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Criterion - III Research, Innovations and Extension

3.5: Collaboration

3.5.1.

List of Year Wise Activities of MOUs/ Collaborations/ Linkage





List of Year Wise Activities of MoUs/ Collaboratons/ Linkage

Sl.No	Name of the Institution/Industry with whom the MoU/Linkage is Made	Year of Signing the MoU	Page Number
1	Girideepam Business School, Kottayam	2023	1-3
2	Christ Academy, Kanjirappally	2023	4-6
3	MSME- Technology Development Centre, Process & Product Development Centre (PPDC)	2023	7-9
4	Brain, Belief, & Behaviour Lab, Coventry University, CV1 5FB, UK	2023	10-11
5	Mahatma Gandhi University, Kottyam	2023	12-14
6	P Tech Industrial Training Centre (ITC), Ettumanoor	2022	15-18
7	Advanced Centre of Environmental Studies and Sustainable Development (ACESSD), Mahatma Gandhi University, Kottayam, Kerala	2022	19-21
8	Civil Service Institute, Palai	2022	22-24
9	Department of Chemistry St. Michael's College, Cherthala	2022	25-28
10	Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram	2022	29-31
11	St.Thomas College, Palai	2022	32-37
12	Bishop Kurialacherry College for Women, Amalagiri	2022	38-42
13	St. Anthony's College Shillong, Meghalaya	2022	43-45
14	Amal Jyothi College of Engineering, Kanjirappally	2022	46-48
15	Christ College Autonomous, Irinjalakuda	2022	49-51
16	P G Department of Commerce, Deva Matha College, Kuravilangad	2021	52-60
17	Rubber Board (Ministry of Commerce and Industry, Government of India)	2021	61-64





Kuriakose Elias College, Mannanam



18	Prof. (Emeritus) Minjoong Yoon, Department of Chemistry, Chungnam National University, S. Korea	2021	65-66
19	National Association of Software and Service Companies (NASSCOM)	2021	67-71
20	Centre for Nano Science and Technology Amal Jyothi College of Engineering, Kanjirapally	2020	72-73
21	Logic Software Solutions, Kottayam	2020	74-77
22	Regal Bee Gardens, Kanjar, Idukki	2020	78-82
23	Shantigram Wellness Pvt Lid, Santigramam, Irumbupalam	2020	83-85
24	St Joseph College of Communication, Media Village Changanassery	2020	86-89
25	Department of Biochemistry, NSS College, Pandalam, Pathanamthitta	2020	90-91
26	Sreedhareeyam Farm Herbs India (P) Ltd	2020	92-93
27	Kottaram Sweet House, Kanjirappally	2020	94-96
28	Department of English, Kristu Jyoti College, Chethipuzha	2019	97-100
29	Sance Laboratories (P) Ltd, Kozhuvanal, Kottayam	2019	101-103







MoU Between P G Department of Commerce, Kuriakose Elias College, Mannanam and Girideepam Business School, Kottayam

Sl.No	List of Actual Activities	Year of Activities
1	Seminar on 'Logistics Management' in collaboration with Girideepam Business School, Kottayam	2023





Report Seminar on Logistics Management

The Post Graduate Department of Commerce, Kuriakose Elias College Mannanam conducted a seminar on 'Logistics Management' in collaboration with Girideepam Business School, Kottayam on 09-03-2023 at 10 am at the computer lab. The event was organized with the aim of providing first-year degree students with a comprehensive understanding of the various facets of logistics and supply chain management. The seminar was facilitated by the esteemed faculty members of Girideepam Business School, Kottayam who brought in their rich expertise and experience to engage the students in an interactive and informative technical session. The key resource person was Mr. Subin Thomas, faculty member at GBS. Forty five students participated in the seminar.

The seminar covered a broad range of topics that are essential for understanding and managing logistics effectively in today's globalized business environment. The key areas addressed during the seminar included: Understand supply chain management, Freight Forwarding, International Trade Management, Material and Warehouse Management, Inventory Management, and Procurement and purchase management.











- The key outcomes of the program included:
 - The students gained a thorough understanding of the fundamental concepts of logistics and supply chain management. Students became more aware of the complexities and challenges associated with logistics management.
 - The faculty members provided practical insights into the logistics industry, which helped bridge the gap between theoretical knowledge and its application in the business environment.
 - The seminar equipped the students with knowledge and skills that are crucial for their future careers in logistics, supply chain management, and related fields.

The seminar on Logistics Management at Girideepam Business School was a resounding success, providing first-year degree students with valuable insights and knowledge. The collaborative effort between the faculty and students made the event engaging and informative, laying a strong foundation for the students' future endeavours in the field of logistics and supply chain management.

Signed to, and on behalf of

P.G. Department of Commerce Kuriakose Flias College, Mannanam Signed to, and on behalf of

Girideepam Business School Kottayam

Head of the Dept. of Commerce

K E College Milmanam

Cerala Pin. 686 561

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MoU Between Kuriakose Elias College, Mannanam and Christ Academy, Kanjirappally

Sl.No	List of Actual Activities	Year of Activities
1	Jointly organised UGC-NSQF certificate course	2023-2024







UGC · NSQF CERTIFICATE COURSES

Communication Skills in English

Coordinator: Dr. Sujarani Mathew

The Department of English, K.E College Mannanam organised UGC approved NSQF course in Communication Skills in English for interested first year undergraduate students. The programme was conducted by Christ Academy, adhering to NSQF guidelines.This course attempted to enhance the linguistic capabilities of students and revamp their communicative skills. Twenty eight students from various departments of our college enthusiastically participated in the course. Apart from the short sessions which were taken on working days following Day 4 order, an intensive programme was held on five days from April 1 to 13. As part of Train the Trainee sessions of this certificate course, the classes were taken by an expert team from Christ Academy including Amal Sankar Shaji, Sujith K. Suresh, Prithvi P Saji and Abraham Sandheep Samuel. Through these classes, students were trained in LSRW skills with apt focus on pronunciation differences,word order and conversational skills. An online exam was held at the end of the course to check the scholarship of the children in the course offered. The students receptively participated in the programme and immensely benefited from the classes offered, and have confidently appeared for the final assesment by MEPSC -Management Entrenuership and Professional Skills Council,



LIST OF PARTICIPANTS

SI.No	Name of the Student	Department	Admission Number
1.	Delna Francis	English	40257
2.	Adithya Krishna Shaji	English	40435
3.	Avinash Sasikumar	English	40360
4.	Sonu Theresa Shaji	English	40194
5.	Anletta Biju	English	40192
6.	Neha P.S	English	4264
7.	Aravind Prasad	English	40317
8.	Josna Sabu	English	40251
9.	Swathy Jayakumar	English	40457
10.	Arathy.M	Physics	40438







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11.	Anjaly Sajeev	Physics	40320
12.	Ananthakrishnan K.A	Physics	40336
13.	Alphin Sebastian	Physics	40551
14.	Abin Saji	Physics	40367
15.	Reethu Robin	Economics	40237
16.	Alan John Sam	Commerce (Aided)	
17.	Fredy Biju	Commerce Finance & Taxation (SF)	4139
18.	Sivapriya K.S	Commerce Finance & Taxation (SF)	4148
19.	Abeena Roy	Commerce Finance & Taxation (SF)	4145
20.	Amrutha K. Manoj	Commerce C.A (SF)	4214
21.	Swathy Saji	Commerce C.A (SF)	4215
22.	Krishnendhu K.G	Commerce C.A (SF)	4208
23.	Anjana Krishna. R	Commerce C.A (SF)	4087
24.	Arathy Jayaprakash	Commerce C.A (SF)	4676
25.	Maria Siby	History	40215
26.	Thomas Raju	Computer Application (Triple Main)	
27.	Neha Satheesh	Psychology (SF)	4264
28.	Azrin Sajith	Psychology (SF)	4227

Dr Sujarani Mathew Course Coordinator

oms Sebastian Academic Head Christ Academy

Principal

Kuriakose Elias College, Mannanam







MoU Between Kuriakose Elias College, Mannanam and MSME- Technology Development Centre, Process & Product Development Centre (PPDC)

Sl.No	List of Actual Activities	
1	Orientation class on skill development, entrepreneurship, and self- employment	2024



Report of "Awareness class by MSME, Ettumanoor"

In order to attract more students to entrepreneurship and self-employment career an awareness class was conducted for all the first year under graduate students of the college on 18-01-2024 by the MSME officials. This program was conducted by IEDC and IIC in association with ED club and the Resource person of the session was Mr. Rajesh Palani, Assistant Director, MSME Technology Development Centre (PPDC), Ettumanoor. The programme was to give awareness about skill development courses and certificate programmes which students can pursue along with their current studies and get in to job market and entrepreneurship career easily. 120 Student participants and 2 faculty members have actively participated in this program. The programme duration was from 9.45 am to 3 pm.











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Dr. Mercy Mathews

IIC President, IEDC Nodal Officer

IEDC Nodal Officer



Dr.Ison V Vanchipurackal

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Principal



Mr. Rajesh Kumar, Assistant Director, Technology Development Centre PPDC Extension Centre, Ettumanoor. Ministry of MSME





MoU Between Department of Psychology, Kuriakose Elias College and Brain, Belief, & Behaviour Lab, Coventry University, CV1 5FB, UK

Sl.No	List of Actual Activities	Year of Activities
1	Collaborative project titled "The Effect of Heart-Centred Spiritual Exercises: A Randomised Controlled Trial."	2023





KURIAKOSE ELIAS COLLEGE, MANNANAM

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Report of the activities conducted under the Memorandum of Understanding (MoU) between the Brain, Belief, & Behaviour Lab at Coventry University, UK, and the Department of Psychology, Kuriakose Elias College, Mannanam.

A meeting was held in 8 February 2023 at Kuriakose Elias College, Mannanam, to discuss the collaborative project titled "The Effects of Heart-Centred Spiritual Exercises: A Randomised Controlled Trial." between the Brain, Belief, & Behaviour Lab at Coventry University, UK, and the Department of Psychology at Kuriakose Elias College, Mannanam. Dr. Miguel Farias led the discussion and presentation of the research, which was attended by the Internal Quality Assurance Cell (IQAC) Coordinator, Institutional Review Board (IRB) members, and faculty from the Department of Psychology.

The study aims to evaluate the potential benefits of Christian and Islamic heart-centred contemplative exercises on health and interpersonal behaviors. It addresses three main questions:

Do Christian and Islamic heart-centred spiritual exercises promote human flourishing, both at the individual level (physiology, cognition, mental health) and interpersonal level (social functioning)?

Are the benefits of these religious exercises comparable to or better than secular meditation interventions (e.g., Mindfulness-Based Stress Reduction; MBSR), which have shown effectiveness in other studies?

What are the mechanisms underlying these positive outcomes?

IRB suggested to conduct a pilot study and present the results to the board before initiating the project.

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MoU Between Kuriakose Elias College, Mannanam and Mahatma Gandhi University, Kottayam

Sl.No	Sl.No List of Actual Activities	
1	Visit to the Business Incubation and Innovation Centre (BIIC) and the Innovation Foundation at Mahatma Gandhi University (MGU)	2023



Brief Report: Visit to BIIC & MG University Innovation Foundation

On February 23rd, 2024, Kuriakose Elias College Mannanam organised a visit to the Business Incubation and Innovation Centre (BIIC) and the Innovation Foundation at Mahatma Gandhi University (MGU). The event was facilitated by the Department of Zoology in association with the Innovation and Entrepreneurship Development Centre (IEDC) and the Institution's Innovation Council (IIC).

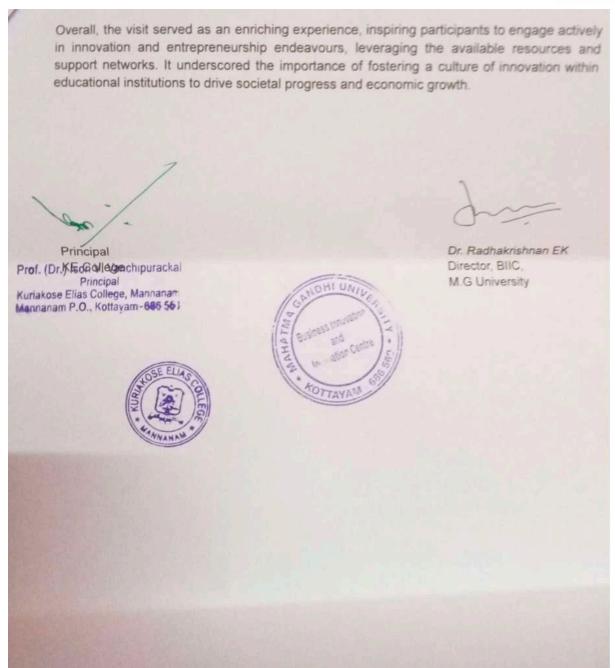
The visit lasted from 10 am to 12:30 pm, providing participants with insights into the dynamic ecosystem of innovation and entrepreneurship and also the research and development facilities there. Attendees had the opportunity to explore the resources, programs, and initiatives offered by BIIC and MGU IF, fostering a deeper understanding of how academia and industry collaborate to nurture innovation and support budding entrepreneurs.





Kuriakose Elias College, Mannanam









MoU Between Kuriakose Elias College, Mannanam and P Tech Industrial Training Centre (ITC), Ettumanoor

Sl.No	List of Actual Activities	Year of Activities
1	Conducted a certificate course on web designing	2022-2023





NSQF COURSE REPORT

The Department of Computer Applications in association with P Tech Institute of Advanced Studies Ettumanoor conducted a certificate course on "Youth employability skill training-Web designing" during the academic year 2022-23.49 students of under graduation were enrolled to the course. On the staff meeting conducted on 15th September it was decided to start the certificate course on 07/11/22. The classes were held at the department classroom. Duration of the course 40 hours and the students are actively participated in theory and lab. Mr. Pratheesh C and Ms. Jasmine Joseph were the resource persons.

