



ST. XAVIER'S COLLEGE (AUTONOMOUS)
PALAYAMKOTTAI - 627 002
(Recognized as "College with Potential for Excellence" by UGC &
Accredited by NAAC at A++ Grade with a CGPA of 3.66 out of 4)



ANNUAL REPORT 2022-2023

RESEARCH CENTRES

CENTRE FOR AQUACULTURE RESEARCH AND EXTENSION

CARE works in diverse research areas of aquaculture, such as aquatic biodiversity, Aquatic toxicology, Fish nutrition and Feed formulation technology, Aquatic biotechnology, Fish histology, recent trends in probiotics like fish gut probiotics and the discovery of drugs using bacterial secondary metabolites (compounds). Currently, studies are being carried out for the treatment and management of fish diseases and enhancing growth rates in both large-scale and small-scale aqua farms. Additional importance is given to developing the culture and breeding of ornamental fishes and edible freshwater fishes. Dr. J. Ronald has presented a keynote address on Age of Exploration-Strategies of Science, at Sarah Tucker College, Tirunelveli. Dr. P. Raja has delivered a special lecture on 'Edible and Ornamental fish culture' in Tamilnadu Millet Conclave 2023 organized by the Centre for Entrepreneurship Development in Francis Xavier Engineering College, Tirunelveli. Three students have registered their Ph.D. and S. Muthukrishnan, a research scholar, has submitted his thesis. Research scholars of Care have presented 7 research articles at national and international conferences organized by various Institutions; R. Ramkumar has participated in five international conferences and successfully presented his research. P. Balagangatharan has presented two oral and one poster; M. Karthick has presented a paper at a national conference. R. Sarathkumar has presented a research article at the national conference and S. Renuka has participated in an International Conference on Recent Trends in Aquaculture" Totally, 6 research articles are published in UGC approved and Scopus indexed journals.

Entomology Research Unit (ERU)

Entomology Research Unit (ERU), Department of Zoology, St. Xavier's College (Autonomous), Palayamkottai under the guidance of Dr. P. Selvaraj and Dr. T. Pushpanathan continues research and extension activities of the research centre. At present, 5 research scholars are doing their Ph.D. in ERU.

Dr. P. Selvaraj and Dr. T. Pushpanathan have participated in a two day national conference on ‘Recent Trends in Bioprospecting – Derived Therapeutic Products’ held on the 12th&13th January, 2023 at St. Xavier’s College (Autonomous), Palayamkottai. The Entomology Research Unit displayed its salient insect collections during the Centenary year exhibition held from 30.01.2023 to 03.02.2023.

Under the co-guidance of Dr. P Selvaraj, the submitted thesis of Mr. M. Madasamy is recommended for the public viva-voce by the Manonmaniam Sundaranar University. Ms. J. Princy Rathnamala Jayaseeli pursues her doctoral research on Control of *Spodoptera litura* using Phytoecdysones from ferns with TNSCST Student Project grant; Mr. J. Sherlin John pursues his research on molecular and classical taxonomy of Reduviidae and Sr. M. Velankanny pursues her research on exploration of new Entomopathogenic fungi for cotton pest management. Ms. Selvarani and Ms. G. Sumathi (CSIR-NET JRF) are doing their research on Insect vector control using phytochemicals. The scholars of ERU have participated in 3 national and international conferences presented 6 papers and published 6 research articles in SCOPUS indexed journals. A total of 10 nucleotides are published in the NCBI. In addition to that UG & PG students are doing their projects in comparative mitochondrial genomics and phytochemical insecticide toxicity.

Centre for Plant Biotechnology

Centre for Plant Biotechnology (CPB) is currently focusing on the *Ex situ* conservation of rare and endangered ferns of the Western Ghats, India, Phytochemical, histochemical, molecular characterization of Pteridophytes. Ms. B. Shivananthini has attended the DST – SERB (Karyashala) Sponsored workshop on “Herbarium Digitization on Plants” from 18th to 25th July, 2022 organized by Botanical Survey of India, Pune. Ms. B. Shivananthini presented two research papers in the National Conference on “Phytomedicine” at Bharathiyar University, Coimbatore on 5th and 6th January, 2023. Three research papers are published in the International journals (Scopus) during this academic year. At present three research scholars are pursuing their doctoral degree. Mrs. Sujatha submitted her thesis. Ms. Vidyarani George and Ms. Silvia Juliet are on the way to submit their theses.

