


## FACULTY PROFILE

### DEPARTMENT OF PHYSICS

#### I. PERSONAL DETAILS

Name	Dr. Mrs. R. Kayalvizhi	
Designation	Head and Assistant Professor of Physics	
Qualification	M.Sc.,M.Phil.,Ph.D.,	
Area of Specialization	Nanoscience	
Mobile No.	9629744303	
e-Mail ID	Institutional: r.kayalvizhi-phy@emgywomenscollege.ac.in	
	Personal: <a href="mailto:kayalraja109@gmail.com">kayalraja109@gmail.com</a>	

#### II. EDUCATIONAL QUALIFICATION

S.NO	NAME OF THE DEGREE/DIPLOMA	NAME OF THE INSTITUTION/UNIVERSITY	YEAR OF PASSING
1.	B.Sc.,	Madurai Kamaraj University	2000
2.	M.Sc.,	Madurai Kamaraj University	2002
3.	M.Phil.,	Bharathidasan University	2006
4.	Ph.D	Madurai Kamaraj University	2024

#### III. TEACHING EXPERIENCE:

S.NO	PREVIOUS TEACHING EXPERIENCE WITH NAME OF THE INSTITUTION	YEAR OF EXPERIENCE
1	EMG Yadava Women's College	22 years

#### IV. RESEARCH ACCOMPLISHMENTS

ORIENTATION/REFRESHER/MOOCs/FDP/ TRAINING PROGRAMMES ATTENDED			
S.NO	DATE	NAME OF THE COURSE/PROGRAMME	NAME OF THE INSTITUTION/UNIVERSITY
1.	2018	Academic Leadership	Crescent College of Education for Women, Madurai
2.	2019	State level workshop on “ Reforms in curriculum design & evaluation based on OBE”	The Standard Fireworks Rajaratnam College for women(Autonomous), Sivakasi

NATIONAL/INTERNATIONAL SEMINAR, WEBINAR, WORKSHOP, CONFERENCE & SYMPOSIUM ATTENDED				
S.NO	DATE	TITLE	EVENT NAME	INSTITUTION NAME
1.	2007	One day Seminar	Quantum Mechanics	Fatima college
2.	2008	State level seminar	Astrophysics	Lady Doak College
3.	2017	International Conference	Advanced Functional material for energy,Environmental and Biomedical Appliacations AFMEEB-2017	Madurai Kamaraj University
4.	2018	International Conference	International conference on Emerging Trends and Challenges-2018	NPR Arts & Science College,  Natham
5.	2020	National Conference	Design and Applications of Emerging materials	NadarMahajanaSangam  S.VellaichamyNadarCollege, Madurai
6.	May 2020	Webinar	Thin film technology - a fascinating area for research and  development	Nirmala College for Women,Coimbatore
7.	May 2020	National level webinar	Investigations on nano-crystals	Mass College of Arts and College, Kumbakonam

8	May 2020	Webinar	Macro to Micro & Nano Approaches in physics	Idhaya college for women Kumbakonam
9.	June 2020	National Webinar	Online tools for citation databases and reference management	ArulMiguPalaniandavar College of Arts and Culture, Palani
10.	June 2020	Webinar	Nano Structured Metal Oxide and Its Hybrids for Environmental and Biological Applications	PSNA college of Engineering & Technology, Dindukul
11	June 2020	National Level Webinar	7 dips to increase wealth during economic slow down	E.M.G. Yadava Women's College, Madurai
12	June 2020	webinar	NANOMATERIALS FOR SOLAR AND BIOLOGICAL APPLICATIONS	GOVERNMENT ARTS COLLEGE  UDHAGAMANDALAM
13	June 2020	International webinar	Green Energy and Technology	Kings Engineering College, Chennai
14	June 2020	National Level Webinar	Stable Organic-Inorganic hybrid halide perovskitenanocrystals for LEDs	Thiagarajar College, Madurai
15	June 2020	Webinar	Walnut Brownie	E.M.G. Yadava Women's College, Madurai
16	June 2020	Webinar	Advances in Crystal Growth & Nano materials	Kamaraj College, Thoothukudi
17	June 2020	Webinar	Prevention of Covid-19 by enhancing innate immunity	VELS University, Chennai
18	July 2020	Webinar		RAJA DORAISINGAM GOVERNMENT ARTS COLLEGE  Sivagangai
19	July	Webinar	3D Nano materials for future energy technology	E.M.G. Yadava Women's College, Madurai