COURSE OBJECTIVES

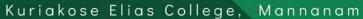
- Use their learned skills, knowledge and abilities to develop websites for the internet
- Reuse code with functions.
- Create and execute server side scripting programs
- Understand the construction of websites,

LEARNING OUTCOMES

Upon completing requirements for this course, the student will be able to:

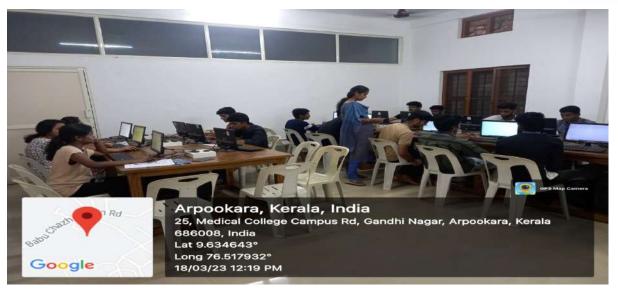
- 1 Create a software application using the HTML, JAVA SCRIPT.PHP
- 2. Debug a software application written in the PHP programming language.
- 3. Test a software application written in the PHP programming language



















CLASS DETAILS AND ATTENDANCE

SI.No	DATE	SUBJECT	TOPIC	TIME	PLATFORM	R. PERSON	No. of Students Present
1	16/12/2022	HTML	HTML paragraph formatting,List	1:15 pm- 1:50pm	Offline class	Pratheesh C	18
2	17/12/2022	HTML	Tables in HtML	7.00pm- 8.00 p.m	Online class	Jasmin Joseph	20
3	20/12/2022	HTML	Forms in HTML	7.00pm- 8.00 p.m	Online class	Pratheesh C	10
4	16/01/2023	HTML	Practical	1:15 pm- 1:50pm	Offline class	Pratheesh C	23
5	18/01/2023	HTML	Practical	1:15 pm- 1:50pm	Offline class	Jasmin Joseph	14
6	27/01/2023	HTML	Practical	1:15 pm- 1:50pm	Offline class	Pratheesh C	27
7	17/03/2023	HTML	Practical	3.40PM - 4.35PM	Offline class	Pratheesh C	27
8	18/03/2023	HTML	Practical	10.00-1.00 PM	Offline class	Jasmin Joseph	32



Director P-Tech Institute of Advanced Studies Ettumanoor



Anite T Manuel HOD Dept- of congular Applications

Principal

Kuriakose Elias College, Mannanam







MoU Between Kuriakose Elias College, Mannanam and Advanced Centre of Environmental Studies and Sustainable Development (ACESSD), Mahatma Gandhi University, Kottayam, Kerala

Sl.No	List of Actual Activities	Year of Activities
1	Collaborative researches	2022-2023





Report on Collaborative Research

Advancements in Analytical Chemistry Research: Towards Sustainable Solutions

Introduction

In the pursuit of sustainable solutions to contemporary environmental challenges, collaborative efforts by Advanced Centre of Environmental Studies and Sustainable Development (ACESSD), Mahatma Gandhi University, Kottayam and Kuriakose Elias College, Mannanam, Kottayam have been underway in the field of Analytical Chemistry. A group of dedicated researchers has embarked on a journey to explore innovative approaches for environmental remediation and sustainable material development. The collaborative research efforts have focused on fabricating novel materials, exploring green synthesis routes, and characterizing their applications in environmental and packaging domains. This report encapsulates the progress and achievements made by the researchers under their guidance during the academic year 2022 to 2023.

Research Endeavours

1. Enhanced Natural Fibers for Adsorptive Removal of Dyes

Researcher: Jeeva Maria Tom, M.Sc. Analytical Chemistry, Kuriakose Elias College, Mannanam

Admission No: 40265

Ms. Jeeva Maria Tom has been investigating the fabrication of enhanced natural fibers for the adsorptive removal of dyes from aqueous solutions. Her work has focused on enhancing the adsorption capacity of natural fibers through various modification techniques, aiming for effective and sustainable removal of dyes from wastewater.

2. Green Synthesis of Carbon Quantum Dots

Researcher: Sandra Anilkumar, M.Sc. Analytical Chemistry, Kuriakose Elias College, Mannanam

Admission No: 40481

Ms. Sandra Anilkumar's research is centered on the green synthesis and characterization of carbon quantum dots derived from selected medicinal plants. Her work aims to develop eco-friendly alternatives for conventional quantum dot synthesis methods, with a focus on their potential applications in sensing and environmental monitoring.





3. Eco-friendly Packaging Films

Researcher: Amal M Nair, M.Sc. Analytical Chemistry, Kuriakose Elias College,

Mannanam

Admission No: 40486

Mr. Amal M Nair's research focuses on the fabrication, characterization, and application of eco-friendly, biodegradable packaging films. His work aims to address the environmental concerns associated with conventional plastic packaging materials by developing sustainable alternatives with desirable mechanical and barrier properties.

4. Bamboo-derived Nano-biochar for Heavy Metal Removal

Researcher: Alona Rose Tom, M.Sc. Analytical Chemistry, Kuriakose Elias College, Mannanam

Admission No: 40278

Ms. Alona Rose Tom's research revolves around the fabrication of bamboo-derived nanobiochar as an adsorbent for the removal of heavy metals, specifically copper, from aqueous solutions. Her work aims to explore the potential of biochar-based materials in mitigating heavy metal pollution, thereby contributing to environmental remediation efforts.

Guidance and Coordination

Dr. Shanthi Prabha V, Scientist and Research Coordinator ACESSD, Mahatma Gandhi University along with Dr. Sandhya C, Assistant Professor, Kuriakose Elias College, Mannanam has provided invaluable guidance and mentorship to the researchers throughout their projects. Their expertise in environmental studies, sustainable development, and analytical chemistry has significantly contributed to the direction and success of the research endeavours. Their collaborative approach has fostered an environment of interdisciplinary learning and innovation, enabling the researchers to tackle complex challenges in research and explore novel solutions.

Prof. (Dr.) Ison V Vanchipurackal

Kuriakose Elias College, Mannanam Mannanam P.O., Kottayam - 686 561 MANATURA SIGNIFICATION OF THE WALL OF THE

Director

Advanced Centre of Environmental

Studies and Sustainable Development

Mahatma Gandhi University

Kottayam, Kerala · 686 560





MoU Between Kuriakose Elias College, Mannanam and Civil Service Institute, Palai

Sl.No	List of Actual Activities	Year of Activities
1	Orientation and interactive session on civil service examinations	2022







REPORT OF ACTIVITIES CONDUCTED AS PER THE MOU BETWEEN K E COLLEGE AND CIVIL SERVICE INSTITUTE PALA FOR THE ACADEMIC YEAR 2022-23.

The Indian civil service offers the most coveted jobs in this country. Over a million people attempt the UPSC Civil Services Exam every year, and only about 0.2 percent is selected. Aspirants have to toil hard to reach this point. It is ideal that they begin their preparation as early as possible preferably during their graduation years.

Keeping this in view, K E College, Mannanam has signed an MOU on 10th October 2022 with Civil Service Institute, Pala established in 1998 under Inter Diocesan Council for Human Resources Development, for providing training support for competitive examinations and career development.

As per the MOU, the Civil Service Coaching Club in association with Civil Service Institute, Pala conducted an Orientation and Interactive session on Civil Services on 14th October 2022 at 2.30pm for first year students of the College. Sri. Jubin James, Chief Academic Coordinator, Civil Service Institute Pala served as the resource person. The programme began with a prayer song. Ms. Amal Sharin T J, Convenor of Civil service coaching welcomed the gathering. The resource person gave a detailed account of the civil services. He also explained the various strategies to be adopted for success in the exam. He elaborated on the importance of time management and early preparation. The students also got a chance to get their doubts and apprehensions cleared. Ms. Deepa Mary Joseph, Co-Convenor of Civil service coaching rendered the vote of thanks. Forty nine students participated in the programme.

The Orientation programme kindled in students the aspiration for clearing the civil services examination. Eleven undergraduate students joined the Add on programme offered by the Civil Service Institute, Pala and completed the course successfully. These students were offered the course at discounted rates as agreed upon in the MOU.

Sl.No.	Name	Admission No
1	Sonu Theresa Shaji	40194
2	Ardhra V Manoj	40427
3	Siddharth V.S	40217
4	Dona Roy	39716
5	Sreya Baby	40201
6	Arun S Augustine	40018
7	Gayathri Unnikrishnan	3768
8	Shradha Josco	3840
9	Alan Shaji	39835
10	Pavithra P	40462
11	Asker Basheer	39932

Principal K E College, Mannanam

Prof. (Dr.) Ison V. Vanchipurackar Principal Kuriakose Elias College, Mannanam Mannanam P.O., Kottayam-686 561 LEGE

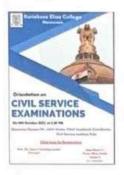
Principal Civil Service Institute, Pala

CIVIL SERVICE INSTITUTE PALA ARUNAPURAM P. 0 PIN - 686 574 04822 215831 6530381100 DR. V. V. GEORGEKUTTY
M.Com,MBA,M.Phil,Ph.D.
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MoU Between Department of Physics, Kuriakose Elias College, Mannanam and Department of Chemistry St. Michael's College, Cherthala

Sl.No	List of Actual Activities	Year of Activities
1	Dr. Ranjini Radhakrishnan, Assistant Professor, Department of Physics, Kuriakose Elias College, Mannanam has served as a resource person for the three-day National seminar organised by the Department of Chemistry, St. Michaels' College, Cherthala	2023
2	Collaborative research work was published in the Journal of Materials Chemistry and Physics (296, 2023, 127255)	2023
3	Organised two-day workshop on "Facets of Research Methodology"	2022
4	Analysis of research samples from Kuriakose Elias College Mannanam were carried out at Department of Chemistry, St. Michael's College, Cherthala	2022-2023
5	The UG students of Department of Physics, K. E. College Mannanam carried their research projects at Department of Chemistry, St. Michael's College, Cherthala	2022-2023







Report of the Activities Conducted by Department of Physics, Kuriakose Elias College, Mannanam (K. E. College) in Association with the Department of Chemistry, St. Michael's College, Cherthala.

The following activities were carried out under the collaboration between the Department of Physics, Kuriakose Elias College Mannanam and the Department of Chemistry, St. Michael's College, Cherthala in the academic year of 2022-2023. The objective of the collaboration is to provide opportunities for networking, learning, and sharing of knowledge and leverage the resources to achieve common goals. The MoU was signed on 22,08,2022 for a period of five years.

Year	Activities
	 Jointly organised two-day workshop on "Facets of Research Methodology" during 22-23 September 2022 at Fenicio Digital Seminar Hall, St. Michael's College, Cherthala. The post graduate students from Department of Physics, Kuriakose Elias College Mannanam, participated for the Workshop.
	 Collaborative research work from Department of Physics, Kuriakose Elias College Mannanam and Department of Chemistry, St. Michael's College, Cherthala, was published in the Journal of Materials Chemistry and Physics (296, 2023, 127255).
2022-2023	 The UG students of Department of Physics, K. E. College Mannanam carried their research projects at Department of Chemistry, St. Michael's College, Cherthala.
	 Analysis of research samples from Kuriakose Elias College Mannanam were carried out at Department of Chemistry, St. Michael's College, Cherthala.
- ·	 Dr. Ranjini Radhakrishnan, Assistant Professor, Department of Physics, Kuriakose Elias College, Mannanam has served as a resource person for the three-day National seminar on Recent Advances in Photochemistry (NSPC 2023) during 1-3 February 2023 organised by the Department of Chemistry, St. Michael's College, Cherthala.

MAEL'S CC

MAYITHARA 688 539

Head, Department of Chemistry St. Michael's College, Cherthala

Principal St. Michael's College, Cherthala

Prof. (Dr.) Sindhu S. Nair Principal St. Michael's College Cherthala. Head, Department of Physics Kuriakose Elias College, Mannanam

Principal

Kuriakose Eliás College, Mannanam Prof. (Dr.) Ison V. Vanchipurackal Principal

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Kuriakose Elias College, Mannanam



Materials Chemistry and Physics 296 (2023) 127255



Contents lists available at ScienceDirect

Materials Chemistry and Physics

journal homepage: www.elsevier.com/locate/matchemphys



The evolution and recent research trends of Surface Enhanced Raman Scattering sensors using plasmonics: Citation network analysis

ABSTRACT

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HIGHLIGHTS

- · Different types of Plasmonic materials for SERS sensors.
- Citation network analysis of Plasmonic based SERS.
- · Global main path of ongoing research in enhancing properties of plasmonic substrates.
- Cluster analysis of the available Web of Science (WoS) data.

ARTICLEINFO

Plasmonics Nanomaterials SERS Citation Network Analysis

The surface enhancement of Raman scattering of molecules in contact with plasmonic substrates revitalized the field of sensors. Since its discovery in the 1970s, many experimental and theoretical studies have been aimed at understanding the effect of different types of plasmonic nanomaterials on surface-enhanced Raman scattering (SERS) and how it can be applied in different forms of ultrasensitive sensing. In this work, the trajectory of global evolution and emerging research trends as well as the different prospects for surface enhanced Raman scattering sensors using plasmonics are systematically examined using citation network analysis. The growth curve, the number of papers published each year indicates that research activities are still in the emerging stage. We obtained the global main path of the on-going research and examined each node to identify major milestones and emerging research fronts. The cluster analysis of the available Web of Science (WoS) data was also done.

