



ST. ALOYSIUS COLLEGE EDATHUA

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"LET THY DIVINE LIGHT SHINE MIRACULOUSLY"

FACULTY PROFILE

Personal Details

Name : Rani George

Department : Research and Post Graduate Department of Physics

Designation : Assistant Professor

Educational Qualification : MSc, JRF

Area of Specialisation : Material Science

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Education

Sl. No.	Degree	Institution/University	Year
1.	B.Sc. (Physics)	Assumption College, Changanacherry	2006-2009
2.	M.Sc.(Physics)	S.B. College, Changanacherry	2009-2011
3.	NET JRF	CSIR University Grants Commission	June 2012, Dec 2102

Career Profile

Sl. No.	Institution/Organization	Designation	Period
1	IIST, Thiruvananthapuram	Research Fellow	Feb. 2012 to June 2012
2	MG University, Kottayam	Research Fellow	April 2013 – Oct 2013

Positions Held or Holding, if any

Sl. No.	Position	Period
	Cordinator, Aloysian Incubation Centre	2023-2024
	Coordinator, Aloysian Media Club	2021-2023
	Secretary, Staff Association	2023-2024
	WWS mentor	2017-2020

	SSB mentor	2017-2019
	Associaton President	2017-18,2021-22

Research Publications

Sl. No.	Publication Details
1.	Sunil Thomas, Rani George , Naser Qamhie, K.G. Gopchandran, Saleh T. Mahmoud, Alessia Quatela, " <u>Sm³⁺-doped strontium barium borate phosphor for white light emission: spectroscopic properties and Judd–Ofelt analysis</u> " Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 248 (2021) 119187-12. https://doi.org/10.1016/j.saa.2020.119187
2.	Rani George, Sunil Thomas, Sanu Mathew Simon, Cyriac Joseph, P.R. Biju, N.V. Unnikrishnan, C. Sudarsanakumar, "Sm ³⁺ -doped PVDF-SiO ₂ hybrid for greenish-blue light emission", Materials Today: Proceedings (2020). https://doi.org/10.1016/j.matpr.2020.05.141
3.	Rani George, Sunil Thomas, Cyriac Joseph, P.R. Biju, N.V. Unnikrishnan, C. Sudarsanakumar, "Spectroscopic properties of Sm ³⁺ -doped PVDF-ZrO ₂ hybrid membrane", Materials Today: Proceedings 25 (2020) 151-154. https://doi.org/10.1016/j.matpr.2019.12.248
4.	Structural and Dielectric Studies of Eu ³⁺ -Doped Li–K–Zn Fluorotellurite Glasses Xavier Joseph, Rani George , Siby Mathew, N. V. Unnikrishnan; Int. J. Sci. Res. (2015)
5	Investigations on spectroscopic properties of Er ³⁺ -doped Li–Zn fluoroborate glass Sunil Thomas, M.S. Sajna, Rani George , Sk.NayabRasool, Cyriac Joseph, N.V.Unnikrishnan; Spectrochimica A (2015)
6	Spectroscopic investigations on Eu ³⁺ ions in Li–K–Zn fluorotellurite glasses Xavier Joseph, Rani George , Sunil Thomas, ManjuGopinath, M. S. Sajna, N. V. Unnikrishnan; Opt. Mat. (2014)
7	Optical properties of Sm ³⁺ ions in zinc potassium fluorophosphates glasses Sunil Thomas , Rani George , Sk. NayabRasool, M.Rathaiah , V.Venkatramu,Cyriac Joseph, N.V.Unnikrishnan; Opt. Mat. (2013)
8	Structural,vibrational and dielectric studies of Sm ³⁺ -doped K–Mg–Al zinc fluorophosphate glasses Sunil Thomas, Rani George , M. Rathaiah, V. Venkatramu, Sk. NayabRasool, N. V. Unnikrishnan; Physica B (2013)

Books Published

Sl. No.	Book Details
1.	Rani George, Sunil Thomas, P.R. Biju, N.V. Unnikrishnan, C. Sudarsanakumar, "Optical properties of Pr ³⁺ -dopedPVDF-TiO ₂ hybrid", Optical and Molecular Physics: Theoretical Principles and Experimental Methods, edited by M.A. Estes et al. (2021) (Book Chapter - Chapter 10) Apple Academic Press Inc. USA.
2.	Rani George "Synthesis and Characterization of Glassy Thin Films" <i>Chapters on Nanoscience</i> . Chapter 18 ISBN 978-81-908006-2-4

