

CURRICULUM VITAE

Dr. Sarita Khaturia
Associate Professor
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**Mody University of
Science and Technology,
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Sikar Rajasthan, India**

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Objective

To perform a responsible and challenging job in a reputed organization, where my acquired experience and skills get utilized to my full potential, and find a quality environment where my knowledge and skills can be shared and enriched to improve and grow.

Educational Qualification

Ph.D, M.Sc., M.Phil., CSIR-NET, GATE (96%), DRDO (SET) Qualified

Experience Summary

Teaching Experience: 14.5 Years

- Working as Associate Professor (Chemistry) at Mody University of Science and Technology, Lakshmangarh, Sikar, Rajasthan from 9 Aug 2010 to current date.
- Worked as Lecturer (Chemistry) at Amity University, Jaipur from 20/02/2009 to 06/08/2010.
- Worked as Lecturer (Chemistry) at MD Mission College, Kota from 01/07/2007 to 31/01/2009.

Research Experience:

- Four Years in CSIR MAJOR RESEARCH PROJECT (2 years as JRF)

Research Areas

Green and Heterocyclic Chemistry/Synthetic Organic Chemistry/ Nanotechnology.

Title of Ph.D: Environ-economic reaction procedures for heterocyclic synthesis.

Title of M.Phil –Dissertation: Micellar spectrophotometric determination of cobalt in the samples of alloys and vitamins with the use of a novel reagent N-(2'-thiazolyl)-2-hydroxy benzamide.

Project and Grant	Co-Principal Investigator in Collaborative Research Scheme-TEQIP-III (AICTE- TEQIP) 10,97,000/- Projects ongoing: 1. Mody University Seed Money Research Grant: Received funding of Rs 2,91,000/- for research proposal titled “Synthesis of New Medicinally Important Heterocyclic Compounds and Their Metal complexes”
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	<p>Project sanctioned in 2020-2021 and is active till the end of FY 2021-22. Research work is ongoing.</p> <p>2. Mody University Seed Money Research Grant: Received funding of Rs 2,20,000/- for research proposal titled “ Plant Extract Mediated Synthesis fo Various nanoparticles and their Applications</p> <p>Project sanctioned on 2019-2020 is completed</p>
Research Scholars (Awarded/Pursuing)	<p>1. Ms. Saloni Sahal (Pursuing)</p> <p>2. Ms. Sangeeta (Submitted)</p>
Student Achievements	<p>Supervised</p> <p>11 M.Sc. dissertations,</p> <p>and 10 B.Sc. dissertations</p>

Administrative Work/ Others (if any):

Institute of scholar, InSc Id: InSc2021123A2 Lifetime member
Association of Chemistry Teachers (Life member No. 1468) since 11-4-2014
Reviewed Five chapters of Engg.Chemistry book O.G. Palama Tata Mc.
Graw HillMcGraw-Hill Education Special Advisor.
External Examiner in Deptt. of chemistry S.K Govt. College Sikar, Vinayak College,
Fatehpur, PDSU Sikar.
Laboratory In charge of Engg, CET, Mody University.
Examination Secrecy, CET 2012-2015
Convener of "Tatva" Chemical Society
Coordinator of M.Sc. and B.Sc. Project
dissertation

Ph. D. supervised: 1

Dr. Sangeeta, Ph D (2022): Environment-friendly methods for the synthesis of biodynamic heterocycles

