



# Department of Chemical Engineering Malaviya National Institute of Technology, Jaipur

## (2019-20)

### (1) Collaborative research publications.

Sr. No.	Name of the Faculty	Name of authors and their institute	Details of published research publication	Page Nos.
1	Dr. Md. Oayes Midda	1. V. C. Srivastava – IIT, Roorkee 2. J. P. Kushwaha – Thapar institute of engineering and Technology, Patiala	Md Oayes Midda, Vimal Chandra Srivastava, Jai Prakash Kushwah "Optimizing experimental binary adsorption of aniline–nitrobenzene onto granular activated carbon packed bed by Taguchi's methodology" <b>Journal of Water Process Engineering</b> Volume :34 / 101045 / 2020 ISBN: ISSN: 2214-7144 (Elsevier)	
3	Dr. Virendra Saharan	1. H. A. Sarode, D. P. Barai, B. A. Bhanavase, R. P. Ugwekar – Department of Chemical Engineering, LIT, Nagpur	Investigation on preparation of graphene oxide-CuO nanocomposite based nanofluids with the aid of ultrasound assisted method for intensified heat transfer properties, <b>Materials Chemistry and Physics</b> 251/ 123102 (Elsevier)	
4	Dr. Virendra Saharan	1. Aditya Chaudhary, B. A. Bhanavase - Department of Chemical Engineering, LIT, Nagpur 2. Paresh H. Salame – ICT, Mumbai 3. Yuvaraj Hunge – Department of Physics, Savitribai Phule Pune University, Maharashtra	Sonochemical preparation and characterization of rGO/SnO <sub>2</sub> nanocomposite: Electrochemical and gas sensing performance, <b>Ceramics International</b> Volume :2020 / 1-7(Elsevier)	
5	Dr. Virendra Saharan	1. Debabrata Panda, Shiva Kumar Manikam – Department of Chemical and Environment Engineering, Faculty of science and engineering, University of Nottingham, Malaysia	Controlled Hydrodynamic Cavitation: A Review of Recent Advances and Perspectives for Greener Processing, <b>Processes</b> Volume :220 / 1-31 (MDPI)	
6	Dr. Virendra Saharan	1. Vinit D. Potle, B. A. Bhanavase - Department of Chemical Engineering, LIT, Nagpur 2. Sachin R. Shirsath – Department of Chemical Engineering, Sinhgad College of Engineering, Pune, Maharashtra	Sonochemical preparation of ternary rGO-ZnO-TiO <sub>2</sub> nanocomposite photocatalyst for efficient degradation of crystal violet dye, <b>Optik - International Journal for Light and Electron Optics</b> Volume :208 / 164555 / 2020 (Elsevier)	

7	Dr. Virendra Saharan	1. Heena Mandhane, Divya P. Barai, B. A. Bhanavase - Department of Chemical Engineering, LIT, Nagpur	Preparation and thermal conductivity investigation of reduced graphene oxide-ZnO nanocomposite-based nanofluid synthesised by ultrasound-assisted method, <b>Materials Research Innovations</b> Volume :2020 / 1-9 / (Taylor & Francis)	
8	Dr. S. P. Chaurasia	1. Parmila Devi, Ajay K. Dalai - Department of Chemical and Biological Engineering, College of Engineering university of Saskatchewan, Canada	"Activity and stability of biochar in hydrogen peroxide based oxidation system for degradation of Naphthenic acid" <b>Chemosphere</b> Volume :241 / 1-9 / 2020 ISBN: 0045-6535 (Elsevier)	
9	Dr. S. P. Chaurasia / Dr. Sushant Upadhyaya/ Dr. Kailash Singh	1. Sarita Kalla – Department of Chemical Engineering, SVNIT, Surat	"CFD modeling of vacuum membrane distillation for removal of Naphthol blue black dye from aqueous solution using COMSOL multiphysics" <b>Chemical Engineering Research and Design</b> Volume :158 / 77-88 / 2020 (Elsevier)	
10	Dr. S. P. Chaurasia / Dr. Sushant Upadhyaya	1. S. Sridhar – Membrane Separation Group, CSIR, IICT, Hyderabad	"Development of hydrogen selective microporous PVDF membrane" <b>International Journal of Hydrogen Energy</b> Volume :45 / 16965-75 / 2019 (Elsevier)	
11	V. Subbaramaiah	1. Vijayalakshmi Gosu- Department of Chemical Engineering, MBM Engineering College, Jodhpur	"Simultaneous degradation of nitrogenous heterocyclic compounds by catalytic wet-peroxidation process using box-behnken design" <b>Environmental Engineering Research</b> Volume :25 / 488-497 / 2020 ISBN: 1226-1025 (Korean Society of Environmental Engineers)	
12	Dr. U.K.ArunKumar	1. Ratan Mohan – Department of Chemical Engineering, IIT-Delhi	Process Intensification of Propionic Acid Extraction and its Recovery by Distillation in Microchannel" <b>Chemical Engineering and Processing: Process Intensification</b> Volume :157 / 108150 / 2020 (Elsevier)	
13	Dr. R.K.Vyas, Dr. Kailash Singh	1. Ajay K. Dalai - Department of Chemical and Biological Engineering, College of Engineering university of Saskatchewan, Canada	Reactive adsorption of Safranin O: Surface - pore diffusion modeling and degradation study" <b>Water Science &amp; Technology</b> Volume :80 / 665-674 / 2019 ISBN: 1996-9732 (IWA Publishing)	

