

PATENT GRANTED/ APPLIED:

Sl. No.	Name of Patent	Application No./Date of Application	Date of Publishing/ Grant	Inventors
1	Gas Liquid Absorption in Microchannel	201611043489 / 20.12.2016	22.06.2018 / 28.05.2021	Kaushal Kishore, , A. K. Chandra, Wasim Khan, Sadhana Sachan, M. Siraj Alam
2	Humidification of Gas through Microfluidic Devices	201911009370 / 11.03.2019	29.03.2019/ (Application Awaiting Examination)	Wasim Khan, Kaushal Kishore, A. K. Chandra, , Sadhana Sachan, M. Siraj Alam

Publications

Research Journals:

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5. Preparation and Application of SPPEES-TiO₂ Composite Micro-porous UF Membrane for Refinery Effluent Treatment, International Journal of Environmental Research and Development, S. Mishra, **Sadhana Sachan**, P. K. Mishra, Volume 4, Number 2, (2014), pp. 147-152.
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10. Biomedical Perspective of Electrochemical Nanobiosensor, Priti Singh, Shailendra Kumar Pandey, Jyoti Singh, Sameer Srivastava, **Sadhana Sachan**, Sunil Kumar Sing,Nano-Micro Letters, Volume 8 Issue 3, June 2016, 193-203.
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12. Viscous flow behaviour of karanja oilbased bio-lubricant base oil,UC Sharma, **S Sachan**, RK Trivedi, Journal of oleo science 67 (1)2018, 105-111.
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15. Friction and wear behavior of karanja oil derived biolubricant base oil, Umesh Chandra Sharma, **Sadhana Sachan**, SN Applied Sciences, 1 (7), 2019, 668-
16. Investigation on Thermo-Oxidative Stability of Karanja Oil Derived Biolubricant Base Oil Umesh Chandra Sharma, Abhishek Kumar Chandra and **Sadhana Sachan**, Asian Journal of Chemistry; Vol. 31, No. 4(2019), 839-844.
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20. UC Sharma, S Sachan, [Friction and wear behavior of karanja oil derived biolubricant base oil](#), SN Applied Sciences, 1 (7), 2019, 668, Springer Nature, **google scholar**, DOI: 10.1007/s42452-019-0706-y, July 2019
21. **Himanshu Gupta**, Harish Kumar, Avneesh Kumar Gehlaut, Satish Kumar Singh, Ankur Gaur, Sadhana Sachan, Jin-Won Park. 2022. "Preparation and characterization of bio-composite films obtained from coconut coir and groundnut shell for food packaging" Journal of material cycles and waste management, Dec. <https://doi.org/10.1007/s10163-021-01343-z>

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1. Synthesis and Characterization of Nanofiltration Carbon Membrane, **Sadhana Sachan**, Nand Kishore, Anil Kumar, Indian Chemical Engineering Congress (CHEMCON-2003), December 19-22, 2003, Regional research Laboratory (CSIR), Bhubaneswar, Orissa.
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7. CFD simulation of three phase fluidized bed for studied of hydrodynamic behavior and energy computation, Shailendra Kr. Pandey, H. M. Jena, **Sadhana Sachan**, CHEMCON 2011, December 27 -29, 2011, Bangalore Regional centre of IChE at MSRIT.
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12. Hydrodynamics and Simulation Studies of Liquid-liquid Slug Flow in Micro Capillaries, Wasim Khan, Abhishek k. Chandra, Kaushal Kishore, **Sadhana Sachan**, M. Siraj Alam., Advance in Mechanical, Industrial, Automation and Management Systems (AMIAMS-2017), February 3-5, 2017, MNNIT Allahabad.
13. Effect of Contact Angle and Fluid Properties on Liquid-Liquid Two Phase Flow in Microfluidic Devices, W Khan, H Babu, A K Chandra, K Kishor, **S Sachan**, M S Alam, CHEMCON 2017, December 27 -30, 2017, Haldia Regional Centre of IChE, jointly with theHaldia Institute of Technology, Haldia.
14. Coagulation – Ultrafiltration hybrid system for river water treatment, Arun Arya, Malla Akash, **Sadhana Sachan**, Energy and environmental technologies for sustainable development, Chem conflux, February 14-16,2020, MNNIT Allahabad.
15. Hybrid membrane separation process for textile effluent treatment, Ashish Gautam, Sadhana Sachan, Sustainable Technologies in Water Treatment and Desalination(STWTD-2020), 18-19th December 2020, National Institute of Technology Calicut, India.
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2. Polymer layered silicate nano composites (PLSN): High performance polymeric material, Umesh Chandra Sharma, Shishir Sinha and **Sadhana Sachan**, TACEE-2012, March 23-24, 2012, Pilani, India.
3. Study of thermal characterization of Xyloglucan (Polysaccharide) and its copolymer, Praveen Bhai Patel, **Sadhana Sachan**, TACEE-2012, March 23-24, 2012 at Pilani, India.
4. Review of CFD and neural network modelling approaches for the performance of pressure driven membrane filtration, Shailendra Pandey, **Sadhana Sachan**, Advances in chemical Engineering(ACE 2013), IIT Roorkee, Feb. 22-24, 2013.
5. Hydrodynamics Study of Two-Phase Flow in Microchannels of Different Diameters and Flow Ratios, W. Khan, H. Babu, A. K. Chandra, K. Kishor, **S. Sachan** and M. S. Alam, Fluid Mechanics and Fluid Power (FMFP-2017), December 14-16,2017, Amrita Vishwa Vidyapeetham Amritpuri Campus, kollam, Kerala.
6. Numerical study of two-phase fluid flow in a T-junction microchannel, W. Khan, B. Khatoon, A. K. Chandra, K. Kishor, **S. Sachan** and M. S. Alam, Computational Modeling of Fluid Dynamics Problems (CMFDP-2019), January 18-20, 2019, NIT Warangal.
7. Hydrodynamic Study of Two-Phase Fluid Flow in T-junction Microchannel, Wasim Khan, Bushra Khatoon, A. K. Chandra, **Sadhana Sachan**, M. Siraj Alam, Industrial Applications of Nanoscience and Nanotechnology [IANN 2019-13], November 15-16, 2019, MNNIT Allahabad.