Papers Published in Journals/Conferences/Workshops

1. A Review and Comparative Analysis of Different Types of Dyes for Applications in Dye-Sensitized Solar Cells. *Brazilian Journal of Physics* volume 52, Article number: 136 (2022).
2. New Complexes of organotin(IV) and organosilicon(IV) with 2-((3,4-dimethoxybenzylidene)amino)-benzenethiol: Synthesis, spectral, theoretical, antibacterial, docking studies. *Journal of Molecular Structure (Elsevier)* 1261 (2022) 132812
3. Greener synthesis of pyranopyrazole derivatives catalyzed by CaO nanoparticles *RASĀYAN Journal of Chemistry* Vol.15, No.1, 2022
4. Green synthesis of dihydropyrimidinone derivatives using FeO nano catalysts, *Journal of Huazhong University of Science and Technology* 2021, Vol. 50, 8, 1-11.
5. Synthesis of New Schiff Base of 1,3-Oxazine and 1,3-Thiazine Derivatives Derived from 4-Phenyl Substituted Chalcones and Evaluation of their Antibacterial Activity. *Asian Journal of Chemistry (International peer reviewed Journal)*. Vol. 33, No.3 (2021), 531-536
6. "Solar based hybrid renewable energy plants" Research article in *WEENTECH proceedings in energy*, 2021, vol. 7(1), pp 49-65
7. Design, spectroscopic characterization and theoretical studies of organotin(IV) and Organosilicon (IV) complexes with Schiff base ligands derived from amino acids, *Asian Journal of Chemistry (International peer reviewed Journal)*. Vol. 32, No. 11 (2020), 2821-2828
8. The Uses of Various Nanoparticles in Organic Synthesis: A Review. *Journal of Nanomedicine & Nanotechnology*. 2020, Vol.11 Iss. 2 No: 543
9. Synthesis of N-Containing Energy Material Compounds. *Journal of Applicable Chemistry*. 2019, 8 (4): 1711-1715, ISSN: 2278-1862 (International Peer Reviewed Journal)
10. A Mini-Review on organic Synthesis in Water." *MOJ Biorg Org Chem.*, Review Article Vol.2, Issue-1, 2017 Published on December 13, 2017
11. Green Route for Efficient Synthesis of Novel Amino Acid Schiff Bases as Potent Antibacterial and Antifungal Agents and Evaluation of Cytotoxic Effects. January 2014 · *Journal of Chemistry* 1.727 IF 01/2014; 2014: Article ID 848543, 12 pages. DOI:10.1155/2014/848543.
12. NiO nanoparticles: an efficient catalyst for the multicomponent one-pot synthesis of novel spiro and condensed indole derivatives. *Journal of Chemistry*. 1.727 IF Volume 2013, Article ID 606259, 10 pages. Hindawi Publishing Corporation, New York, NY 10022, USA. ISSN 2090-9063 e-ISSN 2090-9071.
13. Environ-Economic Synthesis and Characterization of Some New 1,2,4-Triazole

Derivatives as Organic Fluorescent Materials and Potent Fungicidal Agents. Article *in* *Organic Chemistry International* IF 2013(10) · May 2013. DOI: 10.1155/2013/659107

