



# Mary Matha Arts & Science College

Mananthavady, Wayanad, Kerala

Re-accredited by NAAC with B++ Grade, CGPA 2.85 (III Cycle)

Education for total liberation

## CRITERIA 3.5

### DEPARTMENT OF PHYSICS


**3.5.1. Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student/ faculty exchange and collaborative research during the last five years**

S. No	Institution Name	Type of Collaboration
1	Vasyl Stefanyk Precarpatian National University, Ukraine	International Research Collaboration
2	National University of Uzbekistan (NUU)	International Research Collaboration
3	Bhabha Atomic Research Centre, Mumbai	National Research Collaboration
4	Department of Physics, MLSU, Rajasthan	Department level Collaboration
5	Nirmalagiri Coleege	Institutional level Collaboration
6	Department of Physics, Devaswom Board Pampa College Parumala	Department level Collaboration
7	Department of Physics, St. Mary's College, Sulthan Bathery	Department level Collaboration
8	Govt. College, Mananthavady	Department level Collaboration
9	SNDP Yogam Arts & Science College, Pulpally	Department level Collaboration
10	WMO College Muttill	Department level Collaboration
11	Govt. Brannen College, Thalassery	Department level Collaboration
12	M G College, Iritty	Department level Collaboration

## INTERNATIONAL COLLABORATIONS

S. No	Institution Name	Nature of Collaboration	Activities Done
1	Vasyl Stefanyk Precarpatian National University, 57 Shevchenko Str, Ivano-Frankivsk, 76018, Ukraine	Research Collaboration	1. Bilateral Project submitted 2. Published 5 international research publications (4 of these are Scopus-indexed Q <sub>2</sub> articles)

Temporary Registration No. : TPN / 19564



Ministry of Science & Technology  
Government of India

**Project Proposal On**

**Tuning of magnetic and dielectric properties of mixed-spinel ferrites and spinel ferrite thin films**

**Submitted to:**

**Division :International Cooperation (Bilateral)**

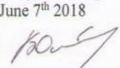


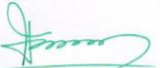


**Programme or Scheme :India Ukraine Joint Call for Proposals**

**Submitted By**

**Project Investigator:**

**Dr. SIJO A K**

**MARYMATHA ARTS AND SCIENCE COLLEGE  
MANANTHAVADY-MANANTHAVADY**

Керівники проекту Project leaders	Україна Ukraine	Республіка Індія Republic of India
1. Ім'я, прізвище First name and last name	1. Остафійчук Богдан Костянтинович Dr. Ostafiychuk Bogdan K.	1. Dr. Sijo A. K.
2. Дата Date	2. 7 червня 2018р. June 7 <sup>th</sup> 2018	2. 7 червня 2018р. June 7 <sup>th</sup> 2018
3. Підпис Signature	3. 	3. 
<b>Установа Institution</b>		
1. Назва установи Name of institution	1. ДВНЗ «Прикарпатський національний університет імені Василя Стефаника» Vasyl Stefanyk Precarpathian National University	1. Mary Matha Arts and Science College, Mananthavady, Wayanad
2. Директор установи Head of institution	2. Цепенда Ігор Євгенович, доктор політичних наук, професор Dr. Tsependa Igor E. Doctor of political sciences, professor	2. Dr. Savio James V.
3. Дата Date	3. 7 червня 2018р. June 7 <sup>th</sup> 2018	3. 7 червня 2018р. June 7 <sup>th</sup> 2018
4. Підпис Signature	4. 	4. 
5. Печатка Stamp	5. 	5. 

Додати резюме керівників проекту / Attached the Cvs of the project leaders

### Papers published

1. Sijo A. K, V. K Jha, L. Kaykan, D. P. Dutta (2020) Structure and cation distribution in superparamagnetic NiCrFeO<sub>4</sub> nanoparticles using Mössbauer study, Journal of Magnetism and Magnetic Materials 497, 166047 <https://doi.org/10.1016/j.jmmm.2019.166047> Impact factor: 2.993, ISSN: 0304-8853
2. L. Kaykan, Sijo A. K, J. Mazurenko, A. Żywczak, (2021) Influence of the preparation method and aluminium ion substitution on the structure and electrical


properties of lithium–iron ferrites Applied Nanoscience  
<https://doi.org/10.1007/s13204-021-01691-0> Impact factor: 3.674 ISSN 2190-5509

