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🌐 <https://bit.ly/3GFW9SJ>🌐 <https://nanobio.wixsite.com/shivendu>**Key Highlights**

- Research Interest:
  - Nanomedicine and Drug / Gene Delivery
  - Biomaterials and Regenerative Medicine
  - Nanomaterials – Biomolecule Interaction
  - Sustainable Nanotechnology
- Involved in prototypes for 06 different products for industries of pharmaceutical, nutraceutical, and Biomedical Sectors
- Publication / Patent Summary
  - Published 01 Patent (USPTO & WIPO) on Electrospinning Multi-Nozzle Design
  - Cumulative Impact Factor = 299.171 ; Average Impact Factor = 6.503
  - H-index – 27 (Google Scholar) 21 (Web of Science) 21 (Scopus)
  - Book Chapters – 8
  - Books – 2 (Authored); 35 (Edited)
- Editorial Summary
  - Associate Editor – Environmental Chemistry Letters (Impact Factor 13.615)
  - Editor and Reviewer in many Q1 / Q2 Journal (Publons verified)
  - Special Issue in International Journals – 04 (Published) 01 (Ongoing)

**Academic Details**

Degree	Subject	University/ Institute / Board	Year
Ph.D. (Integrated)	NanoBiotechnology	Vellore Institute of Technology, Vellore, Tamil Nadu, India	2018
B.Tech.	Biotechnology	Vellore Institute of Technology, Vellore, Tamil Nadu, India	2013

**Work Experiences**

SN	Organisation	Position	From	To
<b>Post PhD Work Experience</b>				
1.	School of Nano Science and Technology, Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, India	Assistant Professor	05-2022	-
2.	Gujarat Biotech Research Centre, DST-Government of Gujarat, Gandhinagar, Gujarat 382011, India	Research Associate	09-2021	01-2022
3.	Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, <b>South Africa</b>	Senior Research Associate	09-2018	07-2021
4.	E-Spin Nanotech Pvt. Ltd., SIIC, <b>Indian Institute of Technology, Kanpur, (IITK)</b> India	Head, Research & Technology Development	04-2018	11-2018
5.	Indian Institute of Food Processing Technology, MoFPI, Govt. of India, Thanjavur, Tamil Nadu, India	Research Associate	11-2017	03-2018
<b>Pre PhD Work Experience</b>				
6.	Vellore Institute of Technology, Vellore, TN, India	DBT – JRF / SRF	09-2015	11-2017
7.	Vellore Institute of Technology, Vellore, TN, India	RA	09-2013	08-2015
8.	CSIR-CFTRI, Mysore, Karnataka, India	UG Dissertation	12-2012	05-2013
9.	Uttar Pradesh Drugs and Pharmaceuticals Co. Ltd., Lucknow, UP, India	Research Intern	05-2011	06-2011

## Administrative Loads

Sl.No.	Assignment	From Date	To Date
<b>Institutional Administrative Loads</b>			
1.	Program Officer, NSS	01/01/2023	31/12/2024
<b>Departmental Administrative Loads</b>			
1.	Departmental ERP Representative, Nano Science and Technology	23/08/2022	31/12/2024
2.	Examination Co-In-Charge, Nano Science and Technology	23/07/2022	31/12/2024
3.	PG Tabulator, Nano Science and Technology	23/08/2022	31/12/2024
4.	Research Scholar Co-ordinator (Co-In charge), Nano Science and Tech.	23/07/2022	30/12/2023
<b>Outreach</b>			
1.	Council Member – Eastern Zone, Indian Chemical Society	01/01/2022	31/12/2024

## Subjects Teaching/Taught

1. NT70002, Introduction to Nano Science and Technology
2. BT510: Biotechnology in Pharmaceutical Science (Before joining IIT Kharagpur as Visiting Faculty NIPER-R)
3. PE520: Biopharmaceutics and Pharmacokinetics (Before joining IIT Kharagpur as Visiting Faculty NIPER-R)
4. PT530: Biochemical Engineering Fundamentals (Before joining IIT Kharagpur as Visiting Faculty NIPER-R)

## Patent(s)

- **Ranjan S**, Kumar M, Kumar R, Tiwari U, Sachan S, Patil S (2020) Capillary type multi-jet nozzle for fabricating high throughput nanofiber.
  - Patent Office: USPTO, **United States**; Publication Date: 24<sup>th</sup> Mar 2022; Patent No: US20220090298A1; Application No: US17/317,658
  - Patent Office: WIPO, **United Kingdom**; Publication Date: 14<sup>th</sup> May 2020; Patent No: WO2020095331A1; Application No: PCT/IN2019/050834
  - Patent Office: IPO, **India**; Status: Filed; Application#: 201811038684 and Date of Filing: October 11, 2018

## Took Part in Products/Prototypes Developed for Industries

SN	Product Name & Description	Year	Role as	Developed For
1.	Electrospun Nanofibrous Membrane of PM2.5 efficiency 99.9% for the application in facemask <b>Product name: SWASA™</b>	2018	Head R&T Development, E-Spin Nanotech Pvt Ltd	E-Spin Nanotech Pvt Ltd
2.	Single sided drug nanocoated Hernia mesh Product Name: easymesh™	2018		Alfa Corpuscles Pvt Ltd
3.	Placebo and nanofiber coated drug loaded oral film Technology Name: ThinOral™ Technology	2018		ZIM Labs
4.	Capillary based Multi-nozzle for electrospinning ( <b>WIPO &amp; USPTO patent</b> published)	2018		E-Spin Nanotech Pvt Ltd
5.	Model drug (lipo- & hydro-philic) microencapsulated in food grade polymer	2017	Research Associate, IIFPT, Thanjavur	Dr. Reddy's Labs

## Scientific Association

1. Life Member: Association of Food Scientists & Technologists (India) [Membership No: AFST/LM/7-2022/ZON/043; Join Date: 05/11/2022]
2. Community Member: America Chemical Society [Membership No: 31407447; Join Date: 07/08/2021]
3. Executive Member – Society for Research and Studies of Nanotechnology (21<sup>st</sup> Oct 2020)
4. Elected Fellow – Indian Engineering Teachers Association [Fellow ID: FM/2019/SR/CS/IND-012; Join Date: 30/09/2019]
5. Elected Fellow – Association of Fellow Engineers [Fellow ID: FM/2019/SR/CS/IND-012; Join Date: 30/09/2019]
6. Life Fellow – Indian Chemical Society [Fellowship No: F/8084; Join Date: 28<sup>th</sup> Dec 2018]
7. Fellow – Bose Science Society, Affiliated with Vigyan Prasar, DST, Govt of India [Fellowship No:

F507/BSS/2018; Join Date: 28/09/2018]

8. Elected Fellow – The Linnaean Society of London (18<sup>th</sup> Oct 2018)
9. Life Member – Bose Science Society, Affiliated with Vigyan Prasar, DST, Govt of India [Membership No: M507/BSS/2018; Join Date: 27/09/2018]
10. Member - Association of Food Scientists and Technologists, India [Membership No: 6/R181/13/ZON; Join Date: 31/10/2013]

