 14-15, 2020.

9. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**, Mahesh Kumar, Dinesh Yadav. Innovations on photovoltaic technology and greenhouse dryer. "Solaris 2020- National Conference on Sustainable Environment and Climate" held in Shri Ram Swaroop Memorial University, Barabanki, Uttar Pradesh, India" from 07-09, 2020.

10. **Sumit Tiwari**, Prabhakar Tiwari, Ravinder Kumar Sahdev, V.K. Dwivedi. Environmental Feasibility of PVT Drying System. International Conference on Electrical and Electronics Engineering (ICE3-2020) at MMMUT, Gorakhpur during 14-15, 2020.

11. Rakhi Sharma, Shivanshu Sharma, **Sumit Tiwari**. Design optimization of solar PV water pumping system. Materials Today: Proceedings Journal, 2019 (In corrected proof, through conference). (DOI- https://doi.org/10.1016/j.matpr.2019.11.322) (SCOPUS)

12. **Sumit Tiwari**, Prabhakar Tiwari, S.N. Singh. Study to Improve the Efficiency of C-Si Material in Photovoltaic Power Plant. International Conference on Computational and Experimental Methods in Mechanical Engineering (ICCEMME-2019), 3-5 May 2019, Page-55, G.L. Bajaj Institute of Technology and Management, Greater Noida, UP, India. (ISBN: 978-81-940546-2-7 (S Tiwari, P Tiwari, SN Singh. Study to improve the efficiency of c-Si material in photovoltaic power plant. Materials Today: Proceedings Journal, 2019 (In corrected proof, through conference). (DOI-https://doi.org/10.1016/j.matpr.019.08.144) (SCOPUS))

13. Desh Bandhu Singh, Gagan Bansal, Jeetendra Kumar Yadav, Navneet Kumar, **Sumit Tiwari**, Anuj Raturi. Exergoeconomic and enviroeconomic analyses of single slope solar desalination unit loaded with/without nanofluid: A comprehensive review. Materials Science and Engineering, 748. 012031. (doi:10.1088/1757-899X/748/1/012031) (SCOPUS, Open access)

14. K.S.Muthukarupan, Santhosh Eashwar S, Vr. Subramanian, **Sumit Tiwari**, DB Singh. Performance improvement of PVT module with applications of nano-fluids and phase change materials: A review. International Conference on Electrical and Electronics Engineering (ICE3-2020) at MMMUT, Gorakhpur during 14-15, 2020. (Available on IEEE explore)

15. Ravin Sehrawat, Ravinder Kumar Sahdev, **Sumit Tiwari**, Mahesh Kumar, Dinesh Yadav. Innovations on photovoltaic technology and greenhouse dryers. "Solaris 2020- National Conference on Sustainable Environment and Climate" held in Shri Ram Swaroop Memorial University, Barabanki, Uttar Pradesh, India" from 07-09, 2020.

16. Vineet Saini, **Sumit Tiwari**, V. K. Jain, G.N. Tiwari. Performance Evaluation of Different Types PV Materials for PVTAC with Solar Drying System. International Conference on Computational and Experimental Methods in Mechanical Engineering (ICCEMME-2019), 3-5 May 2019, Page-89, G.L. Bajaj Institute of Technology and Management, Greater Noida, UP, India. (ISBN: 978-81-940546-2-7)

17. Neeraj Kumar, Abhishek Tyagi, Tapan Yadav, Om Prakash, Vinay Singh, **Sumit Tiwari**. Heat Transfer Analysis of Flat Plate Air Collector. International Conference on Computational and Experimental Methods in Mechanical Engineering (ICCEMME-2019), 3-5 May 2019, Page-109, G.L. Bajaj Institute of Technology and Management, Greater Noida, UP, India. (ISBN: 978-81-940546-2-7)

18. Aditya Verma, Shubham kr. Jha, Ramesh Chandra Verma, Naresh Kumar, Rajiv Ranjan, **Sumit Tiwari**. Investigation of Automatic Solar Irrigation Model. International Conference on Computational and Experimental Methods in Mechanical Engineering (ICCEMME-2019), 3-5 May 2019, Page-115, G.L. Bajaj Institute of Technology and Management, Greater Noida, UP, India. (ISBN: 978-81-940546-2-7)

19. **Sumit Tiwari**, G.N. Tiwari, "Economic evaluation and utility of photovoltaic integrated greenhouse drying system in Indian rural context" in India International Science Festival, Dec. 07-11, 2016, p.p. 709-710, held at NPL, Delhi.

20. Hooman D. Mobarakeh, **Sumit Tiwari**, Nicolas Campbell, Ahmad Bamasag, and Patrick E. Phelan, "Adsorption cooling systems", in Sixth Annual Student Conference on Renewable Energy Science, Technology, and Policy October 19-20, 2017, held at ASU, Arizona, USA.