3. L. Kaykan, Sijo A. K, A. Żywczak, J. Mazurenko, K. Bandura (2020) Tailoring of structural and magnetic properties of nanosized lithium ferrites synthesized by sol-gel self-combustion method, Applied Nanoscience  
<https://doi.org/10.1007/s13204-020-01413-y> Impact factor: 3.674 ISSN 2190-5509
4. L.S Kaykan, J. Mazurenko, Sijo A. K, V I Makovysyn (2020) Structural properties of magnesium substituted lithium ferrites, Applied Nanoscience  
<https://doi.org/10.1007/s13204-020-01259-4> Impact factor: 3.674 ISSN 2190-5509
5. L.S Kaykan, J.S. Mazurenko, Sijo A. K (2020) Effect of pH on magnetic properties of ordered phase Co-doped lithium ferrites nanoparticles synthesized by sol-gel auto combustion method, 12 (4) Journal of Nano and Electronic Physics Impact factor: 0.425 ISSN 20776772 [https://doi.org/10.21272/jnep.12\(4\).04008](https://doi.org/10.21272/jnep.12(4).04008)

### INTERNATIONAL COLLABORATIONS

S. No	Institution Name	Nature of Collaboration	Activities Done
2.	National University of Uzbekistan (NUU)	Research Collaboration	1. Bilateral Project submitted

Temporary Registration No. : TPN / 47031



Ministry of Science & Technology  
Government of India

**Project Proposal On**

*"Search of a high critical temperature superconductivity on the base of doped ferrites"*

**Submitted to**

**Division** :International Cooperation (Bilateral)  
**Programme or Scheme** : Uzbekistan Joint Call for Proposals

**Submitted by**

**Project Investigator:**  
 Dr. SIJO A K  
 MARYMATHA ARTS AND SCIENCE COLLEGE MANANTHAVADY-  
 MANANTHAVADY

MEMORANDUM OF UNDERSTANDING  
 BETWEEN  
 DEPARTMENT OF PHYSICS, MARY MATHA ARTS AND SCIENCE COLLEGE  
 MANANTHAVADY, WAYANAD , KERALA, INDIA-670645  
 AND  
 NATIONAL UNIVERSITY OF UZBEKISTAN NAMED AFTER M. ULUGBEK,  
 TASHKENT, UZBEKISTAN-100174

ON SUBJECT OF BILATRAL RESEARCH COLLABORATION

This Memorandum Of Understanding (MOU) is made on 02/12/2019 between Department of physics, Mary Matha Arts and Science College Mananthavady, Wayanad, Kerala, India-670645, a government aided college under Kannur university located in Payyampally village, Manathavady municipality, Wayanad district in Kerala state and National University of Uzbekistan named after M. Ulugbek, Tashkent, Uzbekistan-100174 for submitting and conducting Indo-Uzbekistan Bilateral International Research Project on "Search of a high critical temperature superconductivity on the base of doped ferrites".

This MOU reflects the Participants' sincere and genuine intentions to collaborate in specific activities set out herein pertaining to the research and development of superconductivity in ferrites. The purpose of this MOU is to advance the collaborative


**3: Declaration from the Heads of the Collaborating Institutions:**

It is certified that :

- i) The Institutions agree to participate in this Joint Research Project;
- ii) The Institutions shall provide infrastructure & necessary facilities for implementing the joint project;
- iii) The Institutions assume to undertake financial & other management responsibility for the part of the project work to be carried out at their institution; and
- iv) the back-up funding for manpower, consumable etc. is available to this project.

**Signature & Seal of the Head of the Institutions**

**INDIAN**

  
Principal  
Dr. Maria Martin Joseph  
Mary Matha Arts & Science College  
P. O. Vemom, Mananthavady 670645  
Principal,  
Mary Matha Arts and Science College,  
Vemom PO, Mananthavady  
Wayanad, Kerala  
India- 670645



**UZBEK**

  
Prof. A.R. Marakhimov  
Rector,  
National University of Uzbekistan  
named after M. Ulugbek  
Tashkent 100174,  
Vuzgorodok, Uzbekistan



## NATIONAL LINKAGE COLLABORATIONS

S. No	Institution Name	Nature of Collaboration	Activities Done
1.	Bhabha Atomic Research Centre, Mumbai	Research Collaboration	<ol style="list-style-type: none"> <li>Major Research Project submitted</li> <li>Published a collaborative research paper - Scopus indexed- Elsevier- Q<sub>2</sub> Article</li> </ol>

Ref: CWD/PP/50058      Dt. 20/6/2022

**Certificate-2 (from PC)**  
Certificate from PC for RRP / CRP

This is to certify that the project entitled "


[Redacted]


submitted for financial support to the Board of Research in Nuclear Sciences (BRNS) by Dr. A. K. Sijo, Assistant Professor and Head, Department of Physics, Principle Investigator (PI) and Dr. S. V. Francis, Assistant Professor, Co-Principle Investigator (Co-PI) from Mary Matha Arts and Science Collage, Mananthavady, Wayanad; has been formulated in consultation with me. I have gone through the Project Proposal Application (PPA), which is as per the current BRNS format.