Crop Protection Research Centre

Members of the CPRC march forward their regular research activities while facing many difficulties with a positive attitude. As a member of screening (cum Review) committee of DBT Star College Scheme, Govt. of India, New Delhi, Dr. K. Sahayaraj has participated from 14.09.2022 to 16.09.2022 in the screening of proposals for the DBT Star College Scheme Program.

On 28.10.2022, scholars have taken part in an "Awareness Program on Intellectual Property Rights (IPR)" at St. Xavier's College in Palayamkottai. On February 27, 2023, Mr. G. Petchidurai has submitted his Ph.D. thesis. He is given the INSC Young Research Award in Bangalore. He has attended two webinars at the School of Natural Sciences, St. Joseph's College, Bengaluru, with a particular focus on the "Passion for Wildlife webinar" on 01.04.2022 and "Conserving the Threatened: Snow Leopard" on 07.05.2022. He also took part in a one-week online FDP on "Research Prospects and Progress in Biological Science (RPPB - 2022)" from 04.07.2022 to 10.07.2022, K. Madasamy has taken part in a one-week online FDP on "Research Prospects and Progress in Biological Science" at the SRM Institute of Science and Technology in Chennai.

Ms. G. Ponmalar has participated in a 7-day online FDP programme on Research Prospect and Progress In Biological Science (RPPB- 2022) at SRM Institute of Science and Technology, Chennai, as well as a series of online lectures on Zoology in the 21st Century from 17.01.2022 to 22.01.2022, both of which are offered by the Department of Zoology at Shivaji University, Kolhapur. On 21.03.2022 & 22.03.2022 at the Department of Zoology, Sri Parasakthi College for Women, Courtallam, she has also presented a paper at the International Virtual Conference on Applied Biology for Sustainable Development-2022. Ms.T.Sri Ram Muthu, has given an oral presentation At the international conference on converging microbiological innovation for application in animal, plant, environment, and health care (ICCMIA-2023), on 27.01.2023 & 28.01.2023, at the Department of Animal science, Manonmaniam Sundaranar University, Tirunelveli. On 11.10.2022 & 12.10.2022, she a science academic lecture workshop on Latest advances in microbiology and biotechnology by the PG Department of Biochemistry at Sacred Heart College (Autonomous), Tirupattur. she has also taken part in two different one-week FDPs, on Research Methodology and Research Prospects and Progress in Biological Science from 04.07.2022 to 10.07.2022 and from 02.05.2022 to 07.05.2022 respectively. T.Sri Ram Muthu has attended national level webinar on Applications of machine learning techniques from 25.04.2022 to 26.04.2022 and "NET, SET, GATE, DBT, ICMR, and other competitive examinations in the life sciences" from 18.04.2022 to 23.04.2022.

CENTRE FOR ADVANCED RESEARCH IN PLANT SCIENCES (CARPS)

The Centre for Advanced Research in Plant Sciences (CARPS) was established on 06.04.2013 by Rev. Dr. A. Joseph, S.J., the former Principal, St. Xavier's College (Autonomous), Palayamkottai with the mission to promote the advance progress in the field of Plant Sciences. Dr. J. John Peter Paul, Assistant Professor of Botany is the Director of CARPS who concentrates on Recent Trends in Plants Sciences. A Major Research Project sanctioned by Science and Engineering Research Board (SERB), Department of Science and Technology

(DST), New Delhi, entitled “Screening of Biochemical and Molecular Diversity of the Selected Brown Algae” was completed in 2022. Mr. G. Ponnudurai was awarded Ph.D., on 02.03.2023. Mr. E. Fredrick Raja has submitted his Ph.D., thesis.

Totally 3 research articles were published in UGC approved International research Journals in the academic year 2022-2023. The Director and the research scholars of CARPS have participated and published 3 research articles in various national and international conferences/symposia/workshops. 14 Rbcl sequences are deposited in National Centre for Biotechnology Information (NCBI), Bethesda, Maryland.