14. Synthesis, anti-inflammatory activity, and QSAR study of some Schiff bases derived from 5-mercapto-3-(4'-pyridyl)-4H-1,2,4-triazol-4-yl-thiosemicarbazide. Article *in* *Medicinal Chemistry Research* 1.720IF 22(10), October 2013. DOI: 10.1007/s00044-013-0507-6
15. Comparative studies of lewis acidity of alkyl-tin chlorides in multicomponent biginelli condensation using grindstone chemistry technique. Article *in* *Journal of the Chilean Chemical Society* IF 0.580 57(1):1012-1016, March 2012. DOI: 10.4067/S0717-97072012000100013
16. Operationally simple green synthesis of some Schiff bases using grinding chemistry technique and evaluation of antimicrobial activities. Article *in* *Green Processing and Synthesis* IF 1.100 1(5) · October 2012. DOI: 10.1515/gps-2012-0043
17. Green Chemical Synthesis of Amino-Acid Schiff Bases Incorporating Oxindole and 1,3,4-Thiadiazole Moieties. *Chem. News Letter*, IF 2012, VOL.1, NO.1, page 97-102, ISSN 2278-6201
18. HgCl₂ promoted one pot synthesis of 3, 4-dihydropyrimidin-2 (1H)-ones and thiones under solvent free conditions. *Heterocyclic Letters* IF 3.833 Published by Raman Publications Vol. 1: (4), 2011, 297-304. ISSN: 2231 – 3087(print) / 2230 – 9632 (Online).
19. Aqua mediated facile synthesis of 2-(5/7-fluorinated-2-oxoindolin-3-ylidene)-N-(4-substituted phenyl) hydrazine carbothioamides. Article *in* *Research Journal of Pharmaceutical, Biological and Chemical Sciences* IF 0.35 2(2):213-219. April 2011
20. Microwave-induced preparation of biologically important benzothiazolo [2, 3-b] quinazolines, and comparison with ultrasonic and classical heating *Monatshefte für Chemie* 141(9), 979–985, 2010
21. Statement of a methodology for the microwave induced preparation of biologically important benzothiazolo [2, 3-b] quinazolines and its comparison with ultrasonic and classical heating. 2008, 1-30, 12th International Electronic Conference on Synthetic Organic Chemistry ECSOC-12 <http://www.usc.es/congresos/ecsoc/11/ECSOC11.htm>
22. Efficient microwave enhanced solvent-free synthesis of potent antifungal agents; Fluorinated benzothiazepine fused beta lactam derivatives. *J. Fluorine Chem.*, IF 2.055128, 524-529, 2007 [Impact factor: 1.993].
23. One pot three-component condensation reaction in water: An efficient and improved procedure for the synthesis of Pyrimido[2,1-b] benzothiazoles." *Phosphorus, Sulfur and Silicon*, IF 0.781 182(11), 2529-2539, 2007 [Impact factor: 0.424].
24. Microwave Enhanced Solid Support Synthesis of Fluorine Containing Benzopyrano- triazolo-thiadiazepines as Potent Antifungal Agents, *Bioorganic & Medicinal Chemistry*, IF 2.802 14, 1303-1308, 2006. [Impact factor: 2.686].
25. Efficient Microwave Enhanced Regioselective Synthesis of a Series of Benzimidazolyl/triazolyl Spiro (indole-thiazolidinones) as Potent Antifungal Agents and Crystal Structure of Spiro[3H-indole-3,2'-thiazolidine]-3'(1,2,4-triazol-3-yl)-2,4'(1H)- dione, *Bioorganic & Medicinal Chemistry*, IF 2.802 14, 2409-2417, 2006. [Impact factor: 2.686].
26. Mild and ecofriendly tandem synthesis of 1,2,4-triazolo[4,3-a]pyrimidines in aqueous medium, *Arkivoc*, IF 1.253 XVI, 83- 92, 2006. [Impact factor: 0.418].
27. Multi-Component One-pot Diastereoselective Synthesis of Biologically Important

Scaffold Under Microwaves, Chinese Journal of Chemistry, IF 2.736 23, 1-10, 2006.[Impact factor: 0.768].

28. Facile one pot microwave enhanced multistep synthesis of biologically important scaffoldspiro[indole-pyridopyrimidines], Arkivoc, IF 1.253 XIII, 80-88, 2005. [Impact factor: 0.418].

29. Solid phase extraction and determination of Ni ions in samples of steel and hydrogenated oils using modified cellulose, Asian Journal of Chemistry IF 0.31, 15(2), 2003, 1029-1032.

30. Micellar spectrophotometric determination of cobalt in the sample of alloys and vitamins with N- (2'-thiazolyl)-2-hydroxybenzamide, Asian Journal of Chemistry, IF 0.31, 15(2), 2003, 1193-1195.