Invited Lectures/Paper Presentations in Conferences

Sl. No.	Conference & Presentation Details
1.	Rani George, Sunil Thomas, C. Sudarsanakumar, N.V. Unnikrishnan, “Spectroscopic studies of Sm^{3+} : PVDF/ ZrO_2 for white light emission”, <i>National Conference on Optics and Photonics (NCOP-2K22)</i> , T.K.Madhava Memorial college, Nangiarkulangara
2.	Rani George, Sunil Thomas, C. Sudarsanakumar, N.V. Unnikrishnan, “Photocatalytic Activity and Blue Light Emission of Sm^{3+} -Doped PVDF- SiO_2 Hybrid”, <i>International Workshop on Advanced Materials (IWAM 2020)</i> , Ras Al Khaimah, United Arab Emirates (February 2020).
3.	Rani George, Sunil Thomas, C. Sudarsanakumar, N.V. Unnikrishnan, “ Sm^{3+} doped PVDF ZrO_2 hybrid membrane for white light emission”, <i>International Conference on Science & Technology of Advanced Materials (STAM 20)</i> , Mar Athanasius College, Kothamangalam, Kerala, India (January 2020)
4.	Rani George, Sunil Thomas, C. Sudarsanakumar, N.V. Unnikrishnan, “ Sm^{3+} -doped PVDF- SiO_2 hybrid for blue light emission”, <i>International Conference on Photochemistry and Sustainable Energy- ICPSE 2019</i> , Camelot Convention Centre, Alappuzha, Kerala, India (October 2019)
5.	Poster presentation on ‘Synthesis and optical characterization of Strontium Magnesium Borate phosphor’ Rani George, Sunil Thomas at International Conference on Advanced Materials held at Nirmalagiri College, Kannur during June 12-14 2019
6.	Poster presentation on ‘ <i>Synthesis and Characterisation of Sm^{3+} Doped PVDF -SiO_2 Hybrid Material</i> ’, Rani George , Sanu M. Simon, C.Sudarsanakumar and Unnikrishnan N.V at International conference on Advanced Functional Materials held at St. Berchmans College, Changanacherry during 9-10 October 2018
7.	Poster presentation on ‘ <i>Synthesis and Characterisation of Sm^{3+} Doped PVDF -TiO_2 Hybrid Material</i> ’, Rani George , Unnikrishnan N.V at UGC sponsored national seminar on ‘Recent Trends in Nano and Other Materials for Energy Efficient Devices’ held during July 20-22 2017 at St. Aloysius College, Edathua.
8.	Sunil Thomas, Rani George, “Spectroscopic properties of Sm^{3+} -doped strontium-borate phosphors incorporated with Mg, Ca, or Ba: A comparative study”, <i>Recent trends in nano and other materials for energy efficient devices</i> , St. Aloysius’ College, Edathua, Kerala (July 2017)
9.	Poster presentation on ‘ <i>Synthesis and Characterisation of Sm^{3+} Doped PVDF -SiO_2 Hybrid Material</i> ’, Rani George , Unnikrishnan N.V at International conference on Advances in Optics and Photonics held at Guru Jambheshwar University of Science & Technology, Hisar (Haryana) during November 23-26 2017
10.	Poster presentation on ‘ <i>Energy transfer and white light emission of $\text{Tb}^{3+}:\text{Eu}^{3+}\text{-TiO}_2/\text{PVP}$ hybrids</i> ’ Prathibha Vasudevan, Sajna M.S, Sunil Thomas, Rani George , Unnikrishnan N.V at 23 rd National Laser Symposium (NLS-23) held during December 3 – 6 2014 at Sri Venkateswara University, Tirupati

Seminar/Workshops Organized

Sl. No.	Title of the Seminar/Workshop	Funding Agency	Amount	Date
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1.	Faculty coordinator – National workshop on iSensobotz (2015) organized in association with IIT Madras & ARK Techosolutions			18 – 19 September 2015
2.	Convenor – Intercollegiate Science Quiz			20 Jan 2017
3	Co-ordinator - EUREKA CORAL- KSCSTE Sponsored Workshop to familiarize the students of class X with basic principles in physics through hands-on experience.	KSCSTE	20000	10 th and 11 th November, 2016.
4	Co-ordinator- UGC sponsored national seminar on ‘Recent Trends in Nano and Other Materials for Energy Efficient Devices’ held at St. Aloysius College, Edathua	UGC	120000	20 - 22 July, 2017
5	Co-ordinator – Ozone day celebrations	Nil	-----	14 th February 2018.
6	Convenor - EUREKA - Workshop to familiarize the students of class X with basic principles in physics through hands-on experience. Conducted on 15 th January, 2019.		----	7 th February 2019.
7	Convenor – International seminar on ‘Physical properties of (Cr ₈₄ Re ₁₆) _{100-y} V _y alloy system’			3 rd August 2021.
8	Convenor - Ozone day celebrations			18-19 Sept 2019
9	Convenor - state level seminar on ‘XRD analysis’			9 th Jan 2021
10	Convenor - Independence Day Quiz Competition			16 Sept 2019

Research Projects

Sl. No.	Title of the Project	Funding Agency	Amount	Period
1.	Minor Research Project on <i>Synthesis and Optical Characterization Studies of Rare-Earth Doped TiO₂/PVDF hybrid membranes</i> funded by UGC (1884-MRP/14-15/KLMG019/UGC-SWRO)	UGC	Rs. 500000/-	Feb 2015 - Feb 2017
2	Student Project on “ <i>Synthesis and Optical Characterization of Dy³⁺ doped TiO₂/PVDF Hybrid Material</i> ”	KSCSTE, Thiruvananthapuram.	Rs.10000/-	2017

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