1. Introduction

Surface-Enhanced Raman Scattering (SERS) is a spectroscopic technique, combining conventional laser spectroscopy with special optical properties of metallic nanostructures. Martin Fleischmann et al. [1], who first observed SERS in 1974, recorded an extremely strong Raman signal from pyridine adsorbed on a roughened silver electrode. Without much delay, Fleischmann's observations were confirmed by the scientists, Jeanmaire and Van Duyne [2], M. G. Albrecht and J. A. Creighton [3] and M. Moskovits [4]. As our understanding of the interactions between molecules and nanostructures is improving rapidly, a broad range of applications is realized in the field of nanoscale optical spectroscopy, surface-enhanced Raman spectroscopy and surface plasmon resonance sensing. One of the most sensitive and efficient tools for sensors as compared to other spectroscopic techniques is the SERS, which boasts a million times enhancement in the Raman signals by using the required SERS substrates [5,6]. Two mechanisms are reported to be the reason for the large enhancement of otherwise weak Raman signals of analytes at close proximity with nanoparticle/nanostructure. The first mechanism is the electromagnetic field (EM) enhancement at the metal particle surface due to the phenomenon known as surface plasmon resonance (SPR). Chemical enhancement in which the charge transfer takes place between the adsorbed molecule and the metal surface is the second mechanism responsible for the Raman signal enhancement. In determining the magnitude of the surface-enhanced Raman scattering, it is the electromagnetic enhancement that plays a key role. For the very same reason, we will limit our search for articles that display the major breakthroughs in plasmonics based SERS research.

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https://doi.org/10.1016/j.matchemphys.2022.127255

Received 4 March 2021; Received in revised form 8 January 2022; Accepted 20 December 2022 Available online 21 December 2022 0254-0584/@ 2022 Elsevier B.V. All rights reserved.



^{*} Corresponding author.

Kuriakose Elias College, Mannanam



Dear Sir/Madam Organic Electronics We are very pleased to invite students, research scholars and teachers of your institution to the Fourth National Seminar on Recent Advances in Photochemistry (NSPC 2023). The seminar is organized by the Department of Chemistry, St. Michael's College, Cherthala, Kerala during 1-3, February 2023. Nanophotonics Photochemistry & Photobiology, Photocatalysis Energy and Electron Transfer · Photo Fenton Reaction Ultrafast Photochemistry The seminar will provide a platform to discuss the latest developments in fundamental and applied photochemistry and related sciences. NSPC 2023 will feature plenary lectures, invited lectures and oral presentations. We are certain that NSPC 2023 will provide a variety of stimulating lectures and presentations · Environmental Photochemistry Renewable Energy Sustainable Energy and Energy Storage Inorganic Photochemistry which will inspire the attendees. The focus areas of the seminar are expected to bring together scientists working on fundamental problems in photochemistry with those who engage in more applied research. The seminar will also discuss the most recent · Dr. Reji Varghese School of Chemistry, Indian Institute of Science Education and Research (IISER), Thiruvananthapuram, Kerala innovations in the field of photochemistry and photophysics. Prof. (Dr.) P. Shanmugam Organic & Bio-organic Chemistry, We invite papers for oral presentation both at the research and Post Graduate level. Participants are requested to send an electronic copy of the paper based on the original research related to the topic on or before 28th January 2023. CSIR - Central Leather Research Institute, Chennai, Tamil Nadu · Droi John anic Chemistry, Nation Chairperson Dr. Sindhu S. Nair echnology (NIIST), Thiruva Fr. Nelson Thaiparambil for Interdisciplinary Science and ram, Kerala . Dr. Jinto George SMEEE Manager, St. Michael's College Principal, St. Michael's College Cherthala Head, Design and Developme Cherthala INTRANS ELECTRO COMPONEN Dr. Ranjini Radhakrishnan Scientific Advisor Convener s College, Mannanam, Dr. Manoj Parameswaran Head, Department of Chemistry St. Michael's College Smt. Liya Jose M. Department of Chemistry St. Michael's College Department of Physics, Kurial Kottayam, Kerala. Cherthala Cherthala **Organizing Committee** Dr. Manoj Parameswaran (Scientific Advisor) Smt. Seena Elizabeth George FOURTH NATIONAL SEMINAR Dr. Pearl Augustine Smt. Liya Jose M. (Convener) RECENT ADVANCES IN Sri. Joseph Libin K.L. (Co-ordinator) Dr. Beena James PHOTOCHEMISTRY Dr. Ligi M. L. **NSPC 2023 Advisory Committe** Dr. Vijayakumar Chakkooth, NiIST, Thiruvananthapuram Dr. Halan Prakash, BITS, Goa **FEBRUARY 1-3, 2023** Prof. Mahesh Hariharan, IISER, Thiruvananthapuram Dr. Suneesh C. V., University of Kerala Dr. S. Anas, MG University, Kottayam Dr. Seno Jose, Govt. College, Kottayam Organized by Department of Chemistry, St. Michael's College, Cherthala, Kerala Dr. Ani Deepthi, University of Kerala Dr. Sindhu S Nair, Principat. St. Michael's College, Cherthala Dr. P. Manoj, IQAC Coordinator, St. Michael's College, Cherthala Dr. Ranjini Radhakrishnan, K.E. College, Mannanam Co-sponsored by Kerala State Council for Science, Technology & Environment (KSCSTE), Thiruvananthapuram Contact: Convener, NSPC-2023 Department of Chemistry, St. Michael's College Mayithara P.O., Cherthala, Kerala - 688539 Mobile: 9895787306, 9947220063, 9400562122 Email: smcchem18@gmail.com Venue : Fenicio Digital Seminar Hall St. Michael's College, Cherthala, Kerala THE SA







MoU Between Kuriakose Elias College, Mannanam and Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram

Sl.No	List of Actual Activities	Year of Activities
1	Visit to the Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram	2022



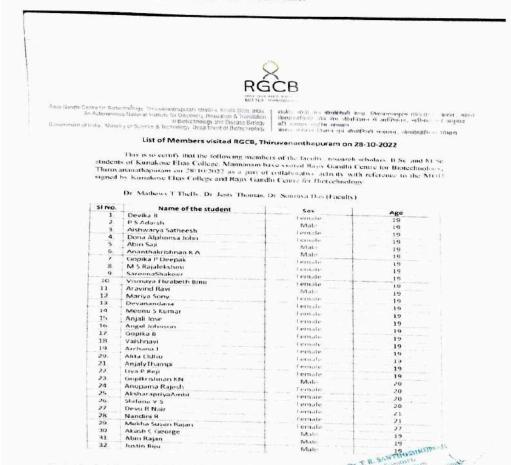


Report of collaborative activities between Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala and

Kuriakose Elias College, Mannanam, Kottayam, Kerala

The collaboration entails the involvement of staff, students and research scholars from both the institutions in sharing academic knowledge and conducting research.

Under the Memorandum of Understanding (MoU), the college organized a visit to the Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram on 28 October 2022. The visit included three faculty members and 40 students, including research scholars. Dr. T. R. Santhoshkumar, Scientist-G of RGCB provided technical support to the college in drafting the DBT Star College proposal, which helped in its successful outcome. Further activities are planned after the release of the funds from the scheme.





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Prof. (Dr.) Ison V. Vanchipurackal Principal Kuriakose Elias College, Mannanam Mannanam P.O., Kottayam-686 561

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DEPARTMENT OF BIOTECHNOLOGY, GOVERNMENT OF INDIA
विश्वनन्वपुरम 1HIBUVANANTHAPCHAM विन्/ PIN-695 014





MoU Between Kuriakose Elias College, Mannanam and St. Thomas College, Palai

Sl.No	List of Actual Activities	Year of Activities
1	Jointly organised a seminar on research methodology	2023
2	Jointly conducted a workshop on research methodology and publication ethics	2023
3	Collaborative publication-Tom, A. E., Thomas, A., Somakumar, A. K., Kuriakose, L., and Ison, V. V. (2023). Performance enhancement of PbS quantum dot solar cells employing a hybrid solid-state ligand exchange protocol. Thin Solid Films.	2023
4	Collaborative publication- Kuriakose, L., and Ison, V. V. (2023). On the synthesis of novel AginZn2Te4 quantum dots employing a green route	2023







Report of the activities conducted as per the MoU between Kuriakose Elias College, Mannanam, Kottayam and

St. Thomas College Palai, Kottayam

The following collaborative ventures were conducted as per the MoU signed on 15 May 2022 between the two colleges:

(i) Seminar on Research Methodology

Date: 18 January 2023

Venue: Fabian Hall, K. E. College, Mannanam

Resource Person: Professor (Dr.) Roonie Moore, Medical Anthropologist, University College

Dublin, Ireland

Convenor: Professor (Dr.) Ison V. Vanchipurackal, Principal, KE College, Mannanam

Organizers: Dr. Ratheesh M, UBA Coordinator, St. Thomas College, Palai and Dr. Sandhya C, IQAC Coordinator, KE College, Mannanam

The seminar aimed to improve participants' understanding of various research methodologies and their application in academic and professional settings. Professor (Dr.) Roonie Moore, a distinguished Medical Anthropologist from the University College Dublin, Ireland, led discussions on key areas such as research design, data collection methods, data analysis techniques, and ethical considerations in research. Practical examples from Professor (Dr.) Moore's research projects were also shared.

Professor (Dr.) Roonie Moore's expertise and engaging sessions had a profound impact on the participants, providing them with valuable knowledge and insights into research methodologies. The collaborative efforts of the IQAC, the Department of Commerce, and the UBA cell of St. Thomas College, Palai, made the event a rewarding and enriching experience for all attendees.

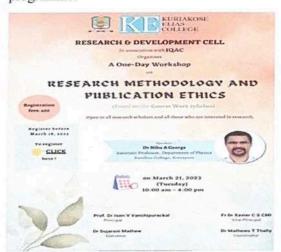






(ii) Workshop on Research Methodology and Publication Ethics for Faculty and Research Scholars conducted on 21 March 2023

Research and Development cell and IQAC of K.E. College jointly organised a one day workshop on 21 March 2023 on the topic "Research Methodology and Publication Ethics," based on the Ph.D Course Work Syllabus of Mahatma Gandhi University at Fabian Hall. The objective of the programme was to inculcate a strong sense of proper research methodology of all research scholars of the different disciplines- both science and Arts. The resource person Dr. Nibu A. George, Assistant Professor of Physics, Baselius College, Kottayam gave a deep insight into the research methodology and successfully created an awareness about publication ethics. 120 participants including seven research scholars from St.Thomas College, Palai attended the programme.











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	1	Mrs Rens k Abraham	Assistant Professor on Contract		CMS College, Kottayam	Jest 1
	2	Ms Nirupama Suncetha	Research Scholar		Scor Sankara College, Kalady	Nigor
	3	Mrs Sheen George	Research Scholar		St. Berchenans College Changanacherry	Mark
	4	Mrs Surya N S	Assistant Professor		Sree Narayana Arts and Science college Kumarakom	South
	5	Mrs Anjaly H	Assistant Professor on Contract		St. George's College Arweithurs	dis.
	6	Ms Annmary C	Research Scholar		St. Thomas College Palai	Strain 1
	37,10	Mrs Asuja Vijayan	Assistant Professor		Marthoma College Thirtyalls	Aller
		Mrs Neethi Chacko	Research Scholar	Law	School of Indian Legal Thought, (SILT) MG University, KOTTAYAM	Natha
	9	Mrs Minta Mariam Varghese	Research Scholar	Thistory	Catholicate College Pathanamthitta	Mirita
		Mr HAREESH M S	Assistant Professor		St. Joseph's Engineering College, Palai	Mark.
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1	I M	lis RESHMA J R	Research Scholar		St.Thomas College Palsi	Que-
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1-	D	r Aswathy Maheswaran	Assistant Professor on Contract	English	Catholicate College Pathonamthitta	O Asimilar
1.5	M	s Anagha K	Research Scholar		St. Thomas College, Palai	distant
16	5 M	s Antu Mariya Jose	Assistant Professor		BCM College Kottayam	· Lieber
17	M	s Lijanol Dominic	Research Scholar	Statistics	St. Thomas College, Palai	dies
18	M	r Renji Varghese	Research Scholar	Botany	CMS College Kottayam	100
19	M	s Megha Rose Manoj	Research Scholar	Mathematics	St. Berchmans Colleg Changanasseey	o position
20	Mr	rs Sneha Anna Sunny	Research Scholar	Chemistry	St. Berchmans College, Changanacherry	Rule
21	Mr	s Sharon Mary Stephen	Research Scholar	Physics	St. Berchmans Colleg Changanasseey	300
		s Reshma Mathew	Research Scholar	Commerce	Sacred Heart College (Autonomous), Theyara	业
	Mn	S ANJALI MACHANDRAN	Research Scholar	Education	St.Thomas College of Teacher Education, Pala	Marine S
		Mercena Eappen	Research Scholar	English	St. Thomas College, Palai	Witness !





