


## FACULTY PROFILE

Name of Teaching Staff / RMK ID	Dr.M.Meena/T0026		
Designation	Professor		
Department	Department of Science & Humanities (Chemistry)		
Date of Joining the Institution	09.07.1997 (Regular)		
Qualifications	M.Sc.,	M.Phil.,	Ph.D., (Chemistry)
Total Experience	Overall : 29yrs	in RMK : 28yrs	
Papers Published in Journal	Overall : 38	After Joining RMK :38	
List of Papers Published	<p>1. Irradiated D32DMBC crystals: Growth, characterization, and applications in optics, sensing, and phase-matching, G.S. Gayathri, <b>M.Meena</b>, Mohamed Abbas, K. SenthilKannan, Journal of Science: Advanced Materials and Devices, 10(4), 2025. DOI: <a href="https://doi.org/10.1016/j.jsamd.2025.100994">https://doi.org/10.1016/j.jsamd.2025.100994</a></p> <p>2. Growth and Structural, Tribological, Pixel Provisioning, Morphological, Nano-Device Fabrication, NLO, Phase-Matching and Frequency Conversion Studies of Novel LHSN Crystals, M. Sathish, T. Balakrishnan, <b>M. Meena</b>, S.B. Pagar, A. Jasmine, P. Baskaran, K. SenthilKannan, M. Kolanjinathan, Advanced Journal of Chemistry, Section A, 8(12), 1904–1914 (2025). DOI: <a href="https://doi.org/10.48309/AJCA.2025.528035.1861">https://doi.org/10.48309/AJCA.2025.528035.1861</a></p> <p>3. Enhancement of Mechanical Performance on Polyethylene-Based Composites with Short Glass Fiber, Graphite Nano-Platelets, and Silicon Dioxide Nanoparticles, M. Anusuya, <b>M. Meena</b>, M. Durga, N. Parthiban, R.K. Pandey, G.A. Sivasankar, S. Palanisamy, B. Palanikumar, AIP Conference Proceedings, 3270, 020252 (2025). DOI: <a href="https://doi.org/10.1063/5.0261765">https://doi.org/10.1063/5.0261765</a></p> <p>4. Investigating Artocarpus heterophyllus biodiesel performance using multi-walled carbon nanotubes as an additive, T. Sathish, R. Saravanan, Madhu Balasubramanian, <b>M. Meena</b>, S. Vedanayaki, S. Sudagar, D. Ramya, D. Sakthivel, Sumarlin Shangdiar, Kassian T.T. Amesho, Fuel, 381, 133266 (2025). DOI: <a href="https://doi.org/10.1016/j.fuel.2024.133266">https://doi.org/10.1016/j.fuel.2024.133266</a></p> <p>5. Synthesis and characterizations of L-lysiniium trichloroacetate crystals of versatile scaling for temperature sensor and opto-electronic utilities, <b>M. Meena</b>, K. SenthilKannan, V. Swarnalatha, K.S. Radha, Journal of Materials Science: Materials in Electronics, 35(10), 2024. DOI: <a href="https://doi.org/10.1007/s10854-024-12438-2">https://doi.org/10.1007/s10854-024-12438-2</a></p>		

	6. Growth, Characterizations of Aspartame (ASP) Crystals for Mechano, Spectral, Photonic, Opto-Electronic and Sensor Applications, K. SenthilKannan, <b>M. Meena</b> , V. Swarnalatha, R. Hariharasuthan, T. Rajesh Kumar, R. Manikandan, ECS Journal of Solid State Science and Technology, 13(9), 094004 (2024). DOI: <a href="https://doi.org/10.1149/2162-8777/ad7b71">https://doi.org/10.1149/2162-8777/ad7b71</a>
	7. Competency of sonolysis on PTC induced polymerization of EMA – A comparative kinetic study, J. Prabha, <b>M.Meena</b> , M.J. Umapathy, Indian Journal of Chemical Technology, 31(4), 538–545 (2024). DOI: <a href="https://doi.org/10.56042/ijct.v31i4.1690">https://doi.org/10.56042/ijct.v31i4.1690</a>
	8. Preparation of Activated Carbon Derived from Prosopis juliflora for the Removal of Malachite Green, <b>M. Meena</b> , B. Murali, G. Diwakar, N. Rajesha, M. Sudhakar, Oxidation Communications, 47(1), 178–187 (2024).
