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SCOPUS 59805998700

WOS KUD-7476-2024



Dr. Manjumol Mathew

MSc, Ph.D

Assistant Professor · Department of Chemistry

PROFILE

Dr. Manjumol Mathew brings a research-informed approach to chemistry teaching, encouraging students to develop conceptual understanding through experimentation, critical thinking, and practical problem-solving. Her research direction centres on environmental chemistry, spectroscopy, and biomolecular interactions, with particular emphasis on environmental pollutants, emerging contaminants, and their interactions with biological systems. Her notable contributions include peer-reviewed research publications and scientific presentations, supported by expertise in advanced spectroscopic and analytical techniques.

APPOINTMENT

Joined 03/08/2021 · Teaching 5 years · Industry 0 years · Research 5 years

SPECIALISATION

Molecular Spectroscopy · Quantum Mechanics · Nanoscience and Nanotechnology · Physical Chemistry

RESEARCH INTERESTS

Dr. Manjumol Mathew's research interests focus on protein-pollutant interactions · nanoscience · and sensing. Her research explores the interaction and binding behaviour of pollutants with proteins using spectroscopic techniques · with an emphasis on understanding molecular-level interactions. Her work also involves the synthesis and characterization of nanomaterials for sensing and environmental applications.

COURSES HANDLED

Environmental Science · Analytical Techniques · Quantum Mechanics · Photochemistry · Coordination Chemistry · Chemical Bonding · Surface Chemistry · Spectroscopy

LABORATORIES

Organic Synthesis · Volumetric Analysis · Physical Chemistry Laboratory · Column Chromatography · Solvent Extraction · Thin-Layer Chromatography (TLC) · ChemSketch

QUALIFICATIONS

Ph.D — Chemistry

Mahatma Gandhi University, Kottayam, Kerala

Thesis: Interaction of Pollutants with Proteins: A Spectroscopic Study

2017

NET- JRF — Chemical Sciences

Joint CSIR-UGC

2011

MS.c — Chemistry

St. Thomas College, Pala, Mahatma Gandhi University, Kottayam

BS.c — Chemistry

Alphonsa College, Pala, Mahatma Gandhi University, Kottayam

EXPERIENCE

Assistant Professor

August 2021 – Present

St. George's College, Aruvithura · Teaching

Assistant Professor on Contract

August 2020 – March 2021

St. George's College, Aruvithura · Teaching

Assistant Professor on Contract

June 2019 – March 2020

CMS College, Kottayam · Teaching

Assistant Professor on Contract

November 2017 – November 2018

Deva Matha College, Kuravilangad · Teaching

RESPONSIBILITIES

IQAC Criterion 5 Coordinator

2024 – Present

Internal Quality Assurance Cell (IQAC)

Leading Criterion 5 activities under IQAC, coordinating the collection and compilation of relevant data and supporting documents, ensuring timely documentation, and facilitating quality initiatives related to student support, progression, and welfare.

JOURNAL PAPERS

- [1] Manjumol Mathew, Divyalakshmi T. V., Charuvila T. Aravindakumar, Usha K. Aravind, "Potential Involvement of Environmental Triggers in Protein Aggregation with Mercuric Chloride as a Model," *International Journal of Biological Macromolecules*, Elsevier, vol. 174, pp. 153–161, 2021. ISSN 0141-8130 (Print); 1879-0003 (Electronic). doi: 10.1016/j.ijbiomac.2021.01.134. SCIE IF 7.7
- [2] Manjumol Mathew, Charuvila T. Aravindakumar, Usha K. Aravind, "Unravelling the fibrillation mechanism of ovalbumin in the presence of mercury at its isoelectric pH," *RSC Advances*, Royal Society of Chemistry (RSC), vol. 10, no. 28, pp. 16415–16421, 2020. ISSN 2046-2069. doi: 10.1039/C9RA10655C. SCIE IF 6.1
- [3] Mathew, M., Sreedhanya, S., Manoj, P., Aravindakumar, C. T., & Aravind, U. K., "Exploring the Interaction of Bisphenol-S with Serum Albumins: A Better or Worse Alternative for Bisphenol A?," *The Journal of Physical Chemistry B*, ACS, vol. 118, no. 14, pp. 3832–3843, 2014. ISSN 1520-6106 (print ISSN: 1089-5647). doi: 10.1021/jp500404u. SCIE IF 3.2

CONFERENCE PAPERS

- [1] Manjumol Mathew, C. T. Aravindakumar, Usha K. Aravind, "Multi-spectroscopic Analysis of Interaction of Bisphenol S (BPS) with Serum Albumin," in *International Conference on Photochemistry and its Applications – ICPA 2017*, International, Mahatma Gandhi University, Kottayam, Kottayam, Kerala, 10–13 November.
- [2] Manjumol Mathew, C. T. Aravindakumar, Usha K. Aravind, "Probing the Binding of Cytochrome C with Ovalbumin in Solution and Immobilized State," in *International Conference on Materials for the Millennium – MatCon 2016*, International, CUSAT, Kochi, Kerala, 14–16 January.

- [3] Manjumol Mathew, Mary Lidiya Mathew, C. T. Aravindakumar, U. K. Aravind, "Probing the Binding of Cytochrome C with Ovalbumin in Solution and Immobilized State," in *International Conference on Membranes – ICM 2015*, International, Mahatma Gandhi University, Kottayam, Kottayam, Kerala, 21-24 August.
- [4] Manjumol Mathew, C. T. Aravindakumar, U. K. Aravind, "Exploring the Interaction of Bisphenol-S with Serum Albumins," in *Workshop cum Nineteenth National Symposium on Environment – NSE-19*, National, Mahatma Gandhi University, Kottayam, Kottayam, 11-13 December.
- [5] Manjumol Mathew, C.T. Aravindakumar, Usha K. Aravind, "Possible impacts of interaction of human serum albumin (HSA) with a model pollutant," in *23rd Swadeshi Science Congress – 2013*, National, Swadeshi Science Movement (Kerala) in association with Mahatma Gandhi University, Kottayam, Kerala, 6-8 November, 287-290, 978-81-928 129.
- [6] Manjumol Mathew, C. T. Aravindakumar, U. K. Aravind, "Exploring the Interaction of Small Molecules with Protein in the Native, Intermediate, Unfolded, and Refolded States by Fluorescence Spectroscopy," in *National Seminar on Recent Advances in Photochemistry*, National, St. Michael's College, Cherthala, Kerala, Cherthala, 5-6 December, 19.

CITATION METRICS

141

CITATIONS

3

H-INDEX

1

I10-INDEX

3

PUBLICATIONS

Source: Google Scholar, as on August 31, 2026

TRAINING & FDPS

Faculty Induction/Orientation Programme

Induction programme · Malaviya Mission Teacher Training Centre (MMTTC), Kannur University · Kannur University, Kerala · Online

14.11.2024–
11.12.2024, 4 Weeks

Orientation & Sensitization Programme

Orientation programme · Malaviya Mission Teacher Training Centre (MMTTC), Kannur University · Kannur University · Online

02.05.2024–
13.05.2024, 2 Weeks

4-Week Faculty Induction/Orientation Programme

Induction programme · Ramanujan College, University of Delhi · New Delhi · Online

21.12.2022–
19.01.2023, 4 Weeks

Faculty Development Programme on "ICT and Internet of Things (IoT) for Creating Smart Learning Environment"

FDP · UGC – Scheme for Trans-disciplinary Research for India's Developing Economy (STRIDE) · Kottayam · Online

06.12.2021–
12.12.2022, 7 days

LANGUAGES

Malayalam · English