### Awards & Honors

SN	Awards/Honours	Date	Awarded By
1.	<b>Grant Proposal Evaluator</b>	05-2022	Agence Nationale de la recherche (ANR), France
2.	<b>Young Investigator</b>	05-2022	IndiaBioScience (supported by Department of Biotechnology, Govt of India)
3.	<b>Vice President, ICS – North Branch</b>	28-02-2020	Indian Chemical Society
4.	<b>Fellow</b>	09-2019	Indian Engineering Teachers Association
5.	<b>Har Gobind Khorana Best Young Scientist Award in Biotechnology</b>	24-08-2019	Bose Science Society, Affiliated with Vigyan Prasar, DST, Govt of India
6.	<b>Fellow</b>	28-12-2018	Indian Chemical Society
7.	<b>Fellow</b>	18-10-2018	The Linnaean Society, <b>London</b>
8.	<b>Fellow</b>	10-2018	Bose Science Society, Affiliated with Vigyan Prasar, DST, Govt of India
9.	<b>Outstanding Certification in Reviewing</b>	10-2018	Journal of Environmental Chemical Engineering, Elsevier, Inc., Netherlands
10.	<b>Scientific Referee</b>	14-12-2017	Iran National Science Foundation (INSF), Tehran, <b>Iran</b>
11.	<b>Distinguished Alumni Award</b>	27-10-2017	School of Bio Sciences and Technology, VIT University, Vellore, India
12.	<b>Invited Juror – National Startup Competition 2017</b>	10-05-2017	Venture Cup, <b>Denmark</b>
13.	<b>Research Award 2016</b>	04-2017	VIT University, Vellore, India
14.	<b>Special Achiever Award 2015</b>	04-2016	VIT University, Vellore, India
15.	<b>Research Award 2015</b>	04-2016	VIT University, Vellore, India
16.	<b>Best Poster Award</b>	19-12-2015	Association of Food Scientists and Technologists (India)
17.	<b>Elsevier Advisory Panel</b>	05-06-2015	Elsevier Inc., Netherlands
18.	<b>Achiever Award 2014</b>	04-2015	VIT University, Vellore, India
19.	<b>GATE 2013 (BT)</b>	2013	Graduate Aptitude Test in Engineering 2013

### Editorial Experience

SN	Editorial Role	Journal, Publisher & Country	Indexing	From	To
1.	Associate Editor	Environmental Chemistry Letters, Springer	IF – 13.615	07-2016	Till Date
2.	Editorial Board	Biotechnology & Biotechnological Equipment	IF – 1.63	04-2017	Till Date
3.	Advisory Editor	Sustainable Agriculture Reviews (Springer Book Series)	-	10-2018	Till Date
4.	Associate Editor	Current Chromatography (Bentham Science)	Scopus	01-2021	Till Date
5.	Editorial Board	Nanoarchitectonics	-		
6.	Section Editor	Pharmaceutical Nanotechnology (Bentham Science)	Scopus	11-2019	11-2020
7.	Guest Editor	Journal of the Indian Chemical Society	IF – 0.28	02-2019	12-2020
8.	Editorial Board	Pharmacologia (UK)	-	05-2012	05-2014
9.	Special Issue Guest Editor	Environmental Technology & Innovation <a href="#">Click here</a>	IF - 5.26	2021	Ongoing
10.	Special Issue Guest Editor	Environmental Science and Pollution Research	IF - <b>5.19</b>	2021	Ongoing

11.	Reviewer	Publons approved reviewer > 50 journals	SCI / SCIE	2015	Till Date
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## Publications

1. Ranjan S, Rajinikanth PS (2022) ECM mimicking biodegradable nanofibrous scaffold enriched with Curcumin/ZnO to accelerate diabetic wound healing via multifunctional bioactivity. *International Journal of Nanomedicine* 17: 6843-6859. DOI: 10.2147/IJN.S388264 **[Impact Factor = 7.033]**
2. Mansuri A, Chaudhari R, Nasra S, Meghani N, Ranjan S, Kumar A (2022) Development of Food-Grade Antimicrobials of Fenugreek Oil Nanoemulsion – Toxicity and Bioactivity Analysis. *Environmental Science and Pollution Research*. DOI: 10.1007/s11356-022-19116-y **[Impact Factor = 5.19]**
3. Agarwal Y, Rajinikanth PS, Ranjan S, Tiwari U, Balasubramnaian J, Pandey P, Arya DK, Anand S, Deepak P (2021) Curcumin loaded polycaprolactone-/polyvinyl alcohol-silk fibroin based electrospun nanofibrous mat for rapid healing of diabetic wound: An in-vitro and in-vivo studies. *International Journal of Biological Macromolecules* 176: 376-386. DOI: 10.1016/j.ijbiomac.2021.02.025 **[Corresponding Author] [Impact Factor = 8.025]**
4. Jain A, Dasgupta N, Ranjan S, Singh V, Singh H, Purohit SD, Mishra NC, Yadav NP, Haque S, Mishra BN, Samanta SK (2021) Whey protein based electrospayed nanospheres for encapsulation and controlled release of bioactive compounds from *Tinospora cordifolia* extract. *Innovative Food Science and Emerging Technologies*, 69: 102671. DOI: 10.1016/j.ifset.2021.102671 **[Corresponding Author] [Impact Factor = 7.104]**
5. Vijayakumar S, Divya M, Vaseeharan B, Ranjan S, Kalaiselvi V, Dasgupta N, Chen J, Durán-Lara EF (2021) Biogenic preparation and Characterization of ZnO nanoparticles from natural polysaccharide *Azadirachta indica*. L. (neem gum) and its clinical implications. *Journal of Cluster Science* 32: 983–993. DOI: 10.1007/s10876-020-01863-y **[Corresponding Author] [Impact Factor = 3.447]**
6. Muthulakshmi L, Vijayakumar T, Selvam P, Annaraj J, **Ranjan S**, Dasgupta N (2021) Strong and nonspecific synergistic antibacterial/antibiofilm impact of nano-silver biosynthesized and decorated with active ingredients of *Oscimum basilicum* L. *3 Biotech* 11(4): 153. DOI: 10.1007/s13205-021-02687-x **[Corresponding Author] [Impact Factor = 2.893]**
7. Sekar V, Mani D, Baskaralingam V, Chen J, Biruntha M, Paulino-Silva L, Durán-Lara EF, **Ranjan S**, Dasgupta N (2021) Biological compound capping of silver nanoparticle with the seed extracts of Black cumin (*Nigella sativa*): A potential antibacterial, antidiabetic, anti-inflammatory, and antioxidant. *Journal of Inorganic and Organometallic Polymers and Materials* 31: 624–635. DOI: 10.1007/s10904-020-01713-4 **[Impact Factor = 3.518]**
8. Maheswari N, Juliana J, Kavithakani A, Muthu IGS, Nirkayani B, Harish KR, Mohammed ADF, Ragavan C, **Ranjan S**, Padmanaban VC (2021) Can human overcome viral hijack-? Comprehensive review on COVID-19 in the view of diagnosis and mitigation across countries. *Journal of Drug Delivery Science and Technology* 61: 102120 DOI: 10.1016/j.jddst.2020.102120 **[Corresponding Author] [Impact Factor = 5.062]**
9. Ganesapillai M, Drewnowski J, **Ranjan S**, Selvaraj T (2021) Sustainable recovery of plant essential Nitrogen and Phosphorus from human urine using industrial coal fly ash. *Environmental Technology & Innovations* 24: 101985. DOI: 10.1016/j.eti.2021.101985 **[Impact Factor = 7.758]**
10. Felix SV, Mohan B, Vaidhegi K, **Ranjan S**, Dharmalingam S (2021) Electrospun Nanofibers of Polyvinylidene Fluoride incorporated with Titanium Nanotubes for Purifying Air with Bacterial Contamination. *Environmental Science and Pollution Research* 28: 37520–37533. DOI: 10.1007/s11356-021-13202-3 **[Corresponding Author] [Impact Factor = 5.19]**
11. Muthulakshmi L, Annaraj J, Seeram R, Rangappa SM, Siengchin S, **Ranjan S**, Dasgupta N (2021) A sustainable solution for enhanced food packaging via a science-based composite blend of natural-sourced chitosan and microbial extracellular polymeric substances. *Journal of Food Processing and*