	9. Optimizing the Selection of Natural Fibre Reinforcement and Polymer Matrix for Plastic Composite Using LS-SVM Technique, Sathish Thanikodi, <b>M. Meena</b> , Yagya Dutta Dwivedi, T. Aravind, Jayant Giri, Mohammad Shahzad Samdani, Lavish Kansal, Mohd Shahzad, Mohammad Ilyas, Chemosphere, 349, 140971 (2024). DOI: <a href="https://doi.org/10.1016/j.chemosphere.2023.140971">https://doi.org/10.1016/j.chemosphere.2023.140971</a>
	10. Appraisal of the Impact of Applying Organometallic Compounds in Cancer Therapy, Abdul Razak Mohamed Sikkander, <b>Manoharan Meena</b> , Hazarathaiah Yadav, Nitin Wah, V. Vidya Lakshmi, Journal of Applied Organometallic Chemistry, 4(2), 145–166 (2024). DOI: <a href="https://doi.org/10.48309/JAOC.2024.433120.1154">https://doi.org/10.48309/JAOC.2024.433120.1154</a>
	11. A Review of Diagnostic Nano Stents: Part (I), Abdul Razak Mohamed Sikkander, Hazarathaiah Yadav, <b>Manoharan Meena</b> , Nitin Wah, Krishan Kumar, Journal of Chemical Reviews, 6(2), 138–180 (2024). DOI: <a href="https://doi.org/10.48309/JCR.2024.432947.1287">https://doi.org/10.48309/JCR.2024.432947.1287</a>
	12. A Review of Advances in the Development of Bioresorbable Nano Stents: Part (II), Abdul Razak Mohamed Sikkander, Hazarathaiah Yadav, <b>Manoharan Meena</b> , V. Vidya Lakshmi, Journal of Chemical Reviews, 6(3), 304–330 (2024). DOI: <a href="https://doi.org/10.48309/jcr.2024.432944.1286">https://doi.org/10.48309/jcr.2024.432944.1286</a>
	13. The Study Examined the Effectiveness of a Nickel (II) Complex Containing 5-Acetyl-N-(adamantan-2-yl) Thiophene-2-Carboxamide as a Derivative for the Drug Isoniazid in Relation to Bacterial, Cancer and Tuberculosis Activities, Abdul Razak Mohamed Sikkander, Hazarathaiah Yadav, <b>Manoharan Meena</b> , Advanced Journal of Chemistry, Section A, 7(5), 501–521 (2024). DOI: <a href="https://doi.org/10.48309/AJCA.2024.443156.1490">https://doi.org/10.48309/AJCA.2024.443156.1490</a>
	14. Effect of Shocked Impact of 50 Scaling on the Structural, Morphological, Optical, and Electrical Properties of MMTC Crystals for Correlated Sensor, Photonic, and Piezoelectric Functionalities, K. Suganya, K. SenthilKannan, R. Hariharasuthan, V. Swarnalatha, <b>M. Meena</b> , T. Rajesh Kumar, R. Manikandan, Journal of Electronic Materials, 53(9), 5411–5420 (2024). DOI: <a href="https://doi.org/10.1007/s11664-024-11273-9">https://doi.org/10.1007/s11664-024-11273-9</a>
	15. Hydrothermal synthesis, growth and characterization of strontium boro tartrate (SBT), A. Vijayalakshmi, Vidyavathy Balraj, <b>M. Meena</b> , AIP Conference Proceedings, 2764, 020003 (2023). DOI: <a href="https://doi.org/10.1063/5.0144273">https://doi.org/10.1063/5.0144273</a>

	16. Single crystal X-ray diffraction study of sodium boro succinate (NaBS), A. Vijayalakshmi, Vidyavathy Balraj, <b>M. Meena</b> , AIP Conference Proceedings, 2764, 020002 (2023). DOI: <a href="https://doi.org/10.1063/5.0144275">https://doi.org/10.1063/5.0144275</a>
	17. Derivation of Chitosan-Based Composite Material with Root Extracts of Calotropis gigantea Accelerating Wound Healing, Y. Ismail, <b>M. Meena</b> , J. Megala, P. Sathyaseelan, S.K. Nandha Kumar, M. Santhanakrishnan, P.T. Rajakumar, A. Rajaram, Oxidation Communications, 46(4), 958–965 (2023).