Invited lectures / resource person/ paper presentation in seminars/conferences/full paper in conference proceedings:

S.No.	Type of event	Topic	Organized by	Held on
1	Organized ACT promoted, IUPAC Global Women's Breakfast GWB 2022	Women empowerment: Role in Science and Technology	Department of Chemistry, in collaboration with the Association of Chemistry Teachers, c/o Homi Bhabha Centre for Science Education, TIFR, Mumbai	Feb 16, 2022
2	International webinar on	REAXYS: A tool for Literature Search and Retrosynthesis of Chemicals and Pharmaceuticals	Amity School of Engineering and Technology, Amity University Madhya Pradesh, Gwalior	26 February 2022.
3	International webinar on	Mendeleev Training Certification of Achievement	Amity University, Gwalior	5 Feb. 2022
4	International Virtual Conference on Chemical Sciences IVCCS-2022	Chemical Sciences IVCCS-2022	IQAC Cell, Deptt. of Chemistry, Annai Violet Arts and science college, Chennai	8-9 Feb. 2022
5	Virtual National Seminar On	"Recent Trends in Chemical Technology A Safety Perspective"	Department of Industrial Chemistry, ISTAR,CVM University, Vallabh Vidyanagar & GUJCOST, DST, Government of Gujarat	24th December 2021

6	International webinar on	Recent trends in Computational chemistry	CRSI, Deptt. of Chemistry, Anurag University, Hyderabad, India	12 November 2021
7	International webinar on	Nuclear Energy and Sustainable Development	Department of Mechanical Engineering , Mody University of Science and Technology	21 August 2021
8	International webinar on	Smart manufacturing and Industrial internet of things(IIoT)	Department of Mechanical Engineering , Mody University of Science and Technology	28 August 2021
9	Invited speaker and delivered a talk on Recent Trends in Nutraceuticals Research	Five Days National Webinar Series on 'Chemistry for Society, Environment & Betterment'	organized by Department of Basic & Applied Sciences, School of Engineering & Sciences, G D Goenka University, Gurugram, Hayana (India)	19-23 JULY, 2021
10	International webinar on	Ethics in Scientific Publications	IQAC Cell, Mody University of Science and Technology	July 13, 2021
11	International webinar on	Advancements in Chemical Sciences :Research Prospects and Career Options	Organized by Deptt. of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore	17 th June 2021
12	National webinar on	Challenges and Opportunities in the Chemical Industries	Organized by Deptt. of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore	10 th June 2021
13	Attended a Virtual event on	Discover Permaculture	Organized by UCMA and St. Joseph's college, Bengaluru	5 th June 2021
14	Conservation and Restoration Conference	Sustainable Development Goals and India	Organized by St. Joseph's college in association with UCM Bengaluru	23 May 2021
15				

16	International webinar on	“Evolutionary Learning and its Engineering Applications”	Organized by IEEE Student Branch-GSSS Institute of Engineering and Technology for Women, Mysuru in Association with IEEE Mysore Sub Section and IEEE Bangalore Section	21 st May 2021
17	One Week Online National Faculty Development Program	E-Contents and ICT Tools for Innovative Teaching & Learning ”	Organized by RCP, Roorkee	1 May to 7 May, 2021
18	One Day Webinar	"Restoring the Earth"	Organized by IQAC and Department of Environmental Science SIES (Nerul) College of Arts, Science and Commerce	April 22, 2021
19	Completed the short term training programme through ICT mode on	Design and development of content for e-learning	National Institute of Technical Teachers Training and Research Kolkata	2 Week STTP 5-10-20 to 16-10-20
20	Completed 5 days International E-Certification course 2020 on	Novel Exploration in Research Writing	PSNA, College of Engineering and Technology, Dindigul-624622	12-10-20 to 16-10-20
21	Attended Virtual Panel Discussion on	"National Education Policy--in India" organized by	IEEE PES-IAS Delhi chapter, IEEE Chandigarh	30-Sep-20
22	Presented Paper on application of nanomaterial in	First International virtual conference on nanomaterials FIVCON- 2020	Deptt of nanotechnology, Acharya Nagarjuna University, Guntur, Andhra Pradesh	10-12 September 2020
23	Completed one Week STTP through ICT mode	Fundamental and applications of Nanomaterials	NITTTR, Kolkata	27-31 July 2020
24			Deptt. of Applied Science, SAGE	8 July 2020