	2020			
20	July 2020	One Week Workshop	Materials  Technology Advancement in Current Scenario - MTACS 2020	Sathyabama Institute of Science and technology(Deemed to be UniveUniversity)
21	17.9.2021	One Day Webinar	Intellectual Property Rights	E.M.G Yadava women's college,Madurai

PAPER PRESENTED IN NATIONAL/INTERNATIONAL SEMINAR, WEBINAR, CONFERENCE & SYMPOSIUM				
S.NO	DATE	TITLE	EVENT NAME	INSTITUTION NAME
1.	11-12, December 2017	International Conference – Green Synthesis and Characterization of CuO Nanoparticles from Costus igneus leaves extract by solgel method	Advanced Functional material for energy,Environmental and Biomedical Applications  AFMEEB-2017	Madurai Kamaraj University
2.	28,December 2018	International Conference -Green Synthesis of Copper oxide Nanoparticles using Costus igneus leaf extract and its antibacterial activity	International conference on Emerging Trends and Challenges-2018	NPR Arts & Science College,  Natham
3.	19, February 2020	National Conference- Green Synthesis and Characterization of Zinc oxide Nanoparticles using Costus igneus leaf extract	Design and Applications of Emerging materials	NadarMahajanaSangam  S.VellaichamyNadarCollege,Madurai
4.	10 & 11 February 2021	National Conference-  Heartfulness Education- An Approach towards a Holistic and Multidisciplinary Education	New Education Policy  The Urge for Transformation in Higher Education	E.M.G Yadava Women's College  Madurai-14
5.	18 & 19 December 2024	International Conference- Green synthesis and characterization of silver oxide nanoparticles using Ocimum Sanctum leaf extract	Online International conference on recent trends in multidisciplinary research	E.M.G Yadava Women's College  Madurai-14
6.	12,March2025	International Conference -BioSynthesis of Silver oxide Nanoparticles using Tulsi leaf extract and its characterization	Landscape of social consciousness: Intersection of Arts, Science and Humanities for sustainability and Equity	N.M.S Sermathaivasan college  for women, Madurai-12

### NATIONAL/INTERNATIONAL SEMINAR, WEBINAR, WORKSHOP, CONFERENCE & SYMPOSIUM ORGANISED

S.NO	DATE	TITLE	EVENT NAME
1.	2016	Nuclear Energy-Green Energy of the future	Kudankulam-Nuclear Power Project sponsored National Seminar
2.	30.7.2020	Higher Studies and Career Scope After B.Sc Physics	Webinar
3.	15.2.2021	Physics is Fun & Pride	Webinar
4,	18 & 19.12.2024	Online International conference on recent trends in multidisciplinary research	Webinar

### ARTICLES PUBLISHED IN JOURNALS / MAGAZINES

S.NO	TITLE WITH (DOI)	NAME OF THE JOURNAL/ MAGAZINE	NATIONAL/ INTERNATIONAL	IMPACT FACTOR	SCOPUS	CITATION INDEX	h-index	VOLUME , ISSUE, MONTH & YEAR
1.	Green Syenthesis Of Copper Oxide Nanoparticles using Costus Igneous leaf extract and its antibacterial activity	Journal of Applied Science and Computation	National	5.8				Volume VI, issue V, May 2019
2.	Heartfulness Education- An Approach towards a Holistic and Multidisciplinary Education		National					College magazine
3.	MgO nanoparticles with altered structural and optical properties by doping (Er <sup>3+</sup> ) rare earth element for improved photocatalytic activity	Applied Physics A	International	2.584				19, January 2022
4.	Optical, structural and photocatalytic properties of rare earth element Gd <sup>3+</sup> doped MgO nanocrystals	Chemical Physical Letters	International	2.328				28, January 2022

5.	Analysis on the combined effect of $Gd^{3+}$ and $Er^{3+}$ lanthanides in the microscopic, physicochemical and photocatalytic characteristics of MgO nanoparticles	Optical Materials	International	3.08				14 February 2022
6.	Synthesis of Zinc Oxide Nanoparticles Employing Costus igneus Leaf Extract and their Antibacterial, Antifungal and Anticarcinogenic Activities	Asian Journal of Chemistry 34(9) (2022) 2357-2362	International	0.49				3 34(9) (2022) 2357-2362 19.08.2022
7.	Green synthesis of CuO-ZnO nanocomposites using Costus igneus leaf extract and its photocatalytic activities	AIP Conference Proceedings	International	SJR-0.152				31.05.2023
8.	Scrutinizing the influence of vanadium ( $V^{5+}$ ) in Gd:MgO nanoparticles in their physicochemical properties and photocatalytic properties	Material science in semiconductor processing	International	4.2		8.0		Volume 181, October 2024, 108594