14	Dr. Dipaloy Datta	<p>1. Dheiver Santos – UNIT, Centro Universitaria Tiradentes, Brazil</p> <p>2. Maria Santos – UFPR, Universidade Federal do Parana, Brazil</p> <p>3. Andersson Barison – Istambul Aydin Univesrity, Turkey</p> <p>4. Hasan Uslu –Aydin University, Engineering Faculty, Food Engineering Department, Istambul Turkey</p> <p>5. Silvana Mattedi – Chemical and Materials Engineering Department, Jeddah, Saudi Arabia</p>	"Protic Ionic Liquid + Water Interactions Studied by 1D NOESY NMR Spectroscopy" <b>Journal of Molecular Structure</b> Volume :2019 / 137-143 / 2019 (Elsevier)	
15	Dr. V.K.Sangal	1. Metali Sarkar, Haripada Bhunia – Department of Chemical Engineering, Thapar institute of engineering and Technology, Patiala	"Hydrodynamics and parametric study of an activated sludge process using residence time distribution technique" <b>Environmental Engineering Research</b> Volume :25 / 400-408 / 2019 (Korean Society of Environmental Engineers)	
16	Dr. V.K.Sangal	<p>1. Alok Garg – Department of Chemical Engineering, NIT Hamirpur</p> <p>2. Gaganpreet Kaur – Department of Electronics and Communication Engineering, Thapar institute of engineering and Technology, Patiala</p> <p>3. Pramod K. Bajpai - Department of Chemical Engineering, Thapar institute of engineering and Technology, Patiala</p>	"Optimization methodology based on neural networks and box-behnken design applied to photocatalysis of acid red 114 dye" <b>Environmental Engineering Research</b> Volume :25 / 753-762 / 2020 (Korean Society of Environmental Engineers)	
17	Dr. V.K.Sangal	<p>1. Jaysingh Singla, Anoop Verma- School of Energy and Environment, Thapar institute of engineering and Technology, Patiala</p> <p>2. Amanjit Singh, Research and Development consumer product division, HSIL, Gurgaon, Haryana India</p>	"Application of mixed metal oxide anode for the electro-oxidation/disinfection of synthetic urine: Potential of harnessing molecular hydrogen generation" <b>Journal of Environmental Management</b> Volume :255 / 109847 / 2020 (Elsevier)	
18	Dr. V.K.Sangal	<p>1. Steffi Talwar - Department of Chemical Engineering, Thapar institute of engineering and Technology, Patiala</p> <p>2. Anoop Verma- School of Energy and Environment, Thapar institute of engineering and Technology, Patiala</p>	"Plug flow approaching novel reactor employing in-situ dual effect of photocatalysis and photo-fenton for the degradation of metronidazole" <b>Chemical Engineering Journal</b> Volume :382 / 122772 / 2020 (Elsevier)	
19	Dr. V.K.Sangal	<p>1. Steffi Talwar - Department of Chemical Engineering, Thapar institute of engineering and Technology, Patiala</p> <p>2. Anoop Verma- School of Energy and Environment, Thapar institute of</p>	Once through continuous flow removal of metronidazole by dual effect of photo-fenton and photocatalysis in a compound parabolic concentrator at pilot plant scale" <b>Chemical Engineering</b>	

		engineering and Technology, Patiala 3. Urska Lavrencic Stangar – Faculty of Chemistry and Chemical Technology, University of LJUbljana, Slovenia	<b>Journal</b> Volume :388 / 124184 / 2020 (Elsevier)	
20	Dr. V.K.Sangal	1. Parminder Kaur – Department of Green Chemistry, LUT university , Finland  2. Monzur A. Imteaz – Department of Civil and Construction Engineering, Swinburney University of Technology Australia  3. Mika Sillanpaa – Department of Enviornment and Chemical Engineering, Duy Tan University, Vietnam	"Parametric optimization and MCR-ALS kinetic modeling of electro oxidation process for the treatment of textile wastewater" <b>Chemometrics and Intelligent Laboratory Systems</b> Volume :203 / 104027 / 2020 (Elsevier)	