	Participated in E-seminar	Research and ethics	University, Indore, India	
25	Invited lecture Resource Person Topic: Sustainable development of society towards a green future	Three day faculty development program on 'Sustainable development with greentechnology: Precovid, Covid and Postcovid	Deptt. of Chemistry, Anurag University, Hyderabad, India	11-13 June 2020
26	Got A+ in One week STTP on Emerging trends in Research methods	Emerging trends in Research methods	REST society for research International Tamilnadu	8-13 June 2020
27	Got A+ in One week STTP on Advanced Research methodology	Advanced Research methodology	REST society for research International Tamilnadu	11-15 May2020
28	Got A+ in 3 Days Online Research Methodology Workshop	Online Research Methodology Workshop	REST society for research International Tamilnadu	18-20 April 2020
29	Participated in online workshop held under TEQIP-III Project	Two Days Online Workshop on Outcome Based Education(OBE)	Organized by State Project Implementation Unit, Bihar(SPIU Bihar)	29-30 May 2020
30	Attended a one day webinar	Virtual lab	Conducted by Rohilkhand University, Bareilly	6 June 2020
31	Attended a one day webinar	SARS CoV2: An Overview of COVID-19	Deptt. of Chemistry, Mody University Lakshmangarh, Sikar, Rajasthan, India	6 June 2020
32	Attended in 1 Day Webinar	Internship for crime free, job and service rich Aatm Samarth Bharat under Auspices of police Reforms MP	Deptt. of Forensic Science, Mody University Lakshmangarh, Sikar, Rajasthan, India	21 May 2020
33	Participated in 1 Day Webinar	Education 4.0	Organized by IQAC, VO Chidambaram College, Tamilnadu	8 May 2020
			Deptt. of Biotechnology and Microbiology Mohan Lal Sukhadia	21 May 2020

34	Qualified with A grade in theonline E-quiz series	COVID-19	University, Udaipur Rajasthan, India	
35	Presented paper in International Conference	International Conference on“Modern Approches of Chemical Science and Nanomaterials”	Deptt. of Chemistry, ModyUniversity	26-08-2019 to 27-08-2019
36	Attended and Orally presented in Green synthesis of coumarin-3-carboxylic acid derivatives using aqueous fruit extracts as catalyst	International Conference onRecent Trends in Environment and Natural Sciences.(ICRTENS-2019)	Govt. Science College, Sikar,Rajasthan, India	12-13 Feb , 2019
37	Attended and Poster presented on Nanomaterials catalyzed green chemical synthesis of Biginelli compounds.	International Conference onRecent Trends in Environment and Natural Sciences.(ICRTENS-2019)	Govt. Science College, Sikar,Rajasthan, India	12-13 Feb , 2019
38	Attended and Poster presented onPlants extract mediated synthesis of nanoparticles	International Conference onRecent Advances at Interfaces of Physical and Life Sciences. (RAIPLS-2019)	Balaji Engineering College,Jaipur, Rajasthan India	January 28-30, 2019
39	Attended and Poster presented on Microwave assisted synthesisof 4H-benzo[b] pyran derivatives by MgO nanoparticles	International Conference onRecent Advances at Interfaces of Physical and Life Sciences. (RAIPLS-2019)	Balaji Engineering College,Jaipur, Rajasthan India	January 28-30, 2019
40	Published a research article on Advancement in Nitrogen containing Energy Material Compounds	International Conference onRecent Advances at Interfaces of Physical and Life Sciences. (RAIPLS-2019)	Balaji Engineering College,Jaipur, Rajasthan India	January 28-30, 2019
41	Published a review article on biologically important Schiff	National conference on“Advances in Applied Science (AAS-2018)	Maharishi Arvind Institute ofEngineering & Technology, Jaipur	23 & 24 February, 2018