Dr. J. John Peter Paul serves as a member of reputed research journals. He is also a reviewer of the International Journal of British Biomedical Bulletin.

MATERIALS RESEARCH CENTRE

Materials Research Centre, Department of physics promotes and coordinates research activities in the field of crystal growth and its characterizations, nanomaterial, polymer science, and irradiation effect on solids. It is utilised by the research scholars from other colleges also. The energy meter assembled temperature reduction method (micro-controlled based) is used by the Research Scholars who do their research on crystal growth, nanoscience, and polymer. At present Mr. P Ajith, Mr. M. SappaniMuthu, Ms. J. Agnes, and Mr.A. Caroll Xavier are working as full-time scholars. During this academic year, 2022-2023 ten research articles were published in reputed journals.

Mr. P. Ajith has published two research articles on optical, and electro chemical performance of selenium decorated reduced graphene oxide assisted (CoSe₂) nanoparticles for oxygen reduction reaction.

And Solvothermal synthesis and characterization studies of selenium decorated reduced graphene oxide supported CuSe₂ nanoparticles as efficient electrochemical catalyst for oxygen reduction reaction in Indian Journal of Chemical Technology (IJCT),

➤ Mr. Sappani Muthu has published three articles on Characterizations and Antibacterial Studies of Chromium trioxide Nanoparticles. International Journal for Modern Trends in Science and Technology, Antibacterial Activity of Copper Oxide Nano Particles against Gram Positive And Negative Bacterial Strain synthesized By Precipitation Technique in International Journal of Zoology and Applied Biosciences, 2022 and One pot synthesis, Structural, morphological, Optical Properties of Graphene Oxide/NiO Nano composite suitable for super capacitor Applications. YMER, 21,2022.

➤ Ms. Agnes has published three articles: “Synthesis and characterization of chitosan encapsulated nickel oxide nanoparticles modified with folic acid” in *Materials Today: Proceedings*, 2022: “Preparation and characterization studies of chitosan encapsulated ZnO

nanoparticles modified with folic acid and their antibacterial activity against selected bacterial species in Particulate Science and Technology” <https://doi.org/10.1080/02726351.2022.2145587>; and “Preparation and Characterization of Chitosan-Encapsulated Cobalt Oxide Nanoparticles Modified with Folic Acid in Journal of Inorganic and Organometallic Polymers and Materials”, <https://doi.org/10.1007/s10904-022-02521-8>,2022.

➤ Mr. Carroll Xavier has published an article on “Synthesis, and antibacterial activity of Aluminium Oxide Nanoparticles” in Journal of Xi’an Shiyou University, Natural Science Edition” 18(04):263-267, April 2022.

CRYSTAL RESEARCH CENTRE

The Crystal research Centre was established in the year 2015 headed by Dr. V. Sivashankar, Assistant Professor in Physics. DST – SERB funded project of worth 13.44 lakhs was successfully completed in 2016. Currently 4 Ph. D candidates are pursuing their research work. Along with nonlinear optical materials, nanomaterials, super capacitors and solar cells are taken into attention by the researchers. We are producing crystalline materials and super capacitors focusing towards industrial applications. Our scholar Ms. Josephine gladia focuses on L-Threonine and γ -glycine based non linear optical single crystals. The grown crystals are subjected to various characterization techniques like structural, optical, mechanical, thermal and electrical analysis. Fe II metallo polymer based super capacitor is fabricated using spray pyrolysis. We have published 8 research papers in peer reviewed reputed journals. A book entitled “Recent research in crystal growth and characterization” is published by the scholar Mr. Gershome Jebaraj from the centre.

ENERGY RESEARCH CENTRE

In the Energy research center the research is carried out in the field of solar energy.