(2) **Collaborative research projects / consultancy.**

Sr. No.	Name of the Faculty	Collaborative institute	Title of the project	PI-co-PIs	Amount (INR)	Status of the project (completed/ongoing)	Page Nos.
1	Dr. Md. Oayes Midda	IIT Kharagpur	Effective treatment of wastewater effluents by a fluidized bed membrane bioreactor with low membrane fouling	Dr. Shamik Chowdhury (Co-PI), IIT Kharagpur	39,64,182	Ongoing	

(3) **Invited Lectures organized in MNIT**

Sr. No.	Name of Speaker	Designation & Affiliation	Topic of Invited Lecture	Date	Funding Agency	Page Nos.
1	Dr. Kirti Yenkie	Professor at Rowan University, New Jersey	Systematizing solvent recovery in chemical industries by applying process systems engineering principles	7-1-2020	Institute	

(4) **Invited lectures / talks delivered/ Conference chair /Resource person in other Institutions/Seminar/Conference/Workshop/Short Term Course organized/chaired outside the MNIT, Jaipur**

Sr. No.	Name	Designation	Title of Event	Place	Date(s)	Funding Agency	Page No.
1	Prof. S.P.Chaurasia	Chairperson	International Conference on Sustainable Technologies for Desalination & National Water Mission and Annual Congress of InDA (InDACON-2020)	Indus University, Ahmedabad	13- 15 February, 2020		
2	Dr. Sushant Upadhyaya	Session Chair	13 th International Conference on Chemical, Agricultural, Environmental and Biological Sciences (BCAEBBS-2019))	EMIRATES RESEARCH PUBLISHING	July 2019		
3	Dr. Sushant Upadhyay	Resource Person	FDP on “Interdisciplinary outlook in engineering sciences” (2019)	VIT, Jaipur	September 2019		
4	Dr. V. K. Saharan	Session Co-chair	1st International conference of water, energy and environment nexus, Turkey	Global Network Researchers	September 2019		

**Keynote addresses delivered by the Faculty in Seminar/Symposia/Workshop/Conference**

Sr. No.	Name of the Faculty	Title of Event	Place	Date(s)	Title of Keynote address	Funding Agency	Page Nos.
1	Dr. Suja George	The 2019 Global Grand Challenges Summit, Parul University	Vadodara, Gujarat.	Sep, 2019	Greener friendly efficient nano The 2019 Global Grand Challenges Summit, Parul University bio-adsorbents developed from waste marble slurry by Process Intensification Techniques for application in defluoridation of drinking water		
2	Dr. Manish Vashishtha	Expert Lecture	Rajasthan Technical University, Kota	Jan, 2020	Latest Research Trends In Petrochemical Industries	TEQIP III	
3	Dr. Manish Vashishtha	International Conference on Chemical, Bio, & Environmental engineering (CHEMBIOEN-2020)	NIT, Jalandhar	Feb, 2020	Characterization and isotherm study of activated carbon production from mustard stalk		
4	Dr. Manish Vashishtha	National Conference of Novel Advancement in Applied Chemical Science	SS Jain Subodh P.G. College Jaipur	27-28 January 2020	Environment and Green Chemistry : latest Developments		
5	Dr. Shiv Om Meena	Invited talk	Collge of Technology and Engineering, Udaipur	Feb, 2020	Application and Use of Coated Fertilizers		
6	Dr. V. K. Saharan	ACES-2020	IISER Bhopal	Feb ,2020	Advanced hybrid treatment of tannery waste effluent using hydrodynamic cavitation (HC) coupled with different oxidizing agents (hydrogen peroxide/Fenton's/ Ozone)		
7	Dr. Rohidas Bhoi	Webinar	Sir Visvesvaraya Institute of Technology, Nashik-422102	May,2020	"Process Intensification for Biomass Derived Chemicals and Transportation fuels"		