	base derivatives			
42	Published a review article on Microwave assisted synthesis of bioactive heterocycles	National conference on "Advances in Applied Science (AAS-2018)	Maharishi Arvind Institute of Engineering & Technology, Jaipur on 23 & 24 February, 2018.	23 & 24 February, 2018
43	Attended a Chemistry Popularization workshop	Popularization workshop, International Student Chapter,	American Chemical Society by Department of Chemistry, SOS, Mody University, Laxmangarh, Sikar (Raj.)	26-27 November 2017
44	Attended and Poster presented in Popular Lecture Series	Popular Lecture Series	Department of bioscience, SOS, Mody University, Laxmangarh, Sikar	25 March, 2017
45	Attended and Poster presented on Green synthesis of indole derivatives under grindstone chemistry technique	International conference on frontiers at the chemistry- allied sciences interface (FCASI)	(FCASI), Organized by Centre of Advanced Study, Department of Chemistry, University of Rajasthan, Jaipur.	April 25-26, 2016
46	Attended a Science academics lecture workshop	"Emerging technologies based on nanosciences- A popularization workshop"	SOS, Mody University, Laxmangarh, Sikar (Raj.)	22-23 April, 2016
47	Attended a National workshop	Energy efficient lighting technology :Recent development and future ahead."	SOS, Mody University, Laxmangarh, Sikar (Raj.)	28 November 2015
48	Presented on Science academics lecture workshop	"Nanoscience & Nanotechnology: Challenges and Opportunities."	SOS, Mody University, Laxmangarh, Sikar (Raj.)	21-22 November 2014
49	Presented on Aqua mediated one pot facile synthesis of thioxo	Third International Conference on Heterocyclic Chemistry	University of Rajasthan, Jaipur- 302004. Organized by Department of Chemistry	10-13, 2011

	1,2,4- triazin-5(2H)-one and[1,2,4] triazino [5,6-b] indole Derivatives.			
50	Presented paper in 47th Annual Convention of Chemists 2007	47th Annual Convention of Chemists 2007	Department of Chemistry, University of Rajasthan, Jaipur.	27Dec. 2007
51	Presented on Accelerated Organic Syntheses via Activation by Microwave- and Ultrasound Irradiation in Eco-friendly Media”.	National Symposium on NewFrontiers in Chemical Sciences (NFCS-10)	RajasthanUniversity, Jaipur	February 25, 2010,
52	Presented on “Solvent-Free Green Chemical Alternatives to Accelerate Organic Synthesis Using Microwaves”	National Conference On Recent Advancements In Microwave Technique &Applications,	Department of Physics, University of Rajasthan, Jaipur.	6-8 Oct.2006,
53	Presented in National Symposium on	Recent Advances inChemical Research.	Department of Chemistry, University of Rajasthan,Jaipur.	28-29 March 2005,
55	Presented in National Symposium on NewVistas In Organic Synthesis,	National Symposium on NewVistas In Organic Synthesis,	International College ForGirls, Jaipur	20 November 2005
56	Presented on “Eco-friendly Synthesis of Thia-Aza Heterocycles: Selectivity Under Microwaves.”	2nd International Conference on Heterocyclic Chemistry	Universityof Rajasthan, Jaipur	16-19 Dec. 2006,
57	Presented on			

	‘Facile One Pot Green Chemical Microwave Promoted Synthesis of Quinoline Alkaloids; Indolo[3,2-C]Quinoline,’	Botanical Products Seminar and Expo,	University of Rajasthan, Jaipur.	5-7 February 2005
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Details of PG guidance