A two year project entitled Synthesis & characterizations of some nanocomposites for opto-electronic applications, under the scheme “Programme for Bridging the Gap in Research Funding For Research Scholars In Colleges (RFRS 2019-2020)” funded to the tune of Rs.3,00,000 by Tamil Nadu State Council For Science And Technology (TNSCST), Department Of Higher Education, Government of Tamil Nadu has been granted for C. Bhagya Lakshmi and is being carried out under the principal investigation of Dr. S. Anna Venus. New findings are recognized with the following awards:

1. “Investigation of CuBiSe/V₂O₅&CuBiSe/ZnO nanocomposites using hydrothermal method for opto-electronic application.” is awarded with BEST ORAL PRESENTATION, in the 5th international Conference ICRTAST 2021 held during November 25-28,2021 organised by Department of Physics, Manonmaniam Sundaranar University, Tirunelveli.

2. A Poster on “Discussion on structural & optical properties of binary metal selenide/Nb₂O₅ nanocomposite synthesized by hydrothermal method.” is presented at the Indo-Norwegian International Online Conference on FARAON-2022 held during 2-4 February 2022 organized by Institute for Energy Technology (IFE), University of Oslo (UiO), Norway and Madurai Kamaraj University, India.

3. “Discussion & Fabrication of ZnO/V₂O₅ nanocomposite prepared by novel solid state mixture method as a photoanode material in DSSC device.” is awarded with BEST RESEARCH PAPER PRESENTATION in the International Conference on ICASE 2022 held at A.P.C. Mahalaxmi College for Women, Thoothukudi, on 24.03.2022 – 25.03.2022.

A Paper entitled “Designing ZnO/V₂O₅/rGO Nanocomposites As A Photo Electrode In Dye-Sensitized Solar Cell With 1.27% Efficiency” is presented the 2nd International Conference On Advances In Chemistry... Studies(ICACSEM -2022) held during 28,29 March 2022 By the Department Of Physical Chemistry, School Of Chemical Science, University Of Madras, Chennai.

4. Paper entitled as “Assessing the Structural & Optical Properties of Synthesized Nb₂O₅/V₂O₅/ rGO Nanocomposites” was presented in the International Conference on "Functional materials for sustainable energy and environment - FMSEE'23 held at Dept of Chemistry & Physics, Lady Doak College for Women, Madurai, Tamil Nadu on 30 th & 31st January, 2023 and is awarded with BEST ORAL PRESENTATION.

A Paper entitled “Synthesis and Optical Studies of Yttrium Oxide Nanocomposites” is presented in the International Online Conference on Basic Sciences for Sustainable Development, Organized by centre for Nanoscience and technology and Department of Basic Sciences, AmalJyothi College of Engineering in partnership with Department of Energy materials, Mahatma Gandhi University and Faculty of Chemistry, Gdansk University of Technology, Poland from 16.12.2022 to 17.12.2022.

A Paper entitled “Electrochemical Analysis of Yttrium Oxide Nanocomposite” is presented in the two Day Workshop Sponsored by BRNS, MUMBAI on “ Advanced XRD and Electron Microscopy Characterization for the Development of Novel materials” Organized by the Department of Physics, MepcoSchlenk engineering College, Sivakasi on 4th and 5th January, 2023.

A Paper entitled “Synthesis and Studies on the influence of MgCl₂ with CMC composite film” was presented in the International Conference on ‘Functional Materials For Sustainable Energy & Environment’ jointly organized by Department of Chemistry & Physics, Lady Doak College, Madurai on 30.01.2023 - 31.01.2023.

PAPERS PUBLISHED

- Published a paper in *Materials Today: Proceedings* 64 (2022) A3–A6 journal: “Discussion on structural & optical properties of binary metal selenide/Nb₂O₅ nanocomposite synthesized by hydrothermal method.”
- Published a paper in *Surfaces and Interfaces* 37 (2023) 102638 journal: “Probing novel photoanodes relying on CuBiSe/metal oxides nanocomposites-based dye sensitizing solar cells.”

Patent: A patent entitled “Solar cell and Photoelectric conversion element” is obtained by Dr. S. AnnaVenus and her team.

Vector Biology and Pharmacology research centre

The research centre functions under the department of Zoology was established in 2017. At present 5 scholars are pursuing Ph.D. Four papers are published this academic year including two in UGC-CARE lists. Students presented 5 papers in National and international conferences. Research scholars attended 2 workshops and 2 training programmes. The centre has organized one national level conference.