Kuriakose Elias College, Mannanam



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	VARGHESE	Research Scholar	2	Pala St Thomas Colleg	a au
	Ms Aswathy Krishna	Research Scholar	English	Palai	- AU.
Section of the Printers of the Parks	Mr Dev Mathew	Research Scholar	Economics	S H College They	The second secon
2.8	Mrs Therese Jose	Research Scholar	Botany	CMS college kots tien Mahatmu Gandhi	7-16-1
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4.7	Mrs Deepthy S	Research Scholar	Legal 1100g	Marthoma Colleg	The second secon
30	Ms Lekshmi Krishma	Student	Physics	Thiruvalla	In State
31	Mrs KEERTHI JACOB	Research Scholar	Education	St. Joseph's Train College, Mannani	ım 🗎
32	Mrs Shiji A C	Research Scholar	Education	St. Joseph's Train College, Mannan	
	Mrs Nayana Elizabeth Andrews	Research Scholar	School of Computer sciences	Mahatma Gandhi University, Kottay	rama Namadara
	Ms Anagha K V	Research Scholar	School Of Computer Sciences	Mahatma Gandhi University, Kotta	
35 8	Mr Eldhose PM	Research Scholar	Botany	Sacred Heart Coll Theyara , Kochi	esc. ENDE
	Mrs Restoni, RK	Research Scholar	Education	St. Joseph College Teacher Education Women Ernakular	n for D
		Research Scholar	School Of Computer Sciences	Mahatma Gandhi University, Kotta	Pin Sank
2000	AS NEENA SURESH	A A A A STATE		Mahatma Gandhi University,Kottay	الماستونوسوناي
38 M	Ir Alfred Shaji Mekkade		English	Sree Shankara co	The second of th
39 M	frs Sharanya	Research Scholar	Economics	Kalady	3,000
40 M	rs ANUPRIYA RAJAN	Research Scholar	Education	St Joseph's Training College, Mannanam	Not attended
41 M	rs PREEJA K GOPAL	Research Scholar	School of pedagogical sciences	St Josephs' training college mannanam	most.
42 Ms	S JYOTHI S NAIR	Research Scholar	Education	St. Thomas College of Teacher Education, Pala	Spare
43 Ms	s Anupa A Francis	Assistant Professor on Contract	Food Science & Technology	St George's College, Aruvithura	Nich attended
44 Ms	s Lakshmi Rajeev	Research Scholar	Statistics	St. Thomas College Palai	Not attanged
45 Mr	Sreejith K Nair	Research Scholar	Education	St Joseph's Training College, Mannanam	Jul Just
	Gladys Paul	Research Scholar	Botany	SACRED HEART COLLEGE THEVARA	Klot affected
47 Ms	Soorya C A	Research Scholar	Botany	SACRED HEART COLLEGE THEVARA	Net altersted
48 Ms	Anju Varkey	Research Scholar	English	SB COLLEGE, Chenganacherry	die
100	Akila Devi V	Research Scholar	English	Meenakshi College for Women, Chennai-24	Sinc truestation
50 Mr.J	Jacob James	Research Scholar	Economics	Sree Sankara College, Kalady	
		Research Scholar	English literature	Deva Matha College, Kuravilangad	#
51 Ms/	Adya Elsa Prasad				







(iii) Collaborative Publications

- (a) Tom, A. E., Thomas, A., Somakumar, A. K., Kuriakose, L., and Ison, V. V. (2023). Performance enhancement of PbS quantum dot solar cells employing a hybrid solid-state ligand exchange protocol. Thin Solid Films, 787, 140138. https://doi.org/10.1016/j.tsf.2023.140138.
- (b) Kuriakose, L., and Ison, V. V. (2023). On the synthesis of novel AgInZn2Te4 quantum dots employing a green route. Nano LIFE, 13(1), 2350001. https://doi.org/10.1142/S1793984423500010.





World Scientific

On the Synthesis of Novel AgInZn₂Te₄ Quantum Dots Employing a Green Route

Libin Kuriakuse* and V. V. Ison¹⁻¹
*Department of Physics
Centre for Nano Bio Polymer Science and Technology
St. Thomas College, Palai Armapuram
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Received 24 October 2022 Accepted 10 December 2022 Published 6 February 2023

We report the synthesis of novel quaternary AglaZa₂Te₄ quantum dots (QDs) utilizing organometallic hot injection procedures. By using octadecene and oleylarnine as the coordinating solvents and do-lecanethial as the capping ligand, we could arrive at a phosphine-free "green route" for the synthesis. Detailed characterizations were performed using high resolution transmission electron microscopy (HRCE(M), selected area electron diffraction (SAED) X-ray diffraction (ARD), X-ray photoelectron spectroscopy (KPS), indertively coupled phasma-optical emission spectrus-copy (HCP-OFS), energy dispersive X-ray spectroscopy (HDX), UV-Vis spectroscopy, and Photoluminescence (PL) spectroscopy for the structural, compositional, and optical analyses. The namestructures were spherical, monodisperse, highly crystalline with cubic structure, and having an average diameter of 6.5 ± 0.5 nm with optical features in the visible region.

Keywords: Quantum dots; colloidal synthesis; $AgInZn_2Te_4$; quaternary quantum dots; phosphic free synthesis; green synthesis.

Prof. (Dr.) Ison V. Vanchipurackal Principal Kuriakose Elias College, Mannanam Mannanam P.O., Kottayam - 686 561



Prat. Dr. James John
Principal
St. Thomas College, Palal





MoU Between Kuriakose Elias College, Mannanam and Bishop Kurialacherry College for Women, Amalagiri

Sl.No	List of Actual Activities	Year of Activities		
1	Sr. Aji Joseph, Head & Assistant Professor of Chemistry, B.K.College, Mannanam led a session for undergraduate and postgraduate Chemistry students	2023		
2	Faculty members from B.K. College Amalagiri participated in the Workshop on Research Methodology and Publication Ethics			
3	Students from Kuriakose Elias College, have participated in the Literary Fest "Flary Palooza" conducted by the Department of English, B.K.College for Women			
4	Faculty members from B.K. College Amalagiri participated in the online seminar on "Creative Writing, Translation, and Publishing Entrepreneurship" conducted by Kuriakose Elias College	2022		
5	Research collaboration- Studies on the Photoluminescence of Lanthanide doped Bismuth Oxide based Materials: A Short Review, Aji Joseph, Ambili K.S., Jesty Thomas, An International Multidisciplinary Double-Blind Peerreviewed Research Journal, 2022:4(1), ISSN:2582-1962	2022		

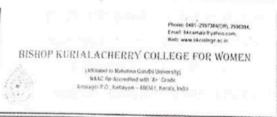




Report of the activities conducted as per the MoU between Kuriakose Elias College, Mannanam, Kottayam and and Bishop Kurialacherry College for Women, Amalagiri, Kottayam

The following collaborative ventures were conducted as per the MoU signed on 15 May 2022 between the two colleges,

A good number of teams from Kuriakose Elias College, Mannanam have participated in the Literary Fest "Flary Palooza" conducted by the Department of English, B.K.College for Women on 7 November 2022. The following students participated in Poetry Writing, Mad Masquerade, Western Solo, Spot Dance and Treasure Hunt. These activities helped to activate the artistic and creative potentials of the students.

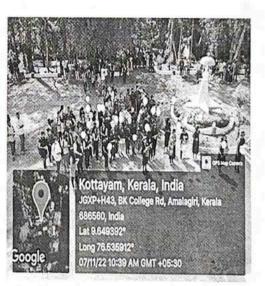




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- ✓ Faculty members from B.K. College Amalagiri participated in the two programmes conducted by K.E. College
 - Online seminar on Creative Writing, Translation and Publishing Entrepreneurship conducted on 25-26 August 2022

The two-day online workshop was conducted by the Department of English and Research and Development Cell of Kuriakose Elias College Mannanam, in collaboration with National Translation Mission and School of Letters, Mahatma Gandhi University, On 25-26 August 2022. The workshop was inaugurated by Dr.E.V Fathima, winner of 2008 Crossword Prize for Translation in English2018, and JCB Literature Award 2021. The inaugural speech was followed by the keynote address by Dr Tariq Khan which acquainted the participants with the innovative programmes and schemes offered by the National Translation Mission of India that envision the development of translation studies in our country.

The workshop also envisaged the beginning of a Translation series of poetry of the great Malayalam poets of yore (who have a veritable place in text books) by the students of the college. Dr Tariq Khan released the first attempt in Translation by the student Liza Priyesh a Literature student, titled Mother and Child based on Kumaranasan's "Kuttiyum Thallayaum."

The first talk of the event was delivered by Dr E.V Fathima, on the topic "Translation as Creative Mediation". She elucidated the idea that translation is a creative endeavor and not a mechanical process, as it is popularly considered. The talk was followed by a panel discussion in which educational experts like Rev.Fr (Dr) Xavier C.S, Prof. V.M Jose, Prof.M.G Chandrashekaran, Dr Karthika S.B and J S Anandakrishnan explained their viewpoints about translation and creativity. The discussion was moderated by Ms.Ancy Cyriac, Assistant Professor, Department of English, BCM College Kottayam. The afternoon session was led by J.S Anandakrishnan, winner of Prime Minister's YUVA Young Author Award, which was also interactive and engaging. His talk on "Letters Now: What the World Reads" discussed how reading as a creative process got evolved over time and how it underwent changes in the technologically advanced world of today.

The second day of the workshop on August 26, 2022 commenced with the talk on "Indian Culture: Gained in Translation" by Dr Rohit P, Associate Professor, School of Letters, MG University. In the talk, he explained how translation as an enterprise got transformed through time with specific focus on the Indian scenario.



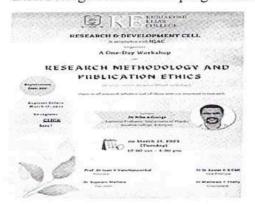


This session was followed by a talk by Dr. Elizabeth Kuruvila, Executive Editor, Penguin Random House. In her talk on "Creative Writing and Publishing Industry", she explained the recent developments in the publishing industry and the formal criterias to be followed to enter the field. As a whole, the workshop familiarized the participants --a total of 185 people, including faculty members from B.K.College with varied nuances and dimensions of translation studies.



 Workshop on Research Methodology and Publication Ethics for Faculty and Research Scholars conducted on 21 March 2023

Research and Development cell in association with IQAC of K.E.College conducted a one day workshop on 21 March 2023 on the topic "Research Methodology and Publication Ethics," based on the Ph.D Course Work Syllabus of Mahatma Gandhi University at Fabian Hall. The objective of the programme was to inculcate a strong sense of proper research methodology of all research scholars of the different disciplines- both science and Arts. The resource person Dr. Nibu A. George, Assistant Professor of Physics, Baselius College, Kottayam gave a deep insight into the research methodology and successfully created an awareness about publication ethics. 120 participants including four faculty members from B.K.College attended the programme.











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✓ Research collaboration

Publication in Journals

Studies on the Photoluminescence of Lanthanide doped Bismuth Oxide based Materials: A Short Review, Aji Joseph, Ambili K.S., Jesty Thomas, An International Multidisciplinary Double-Blind Peer-reviewed Research Journal, 2022:4(1), ISSN: 2582-1962.

Presentation in conferences

A paper was presented on "Bismuth Oxide-based Photocatalyst for Pollutant Degradation" in the Two-day International Conference on "New Frontiers and Development in Chemistry (NFDC-2023)" held by the Post Graduate Department of Chemistry, Catholicate College, Pathanamthitta, on 6 January 2023.

Paper was presented on 'Synthesis and Characterization of NIR Reflecting Bi2O3 Based Nano Pigment' in One Day National Conference on 'Contemporary Topics in Chemistry' held by the Post Graduate Department of Chemistry, SB College, Changanassery on 16 February 2023.

Serves as Resource Person

On 7 March 7 2023, Sr. Aji Joseph, Head & Assistant Professor of Chemistry, B.K.College, Mannanam led a session for undergraduate and postgraduate Chemistry students, in association with the R&D Research Conclave at K.E. College, Mannanam.

The session focused on "Investigation on the Development of Environmentally De

Nanoparticles."

BISHOP KURIALACHERRY COLLEGE FOR WOMEN AMALAGIRI P.O., KOTTAYAM-686 561



MoU Between Kuriakose Elias College, Mannanam and St. Anthony's College Shillong, Meghalaya

Sl.No	List of Actual Activities	Year of Activities
1	Jointly organised national webinar on "Research and Publication Ethics in Chemistry."	2023

Prof. (Dr.) Ison V. Vanchipurackal Principal Kuriakose Elias College, Mannanam

Mannanam P.O., Kottayam - 686 561





Report of the activities conducted as per the MoU between Kuriakose Elias College, Mannanam, Kottayam and St. Anthony's College, Shillong

National Webinar on Research & Publication Ethics in Chemistry

The National Webinar on Research & Publication Ethics in Chemistry was organized as part of the Memorandum of Understanding (MOU) between Kuriakose Elias College, Mannanam, and St. Anthony's College, Shillong on 16 March 2023 at 6 p.m in goggle meet platform (Link: https://meet.google.com/hsb-mcec-udu). The webinar aimed to enhance the understanding and practice of research and publication ethics among participants. Dr. Rahul Narayanan, an esteemed Research Assistant Professor in Chemistry, SRMIST, Chennai delivered an insightful presentation on the topic.

Key Points conveyed were

- Importance of research and publication ethics in chemistry.
- · Best practices and guidelines for conducting ethical research.
- · Responsible authorship, data management, and citation practices.
- · Avoiding plagiarism and ethical dilemmas in research.
- Impact of ethical research practices on the quality and credibility of published work.

101 participants, including faculty members and students from both colleges, attended the webinar. They expressed gratitude for the chance to improve their knowledge and skills in this crucial area of academic research. E certificates were provided to the participants. The collaboration between the colleges in organizing this event demonstrated their dedication to promoting ethical research practices in the field of chemistry.











MoU Between Kuriakose Elias College, Mannanam and Amal Jyothi College of Engineering, Kanjirappally

Sl.No	List of Actual Activities	Year of Activities
1	Visit to Startup Valley Technology Business Incubator at Amal Jyothi Engineering College, Kanjirapally	2022



Ref: AJ/TBI/SS-KE 21st Oct 2023

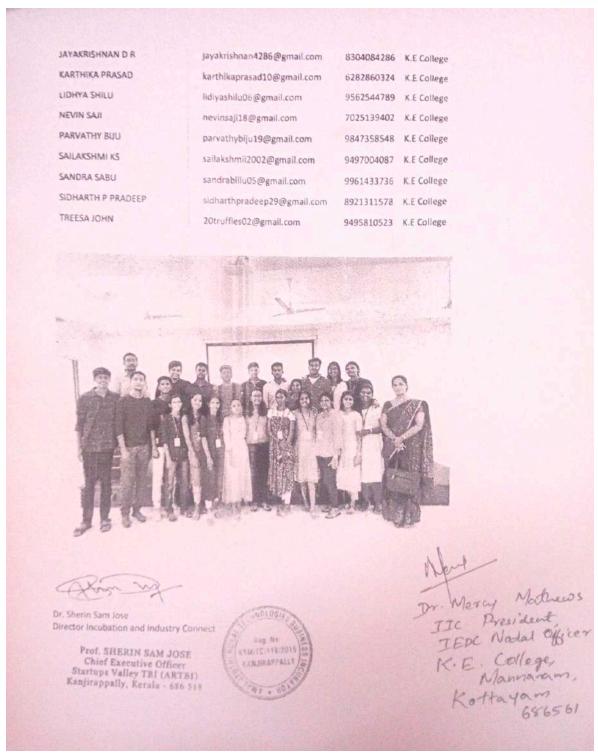
Report of Startup valley, TBI Amal Jyothi Visit

A visit to Startups Valley Technology Business Incubator at Amal Jyothi Engineering College, Kanjirapally was conducted for the final Year B.Sc Physics students of K.E College on October 21, 2022. This programme was named as 'Startup Safari'. The Startup Safari was beginning at 10.30am with an introductory session on innovation and entrepreneurship by Prof Abi Varghese. Total 22 students have participated in this programme. It was a full day programme which includes visit to different labs, consisting of many 3D printers and other sophisticated instruments.