	18. Mechanical Property Analysis of Carbon–Bamboo Fiber–Reinforced Montmorillonite Nanocomposite, Sathish Thanikodi, Indradeep Kumar, <b>Manoharan Meena</b> , Enamuthu Hemalatha, Surya Narayan Padhi, Mohamed Ouladsmene, Hamada Abdelgawad, International Journal of Advanced Manufacturing Technology, 2023. DOI: <a href="https://doi.org/10.1007/s00170-023-12813-z">https://doi.org/10.1007/s00170-023-12813-z</a>
	19. Growth, studies of milled and irradiated crystalline samples of DBNT for macro-photonic and electro-mechano functionalities, <b>M. Meena</b> , K. SenthilKannan, Mohammed S. Alqahtani, Mohamed Abbas, Heliyon, 9, e19009 (2023). DOI: <a href="https://doi.org/10.1016/j.heliyon.2023.e19009">https://doi.org/10.1016/j.heliyon.2023.e19009</a>
	20. Corrosion inhibition efficiency of newly synthesized quaternary ammonium salt in 1M HCl, K.S. Yoganand, <b>M. Meena</b> , M.J. Umamathy, Indian Journal of Chemical Technology, 29(1), 68–74 (2022). DOI: <a href="https://doi.org/10.56042/ijct.v29i1.49224">10.56042/ijct.v29i1.49224</a>
	21. An Inexpensive Inhibitor for Corrosion on Mild Steel in 1M Hydrochloric Acid Solution – A Kinetic Study, K.S. Yoganand, <b>M. Meena</b> , M.J. Umamathy, NeuroQuantology, 20(9), 4750–4755 (2022). DOI: <a href="https://doi.org/10.14704/nq.2022.20.9.NQ44552">https://doi.org/10.14704/nq.2022.20.9.NQ44552</a>
	22. Effect of decorated photoanode of TiO <sub>2</sub> nanorods/nanoparticles in dye-sensitized solar cell, <b>M. Meena</b> , A. Kavitha, S. Karthick, S. Pavithra, S. Shanmugan, Bulletin of Materials Science, 45, 231 (2022). DOI: <a href="https://doi.org/10.1007/s12034-022-02828-9">https://doi.org/10.1007/s12034-022-02828-9</a>
	23. Effect of energy storage material on a triangular pyramid solar still operating with constant water depth, S. Senthil Kumar, S.D. Uma Mageswari, <b>M. Meena</b> , V. Nagaraju, B. Yakkala, D. Vinod, D. Mageshbabu, B. Madhu, R. Sathyamurthy, Energy Reports, 8, 652–658 (2022). DOI: <a href="https://doi.org/10.1016/j.egy.2022.10.203">https://doi.org/10.1016/j.egy.2022.10.203</a>
	24. Carbon Footprint of Information and Communication Technologies, S.D. Uma Mageswari, P. Suganthi, <b>M. Meena</b> , IEEE International Conference on Edge Computing and Applications (ICECAA), 2022. DOI: <a href="https://doi.org/10.1109/ICECAA55415.2022.9936485">https://doi.org/10.1109/ICECAA55415.2022.9936485</a>
	25. Efficiency of Single and Di-Site Phase Transfer Catalyzed Polymerization of Glycidyl Methacrylate in the Two-Phase System: A Kinetic Study, <b>M. Meena</b> , M.J. Umamathy, K.S. Yoganand, Indian Journal of Chemical Technology, 28(4), 445–452 (2021).