MBA – XIBA Centre for Research (XCR)

XIBA Centre for Research has taken its vigor after the renewal of its period. The scholars have progressed gradually and about Five Scholars (fulltime and part time) have finished their Pre PhD Viva. XCR is delightful to pronounce that SIX of our fulltime scholars have completed their thesis satisfying all the norms of the university.

All the Scholars have published papers either in UGC care listed or in Scopus Indexed journals. XCR organized a Two day Workshop on SMART PLS on 14.12.2022 to 15.12.2022, on a Hybrid way (both online and offline). Dr.Manjula and Dr. Dhona Gosh, Tiyagarajar School of Management honoured as the resource persons.

ENGLISH RESEARCH CENTRE

English Research Centre was established in 2011. Dr. V. S. Joseph Albert, Dr. A. Calisthus, Dr. S. John Peter Joseph and Rev. Fr. Dr. Gilbert Camillus S. J. were the first set of Research Supervisors. Ever since its genesis, it has produced noteworthy scholars in and around Tirunelveli. There are 5 Research Supervisors and 20 research scholars. In this academic year, Ms. A. Amala Nithya Roselin defended her thesis. Mr. T. Jude Livinston, Mr. S. Venkata subramaniam and Ms. A. Andrew Arokia Celsy have submitted their theses. The professors and the scholars have published thirteen research articles in reputed journals.

ECONOMICS RESEARCH CENTRE

The Department of Economics Research Center of St. Xavier's College, Palayamkottai was established in 2018 aiming at encouraging and stimulating the Research Scholars to have a deep and closer attitude towards the current changes in social, cultural, industrial, economic, technological agricultural and environmental aspects of people and economic comparison in the society. The center has enabled with all the basic facilities such as, 450 sq.ft of research cabin with three computers with internet facilities Most of the students pursuing Post Graduate in Economics in our college and other colleges have an insight to do their Ph.D Degree in the DERC. At present, the Department of Economics Research centre has seven full time research scholars.

COMPUTER SCIENCE RESEARCH CENTRE

The Computer Science research centre was established in 2009. It was the first research centre among the affiliated colleges of the Manonmaniam Sundaranar University, Tirunelveli. In our Research centre, four faculty members are guiding 20 research scholars. In this academic year 2022-2023, eight candidates are awarded Ph.D. An International conference on "Mathematics and Computing" was conducted on 29.03.2023. Dr. Paul Devasahayam Manuel, Professor, Kuwait University, Kuwait and Dr. Khalid Al Zadjali, Senior Vice President, Digital, Muscat were the Resource Persons.

PLANT MOLECULAR BIOLOGY RESEARCH UNIT

The Plant Molecular Biology Research Unit was established in 2001 with the view to promote Molecular Biology research in plants. PMRU is working in diverse research areas of plant science including aquatic Molecular Assessing, Molecular characterization of plants, Micro anatomy and Karyotyping of ferns, Microbial based drug synthesis, Compound improvising, Crop plant improvements via Microbes and Microalgae Culture and Characterizations and all come up with Bioinformatics and Statistics. Currently studies are being carried out for the Screening and Use of Plant Growth Promoting bacteria in Tomato plants in *in-vivo*. Additional importance is given to assess the genetic variability in treated individuals and micro-biomes with supplements. In this academic year, Ms. A. Antony Selvi has successfully defended her thesis and two research scholars have submitted their Ph.D. theses. Three research articles were published in national and international journals. The Research Scholars of the centre participated in five webinars and training programs. More than eight research articles are presented in International conferences. Our facilities include PCR, Gel documentation system, Microscope with photomicrograph facility and Centrifuges are used by the scholars from the nearby colleges too.

Entrepreneurship Development & Research Centre

The Entrepreneurial Development is inaugurated and Research Centre (ED & RC) Activities for the academic year 2022 – 2023 on 29.08.2022. Mrs. Jerina Bubby, Assistant Director of MSME (Micro, Small and Medium Enterprises) Tirunelveli District, is the Chief guest and delivered a speech on how the state and Union Government are providing benefits to the students to become Entrepreneurs. Dr. Sivabarathi ED HUB Coordinator, Anna University, Tirunelveli has participated and encouraged the students to be an entrepreneur.