### LEADERSHIP/TEAM WORKING SKILLS

S.NO	CELL/CLUB/COMMITTEE/ASSOCIATION	POSITIONS HELD (NODAL, COORDINATOR/ASSISTANT COORDINATOR /MEMBER)	DURATION MONTH/YEAR
1.	Skill Development programme Coordinator	Coordinator	From 2015 to 2022 till
2.	Day Care Centre incharge	Coordinator	From 2015 to 2022 till
3.	Student Service Organisation	Member	2013 to 2015
4.	Grievance Redressal cell	Member	2007 to 2008
5.	Staff Club incharge	Coordinator	2005 to 2007

### e- CONTENT DEVELOPED

S.NO	DATE	TITLE	SOCIAL NETWORK (YouTube, Slideshare, Blog, MOOCs, Others)	LINK
1.	17.05.2021	Pressure Cooker	Slide Share	<a href="https://www.slideshare.net/MrsRKayalvizhiPhysic/pressure-cooker-248334573">https://www.slideshare.net/MrsRKayalvizhiPhysic/pressure-cooker-248334573</a>
2.	18.05.2021	Microwave Oven	Slide Share	<a href="http://www.slideshare.net/MrsRKayalvizhiPhysic/microwave-oven-248345392">http://www.slideshare.net/MrsRKayalvizhiPhysic/microwave-oven-248345392</a>
3.	18.05.2021	Mixer grinder	Slide Share	<a href="https://www.slideshare.net/MsMPreethiPhysics/mixer-grinder-ppt">https://www.slideshare.net/MsMPreethiPhysics/mixer-grinder-ppt</a>
4.	18.05.2021	Wet grinder	Slide Share	<a href="https://www.slideshare.net/MsMPreethiPhysics/wet-grinder-248341710">https://www.slideshare.net/MsMPreethiPhysics/wet-grinder-248341710</a>
5.	24.05.2021	Spectroscopy	Slide Share	<a href="https://www.slideshare.net/TAarthyAarthyarjun/spectroscopy-248491237">https://www.slideshare.net/TAarthyAarthyarjun/spectroscopy-248491237</a>
6.	25.05.2021	Thermostat	Slide Share	<a href="https://www.slideshare.net/RehanaBarveen/thermostat-pdf">https://www.slideshare.net/RehanaBarveen/thermostat-pdf</a>
7.	25.05.2021	Bonding in solids	Slide Share	<a href="https://www.slideshare.net/PriyankaPriyanka111/bonding-in-solids-248521445">https://www.slideshare.net/PriyankaPriyanka111/bonding-in-solids-248521445</a>

8.	25.05.2021	Electro magnetic Waves	Slide Share	<a href="https://www.slideshare.net/AmeernishaBibiS/electromagnetic-waves-248529299">https://www.slideshare.net/AmeernishaBibiS/electromagnetic-waves-248529299</a>
9.	20.05.2021	Origin of domains	You tube	<a href="https://youtu.be/weO7NWcSh_0">https://youtu.be/weO7NWcSh_0</a>
10	21.05.2021	Bloch Wall Transition Region between domains	You tube	<a href="https://youtu.be/SEZv1aLnrml">https://youtu.be/SEZv1aLnrml</a>
11	22.05.2021	Coercive and Hysteresis	You tube	<a href="https://youtu.be/erEWurnu4wQ">https://youtu.be/erEWurnu4wQ</a>
12	24.05.2021	Single domain particles	You tube	<a href="https://youtu.be/dh82vksL420">https://youtu.be/dh82vksL420</a>
13	24.05.2021	Magnetic Force Microscopy	You tube	<a href="https://youtu.be/6gM6-E7aAD8">https://youtu.be/6gM6-E7aAD8</a>
14	25.05.2021	Geomagnetism and Bio magnetism	You tube	<a href="https://youtu.be/OCJrVyUByc0">https://youtu.be/OCJrVyUByc0</a>

#### **V. COMPUTER SKILLS**

<b>COMPUTER LANGUAGE/TECHNICAL SKILLS</b>	
<b>S.NO</b>	
1.	Diploma in Computer Application

#### **VI. LANGUAGE PROFICIENCY**

<b>S.NO</b>	<b>LANGUAGE</b>	<b>SPEAK</b>	<b>READ</b>	<b>WRITE</b>
1.	Tamil	Tamil	Tamil	Tamil
2.	English	English	English	English