- Preservation 41(1): e15031 DOI: 10.1111/jfpp.15031 [Corresponding Author] [Impact Factor = 2.609]
12. Vaidhegi K, Ojha AK, **Ranjan S**, Nandita D, Mahesh G, Sangeetha D, Elmoll A, Seyed AH, Muthulakshmi L, Sekar V (2021) Future Applications of Electrospun Nanofibers in Pressure Driven Water Treatment: A Brief Review and Research Update. *Journal of Environmental Chemical Engineering* 9(2): 105107. DOI: 10.1016/j.jece.2021.105107 [Corresponding Author] [Impact Factor = 7.968]
  13. Ranjan S, Dasgupta N, Mishra D, Ramalingam C (2020) Involvement of Bcl-2 activation and G1 cell cycle arrest in colon cancer cells induced by titanium dioxide nanoparticles synthesized by microwave-assisted hybrid approach. *Frontiers in Bioengineering and Biotechnology* 8:606. DOI: 10.3389/fbioe.2020.00606 [First Author] [Impact Factor = 6.064]
  14. Ranjan S, Dasgupta N, Verma P, Ramalingam C (2020) Acute and sub-chronic toxicity of titanium dioxide nanoparticles synthesized by microwave-irradiation-assisted hybrid chemical approach. *Journal of the Indian Chemical Society* 97: 483-491 [First Author] [Impact Factor = 0.243]
  15. Kumar R, Adil KR, Ranjan S, Kumar VB (2020) Advances in Nanotechnology and Nanomaterials Based Strategies for Neural Tissue Engineering. *Journal of Drug Delivery Science and Technology* 57: 101617. DOI: 10.1016/j.jddst.2020.101617 [Impact Factor = 5.063]
  16. Singh P, Dasgupta N, Singh V, Mishra NC, Singh H, Purohit SD, Srivastava N, Ranjan S, Yadav NP, Mishra BN (2020) Inhibitory effect of clove oil nanoemulsion on fumonisin isolated from maize kernels. *LWT Food Science and Technology* 134: 110237. DOI: 10.1016/j.lwt.2020.110237 [Corresponding Author] [Impact Factor = 6.056]
  17. Pallavi S, Sangela V, Ranjan S, Dutta V, Dasgupta N, Phulwaria M, Rathore DS, Harish (2020) Aquatic Nanotoxicology: Impact of Carbon Nanomaterials on Algal Flora. *Energy, Ecology and Environment* 5: 240–252. DOI: 10.1007/s40974-020-00151-9 [SCIE Indexed]
  18. Dasgupta N, Ranjan S, Ramalingam C, Gandhi M (2019) Silver Nanoparticles Engineered by Thermal Co-Reduction Approach Induces Liver Damage in Wistar Rats: Acute and Sub-Chronic Toxicity Analysis. *3 Biotech* 9:125. DOI: 10.1007/s13205-019-1651-6 [Corresponding Author] [Impact Factor = 2.893]
  19. Walia N, Dasgupta N, Ranjan S, Ramalingam C, Gandhi M (2019) Food-grade nanoencapsulation of vitamins. *Environmental Chemistry Letters* 17(2): 991–1002. DOI: 10.1007/s10311-018-00855-9 [Corresponding Author] [Impact Factor = 13.615]
  20. Dasgupta N, Ranjan S, Gandhi M (2019) Nanoemulsion ingredients and components. *Environmental Chemistry Letters* 17(2): 917–928. DOI: 10.1007/s10311-018-00849-7 [Corresponding Author] [Impact Factor = 13.615]
  21. Ranjan S, Dasgupta N, Singh S, Gandhi M (2019) Toxicity and regulations of food nanomaterials. *Environmental Chemistry Letters* 17(2): 929–944. DOI: 10.1007/s10311-018-00851-z [First Author] [Impact Factor = 13.615]
  22. Deb C, Thowani B, Menon S, Gore V, Chellappan V, **Ranjan S**, Ganesapillai M (2019) Design and analysis for the removal of active pharmaceutical residues from synthetic wastewater stream. *Environmental Science and Pollution Research* 26(18): 18739–18751. DOI: 10.1007/s11356-019-05070-9 [Impact Factor = 5.19]
  23. Walia N, Dasgupta N, **Ranjan S**, Chidambaram R, Gandhi M (2019) Methods for nanoemulsion and nanoencapsulation of food bioactives. *Environmental Chemistry Letters*. 17(4): 1471–1483. DOI: 10.1007/s10311-019-00886-w [Corresponding Author] [Impact Factor = 13.615]
  24. Dasgupta N, **Ranjan S**, Gandhi M (2019) Nanoemulsions in Food: Market demand. *Environmental Chemistry Letters* 17(2): 1003–1009. DOI: 10.1007/s10311-019-00856-2 [Corresponding Author] [Impact Factor = 13.615]
  25. Dasgupta N, Ranjan S, Mishra D, Ramalingam C (2018) Thermal Co-reduction engineered silver nanoparticles induce oxidative cell damage in human colon cancer cells through inhibition of



- reduced glutathione and induction of mitochondria-involved apoptosis. *Chemico-Biological Interactions* 295: 109-118. DOI: [10.1016/j.cbi.2018.07.028](https://doi.org/10.1016/j.cbi.2018.07.028) [**First Author in Equal Contribution**] [**Impact Factor = 5.168**]
26. Kadiyala NK, Mandal BK, Ranjan S, Dasgupta N (2018) Bioinspired gold nanoparticles decorated reduced graphene oxide nanocomposite using *Syzygium cumini* seed extract: Evaluation of its biological applications. *Materials Science and Engineering C* 93: 191-205. DOI: [10.1016/j.msec.2018.07.075](https://doi.org/10.1016/j.msec.2018.07.075) [**Impact Factor = 8.457**]
  27. Meghani N, Patel P, Kansara K, Ranjan S, Dasgupta N, Ramalingam C, Kumar A (2018) Formulation of vitamin D encapsulated cinnamon oil nanoemulsion: Its potential anti-cancerous activity in human alveolar carcinoma cells. *Colloids and Surfaces B: Biointerfaces* 166: 349-357. DOI: [10.1016/j.colsurfb.2018.03.041](https://doi.org/10.1016/j.colsurfb.2018.03.041) [**Impact Factor = 5.999**]
  28. Ranjan S, Dasgupta N, Sudandiradoss C, Ramalingam C, Kumar A (2018) Titanium dioxide nanoparticle-protein interaction explained by docking approach. *International Journal of Nanomedicine* 13:47-50. DOI: 10.2147/IJN.S125008 [**First Author**] [**Impact Factor = 7.033**]
  29. Jain A, Ranjan S, Dasgupta N, Ramalingam C (2018) Nanomaterials in food and Agriculture: an overview on their safety concerns and regulatory issues. *Critical Reviews in Food Science and Nutrition* 58: 297-317. DOI: 10.1080/10408398.2016.1160363 [**Corresponding Author**] [**Impact Factor = 11.208**]
  30. Hosseini SA, Abbasian AR, Gholipoor O, **Shivendu R**, Nandita D (2018) Adsorptive removal of arsenic from real sample of polluted water using magnetic GO/ZnFe<sub>2</sub>O<sub>4</sub>nanocomposite and ZnFe<sub>2</sub>O<sub>4</sub> nanospinel. *International Journal of Environmental Science and Technology* 16(11): 7455–7466 DOI: 10.1007/s13762-018-2140-x [**Impact Factor = 3.519**]
  31. Walia N, Dasgupta N, Ranjan S, Chen L, Ramalingam C (2017) Fish oil based vitamin D nanoencapsulation by ultrasonication and bioaccessibility analysis in simulated gastro-intestinal tract. *Ultrasonics Sonochemistry* 39: 623–635. DOI: 10.1016/j.ultsonch.2017.05.021 [**Corresponding Author**] [**Impact Factor = 9.336**]
  32. Siripireddy B, Mandal BK, Ranjan S, Dasgupta N, Ramalingam C (2017) Nano-zirconia - Evaluation of its antioxidant and anticancer activity. *Journal of Photochemistry and Photobiology B: Biology* 170: 125-133. DOI: 10.1016/j.jphotobiol.2017.04.004 [**Impact Factor = 6.814**]
  33. Maddinedi SB, Mandal BK, Patil SH, Andhalkar VV, Ranjan S, Dasgupta N (2017) Diastase induced green synthesis of bilayered reduced graphene oxide and its decoration with gold nanoparticles. *Journal of Photochemistry & Photobiology, B: Biology* 166: 252-258. DOI: 10.1016/j.jphotobiol.2016.12.008 [**Impact Factor = 6.814**]
  34. Tammina SK, Mandal BK, Ranjan S, Dasgupta N (2017) Cytotoxicity study of Piper nigrum seed mediated synthesized SnO<sub>2</sub> nanoparticles towards colorectal (HCT116) and lung cancer (A549) cell lines. *Journal of Photochemistry & Photobiology, B: Biology* 166: 158-168. DOI: 10.1016/j.jphotobiol.2016.11.017 [**Impact Factor = 6.814**]
  35. Shukla A, Dasgupta N, Ranjan S, Singh S, Ramalingam C (2017) Nanotechnology towards prevention of anaemia and osteoporosis: from concept to market. *Biotechnology and Biotechnological Equipment* 31(5): 863–879 DOI: 10.1080/13102818.2017.1335615 [**Corresponding Author**] [**Impact Factor = 1.762**]
  36. Dasgupta N, **Ranjan S**, Chidambaram R (2017) Applications of Nanotechnology in agriculture and water quality management. *Environmental Chemistry Letters* 15(4): 591–605. DOI: 10.1007/s10311-017-0648-9 [**Corresponding Author**] [**Impact Factor = 13.615**]
  37. Ranjan S, Dasgupta N, Srivastava P, Ramalingam C (2016) A spectroscopic study on interaction between bovine serum albumin and titanium dioxide nanoparticle synthesized from microwave-assisted hybrid chemical approach. *Journal of Photochemistry and Photobiology, B: Biology* 161:472-481. DOI: 10.1016/j.jphotobiol.2016.06.015 [**First Author**] [**Impact Factor = 6.814**]
  38. Dasgupta N, Ranjan S, Patra D, Srivastava P, Kumar A, Ramalingam C (2016) Bovine serum

