

RESUME



Name: Dr. KARTHICK. N. K

Designation: Assistant Professor

Department: Physics

Address: St. Xavier's College, 21, North Highground Road, Palayamkottai

PERSONAL DETAILS

Date of Birth : 08 / 12 / 1987

Qualification : M. Sc., Ph. D.

Designation : Assistant Professor

Department : Physics

Community : BC

Religion : Hindu

Nationality : Indian

Mobile : 9944650074

Email ID : karthicknkphysics@gmail.com

ACADEMIC QUALIFICATIONS

Degree	Specialization	College	University	Year of Passing
Ph. D.	Physics	Thiagarajar College, Madurai	Madurai Kamaraj University	2019
M. Sc.	Physics	Thiagarajar College, Madurai	Madurai Kamaraj University	2013

B. Sc.	Physics	The American College, Madurai	Madurai Kamaraj University	2009
ACADEMIC IDENTITY				
*VIDWAN ID	633026			
*ORCID ID	0000-0002-5929-0167			
*SCOPUS ID	56955406300			
*RESEARCHER ID/ PUBLONS ID	Web of Science Researcher ID : NRY-1452-2025			
GOOGLE SCHOLAR LINK	https://scholar.google.com/citations?user=7Zf5NrQAAAAJ&hl=en			

TEACHING EXPERIENCE	
Date of Appointment	16. 06. 2025
Date of Retirement	08. 12. 2047
Teaching Experience	UG : 3 years
	PG : 2 years and 4 months
	M.Phil. - Nil
Research	Guided M Phil: Nil Guided Ph D: Nil Guiding Ph Scholar: Nil

COURSES/CLASSES TAUGHT	NAME OF THE INSTITUTIONS	DURATION		Years
		From	To	
B. Sc. (Physics)- Quantum Mechanics & Relativity M. Sc. (Physics) – Communication electronics, Classical mechanics I year UG NME – Physics for everyday life	St. Xavier's College, Palayamkottai	June 2025	Till date	
I year B.E – Engineering Physics	Mepco Schlenck Engineering College, Sivakasi	November 2020	August 2021	9 months
B. Sc. (Physics) –Optics, Quantum Mechanics M. Sc. (Physics) – Molecular Spectroscopy, Solid State Physics, Nuclear Physics	The Madura College, Madurai	June 2018	October 2020	2 years and 4 months

AWARDS RECEIVED	
1.	Junior Research Fellow in DST – SERB funded major research project entitled “ Correlative results of Volumetric and Spectroscopic studies “ (SR / FTP / PS-011/12)

ADMINISTRATIVE EXPERIENCE			
S. No	DESIGNATION	INSTITUTIONS	YEAR

MEMBERSHIP		
S. No	Designation	Particulars
1.		
2.		
3.		
4.		
5.		

ORIENTATION / REFRESHER COURSES / FACULTY DEVELOPMENT PROGRAMME UNDERGONE (UGC / HRDC / TLC-PMMNMT ONLY)

S. No	Name of the Training	Name of the Sponsoring Agency	Place and Date
1			
2			
3			
4			
5			

ORIENTATION / REFRESHER COURSES / FACULTY DEVELOPMENT PROGRAMME UNDERGONE (SXC & Others)

S. No	Name of the Training	Name of the Sponsoring Agency	Place and Date
1	An Orientation towards Ignatian Pedagogy, Holistic	IQAC,,St. Xavier’s College, Palayamkottai	11.06.2025 to 13.06.2025

	well- being and Outcome – Based Learning		
2	A three day faculty induction programme for the newly recruited teaching staff (for the academic year 2025 – 26)	Higher Education Commission, Jesuit Madurai Province	04. 06. 2025 to 07. 06. 2025

DETAILS OF RESEARCH WORK

Research Stages	Title of the Thesis	University where the work was carried out
Ph. D awarded	Volumetric, Dielectric, Spectroscopic studies and DFT calculations on the fluid structure of liquid mixtures	Madurai Kamaraj University

AREAS OF RESEARCH

Spectroscopy
DFT calculations
Dielectric studies

RESEARCH PROJECTS CARRIED OUT

S. No	Title of the Project (Minor)	Name of the Funding Agency & Amount	Duration

PUBLICATIONS

BOOKS	BOOK CHAPTERS	SCOPUS	WEB OF SCIENCE	UGC LISTED
0	0	21	0	0
OTHER INDEXED	AS A RESOURCE PERSON	PAPERS PRESENTED IN NATIONAL AND INTERNATIONAL SEMINARS	WEBINARS, SEMINARS, WORKSHOPS ATTENDED	
1	0	4	0	

PUBLICATIONS: BOOKS (0)			
S. No	Title of the Book	Publication	Year

BOOK CHAPTERS (0)			
S. No	Title of the Paper	Name of the Book	ISSN No., Pg.No

PUBLICATIONS: SCOPUS INDEXED JOURNALS (21) WEB OF SCIENCE (0)			
S. No	Title of the Paper	Name of the Journal	ISSN No., Volume, Issue, Impact factor & Pg. No
1.	FTIR studies and DFT calculations on the associative nature of methyl cellosolve in binary solutions with acetonitrile	Journal of Molecular Structure	1872-8014, 1227, 4.7, 129572
2.	FTIR spectroscopic studies and DFT calculations on the binary solution of methyl acetate with m- xylene	Journal of Molecular Liquids	1873-3166, 313, 5.2, 113491
3.	Classical / non-classical hydrogen bonds in m- xylene – ethanol solution : FTIR and theoretical approach	Journal of Molecular Liquids	1873-3166, 312, 5.2, 113406
4.	Hydrogen bond interactions of ethyl acetate with methyl Cellosolve : FTIR spectroscopic and dielectric relaxation studies	Journal of Molecular Liquids	1873-3166, 301, 5.2, 112490
5.	Molecular interactions in the binary solutions of methyl cellosolve with chlorobenzene :	Journal of Molecular Structure	1872-8014, 1205, 4.7, 127565