8	Dr. Madhu Agarwal	FFTP (Expanding Horizons of Nanotechnology in Engineering, Medicine and Biotechnology - Series II)	Coimbatore Institute of Technology through online	Sep, 2019	Application of nanotechnology in water treatment and energy storage		
9	Dr. Sushant Upadhyaya	FDP on "Advances in Renewable and Bioenergy" at Chemical Engineering Dept., IET Lucknow, under TEQIP III	IET Lucknow	Oct-2019	Reverse Osmosis Reject Management using Membrane Distillation with Recovery Calculations and Case studies		
10	Dr. Sushant Upadhyaya	STTP on "Emerging Topics in Fluid Mechanics" jointly organized by MED and Mathematics Department NIT UK	NIT UK Satellite Campus	Oct-2019	Introduction to Simulink in MATLAB		
11	Dr. Vikas Sangal	Symposium on Carbon Nanomaterial Electronics (SCNE) 2019	Birla Institute of Technology and Science (BITS) Pilani	Nov-2019	Applications of Nanomaterial: Synthesis of Graphene oxide/TiO <sub>2</sub> Nanotube Electrodes for Water Treatment		
12	Dr. R. K. Vyas	Newer avenues in the field of Chemical Science	SKIT, Jaipur	Nov-2019	Removal of Recalcitrant Emerging Contaminants from Water		

(5) **Conferences/ FDPs/ Workshops/ Trainings/ Courses attended etc.**

<b>Sr. No.</b>	<b>Name</b>	<b>Title of Event</b>	<b>Place</b>	<b>Funding Agency</b>	<b>Date(s)</b>	<b>Page Nos.</b>
1	Dr. Md. Oayes Mida	NPTEL Course on “Introduction to Process Modeling in the membrane separation process”	IIT Kharagpur	TEQIP - III	Feb – March 2020	
2	Dr. Md. Oayes Mida	NPTEL Course on “Computer aided applied single objective optimization”	IIT Guwahati	TEQIP - III	Jan – March 2020	
3	Dr. Md. Oayes Mida	TEQIP online certification for “Digital Transformation in Teaching Learning Process”	IIT – Bombay	TEQIP - III	6-22 April 2020	
4	Dr. Md. Oayes Mida	FDP on “Curriculum Implementation”	Curriculum development Center Department – National Institute of Technical Teacher Training and Research Chandigarh	CPDA	14-18 Oct. 2019	
5	Dr. Madhu Agrawal	BCAEBS-19	Emirates Association of Chemical, Biological & Environment Engineers at Budapest	CPDA	July 2019	
6	Dr. Madhu Agrawal	ICENLISC - 2020	World Academics	CPDA	January 2020	

(6) **Positions held in Professional Societies and Institutes at National / International level.**

Sr. No.	Name of the Faculty	Details of Institute/ Professional Bodies	Details of position held	Tenure of the position	Page Nos.
1	Dr. Madhu Agarwal	IICChE	Jt. Secretary	2020	
2	Dr. Manish Vashishtha	Indian Chemical Society	Fellow	28-02-2020	
3	Dr. S. P. Chaurasia	International Desalination Association	Member of Board of directors	2019-21	

(7) **Activities related to NAAC/ UGC/ AICTE/ TEQIP/ NPIU/ UPSC/ RPSC etc.**

Sr. No.	Name of the Faculty	Name of the body	Details of position held	Tenure of the position	Page Nos.
1	Dr. Suja George	UPSC	Member of interview board	27/08/2019	
2	Dr. Suja George	UPSC	Member of interview board for post of chemist and metallurgist	07 -12-2020	
3	Dr. Manish Vashishtha	RPSC	Paper Setter/ Examiner / Advisor to Commission in selection of various posts in govt. of Rajasthan	February 2020	

(8) **Positions held in BOS/ Academic Council/ Executive council/ BOG/ Senate of other Institutes/ Universities.**

<b>Sr. No.</b>	<b>Name of Faculty</b>	<b>Name of the Institute</b>	<b>Details of position held</b>	<b>Tenure of the position</b>	<b>Page Nos.</b>
1	Dr. Manish Vashishtha	MITS, Gwalior	Member of BoS	2018-21	
2	Dr. Manish Vashishtha	RTU, Kota	Member of BoS	2020-21	
3	Dr. Sushant Upadhyaya	RTU, Kota	Member of BoS	2020-21	
4	Dr. Madhu Agarwal	IAR, Gandhinagar	BoS, MTech, Chemical Engg. Programme	2020	