21. **Sumit Tiwari**, Ravi Prakash Agrahari, V.K. Dwivedi, G.N. Tiwari. Green House Integrated Biogas System. 1st International Conference on New Frontiers in Engineering, Science & Technology NFEST-2018, 8-12 January 2018, DTU, New Delhi.

22. V.K. Dwivedi, **Sumit Tiwari**. Effect of dusting and aging on the performance of partially PV covered flat plate air collector. International Conference on Computational and Experimental Methods in Mechanical Engineering ICCEMME-2017, 8-9 December 2017, Page- 126-137, G.L. Bajaj Institute of Technology and Management, Greater Noida, UP, India. (ISBN-978-93-86171-85-6)

23. V.K. Dwivedi, Prabhakar Tiwari, **Sumit Tiwari**. International conference on advance computing, communication, energy, instrumentation and robotics, ICACCEIR-18 organized by Galgotia Engineering College, Greater Noida, During 23-24 March 2018.

24. **Sumit Tiwari**, G.N. Tiwari, "Economic evaluation and utility of photovoltaic integrated greenhouse drying system in Indian rural context" in India International Science Festival, Dec. 07-11, 2016, p.p. 709-710, held at NPL, Delhi.

25. **Sumit Tiwari**, Rohit Tripathi, G. N. Tiwari, "Thermal Analysis of Photovoltaic Integrated Greenhouse Solar Dryer", 18thInternational conference on Energy, Environment and sustainability development (ICEESD 2016) at Paris France, Jan 21-22, 2016, p.p. 1958-1962, 18 (1) Part XII.

26. **Sumit Tiwari**, Rohit Tripathi, G. N. Tiwari, "Effect of packing factor of photovoltaic module on performance of photovoltaic thermal (PVT) greenhouse solar dryer" in IEEE International conference on Emerging trends in Electrical, Electronics and sustainable Energy systems (ICETEESES-16), 11-12th March 2016, p.p. 123-126, held at KNIT Sultanpur, U.P.

27. V.K. Dwivedi, Prabhakar Tiwari, **Sumit Tiwari**," Importance of phase change material (PCM) in solar thermal applications: A review" in IEEE International conference on Emerging trends in Electrical, Electronics and sustainable Energy systems (ICETEESES-16), 11-12th March 2016, p.p. 87-90, held at KNIT Sultanpur, U.P. (Electronic ISBN: 978-1-5090-2118-5, Print on Demand(PoD) ISBN: 978-1-5090-2119-2)

28. **Sumit Tiwari**, V.K. Dwivedi, Rohit Tripathi, G. N. Tiwari, "Energy analysis of photovoltaic thermal (PVT) greenhouse under forced mode without load condition" in IEEE International conference on Innovative Applications of computational Intelligence on Power, Energy and Controls with their impact on Humanity (CIPECH-16), 18th -19th Nov. 2016, p.p. 193-197, held at KIET Ghaziabad, U.P.

29. Rohit Tripathi, **Sumit Tiwari**, G. N. Tiwari, "Energy analysis of partially covered number (N) of photovoltaic thermal-compound parabolic concentrator collectors connected in series at constant collection temperature mode" in IEEE International conference on Emerging trends in Electrical, Electronics and Sustainable Energy systems (ICETEESES-16), 11-12th March 2016, p.p. 33-37, held at KNIT Sultanpur, U.P. (Electronic ISBN: 978-1-5090-2118-5, Print on Demand (PoD) ISBN: 978-1-5090-2119-2)

30. Rohit Tripathi, **Sumit Tiwari**, G. N. Tiwari, "Energy performance of partially covered N photovoltaic thermal compound parabolic concentrator (PVT-CPC) collector for cold climate condition" in IEEE International Conference on Innovative Applications of Computational Intelligence on Power, Energy and Controls with their impact on Humanity (CIPECH-16), 18th -19th Nov. 2016, p.p. 178-182, held at KIET Ghaziabad, U.P. (Electronic ISBN: 978-1-4673-9080-4, Print on Demand (PoD) ISBN: 978-1-4673-9081-1)

31. Rohit Tripathi, **Sumit Tiwari**, G. N. Tiwari, "Performance of partially covered N number of photovoltaic thermal (PVT)–Compound parabolic concentrator (CPC) collectors

connected in series connected water heating system", 18thInternational Conference on Energy, Environment and sustainability development (ICEESD 2016) at Paris France, Jan 21-22, 2016, p.p. 1963-1968, 18 (1) Part XII. (EISSN: 1307-6892)