- albumin interacts with silver nanoparticles with a “side-on” or “end on” conformation. *Chemico Biological Interaction* 253: 100-111. DOI: 10.1016/j.cbi.2016.05.018 **[First Author in Equal Contribution] [Impact Factor = 5.168]**
39. **Ranjan S**, Dasgupta N, Bhavapriya R, Ganesh SA, Chidambaram R, Ashutosh K (2016) Microwave-irradiation-assisted hybrid chemical approach for titanium dioxide nanoparticle synthesis: microbial and cytotoxicological evaluation. *Environmental Science and Pollution Research* 23:12287-12302. DOI: 10.1007/s11356-016-6440-8 **[First Author] [Impact Factor = 5.19]**
  40. Dasgupta N, **Ranjan S**, Bhavapriya R, Venkatraman M, Chidambaram R, Avadhani GS, Ashutosh K (2016) Thermal co-reduction approach to vary size of silver nanoparticle: its microbial and cellular toxicology. *Environmental Science and Pollution Research* 23:4149 – 4163. DOI: 10.1007/s11356-015-4570-z **[First Author in Equal Contribution] [Impact Factor = 5.19]**
  41. Dasgupta N, **Ranjan S**, Mundra S, Kumar A, Chidambaram R (2016) Fabrication of Food grade Vitamin E nanoemulsion by low energy approach: characterization and its application. *International Journal of Food Properties* 19(3):700-708. DOI: 10.1080/10942912.2015.1042587 **[First Author in Equal Contribution] [Impact Factor = 3.388]**
  42. **Ranjan S**, Chidambaram R (2016) Titanium dioxide nanoparticles induce bacterial membrane rupture by reactive oxygen species generation. *Environmental Chemistry Letters* 14(4): 487-494. DOI: 10.1007/s10311-016-0586-y **[First Author] [Impact Factor = 13.615]**
  43. Janardan S, Suman P, Ragul G, Anjaneyulu U, **Ranjan S**, Dasgupta N, Ramalingam C, Sasikumar S, Vijayakrishna K, Sivaramakrishna A (2016) Assessment on the Antibacterial Activity of Nanosized Silica derived from Hypercoordinated Silicon(IV) Precursors. *RSC Advances* 6: 66394-66406. DOI: 10.1039/C6RA12189F **[Impact Factor = 4.036]**
  44. **Ranjan S**, Dasgupta N, Walia N, Thara CC, Chidambaram R (2016) Microwave Blanching: An Emerging Trend in Food Engineering and its Effects on *Capsicum annuum* L. *Journal of Food Process Engineering* 40(2): e12411. DOI: 10.1111/jfpe.12411 **[First Author] [Impact Factor =2.889]**
  45. Maddinedi SB, Badal KM, **Ranjan S**, Dasgupta N (2015) Diastase assisted green synthesis of size-controllable gold nanoparticles. *RSC Advances* 5: 26727-26733. DOI: 10.1039/C5RA03117F **[Impact Factor = 4.036]**
  46. Dasgupta N, **Ranjan S**, Deepa M, Chidambaram R, Ashutosh K, Rishi S (2015) Nanotechnology in agro-food: from field to plate. *Food Research International* 69: 381-400. DOI: 10.1016/j.foodres.2015.01.005 **[First Author in Equal Contribution] [Impact Factor = 7.425]**
  47. **Ranjan S**, Dasgupta N, Arkadyuti RC, Melvin SS, Chidambaram R, Rishi S, Ashutosh K (2014) Nanoscience and nanotechnologies in food industries: opportunities and research trends. *Journal of Nanoparticle Research* 16 (6): 2464. DOI: 10.1007/s11051-014-2464-5 **[First Author] [Impact Factor = 2.533]**

### Special Issue as Guest Editor

1. Siram K, Kandimalla R, Ranjan S, Meghani N, Amin HH Rahman H (*Topic Editor*) Translating Nanomedicines for Anti-Cancer Treatment. Special Issue in *Frontiers in Pharmacology* (ongoing) **(Impact Factor = 5.988)**
2. Ratan K Jatinder, Dasgupta Nandita, Ranjan Shivendu, Jasra RakshVir (*Guest Eds.*) Advanced Technologies for Environmental Sustainability. Special Issue in *Environmental Technology & Innovation* (ongoing) **(Impact Factor = 7.758)**
3. Dasgupta N, Ranjan S, Ratan JK, Jasra RV (*Guest Eds.*) SI Title: Risk Assessment, Management, and Mitigation of Emerging Bio & Chemical Hazards. Special Issue in *Env Sci Pollut Res* (ongoing) **(Impact Factor = 5.190)**
4. **Ranjan Shivendu**, Sinha Shishir, Jatinder Kumar Ratan, Priyanshu Verma (*Guest Eds.*), Special

Issue of CHEMBIOEN 2020 (International Conference on Chemical, Bio, & Environmental Engineers organized at Dr. BR Ambedkar National Institute of Technology, Jalandhar, Punjab, India) in Journal of The Indian Chemical Society Volume 97, Issue 3, March 2020 (**Impact Factor = 0.233**)

5. Kumar Sushil, Patle Dipesh Shikchand, **Ranjan Shivendu** (*Guest Eds.*) Special Issue of ChemConFlux 2020 (International Conference on Energy and Environmental Technologies for Sustainable Development organized at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Prayagraj, Uttar Pradesh, India) in Journal of the Indian Chemical Society Volume 97, Issue 10A, October 2020 (**Impact Factor = 0.233**)

### Authored Books

1. Dasgupta N, Ranjan S (Authors) (2018) **An Introduction to Food Grade Nanoemulsions**. Springer International Publishing Singapore. ISBN: 978-981-10-6986-4. DOI: 10.1007/978-981-10-6986-4 (**Web of Science Indexed; Book Citation Index**)
2. **3D Printing in Biotechnology: Current Technologies and Applications**, Dasgupta N, Singh, V, Ranjan S, Mishra T, Mishra BN (Authors) Elsevier BV, Amsterdam, Netherlands. ISBN: 978-0128203019 **Contracted**