Paricipants list

Name	Email	Contact	College	
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ATHIRA K R	athirarejeev71@gmail.com	7736582346	K.E College	
ATHIRA SOMAN	athirasoman1717@gmail.com	9778358066	K.E College	
BLESSY ROSE BENNY	blessyrosebenny@gmail.com	9188434590	K.E College	
CHRISTEENA SAJAN	christeenasaj13@gmail.com	8075551838	K.E College	
DEVIKA SHAJU	devikashaju6@gmail.com	8590875438	K.E College	











MoU Between Kuriakose Elias College, Mannanam and Christ College Autonomous, Irinjalakuda

Sl.No	List of Actual Activities	Year of Activities
1	Students and faculty members from Kuriakose Elias College participated in the 'Zravs-2023' national conference held at Christ College, Irinjalakuda.	2023





Report of the activities conducted as per the MoU between Kuriakose Elias College, Mannanam, Kottayam and Christ Autonomous College, Irinjalakuda, Thrissur

As part of the collaboration between the two institutions, thirty students and four faculty members from K. E. College participated in 'Zravas 2023' National Conference held at Christ Autonomous College, Irinjalakuda on 3 and 4 February 2023.

Theme of the conference: Disaster Resilience: Revitalising Communities as a Social Work Imperative

Aim of the conference: To deepen the understanding, share best practices, and explore innovative approaches to enhance community resilience in the face of disasters.

Key Discussions:

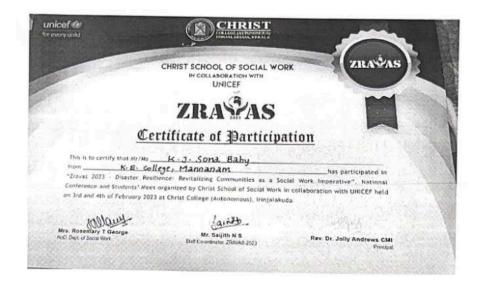
- 1. Understanding Disaster Resilience: The conference commenced with a comprehensive discussion on the concept of disaster resilience, emphasizing the need for proactive measures to mitigate risks and build community capacity.
- Community Engagement: Various sessions highlighted the importance of community participation and empowerment in disaster management, underscoring the role of social workers as catalysts for change.
- Case Studies and Best Practices: Participants shared case studies and best practices from their respective regions, showcasing successful initiatives in disaster preparedness and response.
- 4. Policy Advocacy: The conference also delved into the realm of policy advocacy, emphasizing the need for advocacy at local, national, and international levels to strengthen disaster resilience frameworks.

Key Takeaways:

- The importance of integrating disaster resilience into the social work curriculum to equip future professionals with the necessary skills and knowledge.
- The significance of collaboration and networking among stakeholders to enhance disaster preparedness and response.
- The role of social workers in promoting a culture of resilience and empowerment within communities.

















MoU Between P G Department of Commerce, Kuriakose Elias College, Mannanam and P G Department of Commerce, Deva Matha College, Kuravilangad

Sl.No	List of Actual Activities	Year of Activities
1	Panel discussion on the union budget 2023	2023
2	Workshop on data analysis using SPSS	2022







REPORT

Panel Discussion on the Union budget 2023

A Panel Discussion on Union budget 2023 was organised by Postgraduate Department of Commerce, Kuriakose Elias College, Mannanam in association with Postgraduate Department of Commerce, Deva Matha College, Kuravilangad on 23rd February 2023 from 7.00 pm to 8.30 pm. Programme was organised with the object of giving awareness to students on the key areas or sectors affected by the union budget 2023. Dr. Anish Thomas, HoD of commerce, Devamatha College Kuravilangad and Mrs. Jency Francis, HoD of commerce, K.E College were the convenors of the Programme.

The programme was started with a silent prayer. Mrs. Jency Francis, Head and Assistant Professor of PG Department of Commerce, delivered the



welcome speech. Dr. Thara Thomas t gave a general introduction regarding budget, impact on important sectors of economy and its relevance. Members of the panel presented the main points of the budget and expressed their view points.

The discussion was on the impact of union budget 2023 on areas like, taxation, agriculture, education, infrastructure, MSME, Health, green initiatives etc. Dr. Thara Thomas was the moderator of the panel discussion and she gave a general evaluation regarding the points discussed in the session and clarified the doubts of the audience. A total of 65 students of M. Com and 8 faculty members from both the colleges actively participated in the programme and among them 39 of them were from K.E College Mannanam. The programme gave students an idea on the relevance of union budget and they learned how to analyse the budget in terms of its impact on the economy. Participants got awareness on the key areas of budget 2023 and the sectors benefits out of new budget allocation and those sectors which were not much highlighted in the budget. Dr. Renny A. George, Assistant professor in the department of

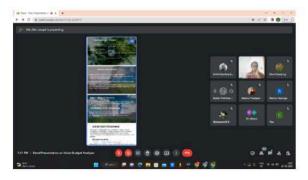
Criterion 3.5.1. - MoU/Collaborations



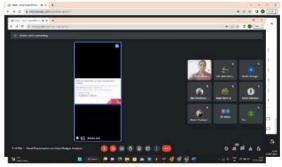




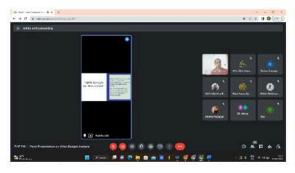
Commerce, Deva Matha College Kuravilangad and also the coordinator of the programme delivered the vote of thanks and the discussion was concluded by 8.30 pm. Feedback was collected from participants and students were of the opinion that the programme was highly informative and useful for them.

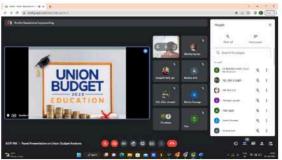
















List of Participants

No	Ad. No	Name	Class	College
1.	40271	ANUMOL C. S	I. M.Com	K. E College Mannanam
2.	403273	CHINJU BENNY	I. M.Com	K. E College Mannanam
3.	40283	YADHU JAYAN	I. M.Com	K. E College Mannanam
4.	40383	JOSWIN CYRIAC	I. M.Com	K. E College Mannanam
5.	40259	RINTU THOMAS	I. M.Com	K. E College Mannanam
6.	40286	ANISHA ANIL	I. M.Com	K. E College Mannanam
7.	40357	MINNA MANOJ	I. M.Com	K. E College Mannanam
8.	40182	VINEETHA MURALI	I. M.Com	K. E College Mannanam
9.	40178	NIBHAMOL K.V	I. M.Com	K. E College Mannanam
1 0 .	40170	AKSHARA SURESH	I. M.Com	K. E College Mannanam
11.	40472	HARIPRIYA SAJEEV	I. M.Com	K. E College Mannanam
12.	40478	MERIN GEORGE	I. M.Com	K. E College Mannanam
13.	40183	ALEENA REJI	I. M.Com	K. E College Mannanam
14.	40477	GEENU MARY GEORGE	I. M.Com	K. E College Mannanam
15.	40526	ANJANA VISWANATH	I. M.Com	K. E College Mannanam
1 6 .	40524	ASHNA BIJILY	I. M.Com	K. E College Mannanam
17.	40345	ATHIRA DILEEP	I. M.Com	K. E College Mannanam
18.	39980	AKHILA AJI	II. M.Com	K. E College Mannanam
19.	39981	PRIYAMOL P M	II. M.Com	K. E College Mannanam
20.	39983	ANJU VIJAYAN	II. M.Com	K. E College Mannanam







21.	40032	LINNY ABRAHAM	II. M.Com	K. E College Mannanam
22.	40034	SWATHY PRAMOD	II. M.Com	K. E College Mannanam
23.	40058	NEENU	II. M.Com	K. E College Mannanam
24.	40059	ANUJA SREEVAS	II. M.Com	K. E College Mannanam
25.	40115	ANJANA AJIKUMAR	II. M.Com	K. E College Mannanam
26.	40131	NIKHITA SYRIAC	II. M.Com	K. E College Mannanam
27.	40156	LIVIYA JOSEPH	II. M.Com	K. E College Mannanam
28.	40045	BEN VARGHESE	II. M.Com	K. E College Mannanam
29.	40046	ROBIN THOMAS	II. M.Com	K. E College Mannanam
30.	40083	MIDHUN PRADEEP	II. M.Com	K. E College Mannanam
31.	40087	BILBIN GEORGE	II. M.Com	K. E College Mannanam
32.	40111	EBIN WILSON	II. M.Com	K. E College Mannanam
33.	40132	MIDHUN SKARIA ABRAHAM	II. M.Com	K. E College Mannanam
34.	40150	ALAN SEBASTIAN SAJAN	II. M.Com	K. E College Mannanam
35.		DIVYA JOSEPH	FACULTY	K. E College Mannanam
36.		JENCY FRANCIS	FACULTY	K. E College Mannanam
37.		NEETHU JOSE	FACULTY	K. E College Mannanam
38.		PRAJOD SUNNY	FACULTY	K. E College Mannanam
39.		GEORGE J PUTHUMANA	FACULTY	K. E College Mannanam
40.		1		





SIGNATURES

Signed to, and on behalf of

P.G. Department of Commerce

Deva Matha College

Kuravilangad

The b

Mr. Anish Thomas

Assistant Professor & HoD

P.G. Department of Commerce

Deva Matha College

Kuravilangad

Signed to, and on behalf of

P.G. Department of Commerce

K.E. College

Mannanam

Ms. Jency Francis

Assistant Professor & HoD

P.G. Department of Commerce

K.E. College

Mannanam





Report on the Workshop on Data Analysis Using SPSS

A workshop on the topic Data Analysis Using SPSS was organised by PG Department of Commerce, Kuriakose Elias College, Mannanam in association with the PG Department of Commerce, Deva Matha College, Kuravilangad on 7th,8th and 9th of July 2022. Mr. Marvin Sabu, Research Scholar and Alumni of the Commerce Dept of Deva Matha College was the resource person. The objective of the programme was to equip the students to do the analysis of their dissertation or project work using SPSS.



Brochure of workshop on Data Analysis Using SPSS

The workshop in connection with the topic Data Analysis using SPSS started at 10.30 a.m on 7th July 2022 through google meet. Mr. Anish Thomas, Head of the Department of Commerce, Deva Matha College, Kuravilangad delivered the welcome speech and introduced the resource person, Mr. Marvin Sabu. The resource person then gave a general idea regarding SPSS and its usage. He also mentioned in detail the meaning and significance of variables and the relevance of its coding in SPSS. Final Year post graduate students from Deva Matha College and Kuriakose Elias College actively participated in the workshop. The session concluded by 12.30 p.m.

The second session of the workshop started in the computer lab of Deva Matha College, Kuravilangad at 9.30 a.m on 8th July 2022. Mr. Renny A George, Assistant Professor in Commerce, Deva Matha College, welcomed the resource person and the participants. The resource person then continued the workshop on the topic of Data Analysis Using SPSS. In this session, he explained the practical application of SPSS and



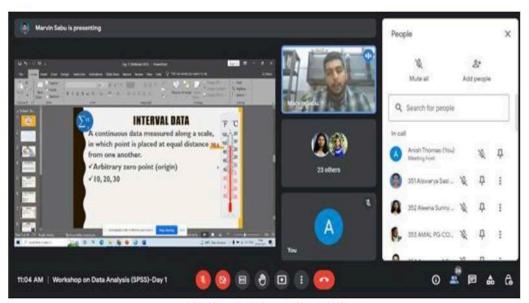
the theoretical explanations regarding various research tests. Merin Dali Shaji, II P.G M.com Student from Deva Matha College, delivered the vote of thanks. The second-day session of the workshop concluded by 3.15 p.m.





Offline practical session of workshop at Deva Matha College, Kuravilangad

The Final day session of the workshop started at 10.30 a.m on 9th July through google meet. The resource person covered the remaining topics related to various tests. The workshop was fruitful in all the sense which gave confidence in students to do analysis using SPSS. 23 Students from both the colleges attended the workshop which was conducted specially for the final year M. Com students. Mrs. Divya Joseph, Assistant Professor in Commerce, Kuriakose Elias College, Mannanam delivered the vote of thanks. The session concluded by 12.30 p.m.



Online session of workshop





Participation List





SIGNATURES

Signed to, and on behalf of

P.G. Department of Commerce Deva Matha College Kuravilangad Kuravilangad

Mr. Anish Thomas

Fresh.