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9. Recent Trends in Application of Nano Particles in Biopolymer Films: Review, Himanshu Gupta, Avneesh Kumar Gehlaut, Satish Kumar Singh, Harish Kumar, Ankur Gaur, **Sadhana Sachan**, [IANN 2019-28], 2019, MNNIT Allahabad.
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11. Recent trends in the synthesis of Hybrid polymer/clay Nano composites: An overview, Malla Akash, **Sadhana Sachan**, Manju Verma, [IANN 2019-49], 2019, MNNIT Allahabad.

Book Chapters:

Sl. No.	Author(s)	Book Title	Title of Chapter, if any	Page No. (if reqd)		ISBN/ISSN No.	Publisher
				From	To		
1.	Umesh Chandra Sharma, Neetu Singh, Sadhana Sachan	Biotechnology Series Volume 10: Nanobiotechnology	Nano Biosensors: Fundamental Concepts and Applications	49	77	ISBN: 978-16-26990-25-8 (2014).	Studium Press LLC, USA,
2.	Umesh Chandra Sharma, Neetu Singh, Sadhana Sachan , Shishir Sinha	Nanotechnology Series Volume 12	Fundamentals of Bio-Nano Imaging ,	1	25	ISBN: 1-626990-12-3(2014)	Studium Press LLC, USA
3.	A. Banerjee, M. Sonker, Parasmani, A. Tiwari, S. Sachan , P. B. Patel and A. Yadav	Biotechnology series, Vol. 8: Novel Drug Delivery (Chapter 11)	Cell penetrating peptides: A unique gift from microorganisms	295	318	Series ISBN :1-62699-015-8 Vol ISBN : 62699-023-9(2014)	Studium Press, LLC, P.O. Box 722200, Houston, Texas 77072, (USA)
4.	S. Mishra, Sadhana Sachan , Munish Upadhyay	Nanotechnology: Novel Perspectives and Prospects,	Synthesis and application of PPEES-ZrO ₂ composite micro-porous UF membrane for oily water treatment	616-	621	ISBN (10): 93-392-2109-5 (2015)	McGraw Hill Education, New Delhi, India,
5	Wasim Khan, A. K. Chandra, Sadhana Sachan , M. Siraj Alam	Industrial application of Nanoscience & Nanotechnology vol1, Chap.5	Liquid –Liquid Two phase flow and Heat Transfer in Microchannels,	63-62		ISBN: 978-93-89947-256-7 (2020)	Excel India Publishers

6.	Vikas K. Choudhary, Bushra Kathoon, Sadhana Sachan and M. Siraj Alam	Industrial application of Nanoscience & Nanotechnology vol1, Chap.10	Liquid-Liquid Extraction in Microchannel: A Brief Review	111-126		ISBN: 978-93-89947-256-7 Dec.(2020)	Excel India Publishers
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