### Book Chapters

1. Kugarajah V, Ojha AK, Hadem H, Dasgupta N, Mishra BN, **Ranjan S**, Dharmalingam S (2022) Chapter 2 - Nanoparticles and nanofluids: Characteristics and behavior aspects. In Food, Medical, and Environmental Applications of Nanomaterials (Eds. Pal K, Sarkar A, Sarkar P, Bandara N, Jagadheesan V) ISBN: 978-0-12-822858-6. pp – 41-71. Elsevier (USA). DOI: 10.1016/B978-0-12-822858-6.00002-9
2. Kugarajah V, Hadem H, Ojha AK, **Ranjan S**, Dasgupta N, Mishra BN, Dharmalingam S (2022) Chapter 1 - Fabrication of nanomaterials. In Food, Medical, and Environmental Applications of Nanomaterials (Eds. Pal K, Sarkar A, Sarkar P, Bandara N, Jagadheesan V) ISBN: 978-0-12-822858-6. pp – 1-39. Elsevier (USA). DOI: 10.1016/B978-0-12-822858-6.00001-7
3. Gandhi M, Shiao-Shing C, Ray SS, Jaiswal NK, Ranjan S (2021) Chapter 09: Phyto-Nanosensors: Advancement of Phytochemicals as an Electrochemical Platform for Various Biomedical Applications. In Environmental Nanotechnology Volume 5 (Eds: Dasgupta N, Ranjan S, Lichtfouse E, Mishra BN) ISBN: 978-3-030-73009-3. pp- 311-338. Springer Nature Switzerland AG, Cham, Switzerland. DOI: 10.1007/978-3-030-73010-9\_9
4. Kumar V, Guleria P, **Ranjan S** (2021) Chapter 10: Phytoresponse to Nanoparticle Exposure. In Nanotoxicology and Nanoecotoxicology Vol. 1 (Eds: Vineet K, Praveen G, Ranjan S, Dasgupta N, Lichtfouse E). ISBN: 978-3-030-63241-0. pp. 251-286. Springer Nature Switzerland AG, Cham, Switzerland. DOI: 10.1007/978-3-030-63241-0\_10
5. Singh S, **Ranjan S**, Dasgupta N, Chidambaram R (2018) Chapter 12: Nanotechnology in Functional Foods and Their Packaging. In Nanobiotechnology Human Health and the Environment (Eds: Dhawan A, Singh S, Kumar A, Shanker R) 2018 (ISBN: 9781351031585). pp. 389-412. CRC Press, Boca Raton, Florida, USA. DOI 10.1201/9781351031585-12 [Corresponding Author]
6. Dasgupta N, **Ranjan S**, Charaborty AR, Chidambaram R, Shanker R, Kumar A (2016) Chapter 1: Nanoagriculture and water quality management. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) Sustainable Agriculture Reviews: Nanoscience in Food and Agriculture 1 (ISBN: 978-3-319-39302-5). Springer International Publishing Switzerland. DOI: 10.1007/978-3-319-39302-5\_1 [Corresponding Author] (**Web of Science Indexed; Book Citation Index**)
7. **Ranjan S**, Dasgupta N, Chidambaram R, Kumar A (2016) Ch.7: Nanoemulsions in Food Science and Nutrition. Book: Nanotechnology in nutraceuticals: Production to consumption (ISBN: 9781315370859). Sen S, Pathak Y (Eds.) CRC press, Boca Raton, Florida. pp: 135. DOI: 10.1201/9781315370859-17 (**Scopus Indexed**)
8. Dasgupta N, **Ranjan S**, Chidambaram R, Kumar A (2016) Ch. 17: Nanonutraceuticals: Are they



safe? Book: Nanotechnology in nutraceuticals: Production to consumption (ISBN: 9781315370859). Sen S, Pathak Y (Eds.) CRC press, Boca Raton, Florida. pp: 317. DOI: 10.1201/9781315370859-27 (**Scopus Indexed**)

9. Sannapaneni J, Pavankumar BB, **Ranjan S**, Dasgupta N, Samuel MS, Chidambaram R, Akella S, Kari V (2015) Chapter 12: A Chemist's Perspective on Bioenergy: Opportunities and Challenges. Navanietha KR, Jong-Sung Y (Ed.) Bioenergy: Opportunities and Challenges; Apple Academic Press, Oakville, Canada. ISBN: 9781771881098. DOI: 10.1201/b18718-22 (**Scopus Indexed**)

### Edited Books

1. Maurya VK, Gothandam M, Ranjan S, Dasgupta N, Lichtfouse E (2022) Micro and Nano Engineering in Food Science Vol 1. Springer International Publishing Switzerland AG. ISBN: 9783030768126 DOI: 10.1007/978-3-030-76813-3
2. Gothandam KM, Srinivasan R, **Ranjan S**, Dasgupta N (2022) Biotechnology for Toxicity Remediation and Environmental Sustainability. CRC Press, Boca Raton, Florida. ISBN: 9781032319230
3. Kumar V, Guleria P, **Ranjan S**, Dasgupta N, Lichtfouse E (2021) Nanotoxicology and Nanoecotoxicology Vol. 2. Springer International Publishing Switzerland AG. ISBN: 9783030694913. DOI: 10.1007/978-3-030-69492-0
4. Kumar V, Guleria P, **Ranjan S**, Dasgupta N, Lichtfouse E (2021) Nanotoxicology and Nanoecotoxicology Vol. 1. Springer International Publishing Switzerland AG. ISBN: 9783030632410. DOI: 10.1007/978-3-030-63241-0
5. Kumar V, Guleria P, **Ranjan S**, Dasgupta N (2021) Functionalized Nanomaterials II Applications, CRC Press, Boca Raton, Florida, ISBN: 9781351021388. DOI: 10.1201/9781351021388
6. Lateef A, Kana EBG, Dasgupta N, **Ranjan S** (2021) Microbial Nanobiotechnology: Principles and Applications. Springer International Publishing Singapore. ISBN: 9789813347779. DOI: 10.1007/978-981-33-4777-9
7. Kumar V, Guleria P, Ranjan S, Dasgupta N, Lichtfouse E (2021) Nanosensors for Environment, Food and Agriculture Vol. 1. Springer International Publishing Singapore. ISBN: 9783030632458. DOI: 10.1007/978-3-030-63245-8
8. Dasgupta N, **Ranjan S**, Lichtfouse E, Mishra BN (Eds.) (2021) Environmental Nanotechnology Volume 5, Springer International Publishing Singapore. ISBN: 9783030730109. DOI: 10.1007/978-3-030-73010-9
9. Gothandam KM, Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2021) Environmental Biotechnology Vol 4, Springer International Publishing Singapore. ISBN: 978-3-030-77794-4. DOI: 10.1007/978-3-030-77795-1
10. Gothandam KM, **Ranjan S**, Dasgupta N, Lichtfouse E (Eds.) (2021) Environmental Biotechnology Vol 3, Springer International Publishing Singapore. ISBN: 9783030489731. DOI: 10.1007/978-3-030-48973-1
11. Gothandam KM, **Ranjan S**, Dasgupta N, Lichtfouse E (Eds.) (2021) Environmental Biotechnology Vol 2, Springer International Publishing Singapore. ISBN: 9783030381967. DOI: 10.1007/978-3-030-38196-7
12. Gothandam KM, **Ranjan S**, Dasgupta N, Lichtfouse E (Eds.) (2021) Environmental Biotechnology Vol 1, Springer International Publishing Singapore. ISBN: 9783030381929. DOI: 10.1007/978-3-030-38192-9
13. Kumar V, Guleria P, **Ranjan S**, Dasgupta N (2020) Functionalized Nanomaterials I Fabrications, CRC Press, Boca Raton, Florida, ISBN: 9780815370413. DOI: 10.1201/9781351021623
14. Yata VK, **Ranjan S**, Dasgupta N, Lichtfouse E (2020) Nanopharmaceuticals: Principles and Applications Vol. 3. Springer International Publishing Singapore. ISBN: 9783030471200. DOI: 10.1007/978-3-030-47120-0
15. Yata VK, **Ranjan S**, Dasgupta N, Lichtfouse E (2020) Nanopharmaceuticals: Principles and Applications Vol. 2. Springer International Publishing Singapore. ISBN: 9783030449216. DOI:

10.1007/978-3-030-44921-6

16. Yata VK, **Ranjan S**, Dasgupta N, Lichtfouse E (2020) Nanopharmaceuticals: Principles and Applications Vol. 1. Springer International Publishing Singapore. ISBN: 9783030449254. DOI: 10.1007/978-3-030-44925-4
17. Daima HK, Navya PN, **Ranjan S**, Dasgupta N, Lichtfouse E (2020) Nanoscience in Medicine Volume 1, Springer International Publishing Singapore. ISBN: 9783030292065. DOI: 10.1007/978-3-030-29207-2
18. Hebbar UH, **Ranjan S**, Nandita D, Mishra RK (2020) Nano-food Engineering (A Volume in the Food Engineering Series) Springer International Publishing AG, Gewerbestrasse 11, 6330 Cham, Switzerland. ISBN: 9783030445522. DOI: 10.1007/978-3-030-44552-2 (**Scopus Indexed**)
19. Mohapatra SM, **Ranjan S**, Dasgupta N, Mishra R, Thomas S (Eds.) (2019) Nanocarriers for Drug Delivery 1st Edition (Nanoscience and Nanotechnology in Drug Delivery), Elsevier Inc. Cambridge, MA 02139, USA ISBN: 9780128140338. DOI: 10.1016/C2017-0-00199-4 (**Web of Science Indexed; Book Citation Index**)
20. Mohapatra SM, **Ranjan S**, Dasgupta N, Mishra R, Thomas S (Eds.) (2019) Characterization and biology of nanomaterials for drug delivery 1st Edition (Nanoscience and Nanotechnology in Drug Delivery), Elsevier Inc. Cambridge, MA 02139, USA ISBN: 9780128140314. DOI: 10.1016/C2017-0-00272-0 (**Scopus Indexed**) (**Web of Science Indexed; Book Citation Index**)
21. Mohapatra SM, **Ranjan S**, Dasgupta N, Mishra R, Thomas S (Eds.) (2019) Applications of Targeted Nano Drugs and Delivery Systems (Nanoscience and Nanotechnology in Drug Delivery), Elsevier Inc. Cambridge, MA 02139, USA ISBN: 9780128140291. DOI: 10.1016/C2017-0-00274-4 (**Web of Science Indexed; Book Citation Index**)
22. Karthik L, Kirthi VA, **Ranjan S**, Srinivasan VM (2019) Biological Synthesis of Nanoparticles and Their Applications. CRC Press, Boca Raton, Florida, ISBN: 9780367210694. DOI: 10.1201/9780429265235
23. Dasgupta N, **Ranjan S**, Lichtfouse E (Eds.) (2019) Environmental Nanotechnology Volume 4, Springer International Publishing Singapore. ISBN: 9783030266677. DOI: 10.1007/978-3-030-26668-4
24. Dasgupta N, **Ranjan S**, Lichtfouse E (Eds.) (2019) Environmental Nanotechnology Volume 3, Springer International Publishing Singapore. ISBN: 9783030266714. DOI: 10.1007/978-3-030-26672-1
25. Dasgupta N, **Ranjan S**, Lichtfouse E (Eds.) (2019) Environmental Nanotechnology Volume 2, Springer International Publishing Singapore. ISBN: 9783319987071. DOI: 10.1007/978-3-319-98708-8
26. Gothandam KM, **Ranjan S**, Dasgupta N, Lichtfouse E (Eds.) (2019) Nanoscience and Biotechnology for Environmental Applications, Springer International Publishing Singapore. ISBN: 9783319979212. DOI: 10.1007/978-3-319-70166-0
27. Kumar V, Dasgupta N, **Ranjan S** (Eds.) (2018) Environmental Toxicity of Nanomaterials, CRC Press, Boca Raton, Florida, ISBN: 9780815366522. DOI: 10.1201/9781351252966
28. Kumar V, Dasgupta N, **Ranjan S** (Eds.) (2018) Nanotoxicology: Toxicity Evaluation, Risk Assessment and Management, CRC Press, Boca Raton, Florida, United States. ISBN:9781498799416. DOI: 10.1201/b21545
29. Dasgupta N, Ranjan S, Lichtfouse E (Eds.) (2018) Environmental Nanotechnology Volume 1, Springer International Publishing Singapore. ISBN: 9783319760902. DOI: 10.1007/978-3-319-76090-2 (**Web of Science Indexed; Book Citation Index**)
30. Gothandam KM, Shivendu R, Nandita D, Chidambaram R, Eric L (Eds.) (2018) Nanotechnology, Food Security and Water Treatment, Springer International Publishing Singapore. ISBN: 9783319701660. DOI: 10.1007/978-3-319-70166-0 (**Web of Science Indexed; Book Citation Index**)

31. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2017) Nanoscience in Food and Agriculture 5, Springer International Publishing Switzerland. ISBN: 9783319584966. DOI: 10.1007/978-3-319-58496-6 (**Web of Science Indexed; Book Citation Index**)
32. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2017) Nanoscience in Food and Agriculture 4, Springer International Publishing Switzerland. ISBN: 9783319531120. DOI: 10.1007/978-3-319-53112-0
33. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2016) Nanoscience in Food and Agriculture 3, Springer International Publishing Switzerland. ISBN: 9783319480084. DOI: 10.1007/978-3-319-48009-1 (**Web of Science Indexed; Book Citation Index**)
34. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2016) Nanoscience in Food and Agriculture 2, Springer International Publishing Switzerland. ISBN: 9783319393063. DOI: 10.1007/978-3-319-39306-3 (**Web of Science Indexed; Book Citation Index**)
35. Ranjan S, Dasgupta N, Lichtfouse E (Eds.) (2016) Nanoscience in Food and Agriculture 1, Springer International Publishing Switzerland. ISBN: 9783319393032. DOI: 10.1007/978-3-319-39303-2 (**Web of Science Indexed; Book Citation Index**)

### **Conferences Organized / Invited Talk / Oral Presentation**

1. **National Advisory Member**, International Conference on Recent Advances in Biotechnology and Environmental Science (ICRABES); organized by Vellore Institute of Technology, Vellore along with an association of Association of Biotechnology and Pharmacy, from 16th to 18th December, 2022 at VIT Vellore, Tamil Nadu, India
2. **Invited Talk** (Title: Food Grade Nanomaterials and Safety Perspectives) in Dobes days conference organized by University of Veterinary Sciences, Brno on 05<sup>th</sup> Sept 2022, at Palackeho, Brno (Online)
3. **Invited Talk** (Title: Nano-fibres for Healthcare and Biomedical Application) in International Conference on Sustainability: Integrated and Scientific Approach (ICS 2022) held at University of Mumbai, on 04<sup>th</sup> Aug 2022, at Mumbai, Maharashtra (Online)
4. **Invited Talk** (Title: Electrospinning and Electro spraying in Drug Delivery & Healthcare Application) during the 161<sup>st</sup> Birth Anniversary Celebration of Acharya PC Ray at Department of Chemistry, Jadavpur University, Kolkata (Online)
5. **Invited Talk** (Title: Nano-Food Technology: Processes and Technology) in School of Bio Sciences and Technology, Vellore Institute of Technology, Vellore on 01<sup>st</sup> June 2022. (Online)
6. **Invited Talk** (Title: Nanotoxicology and Available Regulations: Global Scenario) in the International Conference of Emerging Trends in Biotechnology (ICETB) organized by School of Bio Sciences and Technology, Vellore Institute of Technology along with association of Association of Biotechnology and Pharmacy, from December 14-16 2020 at Vellore, Tamil Nadu, India
7. **Invited Talk** (Title: Environmental, Health and Safety Implications of Nanomaterials: Critical Issues) in 2<sup>nd</sup> International Conference on Future Aspects of Sustainable Technologies (FAST 2.0) Organized by Department of Chemistry, Central Institute of Technology Kokrajhar (Deemed to be University, Ministry of Education, Govt of India), Assam, India on 20-21 October 2020 at Kokrajhar, Assam, India
8. **Keynote Speaker** (Talk Title: Nanotechnology at Industrial Scale – An Overview on Toxicological Aspect) in International Conference On Sustainable Technologies In Healthcare and Environment Organised by Department of Biotechnology Kamaraj College of Engineering and Technology during 6-7 March 2020 at K. Vellakulam, Madurai, Tamil Nadu, India
9. **Organizing Secretary (Publication)** in International Conference On Sustainable Technologies In Healthcare and Environment Organised by Department of Biotechnology Kamaraj College of Engineering and Technology during 6-7 March 2020 at K.Vellakulam, Madurai, Tamil Nadu, India