	26. The Struggle of India in COVID-19 Combat, <b>M. Meena</b> , A. Vijayalakshmi, Indian Journal of Science and Technology, 14(25), 2106–2110 (2021). DOI: <a href="https://doi.org/10.17485/IJST/v14i25.833">https://doi.org/10.17485/IJST/v14i25.833</a>
	27. Toxic Solvent-Free Radical Polymerizations of Vinyl Monomers Using a Di-Site Phase-Transfer Catalyst – A Kinetic Approach, <b>M. Meena</b> , M.J. Umamathy, Bulgarian Chemical Communications, 52(3), 348–354 (2020). DOI:10.34049/bcc.52.3.5167

	28. Free Radical Polymerization of Methyl and Ethyl Methacrylates by Green Methodology, <b>M. Meena</b> , S. Nanjundan, M.J. Umapathy, International Journal of Applied Engineering Research, 11(4), 2177–2184(2016). DOI: <a href="https://doi.org/10.37622/IJAER/11.4.2016.2177-2184">https://doi.org/10.37622/IJAER/11.4.2016.2177-2184</a>
	29. Efficiency of Single Site Phase Transfer Catalyst in Free Radical Polymerization of Butyl Methacrylate – A Kinetic Study, <b>M. Meena</b> , M.J. Umapathy, Brazilian Archives of Biology and Technology, 59(Special Issue 2), e161045 (2016). DOI: <a href="https://doi.org/10.1590/1678-4324-2016161045">https://doi.org/10.1590/1678-4324-2016161045</a>
	30. Kinetics of Phase Transfer Agent-Aided Free-Radical Polymerization of Acrylonitrile and Methyl Methacrylate Using Water-Soluble Initiator, K.S. Yoganand, D.S. Srikumar, <b>M. Meena</b> , M.J. Umapathy, International Journal of Polymeric Materials and Polymeric Biomaterials, 58(3), 150–159 (2009). DOI: <a href="https://doi.org/10.1080/00914030802565574">https://doi.org/10.1080/00914030802565574</a>
	31. Removal of Pollutants from Wastewater Using Neem Leaf as Bioadsorbent, <b>M. Meena</b> , A. Vijayalakshmi, K.S. Yoganand, European Chemical Bulletin, 12(Regular Issue 6), 563–566 (2023).
	32. Statistical Analysis on Vulnerable Categories of COVID-19 – A Bird’s Eye View, A. Vijayalakshmi, <b>M. Meena</b> , P. Suganthi, Journal of Xidian University, 14(7), 1136 (2020). DOI: <a href="https://doi.org/10.37896/jxu14.7/127">https://doi.org/10.37896/jxu14.7/127</a>
	33. Plastic Microbeads, <b>M. Meena</b> , A. Vijayalakshmi, Waffen-Und Kostumkunde Journal, XI(3), 1–3 (2020).
	34. Crop Destructor – Locust – A Critical Review, A. Vijayalakshmi, <b>M. Meena</b> , Journal of Xidian University, 14(7), 1798 (2020). DOI: <a href="https://doi.org/10.37896/jxu14.7/206">https://doi.org/10.37896/jxu14.7/206</a>
	35. Pandemics / Epidemics – A Causal Analysis, <b>M. Meena</b> , A. Vijayalakshmi, Journal of Green Engineering, 45(9), 34 (2020).
	36. Cradle to Grave of Materials, A. Vijayalakshmi, <b>M. Meena</b> , Test Engineering and Management, 8241–8245 (Jan–Feb 2020).
	37. Blooming Electronic Gadgets is Boon or Bane? – A Critical Review, <b>M. Meena</b> , A. Vijayalakshmi, Cikitusi Journal for Multidisciplinary Research, 6(6), 245–250 (2019).
	38. Bioelectronics – A Revolution in Science – A Review, A. Vijayalakshmi, <b>M. Meena</b> , Cikitusi Journal for Multidisciplinary Research, 6(6), 313–317 (2019).