Assistant Professor & HoD P.G. Department of Commerce Deva Matha College Kuravilangad

Signed to, and on behalf of

P.G. Department of Commerce K.E.College Mannanam Mannanam



Ms. Jency Francis

Assistant Professor & HoD P.G. Department of Commerce K.E. College Mannanam





MoU Between Kuriakose Elias College, Mannanam and Rubber Board (Ministry of Commerce and Industry, Government of India)

Sl.No	List of Actual Activities	Year of Activities
1	Virtual visit of the Rubber Board Training Institute and Incubation Centre	2021



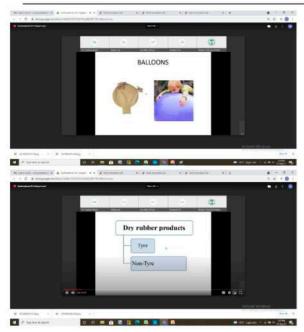




Report on Rubber Board Visit

Department of Chemistry in association with IEDC, IIC of K.E College has conducted a virtual visit of Rubber Board Training Institute and incubation Center for the final year B.Sc Chemistry Students on 23-07-2021 at 10.30 am. It was a half day visit through which students learned how the rubber based products are made and new ideas for the new products are incubated.











Participation List

Name	Admission number	
ARATHI K P	38913	
ASHIK SHAJI	38962	
ASWATHI C NAIR	38917	
NANDINI R	39014	
NEERAJA SANTHOSH	38763	
RAKHIMOL PRASANNAN	39046	
ROJA KUMAR	38776	
SARANYA R	38922	
SREEJITH V	39157	
AMAL ROY	39127	
ANN MARY PRINCE	38999	
ARJUN BIJU	39143	
ARYA S LAL	38899	
ATHIRA VIJAYAN	39076	
BICHU SUNIL	38957	
BLESSY MARIA THOMAS	38878	
DEVI S	38729	
HARITHA HARIDAS	39146	
JOYAL PIOUS	39074	
JYOSLIN JOHN	38809	
RENCEMON T THOPPIL	39150	
SONA TOGI	38972	
SREELAKSHMI T A	39133	
ANJITHA SURESH BABU	39172	
NANDU S	39173	
ANN MARIA JOSEPH	39166	
ADITHYA P S	39168	
ALEX M JOHNSON	39134	
ROSHNA SHYNA SHAJAN	39189	
ATHUL SAHADEVAN	39197	
ARATHI K P	38913	
ASHIK SHAJI	38962	
ASWATHI C NAIR	38917	
NANDINI R	39014	
NEERAJA SANTHOSH	38763	
RAKHIMOL PRASANNAN	39046	
ROJA KUMAR	38776	
SARANYA R	38922	
TIBIN MATHEW	38911	
VYSHNAV G NAIR	39163	
KARTHIKA VASANTHAKUMAR	39165	
AHIMAL FRANCIS	39139	





AMRUTHA SUGATHAN	39036
DAISON ANTO SEBASTIAN	38873
GOWTHAM P AJITH	38781
JOEL JOSE	38925
JOSEPH PARAVATHEL	38939
KRISHNA PRIYA N NAIR	39007
NEENU THAMPI	38889
ROSHIN PAUL	38820
SLINTO P S	38850
V S VINAYACHANDRAN NAIR	38814
ABHISHEK N	39130
APARNA ELIZABATH THOMAS	38801

Dr. Mercy Mathews

IIC President, IEDC Nodal Officer

IEDC Nodal Officer

Sudha Director (Training)

Rubber Training Institute







Research Collaboration Between Dr. Jesty Thomas, Assistant Professor, Department of Chemistry, Kuriakose Elias College, Kerala, India and Prof. (Emeritus) Minjoong Yoon, Department of Chemistry, Chungnam National University, S. Korea

Sl.No	List of Actual Activities	Year of Activities
1	Mekha Susan Rajan, Anju John, Minjoong Yoon, Jesty Thomas, Zeolite Y-supported carbon-doped TO2 nanocomposites: Efficient solar photocatalysts for the purification of medicinal wastewater Environ. Sci. Pollut.Res. (2023) 30(21), 60638-60653	2023
2	Mekha Susan Rajan, Minjoong Yoon, Jesty Thomas Kaolin-graphene carboxyl incorporated TiO2 as efficient visible light active photocatalyst for the degradation of cefuroxime sodium. Photochem Photobiol Sci (2022) 21,509-528	2022





31-05-2023

Report of the activities of collaborative research between Dr.Jesty Thomas, Assistant Professor, Department of Chemistry, Kuriakose Elias College, Kerala, India and Prof. (Emeritus) Minjoong Yoon, Department of Chemistry, Chungnam National University, S. Korea during the year 2022-23

Dr. Jesty Thomas, Assistant Professor, Department of Chemistry, Kuriakose Elias College, is actively engaged in collaborative research with Prof. (Emeritus) Minjoong Yoon, Department of Chemistry, Chungnam National University, S. Korea since 2011. The topic of our joint research is "Development of nanomaterials for the photocatalytic degradation of pollutants under sunlight". During this year we have published our works in reputed international journals as given below. This collaborative work enhanced the knowledge base to the scientific community to support the society where people are adversely affected by persistent organic pollutants, especially in India where the consequences of the use of pesticides like endosulfan is affected.

Mekha Susan Rajan, Anju John, Minjoong Yoon, Jesty Thomas, Zeolite Y-supported carbon-doped TiO2 nanocomposites: Efficient solar photocatalysts for the purification of medicinal wastewater Environ. Sci. Pollut.Res. (2023) 30(21), 60638-60653. https://doi.org/10.1007/s11356-023-26768-x

 Mekha Susan Rajan, Minjoong Yoon, Jesty Thomas Kaolin-graphene carboxyl incorporated TiO2 as efficient visible light active photocatalyst for the degradation of cefuroxime sodium. Photochem Photobiol Sci (2022) 21, 509–528. https://doi.org/10.1007/s43630-022-00179-2

Sincerely yours.

ringing from

Prof. Emeritus Minjoong Yoon, Ph.D.

Molecular/Nano Photochemistry and Photonics Lab

Department of Chemistry

Chungnam National University, South Korea

Dr. Jesty Thomas, Associate Professor & Head Department of Chemistry, Kuriakose Elias College

Kottayam, Kerala-686561, India

Prof. Emeritus Minjoong Yoon, Ph.D.

R & D Advisor, TSC Inc

Associate Editor, Photochem. Photobiol. Sci. (Royal Society of Chemistry)

Department of Chemistry, Chungnam National UniversityPhone: +82-10-6402-6546, E-mail: mjyoon@cnu.ac.kr-----







MoU Between Kuriakose Elias College, Mannanam and National Association of Software and Service Companies (NASSCOM)

Sl.No	List of Actual Activities	Year of Activities
1	Jointly offered a certificate course titled "Computer Hardware and Networking."	2020-2021







Report of Diploma in Computer Hardware and Networking (MoU with NASSCOM)

The Diploma in Computer Hardware and Networking is a skill development programme under UGC-NSQF level-5 (QP/NOS code: SSC/Q0101) under the sector skill council IT and ITeS. This program is designed to equip students with the essential skills and knowledge required for careers in the field of computer hardware and networking.

Course Overview

Duration of the Course: 1 Year

Minimum Eligibility for Candidates: 10th / Plus Two / Equivalent

Hours: 900 Hours Number of Credits: 60

Course Coordination and Structure

This course was coordinated by the Department of Physics with Applied Electronics and was offered to the first-year students of K.E College, irrespective of their programmes. The course aimed to provide a comprehensive understanding of computer hardware and networking, ensuring students are well-prepared for professional roles in the IT sector.

Trainer and Syllabus

Mr. Naveen D from Logic Software Solutions, Kottayam, was appointed as the trainer for both the theoretical and practical components of the course. The syllabus for the course was meticulously designed by Mr. Naveen D and received approval from the IT-ITeS sector skill council. This syllabus covered a wide range of topics essential for proficiency in computer hardware and networking.

Class Schedule and Enrollment

The theory classes were scheduled on Wednesdays, while practical sessions were held on Saturdays, starting from 23rd October 2020. A total of 28 students enrolled in the course, demonstrating a keen interest in developing their skills in this area.

Memorandum of Understanding (MoU)

To formalize the training and ensure industry relevance, an MoU was signed with the respective sector skill council on 30th May 2021. This agreement underscored the commitment to providing high-quality education and maintaining industry standards.







Assessment and Certification

An online assessment was conducted by the sector skill council on 27th November 2021, with 34 students participating. This assessment was a crucial component of the course, ensuring that students met the required standards and were ready for professional challenges in the field.

Course Content and Skills Developed

The course covered a broad spectrum of topics under the Professional Skill subject, ensuring students developed a well-rounded skill set:

- Operating System Installation: Installing various operating systems and application software
 to ensure students are adept at managing different computing environments.
- System Customization and Maintenance: Customizing operating systems and maintaining system application software to enhance system performance and usability.
- Office Packages: Performing operations with office packages, which is essential for many administrative and support roles.
- Peripheral Devices: Installing printers, scanners, and troubleshooting their faults, ensuring students can handle common hardware issues.
- Networking: Setting up and configuring networking systems using various network devices, sharing and controlling resources and internet connections through networks.
- Network Security: Implementing network security measures to protect systems from various attacks, an essential skill in today's cyber-threat landscape.
- Server Management: Installing and configuring Windows and Linux servers to manage enterprise environments.
- IT Service Requests: Dealing remotely with basic IT service requests/incidents and directly
 handling IT service requests/incidents, ensuring students can provide effective IT support.
- Work Management: Managing work to meet requirements, working effectively with
 colleagues, and maintaining a healthy, safe, and secure working environment.
- Professional Development: Developing knowledge, skills, and competence through continuous learning and practical experience.

Extracurricular Activities and Project Work

In addition to the core curriculum, students were encouraged to undertake project work and participate in extracurricular activities. These activities were designed to build confidence, foster teamwork, and enhance practical skills. Projects provided hands-on experience, reinforcing theoretical knowledge and preparing students for real-world applications.











N	Name	Whether a state of the state	Signature
1.	Christini Shaji	400	My
2	Hazimon R	- 14	G VR
3.			HEAL NO.
H	Excitation agreement	- 1	
5	Devika Gopi	U	- D-
6	Bhadra M	U.	Market .
7	Bhama M.	V	INTER-
8	Emil Geigy	U	ALL
	Alan Joseph Attril V.s	11.	禁

Assessment Agency Name	Mettl
Training Provider Name	KURIAKOSE ELIAS COLLEGE
QP Title	Engineer-Technical Support(Level 1)(SSC/Q0101)
State	Kerala
City	KOTTAYAM
Batch ID	BV0673
Assessment Date	27/11/2021

SI.No	Trainee Name	Admission Number	Certification category
1.	RIJO ABRAHAM	3472	Bronze
2.	ALAN JOHNY	39469	Silver
3.	JITHIN JOSEPH	3356	Bronze
4.	HARITHAMOL NS	3452	Silver
5.	внама.м	39336	Gold
6.	BHADRA.M	39380	Silver
7.	SRUTHY E.S	39467	Silver
8.	ASHBIN JOSEPH	3324	Gold
9.	JERIN BENNY	2513	Silver







Conclusion

The Diploma in Computer Hardware and Networking provided a robust foundation for students aspiring to enter the IT field. With comprehensive training in both theoretical and practical aspects, students were well-equipped to meet industry demands. The program's emphasis on professional skills, knowledge, and employability ensured that graduates were ready to take on various roles in the computer hardware and networking domain.

Name: Dr.Brigit Paul

Second Party

Designation: Principal

State: Kerala

Organisation Name: Kuriakose Elias College

Name: Ajit Kumar Padhi

First Party

Designation Director Operations

State, NOIDA Uttar Pradesh

Organisation Name IT-ITES SECTOR SKILLS

COUNCIL NASSCOM







Research Collaboration Between Research Department of Chemistry Kuriakose Elias College, Mannanam and Centre for Nano Science and Technology Amal Jyothi College of Engineering, Kanjirapally

Sl.No	List of Actual Activities	Year of Activities
1	Research scholar Ms. Anju John (Kuriakose Elias College) and Dr. Jesty Thomas wrote a chapter entitled "Metal Ion Incorporated Metal Oxides for Water Splitting for the book entitled "Photochemical Splitting of Water: Fundamentals to Applications" (Book, published by Elsevier) edited by Dr. Soney George	2020







REPORT OF RESEARCH COLLABORATION BETWEEN

'CENTRE FOR NANO SCIENCE AND TECHNOLOGY', AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

AND

RESEARCH DEPARTMENT OF CHEMISTRY, KURIAKOSE ELIAS COLLEGE, MANNANAM, KOTTAYAM

The collaboration made between Dr. Soney C George, Centre for Nano science and Technology, Amal Jyothi College of Engineering. Kanjirapally and Dr. Jesty Thomas, Associate Professor, Research Department of Chemistry, Kuriakose Elias College, Mannanam supported to enhance the academic and research quality of students and to increase their potentialities and skills by the mutual cooperation of the faculties of both departments of the colleges.

As one of the activities of this collaboration, the research scholar Ms. Anju John (Kuriakose Elias College) and Dr. Jesty Thomas submitted a chapter entitled "Metal Ion Incorporated Metal Oxides for Water Splitting" for the book entitled "Photochemical Splitting of Water: Fundamentals to Applications" (Book, published by Elsevier) edited by Dr. Soney George

Dr. JESTY THOMAS M.Sc., Ph.D., PDF Associate Professor & Head Research Department of Chemistry Kuriakose Elias Collegy, Mannanam Kottayany, 686,461

DR. JESTY THOMAS

ASSOCIATE PROFESSOR AND HEAD.

DEPARTMENT OF CHEMISTRY

KURIAKOSE ELIAS COLLEGE, MANNANAM SIGNATURES

Or. SONEY GEORGE Dean Research

Director, Centre for Nanoscience & Technology Amal Jyothi College of Engineering Koovappally P.O., Kottayam-686 518, Kerala

CENTRE FOR NANO SCIENCE AND TECHNOLOGY',

AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

Principal
Kuriakose Elias College, Mannanam







MoU Between Kuriakose Elias College, Mannanam and Logic Software Solutions, Kottayam

Sl.No	List of Actual Activities	Year of Activities
1	Offered a certificate course together	2019-2020







Report of Certificate Course in Computer Hardware and Networking (MoU with Logic IT Solutions)

Overview

The Department of Electronics offered a comprehensive certificate course titled "Computer Hardware and Networking" during the academic year 2019-20. This course was designed for the students of the second and third DC Electronics.