Awareness Programme on Avenues for Entrepreneurship

Entrepreneurial Development & Research Centre of St. Xavier's College (Autonomous) has organized one day awareness programme on "Avenues for Entrepreneurship" on 29.09.2022 Mr. V. Selvakumar Regional Joint Director of Employment and Training Tirunelveli has Inaugurated the Programme. and pointed out how to become an Entrepreneur.

In the first Technical session Mr. K. Siva sankaran General Manager of DIC has explained about the various schemes available in DIC to become Entrepreneurs. In the second Technical session Ms. D. Padma Faculty Member of Rural Self Employment Training Institute (RSETI), Tirunelveli, spoke on the Various Trading Avenues for the students in RSETI. In Technical session-3, Mr. I. Ganesh Manikandan Senior Manager Lead Bank, IOB Tirunelveli has explained the availability of various financial avenues in Lead bank for becoming Entrepreneurs.

One Day Entrepreneurship Development Awareness Programme for outgoing Students is scheduled on 6th March 2023

Dr. G. Magesh Kuttalam, Director of EDII-Hub M.S University, Tirunelveli, inaugurated the programme. Mr. S. Rajagopal, Managing Director of Tech Face Furniture India Private Ltd. Coimbatore. Mrs. G. Jerina Bubby, Assistant Director of Branch MSME DFO, Mr. S. Bharathi, Branch Manager, The Tamilnadu Industrial Investment Corporation Ltd., Tirunelveli and Dr. J. Merrylin, ILO Trainer, Sadakathullah Appa College, were the resource persons. Thiru. S. Gokul I.A.S, Assistant Collector (Training), Tirunelveli District has delivered the valedictory address and distributed the certificates .

COMMERCE RESEARCH CENTRE

The Research center of Commerce is a unique centre which paves the way for exploration in the fields of commerce and management. The center is a hub for the students who are interested in conducting research using qualitative and quantitative methods. The center is well equipped with sufficient number of computer terminals with internet facility, research journals and an array of theses are submitted for the award of the doctoral degree. Five scholars have enrolled during the Academic year 2022 -2023 under the guidance of 10 research supervisors in

the department. A total of 25 research scholars pursue their Ph.D. 5 scholars are awarded the degree of Doctorate in Philosophy. The research center of commerce has conducted a workshop on “Application of Statistical Tools for Social Science Research”. Dr.P.Devaraju, Ph.D, Associate Professor and Former Head of the Department of Economics St. Xavier’s College, Palayamkottai is the resource person.

MATHEMATICS RESEARCH CENTRE

Maths Research Centre concentrates on Graph theory, Analysis, Fuzzy Logic. There are five guides with 15 scholars. Two Ph.Ds are awarded through the Centre. Sxc centenary year-international conference on recent developments in pure and applied mathematics was organized by Mathematics Research Centre. Dr. A. Lourdusamy, Head of the Department of Mathematics was the convener. There were eight eminent Experts: Dr. Glenn Hulbert (Professor, Virginia Commonwealth University, USA)- Dr. S. Arumugam (Senior Professor), Kalasalingam Academy of Research and Education), Dr. R. Kala (Manonmaniam Sundaranar University, Tirunelveli), Dr. T. Tamizh Chelvam, CSIR Emeritus Professor, Manonmaniam Sundaranar University, Tirunelveli), Dr. V. P. Ramesh, Central University of Tamilnadu, Thiruvarur), Rev. Dr. Joseph Varghese, School of Science, Christ University, Bangalore), Dr M . Lellis Thivagar, (Madurai Kamaraj University, Madurai)-Dr. T. Asir (Pondicherry University, Pondicherry). Around 300 participants from different parts of the country participated. 133 research papers were presented in the conference to disseminate knowledge among the scientific community. An MoU is signed between St. Xavier’s College (Autonomous), Palayamkottai and the Department of Mathematics, Virginia Commonwealth University, USA to carry out student and scholar exchange programme. The papers of the conference are published in UGC Care listed journals and ISBN Proceedings.