<b>Papers Presented in Conferences</b> (Scopus / WoS indexed only)	Overall : 7	After Joining RMK :7
<b>Ph.Ds / Projects Guided</b>	Ph.Ds Guided : -	Student Projects Guided : -
<b>Books Published :</b>	Count : 7	
	1. Chemistry of Nanomaterials: Synthesis and Applications, 2025, Co-authored, Addition Publishing House, ISBN: 978-93-6422-443-7	
	2. Fundamentals of Nanotechnology, 2025, Co-authored, Addition Publishing House, ISBN: 978-93-6422-443-7, ISBN: 978-93-6422-126-9	
	3. Environmental Concerns and Sustainable Development, 2024, Co-authored, AGPH, ISBN: 978-81-19843-65-7	
	4. Basics of Engineering Chemistry, 2023, Co-authored, AGPH Books, ISBN: 978-81-960902-6-5	
	5. Environmental Issues and Sustainable Development, 2022, Co-authored, AGPH Publisher, ISBN: 978-81-960691-8-6	
	6. Practical Engineering Chemistry, Co-authored, Scitech Publications (India) Pvt. Ltd., ISBN-10: 8187328320, ISBN-13: 9788187328322	
	7. Engineering Chemistry, Co-authored, Scitech Publications (India) Pvt. Ltd., ISBN-10: 8187328347, ISBN-13: 9788187328346	
<b>Patents</b>	1. Eco-Friendly Nanocomposites for Heavy Metal Removal – Applicant: R.M.K. Engineering College; Inventors: Dr. M. Meena, Dr. A. Vijayalakshmi; Publication Date: 31/01/2025	
	2. Nano Metal Oxide Loaded Chitosan Polymer Metal Complexes for Photocatalytic Degradation of Pharma Pollutants – Applicant: R.M.K. Engineering College; Inventors: Dr. A. Vijayalakshmi, Dr. M. Meena; Publication Date: 10/01/2025.	
	3. Green Technique for Synthesis of Polyethyl Methacrylate – Applicant: R.M.K. Engineering College; Inventors: Dr. M. Meena, Dr. A. Vijayalakshmi; Publication Date: 09/02/2024.	
	4. Synthesis, Characterization of Curcumin Glycinates for In Vitro and In Silico Carbohydrate Digestive Enzyme Inhibitor – Applicant: R.M.K. Engineering College; Inventors: Dr. A. Vijayalakshmi, Dr. M. Meena; Publication Date: 09/02/2024	
	5. Crystal Engineering of Semi-organic Borate Sodium Boro Succinate Crystals for Electronic Applications – Applicant: R.M.K. Engineering College; Inventors: Dr. A. Vijayalakshmi, Dr. M. Meena; Publication Date: 30/09/2022.	
	6. Extraction of Hexavalent Chromium from Wastewater by Green Methodology – Applicant: R.M.K. Engineering College; Inventors: Dr. M. Meena, Dr. A. Vijayalakshmi; Publication Date: 30/09/2022.	
	7. Crystal Engineering of Pharmaceutical Co-Crystals Isonicotinamide for the Development of Active Pharmaceutical Ingredients (API) – Applicant: R.M.K. Engineering College; Inventors: Dr. A. Vijayalakshmi, Dr. M. Meena; Filed on: 07/09/2022; Publication Date: 16/09/2022 (The Patent Office Journal No. 37/2022, Application No. 202241051160 A).	
	8. Corrosion Inhibition on Mild Steel using Inexpensive Inhibitor in 1 M HCl – Applicant: R.M.K. Engineering College; Inventors: Dr. M. Meena, Dr. A. Vijayalakshmi; Publication Date: 16/09/2022.	
	9. Biomaterial Infused Chitosan Beads for the Effective Removal of Oil and Heavy Metal Ions from Industrial Effluents – Applicant: R.M.K.	

	Engineering College; Inventors: Dr. M. Meena, Dr. S. D. Uma Mageswari, Dr. V. Srinivasan, Dr. A. Vijayalakshmi, Dr. P. Balaramesh, Mrs. A. Parvathi Priya, Dr. R. Thinesh Kumar, Ms. P. Malini Anand Raj; Filed on: 19/03/2022; Publication Date: 08/04/2022 (The Patent Office Journal No. 14/2022, Patent No. 21767, Chemical Sciences).
	10. Device for Analysis of Market Communication in Tourism – Applicant: R.M.K. Engineering College; Inventors: Institutional Project Team; Publication Date: 2022.
	11. Robotic Arm Using Arduino in Construction Work – Applicant: R.M.K. Engineering College; Inventors: Institutional Project Team; Publication Date: 2022.