32. G.N. Tiwari, **Sumit Tiwari**, V. K. Dwivedi, Sanjeev Sharma, Vineet Tiwari "Effect of Water Flow on PV Module: A Case Study", IEEE International Conference on Energy, Economic and Environment (ICEEE 2015) ,p.p.,1-7, 26th-28th March 2015 held at GCET Greater Noida.
33. **Sumit Tiwari**, Rohit Tripathi, G. N. Tiwari, "Energy analysis of photovoltaic-thermal (PVT) greenhouse solar dryer," in International Conference on Advanced and agile manufacturing systems, p.p. 434-437, December 28-29, 2015, held at KNIT Sultanpur, U.P.
34. Rohit Tripathi, **Sumit Tiwari**, G. N. Tiwari, "Energy analysis of fully covered (N) number of photovoltaic thermal-compound parabolic concentrator collectors connected in series" in International conference on Advanced and agile manufacturing systems, p.p. 429-433, 2015, held at KNIT Sultanpur, U.P. (ISBN: 9789385777035)

- **Detail of patents, if any**

1. Gaucrete: A composite of cow dung, clay, and hydrated lime. **Patent No. 405766 Indian** (Dr. Shiv Darshan Malik, Dr. Ravinder Kumar Sahdev, Dr. Deepak Chhabra, **Dr. Sumit Tiwari**, Dr. Mahesh Kumar, Mr. Ravin, Ms. Pinki, Mr. Dinesh, Dr. Ramesh Kumar Garg, Mrs. Vani Goyal)- **Granted**
2. Solar Adsorption Cooling System and A Method of Operation Thereof. **Patent Number-518582** (**Sumit Tiwari**, Manigandan Sidhareddy, Harender, Harpreet Singh Arora)- **Granted**
3. Improved Greenhouse Dryer with Insulated North Wall And Ground With Gaucrete. **Application Number: 202211022345** Indian (Dr. Ravinder Kumar Sahdev, Dr. Deepak Chhabra, **Dr. Sumit Tiwari**, Mr. Ravin, PINKI, Dr. Suresh Kumar, Dr. Mahesh Kumar, Dr. Shiv Darshan Malik, Amit Kaushik, Dr. Arun Kumar, Dr. Sunil Luthra)- **Reply Filed. Application in amended examination**

- **Books/Reports/Chapters/General articles etc.**

Book:

1. Sri Niwas Singh, Prabhakar Tiwari, **Sumit Tiwari**. Fundamentals and Innovations in Solar Energy. eBook ISBN 978-981-336-456-1; DOI- 10.1007/978-981-33-6456-1, Hardcover ISBN: 978-981-336-455-4, Series ISSN-2199-8582; Publisher: Springer Singapore.

2. 2nd International Conference on Computational and Experimental Methods in Mechanical Engineering (Materials Today Proceeding Journal, Elsevier, Link:

https://www.sciencedirect.com/journal/materials-today-proceedings/vol/25/part/P4) **Edited by: Sumit Tiwari,** Ashish Kumar Srivastava, Rohit Sahu**,** Volume 25, Part 4, Pages 537-960 (2020)

3. L. M. Das, Abhishek Sharma, Fitwi Yohaness Hagos**, Sumit Tiwari**. Recent Trends in Thermal Engineering. DOI- https://doi.org/10.1007/978-981-16-3428-4

Chapters:

1. S. N. Singh, Prabhakar Tiwari, **Sumit Tiwari**. Introduction to Solar Energy. Edited by "Singh et al. Fundamentals and Innovations in Solar Energy. Springer, Pages 1-9".
2. Anirudh Kulkarni, Rajat Saxena, **Sumit Tiwari.** Phase Change Materials and Its Applications. Edited by "Singh et al. Fundamentals and Innovations in Solar Energy. Springer, Pages 311-340.
3. Desh Bandhu Singh, **Sumit Tiwari**, Sanjay Kumar. Sensitivity Analysis in Solar Systems. Edited by "Singh et al. Fundamentals and Innovations in Solar Energy. Springer, Pages 341-365.
4. **Sumit Tiwari**, Prabhakar Tiwari, V. K. Dwivedi, G. N. Tiwari. Environmental Feasibility of Solar Hybrid Systems. Edited by "Singh et al. Fundamentals and Innovations in Solar Energy. Springer, Pages 367-396.
5. Sehrawat, R., Sahdev, R.K., **Tiwari, S.** (2022). Performance Analysis of PCM-Integrated Greenhouse Dryer. In: Singari, R.M., Kankar, P.K., Moona, G. (eds) Advances in Mechanical Engineering and Technology. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-9613-8_4.
6. Ajay Pratap Singh, **Sumit Tiwari**, Harender, Prabhakar Tiwari, S.N. Singh. Performance Analysis of Solar Energy Conversion Technology. The book entitled "Energy Conversion: Methods, Technology and Future Directions" by Nova Science Publisher, USA. Series: Energy Science, Engineering and Technology, BISAC: SCI024000, DOI: https://doi.org/10.52305/VXCB5652.