10. **Advisory Committee** of Chem-ConFlux 20: International Conference on Energy and Environment Technologies for Sustainable Development organized by Motilal Nehru National Institute of Technology, Allahabad during 14<sup>th</sup> – 16<sup>th</sup> February 2020 at Allahabad, Uttar Pradesh, India
11. **Organizing Secretary (Publication)** in International Conference on Chemical, Bio & Environmental Engineering (ChemBioEn 2020) organized by Dr. B. R. Ambedkar National Institute of Technology, Jalandhar during 13<sup>th</sup> – 14<sup>th</sup> February 2020 at Jalandhar, Punjab, India
12. **Plenary Speaker** (Talk Title: Nanoparticles for Cancer Treatment: Are They Equally Safer for Healthy Cells) during National conference on Frontiers in Cancer Research organized by Department of Biochemistry, Arcot Sri Mahalskshmi Women's College, Vellore during 05-06 February 2019
13. **Resource Person and Speaker** (Talk Title: STI Capacity Building in Lower Strata of Indian Society: Barriers & Obstacles) during two days National Workshop on ‘Application of Technical Terminology in Science & Technology’, Organized by Commission for Scientific and Technical Terminology, Department of Higher Education, Ministry of Human Resource Development, Government of India during 23-24 October 2019 at Lucknow, Uttar Pradesh, India
14. **Organizing Secretary** of National Workshop on Building National STI Policy System and Governance for Effective R&D Ecosystem, organized by DST-Centre for Policy Research, Lucknow on 05<sup>th</sup> March 2019
15. **Invited Talk as Special Guest** (Talk title: Nanotechnology as emerging technology in fire safety measures and equipment) in Valedictory Session of Fire Safety Week organized by Central Industrial Security Force, Ministry of Home Affairs, Government of India at National Thermal Power Corporation, Barh, Bihar India on 20<sup>th</sup> April, 2019
16. **Invited Talk** entitled ‘Electrospinning and Electrospaying for Active Compound Encapsulation’ at Department of Chemical and Biochemical Engineering, Indian Institute of Technology Patna on April 16<sup>th</sup> 2019.
17. **Resource Person** in Faculty Development Program (FDP) on Importance of Scientometry in STI Policy Research and Scientific Paper Writing for High Impact Factor at Department of Research and Development, Lovely Professional University, Jalandhar on March 23<sup>rd</sup> 2019
18. **Invited Talk** in (Title: Nanomaterials for Chemical Engineers) 2<sup>nd</sup> National Conference on Advances in Chemical and Environmental Engineering (ACEE 2019) held at Department of Chemical Engineering, Dr. BR Ambedkar National Institute of Technology, Jalandhar organized under TEQIP-III, Ministry of Human Resource Development, Govt of India from 23-24 March, 2019
19. **Technical Session Chair** in National Conference on Advances in Chemical and Environmental Engineering (ACEE 2019) held at Department of Chemical Engineering, Dr. BR Ambedkar National Institute of Technology, Jalandhar organized under TEQIP-III, Ministry of Human Resource Development, Govt of India from 23-24 March, 2019
20. **Advisory Board** of National Conference on Advances in Chemical and Environmental Engineering (ACEE 2019) held at Department of Chemical Engineering, Dr. BR Ambedkar National Institute of Technology, Jalandhar organized under TEQIP-III, Ministry of Human Resource Development, Govt of India from 23-24 March, 2019
21. **Panel Member** of AZeotropy 2019, Chemical Engineering Symposium of IIT Bombay organized by IIT Bombay on 16<sup>th</sup> – 17<sup>th</sup> March, 2019 at Mumbai, India
22. **Invited Guest Speaker** entitled ‘Electrospinning and Electrospaying in Food and Nutraceutical’ at Department of Food Engineering and Technology, Institute of Chemical Technology, Mumbai (UDCT, Mumbai) on 16<sup>th</sup> March, 2019
23. **Oral presentation** entitled ‘Risk Assessment and Management: E-Waste Perspectives’ in Workshop on Environmental Hazards of Electronic Waste, organized by Department of Environment Science, Babasaheb Bhimrao Ambedkar University, Lucknow on 13<sup>th</sup> March 2019.
24. **Invited Talk** on “Environmental Sustainability: Present Scenario and Future Aspects” during One Day Technical Seminar organized by Department of Environmental Science, Babasaheb Bhimrao

Ambedkar University (A Central University), Lucknow, India

25. **International Scientific Committee Member** of CIMEE18 – 2<sup>nd</sup> International Symposium on Materials, Electrochemistry & Environment held on October 18-20, 2018 at CCIAT, Tripoli, Lebanon
26. **Co-Chair** in Technoscape 2018 jointly organized by Yokohama National University **Japan** and Department of Chemical Engineering, VIT, Vellore, **India** from 6 Sep 2018 – 8 Sep 2018.
27. **Scientific Committee Member** in Technoscape 2018 jointly organized by Yokohama National University **Japan** and Department of Chemical Engineering, VIT, Vellore, **India** from 6 Sep 2018 – 8 Sep 2018.
28. **Program Chair** of 2<sup>nd</sup> International Conference on Conscientious & Unimpeachable Technologies 2017 (ICCUT-2017) organized by St. Andrews Institute Of Technology And Management, Gurugram, India and sponsored by Institute of Institutional Industrial Research (IIIR) held on 14<sup>th</sup> October 2017
29. **Session Chair** on “Nano in Drug Delivery” at Fourth International Conference On Nanomedicine And Tissue Engineering (**ICNT 2016**) organized by Mahatma Gandhi University, Kottayam, India & Wuhan University, Hubei, China & Nicholas Copernicus University, Poland from **12-14 August 2016 at MGU, Kottayam, Kerala, India**
30. **Invited Talk** on “Nano in Drug Delivery” at Fourth International Conference On Nanomedicine And Tissue Engineering (**ICNT 2016**) organized by Mahatma Gandhi University, Kottayam, India & Wuhan University, Hubei, China & Nicholas Copernicus University, Poland from **12-14 August 2016 at MGU, Kottayam, Kerala, India**
31. **Invited guest lecture** (Title: Interface of Chemistry and Biology) at Sigma-Aldrich Chemicals Pvt. Ltd. Bangalore, India on the topic entitled “Material Science and Life Science: Research trends and opportunities between Academia and Industries” on 12<sup>th</sup> September 2014
32. **Committee Manager** in Food Stall Committee for graVITas’12, an International Knowledge Carnival held at VIT University, Vellore, India from 14<sup>th</sup> – 16<sup>th</sup> September 2012
33. **Founder-Organizer** of the first edition of VIT Bio Summit’12 (Bio School Technical Fest to ligate academia and industry) held at VIT University, Vellore Tamil Nadu, India from 3<sup>rd</sup> – 5<sup>th</sup> April 2012
34. **Oral Presentation** on the topic entitled “Garlic & Cinnamon for Improving Shelf Life of Fish” in 3<sup>rd</sup> International Conference on Science, Engineering and Technology - organized by School of Mechanical and Building Sciences, VIT University, Vellore, India during 17<sup>th</sup> – 18<sup>th</sup> November 2011
35. **Committee Coordinator** for Hall Arrangement Committee of graVITas’11, an International Knowledge Carnival held at VIT University, Vellore, India from 16<sup>th</sup> – 18<sup>th</sup> September 2011
36. **Coordinator** for Tattoo Making Event conducted during The International Sports and Cultural Carnival, Riviera’11 held at VIT University, Vellore, India from 30<sup>th</sup> Jan – 2<sup>nd</sup> Feb 2011
37. **Committee Coordinator** for Reception Committee of graVITas’10, an International Knowledge Carnival held at VIT University, Vellore, India from 17<sup>th</sup> – 19<sup>th</sup> September 2010