S.No.	Name of Scholar	Title of Dissertation	Name of Department & University Guided	Date of Award
1	Manisha Ruhela	Applications of green catalysts in organic synthesis	Deptt. of Chemistry, Mody University	2022
2	Kiran Kumari	Green synthesis of silver, cobalt and palladium nanoparticles	Deptt. of Chemistry, Mody University	2022
3	Bhawana	Synthesis of Ionic liquids and their applications	Deptt. of Chemistry, Mody University	2021
4	Shweta Sunda	Novel approach using natural and renewable ingredients for cosmetics	Deptt. of Chemistry, Mody University	2020
5	Isha Goyal	Sustainable innovation: preparation of herbal shampoo by green method	Deptt. of Chemistry, Mody University	2020
6	Priya Devi	Aqueous-mediated green synthesis of heterocyclic compounds	Deptt. of Chemistry, Mody University	2019
7	Nikita Nain	Green and Environmentally Benign Organic Synthesis by Using Fruit Juice as Biocatalyst	Deptt. of Chemistry, Mody University	2019
8	Manohari	Nanomaterials catalyzed green chemical synthesis of Biginelli compounds	Deptt. of Chemistry, Mody University	2018
9	Kiran	New protocols for Environmentally benign synthesis of potential biodynamic heterocycles.	Deptt. of Chemistry, Mody University	2018

10	Ms. Nikita	Natural acid catalyzed green chemicalsynthesis of various Schiff bases	Deptt. of Chemistry, Mody University	2017
11	Ms. Sunita Prajapat	Green chemical synthesis of various isatinschiff bases under solvent free conditions	Deptt. of Chemistry, Mody	2017
12	Anjali	Green chemical synthesis of various aldehyde schiff bases under solvent freeconditions	Deptt. of Chemistry, Mody University	2017
13	Manisha	New Protocols for Environ-EconomicSynthesis of Potential Biodynamic Heterocycles	Deptt. of Chemistry, Mody University	2016

Details of UG guidance

1	Manvi	Potential nutraceuticals and their health benefits	Deptt. of Chemistry, Mody University	2020
	Geeta	Immunity booster green food:coronavirus disease (covid-19)	Deptt. of Chemistry, Mody University	2020
3	Anju	Multi component transformation of Dimedone:A versatile molecule ingreen reaction media	Deptt. of Chemistry, Mody University	2019
4	Rinku	Microwave assisted synthesis of heterocyclic compounds	Deptt. of Chemistry, Mody University	2018
5	Pooja	Plants extract mediated synthesis of nanoparticles	Deptt. of Chemistry, Mody University	2018
6	Pooja Sihag	Eco-friendly and economic method forKnoevenagel condensation by employing natural catalyst	Deptt. of Chemistry, Mody University	2017
7	Lalita Jangir	Green chemical synthesis of heterocyclic compounds under solventfree conditions	Deptt. of Chemistry, Mody University	2017
8	Manju	Environmentally benign synthesis of 2-oxoindolin-3-ylidene derivatives by Knoevenagel condensation	Deptt. of Chemistry, Mody University	2016

Book Chapters:

1. (Chapter-12 Energy Efficiency) in Book Introduction to AI techniques for Renewable Energy System, Taylor & Francis, CRC Press. June 9, 2021 (ISBN No