Course Title: Computer Hardware and Networking

Number of Students Enrolled: 26

Teacher in Charge: Mr. Naveen D (Logic Software Solutions, Kottayam)

Course Objective

The primary objective of the course was to equip students with the essential knowledge and practical skills needed to excel in the fields of computer hardware and networking. The course aimed to:

- 1. Provide in-depth understanding of computer hardware components.
- 2. Teach the installation, configuration, and troubleshooting of hardware.
- 3. Offer insights into various networking concepts and technologies.
- 4. Develop practical skills for setting up and maintaining network systems.

Learning Outcomes

By the end of the course, students were expected to:

- 1. Demonstrate proficiency in assembling and troubleshooting computer hardware.
- 2. Install, configure, and manage operating systems effectively.
- 3. Understand and apply fundamental networking concepts.
- 4. Configure and manage network devices and software.
- 5. Troubleshoot and resolve common network issues.
- 6. Design and implement basic network security measures.





Kuriakose Elias College, Mannanam



Sl.No	Name	Batch	Admission Number
1.	ABHISHEK BABU	3 DC Electronics	2285
2.	AKSHAY HARIHAR	3 DC Electronics	2286
3.	ALBIN SABU	3 DC Electronics	2287
4.	AMAL G THANKAPPAN	3 DC Electronics	2342
5.	ARANYA BHASI	3 DC Electronics	2289
6.	ARAVIND HARI	3 DC Electronics	2290
7.	ARUN V VARGHESE	3 DC Electronics	2292
8.	FREDYMON JOY	3 DC Electronics	2295
9.	HARIKRISHNAN C.R	3 DC Electronics	2329
10.	ADHIRATH S	2 DC Electronics	2651
11.	ALAN JOSEPH	2 DC Electronics	2509
12.	CHRISTIN SHAJI	2 DC Electronics	2518
13.	FRANCINA C FERNANDEZ	2 DC Electronics	2510
14.	HARIMON R	2 DC Electronics	2617
15.	JACOB SEBASTIAN	2 DC Electronics	2511
16.	JEENA MARIYA SEBASTIAN	2 DC Electronics	2512
17.	JERIN BENNY	2 DC Electronics	2513
18.	KARTHIK V	2 DC Electronics	2657
19.	KEERTHI S	2 DC Electronics	2843
20.	NIVEDYA RAJ	2 DC Electronics	2658
21.	PRINSON MATHEW	2 DC Electronics	2514







Conclusion

The "Computer Hardware and Networking" certificate course provided students with a solid foundation in both computer hardware and networking. With a practical, hands-on approach guided by Mr. Naveen D from Logic Software Solutions, the course successfully enhanced the technical skills of the enrolled students, preparing them for further studies or careers in the field of electronics and information technology.

DR. ANTONY THOMAS PRINCIPAL KURIAKOSE ELIAS COLLEGE MANNANAM, KERALA

(Johnson

Name of Institution	Name of Institution
KURIAKOSE ELIAS COLLEGE	LOGIC SOFTWARE SOLUTIONS ALIAS LOGIC IT SOLUTIONS
Mannanam P.O Kottayam-686561	IVth Floor, Matteethra Bldgs. Baker Jn, Kottayam
kecollegemnm@gmail.com	ktm@logicindia.net
www.kecollege.ac.in	www.logickottayam.com









MoU Between Kuriakose Elias College, Mannanam and Regal Bee Gardens, Kanjar, Idukki

Sl.No	List of Actual Activities	
1	Agri Entrepreneur skill development programme on 'Art of Beekeeping: Apiculture'	2020
2	UGC-NSQF-approved diploma course on beekeeping	2020-2021







DEPARTMENT OF BOTANY Art of Bee keeping- Apiculture REPORT

An Agri Entrepreneur skill development programme on 'Art of Bee keeping- Apiculture' was organised by the Department of Botany in association with the Internal Quality assurance cell of Kuriakose Elias College, Mannanam on July 29, 2020. This webinar was organised in recognition of the importance of honey bees for sustainable agriculture and entrepreneurship development, especially among the graduate students.

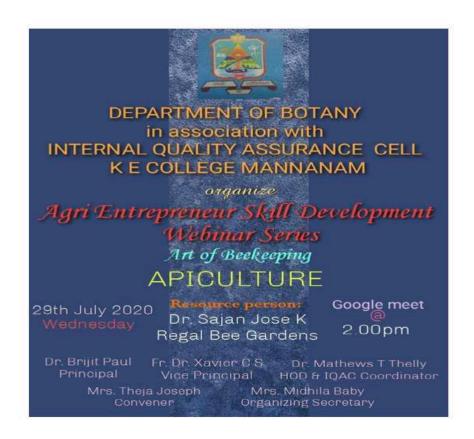
Dr. Mathews. T. Thelly (HOD and IQAC coordinator) welcomed the resource person and participants to the webinar. Dr. Brigit Paul (Principal, K. E college Mannanam) delivered the inaugural address. Fr. Dr. Xavier C.S CMI (Vice Principal, K. E college Mannanam) felicitated the gathering. The resource person **Dr. Sajan jose K (Managing Director, Regal Bees garden, Kanjar, Moolamattom)** provided knowledge on bees, its lifecycle, disease management and honey extraction.

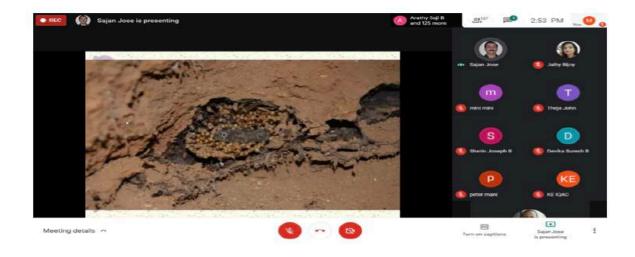
He highlighted the fact that, bee keeping, apart from creating a self-employment opportunity which generates good income, encourages the maintenance of biodiversity. The unemployed youth can start this as a business with minimal funds and proper utilization of natural resources. In addition to honey, the bee hive provides other useful products of economic value, such as propolis, bee venom, royal jelly, bees wax etc. Thus, bee keeping is a technology that generates income from multiple channels. The talk was followed by an active interactive session.

A total of 140 participants attended the programme. Ms. Theja Joseph (Assistant Professor, Botany Department) proposed the vote of thanks. The webinar helped to update the skill and knowledge of the participants, especially students, in the field of agriculture with development of entrepreneurship among them.





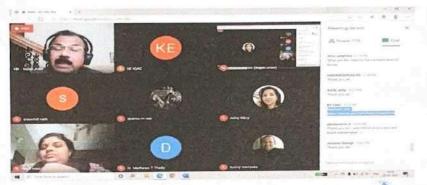












As the part of existing MOU between Kuriakose Elias College, Mannanan and Regal Bee Gardens Kanjar, Dr. Sajan Jose K Managing Director, Regal Bee Gardens, served
as Resource person on Agricultupreneur
Skill Development Colebinar - Art of Beekerping-APICULTURE on 29th July 2020 at KEC Pannanam.

For Regal Bee Gardens

Principal,

Kuriakose Elias College, Mannanam







REPORT ON UGC-NSQF APPROVED DIPLOMA COURSE ON BEE KEEPING 2020-2021

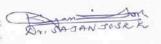
UG-NSQF approved the diploma course on Bee Keeping offered by Department of Botany. Students from Botany and Zoology departments (23 students) were enrolled to the course. The syllabus was approved by Agriculture Skill Council of India (ASCI, UG-NSQF). The classes were started on 12/02/2021 and concluded on 19/10/2021. Dr. Mathews T Thelly, the Course Coordinator, Dr. Sajan Jose K, Director, Reegal Bee Garden, Kanjar, Mr. Biju Joseph, Director, Meenachil Bee Garden, Palai were the resource persons. The course was of 60 hours duration and the ASCI conducted Semester I, Level 4, exam in offline mode at Kuriakose Ellas College, Mannanam on 12/11/2021. Mr. Abdul Raheem M was the Assessor. Out of 23 students 21 attended the exam and all the students passed with Outstanding Grade



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MoU Between Kuriakose Elias College, Mannanam and Shantigram Wellness Pvt Lid, Shantigramam, Irumbupalam

Sl.No	List of Actual Activities	Year of Activities
1	Webinar on "Holistic Way of Life: Utilising Universal Phenomena of Magnetism"	2020
2	Webinar on "Reproductive Health"	2020

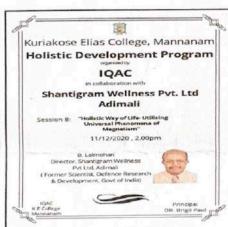




REPORT OF THE PROGRAMME ON "HOLISTIC WAY OF LIFE - UTILIZING UNIVERSAL PHENOMENA OF MAGNETISM,"

The IQAC and Yoga and Wellness Club of Kuriakose Elias College, Mannanam in collaboration with Shantigram Wellness Pvt. Ltd, Adimali, organized a Holistic Development Program on December 11, 2020. The session, titled "Holistic Way of Life - Utilizing Universal Phenomena of Magnetism," was led by B. Lalmohan, Director of Shantigram Wellness Pvt. Ltd and a former scientist with the Defence Research & Development Organization (DRDO), Government of India. The program aimed to educate participants on the holistic application of magnetism to enhance well-being. Mr. Lalmohan provided insights into the scientific basis of magnetism and discussed its practical uses in daily life to promote physical and mental health.

The session was well-received, offering participants a unique perspective on integrating natural phenomena like magnetism into their lives for improved well-being. The event highlighted the importance of combining scientific knowledge with practical applications in fostering holistic development. Participants expressed appreciation for the valuable information shared and the opportunity to learn from an expert in the field. The IQAC and the college administration were commended for their efforts in organizing this informative and engaging session.





Principal, K.E. College

B. Lalmohan,

Director Shantigram Wellness Pvt. Ltd

Fr. Johnson Joseph CST Staff Advisor, Yoga and Wellness Club

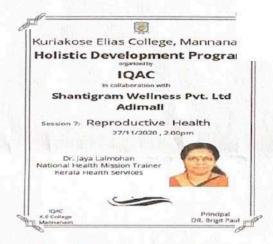




REPORT OF THE SEMINAR ON REPRODUCTIVE HEALTH

The IQAC and Yoga and Wellness Club of Kuriakose Elias College, Mannanam, in collaboration with Shantigram Wellness Pvt. Ltd, Adimaly, organized a seminar on the Holistic Development Program on November 27, 2020. The session, focused on "Reproductive Health," was led by Dr. Jaya Lalmohan, a National Health Mission Trainer with Kerala Health Services. The program aimed to educate participants on the critical aspects of reproductive health, addressing both biological and psychosocial dimensions. Dr. Lalmohan provided comprehensive insights into reproductive health, emphasizing the importance of awareness and preventive care in promoting overall well-being.

The session was highly informative and catered to the pressing need for awareness about reproductive health among the participants. Dr. Lalmohan's expertise and experience in the field were evident in her detailed discussion on the subject, which included practical advice and guidance. Participants found the session to be valuable, as it provided them with essential knowledge and tools to make informed decisions regarding their reproductive health. The event was well-received, further solidifying the importance of such educational programs in fostering holistic development.



Principal,

Kuriakose Elias College, Mannanam,

luke

B. Lalmohan

Director, Shantigram Wellness Pvt. Ltd

ADIMALI PIN-685 56

Fr. Johnson Joseph CST,

Staff Advisor, Yoga and Wellness Club





MoU Between Kuriakose Elias College, Mannanam and St Joseph College of Communication, Media Village Changanassery

Sl.No	List of Actual Activities	
1	Workshop on media production, journalism, and digital communication skills	2021
2	Sessions were held to improve students' public speaking and presentation skills	2021
3	Guest lectures and seminars	2021







Report of the activities for the Memorandum of Understanding (MOU) signed between Kuriakose Elias College, Mannanam and Media Village, Changanacherry

1. Introduction

This report outlines the key activities and outcomes of the Memorandum of Understanding (MOU) signed between K E College and St. Joseph College of Communication, Media Village, Changanacherry. The MOU, signed on 12/06/2020, aimed to foster collaboration between the academic and media sectors to enhance educational opportunities, practical skills, and industry exposure for students.

2. Objectives of the MOU

- To provide students with practical experience in media and communications.
- To facilitate academic and professional development through joint initiatives.
- To create opportunities for research and knowledge exchange between the institutions.

3. Key Activities Undertaken

Workshops and Training Sessions

- Media Skills Workshop (Wednesday, 07/01/2021): A comprehensive workshop was
 conducted by Media Village professionals focusing on media production, journalism,
 and digital communication skills. The workshop included hands-on training in video
 editing, content creation, and social media management. Some of our students (nearly
 five) attended the programme.
- Public Speaking and Presentation Skills (Monday, 15/02/2021): A series of sessions
 were held to improve students' public speaking and presentation skills, with trainers
 from Media Village providing practical tips and feedback. Our students got a chance
 improve their oratorical skills.

4. Guest Lectures and Seminars

 Industry Expert Seminars: Media Village organized guest lectures and seminars on various days in 2021 featuring industry experts who shared their experiences and knowledge on current media trends, career opportunities, and industry challenges.
 Some of our students participated in the programme.

5. Outcomes and Achievements

 Enhanced Student Skills: The practical experience and training provided through the MOU significantly improved students' media-related skills and prepared them for careers in the industry.















- Strengthened Industry-Academic Links: The collaboration fostered strong ties between the academic and media sectors, facilitating ongoing communication and partnership opportunities.
- Increased Job Readiness: Internships and collaborative projects enhanced students'
 employability by providing them with real-world experience and industry
 connections.