	Spectroscopic and dielectric studies		
6.	Hydrogen bond interactions in the binary solutions of formamide with methanol : FTIR spectroscopic and theoretical studies	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	1873-3557, 229, 4.6, 117892
7.	FTIR studies, DFT calculations and time domain reflectometry studies on tetrahydrofuran – methanol binary solutions	Spectrochimica Acta Part A : Molecular and Biomolecular Spectroscopy	1873-3557, 222, 4.6, 117162
8.	Homo/hetero interactions in the binary solutions of toluene with acetonitrile: FTIR spectroscopic, theoretical and dielectric studies	Journal of Molecular Structure	1872-8014, 1192, 4.7, 208
9.	FTIR spectroscopy, quantum chemical calculations and time domain reflectometry studies on the behavior of methanol molecules in the environment of dibutyl ether	Journal of Molecular Structure	1872-8014, 1183, 4.7, 60
10.	FTIR spectroscopic studies and DFT calculations on the toluene- propionitrile binary system	Journal of Molecular Structure	1872-8014, 1173, 4.7, 456
11.	Molecular interactions in the complexes of toluene with butyronitrile : A DFT approach	Journal of Molecular Structure	1872-8014, 1157, 4.7, 654
12.	Hydrogen bond interactions in the binary solutions of ethyl acetate with nitrobenzene: Spectroscopic, theoretical and dielectric studies	Journal of Molecular Liquids	1873-3166, 251, 5.2, 385
13.	Red / blue shifting hydrogen bonds in acetonitrile- dimethyl sulphoxide solutions : FTIR and theoretical studies	Journal of Molecular Structure	1872-8014, 1139, 4.7, 196
14.	Spectroscopic and time domain reflectometry studies on acetonitrile – ethylene glycol binary solutions	Journal of Molecular Structure	1872-8014, 1136, 4.7, 303
15.	Molecular interactions in ethyl acetate –chlorobenzene binary solution: Dielectric, spectroscopic studies and quantum chemical calculations	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	1873-3557, 178, 4.6, 218
16.	Spectroscopic studies on the binary solutions of ethanol with 1,4- dioxane	Journal of Molecular Liquids	1873-3166, 232, 5.2, 147

17.	Molecular interaction forces in acetone + ethanol binary liquid solutions: FTIR and theoretical studies	Journal of Molecular Structure	1872-8014, 1130, 4.7, 497
18.	Time domain reflectometric study on toluene + propionitrile binary mixture	Physics and Chemistry of Liquids	1029- 0451, 54, 1.2, 779
19.	Time Domain Reflectometric and spectroscopic studies on toluene + butyronitrile solution	Journal of Molecular Structure	1872-8014, 1108, 4.7, 203
20.	Study of molecular interaction in the mixtures of benzene +methyl acrylate / butyl acrylate through dielectric and spectroscopic studies	Journal of Molecular Liquids	1873-3166, 214, 5.2, 357
21.	Intermolecular forces in acetonitrile + ethanol binary liquid mixtures	Chemical Physics Letters	1873 – 4448, 639, 2.8, 161

PUBLICATIONS: UGC LISTED JOURNALS (0)

S. No	Title of the Paper	Name of the Journal	ISSN No., Volume, Issue, Impact factor & Pg. No

PUBLICATIONS: OTHER INDEXED JOURNALS (1)

S. No	Title of the Paper	Name of the Journal	ISSN No., Volume, Issue, Impact factor & Pg.No
1.	FTIR spectral studies and dielectric relaxation studies on binary solutions of ethyl acetate with bromobenzene	Indian Journal of Pure and Applied Physics	0975-1041, 56, 0.846, 261

AS A RESOURCE PERSON (0)

S. No	Name of the Event	Name of the Sponsoring Agency	Place and Date

WEBMINARS/SEMINARS/ CONFERENCES / SYMPOSIA / WORKSHOP
PAPER PRESENTED: National (2) International (2)

S. No	Name of the Event	Name of the Sponsoring Agency	Place and Date
1.	National Seminar on Advanced Materials (NSAM)- 2020	, Jamal Mohamed College (Autonomous), Trichurappalli.	, Jamal Mohamed College (Autonomous), Trichurappalli, 23 rd January 2020
2.	International Conference on Recent Advances in Applied Physics	Annamalai University, Annamalai Nagar.	Annamalai University, Annamalai Nagar, September 21 – 22, 2017
3.	National Level Seminar on Recent Advancements in Materials	Jamal Mohamed College, Tiruchirappalli,	Jamal Mohamed College, Tiruchirappalli, 15 th February 2017
4.	II International Conference on Recent Trends in Materials	Jamal Mohamed College, Tiruchirappalli.	Jamal Mohamed College, Tiruchirappalli, January 22 – 23, 2016

WEBMINARS/SEMINARS/ CONFERENCES / SYMPOSIA / WORKSHOP
ATTENDED: 0

S. No	Name of the Event	Name of the Sponsoring Agency	Place and Date

COUNTRIES VISITED

EXTRA-CURRICULAR ACTIVITIES/ CO-CURRICULAR ACTIVITIES
ATTENDED(NCC/NSS/YRC/SPORTS/LITERARY AND CULTURAL ACTIVITIES)

Served as an NSS volunteer in American College during my UG from 2006 - 2009

Date: 10. 07. 2025

Name: Dr. Karthick N. K