- 9780367610920)
2. **2D Nanomaterials: Sustainable Materials for Cancer Therapy Applications (Book Chapter 9) Accepted in 2D Functional Nanomaterials (ISBN:978-3-527-34677-6) WILEY–VCH Publisher**
 3. **Nutraceuticals as Therapeutic Agents for Prevention and Treatment of Diseases, Chapter No.: 4499410_1_En. 45-68, Springer Nature Singapore Pte Ltd. 2022 K. K. Behera et al. (eds.), Prebiotics, Probiotics and Nutraceuticals, https://doi.org/10.1007/978-981-16-8990-1_4#DOI**
 4. **Advanced Oxidation Processes for Wastewater Treatment: Types and Mechanism book chapter 6, 69-78, 2022 1st Edition published in “Advanced Oxidation Processes for Wastewater Treatment: An Innovative Approach, published by Taylor & Francis Group, LLC, CRC Press, ebook ISBN: 9781003165958**
 5. **Book Chapter on Microbial community profiling in waste water of effluent treatment plants Genomics Approach to Bioremediation: Principles, Tools, and Emerging Technologies, Wiley (Accepted) Book Chapter on Application of microbial enzymes in wastewater treatment**
 6. **Genomics Approach to Bioremediation: Principles, Tools, and Emerging Technologies, Wiley (Accepted)**
 7. **Membrane and Membrane-Based Processes for Wastewater Treatment” book chapter communicated in "WASTEWATER TREATMENT & RESEARCH", to be published by CRC Press.**
 8. **Emerging Innovative Technologies for Wastewater Treatment” book chapter communicated in "WASTEWATER TREATMENT & RESEARCH", to be published by CRC Press.**
 9. **Reviewed Chapters (Electrogravimetry and Coulometry, Supercapacitors, Nanoscience and Technology, Lubrication, Thermal Analysis) in Engineering Chemistry OG.Palanna, Tata McGraw Hill, 978-0-07-014610-5**

Summary of Research Work

The field of my research is Green Chemistry. In the course of innovation and contribution to the field of research, I had synthesized novel biologically important scaffolds. Our main purpose is avoiding the use of organic solvent for developing environmentally friendly chemistry, known for a long time for their low cost and toxicity, avoiding time consuming and tedious extractive workup. With this objective and under the framework of Green Chemistry, we have synthesized some novel biodynamic sulfur and nitrogen containing ring systems in our laboratory using well known non conventional energy source i.e. microwaves and ultrasound.

- (i) Benzopyrano [4,3-e] [1,2,4]-triazolo [3,4-b] [1,3,4]-thiadiazepines.
- (ii) 3'-substituted spiro[3H-indole-3,2'-thiazolidine]-2,4'(1H)-diones.
- (iii) Fluorinated Benzothiazepine Fused β -Lactam Derivatives.
- (iv) Benzothiazolo[2,3-b] Quinazolines.
- (v) Pyrimido[2,1-b] Benzothiazoles.

(vi) Spiro [1, 3-Oxathiolane] Derivatives.

All the products, were purified by crystallization from appropriate solvent and tested for their purity by thin layer chromatography (TLC), using silica gel 'G' coated glass plates as adsorbent. The purified products were then subjected to structural characterization by spectroscopy comprising, IR, ¹HNMR, ¹³CNMR, ¹⁹FNMR, mass and X-ray crystallography in some cases.

The synthesized compounds were screened for antifungal activity against three pathogenic fungi, namely Rhizoctonia Solani, causing root rot of okra, Fusarium oxysporum, causing wilt of mustard and Colletotrichum capsici causing leaf spot and fruit rot of chilly. I also added a review on the combined use of microwaves and ultrasound: improved tools in process chemistry and organic synthesis. To the contribution in this field I have published many research papers and in reputed International journals.

References

1. Dr. Anshu Dandia, (Research Supervisor) Professor, Department of Chemistry, University of Rajasthan, Jaipur Rajasthan – 302 004, Ph.: 0141-2520301, email: dranshudandia@yahoo.co.in
2. Professor A.K.Das, Deptt.of Chem. SLAS, Mody University of Science and Technology, 8233315441, akdas.slas@modyuniversity.ac.in
3. Dr. Harshita Sachdeva, Asso.Professor, Deptt.of Chem. University of Rajasthan, Jaipur, 9414467822, drhmsachdevaster@gmail.com
4. Dr. Harlal Singh, Professor, Deptt.of Chem. SLAS, Mody University of Science and Technology, 9057277932, harlalsingh.slas@modyuniversity.ac.in

Declaration

I declare that information furnished is true to the best of my knowledge.



Dr. Sarita Khaturia