6. Future Plans

- Expansion of Internship Opportunities: Plans are underway to expand the internship program to include more students and offer a wider range of media-related roles.
- Additional Workshops and Training: Future activities will include additional workshops and training sessions to cover emerging media trends and technologies.
- Long-term Research Projects: Continued focus on collaborative research projects to
 explore new areas of interest and contribute to media studies.

7. Conclusion

The MOU between the Department of English, K E College, and Media Village, Changanacherry has been instrumental in creating valuable learning opportunities and fostering a productive partnership between academia and industry. The activities conducted under this agreement have not only enriched the educational experience for students but also laid the foundation for continued collaboration and growth.

OGLE ELLAS COLLEGE

Kuriakose Elias College, Mannanam

Media Village, CHRY

Date

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Prof. (Dr.) Ison V. Vanchipurackal Prineipal Kuriakose Elias College, Mannanam

Kuriakose Elias College, Mannanam Mannanam P.D., Kottayam-686 561 DR. JOSEPH PARACKAL
PRINCIPAL
ST JOSEPH COLLEGE OF COMMUNICATION
KURISUMMOODU, CHANGANASSERY - 4, KERALA

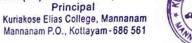




Research Collaboration Between Department of Biochemistry, Kuriakose Elias College, Mannanam and Department of Biochemistry, NSS College, Pandalam, Pathanamthitta

Sl.No	List of Actual Activities	Year of Activities
1	Joint Publication by Dr. Sandhya C., Assistant Professor, Department of Biochemistry, Kuriakose Elias College, Mannanam and Dr. Chithra V., Department of Biochemistry, NSS College, Pandalam	2021

Prof. (Dr.) Ison V. Vanchipurackal Principal



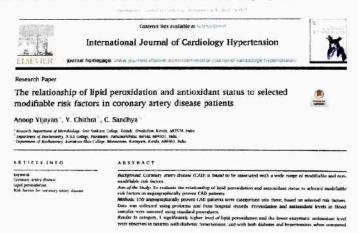




Report on Activities conducted under the Collaboration Agreement

In accordance with the collaboration agreement signed between Dr. Sandhya.C, Assistant Professor of Biochemistry at Kuriakose Elias College, Mannanam, and Dr. Chitra V, Assistant Professor of Biochemistry at N.S.S. College, Pandalam, on 05/06/2020, the following activities were undertaken:

The collaboration commenced with an initial meeting to discuss shared research interests and potential collaboration areas. Both teams conducted experimental work, including laboratory experiments, data collection, and analysis. This joint effort led to a collaborative research article by Vijayan, A., Chithra, V., & Sandhya, C. (2021), titled "The relationship of lipid peroxidation and antioxidant status to selected modifiable risk factors in coronary artery disease patients," published in the International Journal of Cardiology Hypertension, 8, 100077. https://doi.org/10.1016/j.ijchy.2021.100077. The collaboration significantly contributed to advancing knowledge in biochemistry and enhancing the research capabilities of both institutions. Based on the success of this collaboration, both parties intend to continue their collaboration on future research projects.



Dr. SANDHYA C.
Assistant Professor
Department of Biochemistry
Kuriakose Elias College
Mannanam, Kottayam, Kerala-586561
(Research Guide
Sree Senkara College, Kalady, Ernskutam)

Dr. CHITHRA. V., M.Phil. Ph.D.
ASSISTANT PROFESSOR
DEPARTMENT OF BIOCHEMISTRY
N. S. S. COLLEGE, PANDALAM

Chitty ...V

Principal
Kuriakose Elias College, Mannanam







MoU Between Kuriakose Elias College, Mannanam and Sreedhareeyam Farm Herbs India (P) Ltd

Sl.No	List of Actual Activities	Year of Activities
1	Ms. Ashamol Cheriyan, Research Scholar under the guidance of Dr. Jollyamma Mathew, Department of Chemistry, has performed various analyses at Sreedhareeyam Farmherbs Pvt.Ltd, Koothattukulam	2021





Report of the activities of collaborative research between Department of Chemistry, Kuriakose Elias College, Kerala, India and Sreedhareeyam Farmherbs Pvt. Ltd, Koothattukulam

Ms. Ashamol Cheriyan, Research Scholar under the guidance of Dr. Jollyamma Mathew, Department of Chemistry, K. E College has performed various analysis for one month (November 2021) at Sreedhareeyam Farmherbs Pvt Ltd, Koothattukulam, as a part of her research work entitled "A study on the various components present in the chassalia curviflora plant extract".

SIGNATURES

Signed to, and on behalf of

Research & P.G. Department of Chemistry

Kuriakose Elias College, Mannanam

Dr. Jesty Thomas,

Associate Professor and Head, Department of Chemistry Kuriakose

Elias College, Mannanam

Signed to, and on behalf of

Sreedhareeyam Farmherbs Pyt Ltd

Koothattukulam

Mr. Rajan N Namboothiri,

Executive Director,

Sreedhareeyam Farmherbs, Pvt Ltd.,

Koothattukulam

RESEARCH AND POSTGRADUATE DEPT. OF CHEMISTRY K. E. COLLEGE, MANNANAM KOTTAYAM-686 561, KERALA

Principal,

Kuriakose Elias College, Mannanam







MoU Between Kuriakose Elias College, Mannanam and Kottaram Sweet House, Kanjirappally

Sl.No	List of Actual Activities	Year of Activities
1	Students and faculty members of Kuriakose Elias College, Mannanam, have conducted an industrial visit to Kottaram Sweet House, Kanjirapally	2021





Report of collaborative activity between Kuriakose Elias College, Mannanam and Kottaram Sweet House, Kanjirapally

On 26-11-2021, the students and faculty members of Kuriakose Elias College, Mannanam, visited Kottaram Sweet House, Kanjirapally. Kottaram Sweet House is renowned as one of the pioneering establishments in the food industry and legendary bakers of Central Travancore. This visit was organized under the existing Memorandum of Understanding (MOU) between Kuriakose Elias College and Kottaram Sweet House. The purpose of this MOU is to make education more relevant and to create industry-fit, skill-based courses through constant dialogue with the industry, ensuring that students are updated on the workforce requirements of the local economy.

Objectives of the Visit

- To provide students with practical insights into the operations of a renowned enterprise in food industry
- To observe and learn about the production processes, quality control, and management practices at Kottaram Sweet House
- To enhance student's understanding of the industry requirements and the skills needed to succeed in the workforce

The visit was attended by

- 15 students those who are enrolled for certificate course in food processing at Kuriakose Elias College
- Dr. Jolliyamma Mathew and Ms. Neethu Jose are two of the faculty members
- Representatives from Kottaram Sweet House

Outcomes of the Visit

- · The students and faculty were taken on a guided tour of the production facility
- An interactive Q&A session was held, where students asked questions about the processes and management practices
- Insights were shared by the industry experts on the challenges and opportunities in the food industry





 Students gained a deeper understanding of the food industry, bridging the gap between theoretical knowledge and practical application





Conclusion

The industrial visit to Kottaram Sweet House was a highly enriching experience for the students and faculty of Kuriakose Elias College. It not only provided practical exposure but also fostered a deeper understanding of the working of food industry. Such initiatives are crucial in making education more relevant and ensuring that students are well-prepared to meet the demands of the local economy. The ongoing collaboration with Kottaram Sweet House will continue to play a significant role in achieving these educational objectives.

Principal/

Kuriakose Elias College, Mannanam

Prof. (Dr.) Ison V. Vanchipurackal Principal Kuriakose Elias College, Mannanam Mannanam P.O., Kottayam-686 561 Managing Director

Kottaram Sweet House



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MoU Between Department of English, K.E. College, Mannanam and Department of English, Kristu Jyoti College, Chethipuzha

Sl.No	List of Actual Activities	Year of Activities
1	Workshop on modern literary theories	2019
2	Jointly organised a talk exploring the intersection of literature and digital technology	2019
3	Mr. Cijo Chennelil, Assistant Professor, Department of English, KJC, led the session on Women Writing for third year degree students of K.E College	2019







Report of Activities

Memorandum of Understanding (MoU) Between:

Department of English, Kuriakose Elias College, Mannanam, Kottayam

 Department of English, Kristu Jyoti College of Management and Technology, Chethipuzha, Changanacherry

Date of MoU Signing: 12/11/2019

Duration of MoU: Five Years (2019-2024)

1. Introduction

The MoU between the Department of English, K E College and the Department of English, Kristu Jyoti College of Management and Technology was signed with the aim of fostering academic collaboration, sharing resources, and enhancing the educational experience for students and faculty members. This report outlines the key activities undertaken since the signing of the MoU.

2. Joint Academic Workshops and Seminars

Workshop on Modern Literary Theories

- Date: 10 October, 2019 (Thursday): Time: 10:30-12:30
- Location: Department of English, Room No. 315 (K E College)
- Details: A joint workshop was conducted in Room No. 316 (Department of English, K. E. College) focusing on modern literary theories especially Psychoanalytic Criticism. Faculty from both institutions shared their research and perspectives on contemporary theoretical frameworks.

3. Talk on Digital Humanities

- Date: 19 November, 2019 (Tuesday): Time: 2: 30-3:30pm
- · Location: Kristu Jyoti College of Management and Technology (Room No. 703)
- Details: A Talk exploring the intersection of literature and digital technology was organized. The event included presentations, panel discussions, and interactive

4. Faculty Exchange Programme

- Date: 16 December, 2019 (Monday)
- Details: A faculty exchange initiative allowed professors to teach and conduct research
 at the partner institution for a specified period, fostering professional growth and crossinstitutional collaboration. Mr. Cijo chennelil, Assistant Professor, Department of
 English, KJC, led the session on Women Writing for our third year Degree students.







5. Community Outreach and Engagement

Literary Festival

- Date: 08 January, 2020
- · Location: K E College, Mannanam
- Details: A literary festival was organized by Department of English, KEC to engage
 with the local community and students from surrounding campuses featuring,
 workshops and literary competitions. Many students from other colleges participated
 in the events.

6. Future Plans

- Expansion of Student and Faculty Exchange Programs: Plans are in place to increase the number and scope of exchange programs to provide more opportunities for immersive learning experiences.
- Development of Online Collaborative Courses: Both departments are exploring the
 development of online courses that leverage the strengths and expertise of both
 institutions.
- Continued Joint Research Initiatives: Ongoing and future research collaborations
 are planned, focusing on emerging areas in literary studies.

7. Conclusion

The MoU between the Department of English at K E College and the Department of English at Kristu Jyoti College of Management and Technology has fostered significant academic and professional growth through various joint activities. The collaboration has benefited students and faculty alike and has set a strong foundation for continued partnership and innovation in the field of English studies.





Participants

L.No-	NAME OF THE STUDENT	CLASS NO.	SIGN
01.	Dhanya Pankajaksbam	3507	ELBUR.
02.	Milien Maria Thomas	3514	9112
03.	Lakshmi Nagana. S. Manika	andan 3512	Compare
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05.	Kzishnaja Santhosh	3511	المعند المعنوب
06.	Kanthika Snukuman	3527	Lastlian.
07.	Valentina Amy Dommen	3538	Glentina
08.	Dona Rose Alexaham	3524	At the
09.	Sini Sabu	3532	all in
10.	Petsi Peter	3529	Pets?
11 .	Sona V. Perumalil	3533	Sonal.
12.	Aleena Baji	3501	Aw.
13.	Dinya Gijo	3523	Day.
14.	Ameritha burendran	3503	Autorta
15.	Arsha Abil	3504	D4123
16.	Taniya. S. Thottupuram	3535	adist
17.	Manisha Thomas	3528	Navina
18,	Bhagyalakshmi Haridas	3505	gort.
19.	Alex N.T	3520	AMERIAL
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21.	Tom James	3536	Same.
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24.	Marcel Grevind P	3515	Multersid.
25.	Szeejubh Szeenivasun	3517	Sell







MoU Between Department of Chemistry Kuriakose Elias College, Mannanam and Sance Laboratories (P) Ltd, Kozhuvanal, Kottayam

Sl.No	List of Actual Activities	Year of Activities
1	A joint seminar was held on "Novel trends in polymeric materials: An interdisciplinary approach & Industrial Acquaintance by Sance Laboratories Pvt. Ltd."	2021
2	Ms. Athira Suvarnakumar of the chemistry department got placed at Sance Laboratories Pvt. Ltdas the Trainee Chemist - Quality Control	2020
3	Students of the chemistry department Ms. Anu K R, and Ms. Honeymol Sebastian, carried out their M.Sc. project at Sance Laboratories Pvt. Ltd	2018-2019





Report of the activities of memorandum of understanding (MOU) between Kuriakose Elias College, Kerala, India and Sance Laboratories Pvt. Ltd

A seminar on "Novel trends in polymeric materials: An interdisciplinary approach & Industrial Acquaintance by Sance Laboratories Pvt. Ltd." was conducted on 15-1-2020. Dr. Antony Thomas, Principal, K.E College presided over the inaugural ceremony for the seminar, Dr. Anitha C Kumar, Nagarjuna Acharya University, Guntur was the chief guest for the day. She inaugurated the seminar and Mr. Vinu Varghese, Manager, Sance Laboratories Pvt. Ltd. interacted with the students





Two students of the chemistry departments Ms. Anu K R, and Ms. Honeymol Sebastian, carried out their M.Sc. project at Sance Laboratories Pvt. Ltd during the academic year 2018-2019.

One of our alumna Ms. Athira Suvarnakumar got placed at Sance Laboratories Pvt. Ltd as the Trainee Chemist – Quality Control on 10-11-2020.







SIGNATURES

Signed to, and on behalf of

Research & P.G. Department of Chemistry

Kuriakose Elias College, Mannanam

Dr.Jesty Thomas, Associate Professor & Head

Kuriakose Elias College, Mannanam

Signed to, and on behalf of

Sance Laboratories Pvt. Ltd.

Palai

Vinu Varghese, Manager - QC

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