CHEMISTRY RESEARCH CENTRE

The Chemistry Department became a research centre in 2011. The research center is equipped with rotary vacuum distillator, UV-Vis spectrophotometer, FT-IR spectrophotometer, cyclic voltameter, Flash photometer, HPLC and guoy balance. The important research fields concentrated by the department are phytochemistry, electro organic chemistry, nano chemistry, polymer chemistry, green chemistry, supramolecular chemistry and adsorption studies. At present the research center has eight recognized research guides. Sixteen research scholars are pursuing their PhD Mr. A. Jerold Antony and S. Kavitha have successfully defended their theses. Totally nine research papers are published in reputed international journals.

PHYSICS RESEARCH CENTRE

The Physics research centre was established in the year 2007. Physics research centre has created a well defined system to promote research. Exclusive research centres such as Materials research centre, Crystal growth lab and Energy research centre are the department level research units to support the research scholars. At present 27 research scholars are pursuing their research under 9 research supervisors in different disciplines. The Physics research centre is available to all the PG students. The Department has purchased research instruments at the cost of Rs.5,44,063 to carry out UV studies, Optical properties of Thin film and Nanomaterials. The faculty of Physics Department are pursuing their research in the field of crystal growth, thin film, nano materials, polymers, opto electronics, super capacitors, etc. 42 papers are published in leading National and International Journals during 2022-2023. Dr. S. G. Rejith and Dr. L. Arun Jose have received a sum of Rs.15,000 towards students research project at PG level. The Department of Physics has signed an MOU with PSN College of Engineering, Melathediyoor with the aim of undertaking research activities pertaining to nanomaterials synthesis and characterization, polymers and Hands-on training on electrochemical work station.

FOLKLORE RESEARCH CENTRE

In collaboration with the Department of Tamil, Sri S. Ramasamy Naidu Memorial College, Sattur, the Department of Folklore and FRRC organized a “Seminar on Folkloristics” on 31.10.2022 at Sattur. Dr. J. Joseph Antony Raj, Head of the Department, PG & Research Department of Folklore, Dr. M. Peter Arockiaraj, Dr. S. Karmegam, and M. Arivalagan, have served as the resource persons.

In collaboration with the Department of Tamil, A. P. C. Mahalakshmi College for Women, Thoothukudi, the Department of Folklore and FRRC organized a national. seminar on “Folkloristics” on 06.04.2023 at FRRC, Palayamkottai.. Dr. N. Ramachandran, Director, FRRC, Dr. J. Joseph Antony Raj, Dr. M. Peter Arockiaraj, and M. Arivalagan, have served as resource persons.

The Department has organized one day seminar to commemorate Professor Tho. Paramasivan on March 07, 2023 at FRRC. Dr. S. Navaneethakrishnan, Assistant Professor, Department of Tamil, Manonmaniam Sundaranar University College, has presented the research article. Mrs. Isakkiyammal, wife of Professor Tho.Pa, donated the books which were collected by Pro.Tho.Pa to FRRC. On behalf of FRRC Rev. Dr. V. Henry Gerome, Rector of St. Xavier’s Institutes has received the books from Tho.Pa.’s family.

The Department and FRRC conduct regular coaching to the Folklore students and scholars for the Paper - I of UGC – NET Examination. It has been conducted weekly twice from

March 15, 2023 onwards. Dr. N. Navaneethkrishnan, Assistant Professor, MSU College, is the resource person.

FOLKLORE RESOURCES & RESEARCH CENTRE

FRRC signed a Memorandum of Understanding with Sri Ramasamy Naidu Memorial College, Sattur, Virudhunagar District, for conducting Folklore Seminar every year.

In 2021, FRRC started an informal reading circle to improve reading habits, initiating debates, sharpening and enriching critical thinking among research scholars and students. The inaugural was held on 18.05.2022. Dr. T. Namasivayam, Drama Teacher, St. Xavier's College of Education, Palayamkottai has reviewed the book "Ulaga Varalartil Pengal" by Roslind Miles. In the second event held on 25.05.2022, Dr. M. Arivalagan, Assistant Professor, has reviewed the book, *Nadodikal – Vaimozhi Varalarum Ulakak Kannottamum* written by A. Dhananjeyan.

The Reading circle has met 25 times at regular intervals in 2022-2023 to present research articles book reviews, review of translations and so on.