#### **Publication in Proceedings of Seminars / Conferences (National)**

1. Title: STI Capacity Building in Lower Strata of Indian Society: Barriers & Obstacles  
Authors: Ranjan S, Dasgupta N  
National Workshop on Application of Technical Terminology in STI, Organized by Department of Higher Education, Ministry of HRD, Govt of India during 23-24 October 2019 at Lucknow, Uttar Pradesh, India
2. Title: Importance of Scientometry in STI Policy Research and Scientific Paper Writing for High Impact Factor  
Authors: Ranjan S  
Conference Details: Resource Person in Faculty Development Program (FDP) at Department of Research and Development, Lovely Professional University, Jalandhar on March 23rd, 2019 at Jalandhar, Punjab, India
3. Title: Invited Talk on Electrospun Nanofibers for Biomedical Application  
Authors: Dasgupta N, Ranjan S  
Conference Details: 2<sup>nd</sup> ACEE 2019 held at Department of Chemical Engineering, Dr. BR Ambedkar National Institute of Technology, Jalandhar organized under TEQIP-III, Ministry of



Human Resource Development, Govt of India from 23-24 March, 2019, Jalandhar, Punjab, India

4. Title: Panel discussion on Nanotoxicology at IIT Bombay  
Authors: Ranjan S  
Conference Details: Panel Member of AZeotropy 2019, Chemical Engineering Symposium of IIT Bombay organized by IIT Bombay on 16th – 17th March, 2019 at Mumbai, India
5. Title: Electrospinning and Electrospaying in Food and Nutraceutical  
Authors: Ranjan S  
Conference Details: Invited talk at Department of Food Engineering and Technology, Institute of Chemical Technology, Mumbai (UDCT, Mumbai) on 16th March, 2019, Mumbai, Maharashtra, India
6. Title: Risk Assessment and Management: E-Waste Perspectives  
Authors: Ranjan S, Dasgupta N  
Conference Details: Workshop on Environmental Hazards of Electronic Waste, organized by Department of Environment Science, Babasaheb Bhimrao Ambedkar University, Lucknow on 13th March 2019, Lucknow, Uttar Pradesh, India
7. Title: Environmental Sustainability: Present Scenario and Future Aspects  
Authors: Dasgupta N, Ranjan S  
Conference Details: One Day Technical Seminar organized by Department of Environmental Science, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow, India
8. Title: Bovine Serum Albumin interacts with Silver nanoparticles with a side-on or end on conformation  
Author(s): Dasgupta N, Ranjan S, Srivastava P, Chidambaram R  
Conference Details: One day UGC sponsored National Conference on Recent Trends in Chemistry organized by Jyoti Nivas College Autonomous in collaboration with Sigma Aldrich Chemicals Pvt. Ltd., Bangalore on 24th February 2016, Bengaluru, Karnataka, India
9. Title: Microwave-irradiation-assisted hybrid chemical approach for titanium dioxide nanoparticle synthesis: microbial and cyto-toxicological evaluation  
Author(s): Ranjan S, Dasgupta N, Srivastava P, Chidambaram R  
Conference Details: One day UGC sponsored National Conference on Recent Trends in Chemistry organized by JyotiNivas College Autonomous in collaboration with Sigma Aldrich Chemicals Pvt. Ltd., Bangalore on 24th February 2016, Bengaluru, Karnataka, India
10. Title: Enhancing anticancerous activity of chlorambucil through oil-in-water nanoemulsion  
Author(s): Dasgupta N, Ranjan S, Mundra S, Chidambaram R  
Conference Details: XXVI Indian Convention of Food Scientist and Technologist organized by AFSTI, Parbhani, Maharashtra, India during 18th - 19th December 2015, Parbhani, Maharashtra, India
11. Title: Synthesis and characterization of dextran from *Leuconostoc mesentroides* NCIM-2198 and its application as an emulsifier in nanoemulsion  
Author(s): Ranjan S, Dasgupta N, Mundra S, Chidambaram R  
Conference Details: XXVI Indian Convention of Food Scientist and Technologist organized by AFSTI, Parbhani, Maharashtra, India during 18th - 19th December 2015
12. Title: Dry blanching of red bell pepper using the microwave: Process optimization  
Authors: Jeevitha GC, Ranjan S, Hebbar UH, Raghavarao KSMS  
Conference Details: Colloquium on “Food Engineering: Present Status & Future Possibilities” held at Department of Food Engineering, CSIR-Central Food Technological Research Institute, Mysore, India on 6th August 2013

#### **Publications in Proceedings of Seminars / Conferences (International)**

1. Title: Nanotoxicology and Available Regulations: Global Scenario  
Authors: Ranjan S, Dasgupta N  
International Conference on Emerging Trends in Biotechnology (ICETB-2020), organized by VIT Vellore from 14<sup>th</sup> Dec 2020 to 16<sup>th</sup> Dec 2020, Vellore, Tamil Nadu, India  
Abstract Book/Souvenir: Page No: 35
2. Title: Environmental Nanotechnology: Future trends with Electrospinning  
Authors: Ranjan S, Tiwari U, Patil S  
Conference Details: CIMEE18 – 2nd International Symposium on Materials, Electrochemistry

& Environment held on October 18-20, 2018 at CCIAT, Tripoli, Lebanon

3. Title: Comparative toxicological evaluation of chemically synthesized silver nanoparticles  
Author(s): Dasgupta N, Ranjan S, Chidambaram R  
Conference Details: International Conference on Translational Nanomedicine (T-Nano-2014) held at Institute of Life Sciences, Ahmedabad University from 15<sup>th</sup> Dec 2014 to 17<sup>th</sup> Dec 2014, Ahmedabad, Gujarat, India
4. Title: In silico toxicological evaluation of TiO<sub>2</sub>nanoparticles with proteins: a novel approach for insight into the mechanism of action  
Author(s): Ranjan S, Dasgupta N, Chidambaram R  
Conference Details: International Conference on Translational Nanomedicine (T-Nano-2014) held at Institute of Life Sciences, Ahmedabad University from 15<sup>th</sup> Dec 2014 to 17<sup>th</sup> Dec 2014, Ahmedabad, Gujarat, India
5. Title: Engineering nano-silver by novel thermal co-reduction approach and its toxicity  
Author(s): Dasgupta N, Ranjan S, Chidambaram R  
Conference Details: International Conference on Nanomedicine and Tissue Engineering ICNT 2016 organized by Mahatma Gandhi University, Kottayam, India & Nicholas Copernicus University, Poland from 12-14 August 2016, Kottayam, Kerela, India
6. Title: Nano in Drug Delivery  
Author(s): Ranjan S, Dasgupta N, Chidambaram R  
Conference Details: International Conference on Nanomedicine and Tissue Engineering ICNT 2016 organized by Mahatma Gandhi University, Kottayam, India & Nicholas Copernicus University, Poland from 12-14 August 2016

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