	12. Ultrasonic Blind Stick Using Arduino Nano – Applicant: R.M.K. Engineering College; Inventors: Institutional Project Team; Publication Date: 2022.
	13. Virtual Mouse System Using Object Detection – Applicant: R.M.K. Engineering College; Inventors: Institutional Project Team; Publication Date: 04/02/2022.
	<b>Design Patents</b>
	1. Device to Convert Waste into Energy Material – Applicant: Government of India (The Patent Office); Inventors: Dr. M. Meena, Dr. S. D. Uma Mageswari, Dr. A. Vijayalakshmi; Registration Date: 11/01/2023 (Issue Date: 27/03/2024).
	2. Smart Planter with Automated Soil and Air Analysis System – Applicant: Government of India (The Patent Office); Inventors: Dr. S. Rafi Ahamed, Dr. S. Dinakaran, Dr. A. Vijayalakshmi, Dr. M. Meena, Dr. Bapu Sitaram Khair, Dr. Aruna Kumari Nakkella; Publication Date: 28/09/2022 (Issue Date: 29/12/2022).
	3. IOT Based Solar Powered Agriculture Robot – Applicant: Government of India (The Patent Office); Inventors: Dr. S. D. Uma Mageswari, Dr. M. Meena, Dr. S. Meenakshi, Dr. A. Vijayalakshmi; Publication Date: 17/08/2022 (Issue Date: 28/12/2022).
<b>Professional Memberships</b>	Count :6
	<ol style="list-style-type: none"> <li>1. Lifetime member – Institute of Researchers</li> <li>2. Life time member - The Indian Society for Technical Education</li> <li>3. Life time member - Society for Environmental Sustainability</li> <li>4. Life time member -Association of Chemistry Teachers</li> <li>5. Life time member – IAENG</li> <li>6. Life time member -The Indian Science Congress Association</li> </ol>

<b>Consultancy Projects Completed</b>	Count : 2
	<ol style="list-style-type: none"> <li>1. Completed surface characteristics of materials testing with K R Construction, Kolathur, Chennai-600099, on 25/03/2025, for an amount of Rs. 1,02,000/-</li> <li>2. Completed Grey water treatment &amp; Water quality analysis - Rs. 50,000 /- -Phoenix Serene Private Limited, No. 106, OMR, Kalavakkam, Chennai – 603110 on 07/03/2024 and Urbanrise Constructions Private Limited Plot No: A, No: 36/1, Gandhi Mandapam Road Kotturpuram, Chennai – 600085</li> </ol>
<b>Awards Received</b>	Count :4 List : <ol style="list-style-type: none"> <li>1. Inspiring Professor Award- 2022 - Madras Journal Series Pvt Ltd (Registered enterprise under the Ministry of MSME, Government of India)</li> <li>2. InRes Academic Excellence Award 2021 - Institute of Researchers, registered and recognized by the Ministry of MSME, Govt. of India,</li> <li>3. Distinguished Woman in Science - Center for Advanced Research and Design, Venus International Foundation, in the year 2020</li> <li>4. Adarsh Vidya Saraswati Rashtriya Puraskar - National Award of Excellence – 2019, offered by Glacier Journal Research Foundation, Ahmedabad.</li> </ol>
<b>Research grants Received</b>	1. Rs. 1,00,000 – under UBA scheme
<b>Orchid Link / ID</b>	ID : <a href="https://orcid.org/0000-0001-6270-7333">https://orcid.org/0000-0001-6270-7333</a>
<b>Google Scholar Link / ID</b>	ID: <a href="https://scholar.google.com/citations?hl=en&amp;user=cxmULjIAAAAJ">https://scholar.google.com/citations?hl=en&amp;user=cxmULjIAAAAJ</a>
<b>Vidwan Link / ID</b>	Link: <a href="https://vidwan.inflibnet.ac.in/profile/282131">https://vidwan.inflibnet.ac.in/profile/282131</a>
<b>Research Gate Link / ID</b>	Link: <a href="https://www.researchgate.net/profile/Meena-Manoharan">https://www.researchgate.net/profile/Meena-Manoharan</a>
<b>Scopus Link / ID</b>	ID : <a href="https://orcid.org/57210685431">57210685431</a>