The project would be executed in active collaboration between us and I shall ensure for timely submission of yearly progress reports and financial documents towards conclusion of the project as scheduled.

This proposal had been approved by the Chemistry & Isotope Group Board in meeting number 372 held on May 25, 2022 vide reference no. RC&IG/CIGB-372/2022/23936. A copy of the relevant Group Board MoM extract is attached for ready reference.

Date: 16-06-2022

  
 (Dr. Prasad P. Phadnis)  
 Name, Signature & Seal of the Division/Unit  
 (Principal Collaborator)

  
 Bhabha Atomic Research Centre  
 Trombay, Mumbai - 400085

Ref: CWD/PP/50063      Dt. 20/6/2022

**Certificate-1 (for PC)**

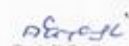
Date: 17-06-2022

Certificate from the Head of the Institution of Principal Collaborator (PC) from DAE Institution

**Project Title:**

- (1) Certified that this Institution agrees to the participation of Dr. Prasad P. Phadnis, Scientific Officer (E), Chemistry Division, BARC, as Principal Collaborator (PC) for the above project that is being submitted for financial support to the Board of Research in Nuclear Sciences (BRNS) by Dr. A. K. Sijo, Assistant Professor and Head, Department of Physics, Principle Investigator (PI) and Dr. S. V. Francis, Assistant Professor, Co-Principal Investigator (Co-PI) from Mary Matha Arts and Science Collage, Mananthavady, Wayanad.
- (2) The PC shall coordinate for timely submission of yearly scientific / technical progress reports and financial documents towards conclusion of the project as scheduled.
- (3) Certified that the infrastructural facilities related to the project activity available in this Institution as mentioned in Part V of the proposal (including equipment, manpower and other facilities) will be extended for the project.
- (4) This Institution assures to undertake the financial and other management responsibilities of the part of the project work that will be conducted in this Institution.
- (5) This Certificate is issued with the approval of the Chemistry & Isotope Group Board in meeting No. 372; dated May 25, 2022; Ref. No.: RC&IG/CIGB-372/2022/23936.

Name of Issuing Authority	Designation of the Issuing Authority	Official E-mail ID	Phone Number
Dr. A. K. Tyagi	Director, Chemistry Group	aktyagi@barc.gov.in	+91 2554 5300

  
 (Dr. A. K. Tyagi)  
 Director, Chemistry Group  
 Trombay, Mumbai - 400085

### Papers published

1. Sijo A. K, V. K Jha, L. Kaykan, D. P. Dutta (2020) Structure and cation distribution in superparamagnetic NiCrFeO<sub>4</sub> nanoparticles using Mössbauer study, Journal of Magnetism and Magnetic Materials 497, 166047 <https://doi.org/10.1016/j.jmmm.2019.166047> Impact factor: 2.993, ISSN: 0304-8853

### NATIONAL LINKAGE COLLABORATIONS

S. No	Institution Name	Nature of Collaboration	Activities Done
2.	Department of Physics ML Sukhadia University	Informal collaboration. No MOU signed. Collaborative paper published in Scopus indexed springer journal.	<ol style="list-style-type: none"> <li>1. MLSU provides research facilities Mary Matha Arts &amp; Science College</li> <li>2. Published a collaborative research paper - Scopus indexed</li> </ol>

### Papers published

1. V. K. Jha, Sijo A. K, S. N. Alam, M. Roy (2020) Effect of Nd Coping on Structural, Electrical, Thermal and Magnetic Properties of Multifunctional BiFeO<sub>3</sub> Ceramics, Journal of Superconductivity and Novel Magnetism 33, 455–46, <https://doi.org/10.1007/s10948-019-05206-5> Impact factor: 1.506 ISSN 1557193

### INSTITUTIONAL COLLABORATIONS

S. No	Institution Name	Nature of Collaboration	Activities Done
1	Nirmalagiri College	Academic and Research Collaboration	<ol style="list-style-type: none"> <li>1. Major Research Project submitted</li> <li>2. Collaborative research work is going on.</li> <li>3. Provided research facility to BSC project students</li> <li>4. Mr. Deepu Joseph of Nirmalagiri College gave an invited talk at MMC</li> <li>5. Dr Sijo A K was the guest reviewer of the International Conference on Advanced Materials (ICAM 2019) organized by Nirmalagiri College</li> </ol>

\*MOU is ready for Signing (both institutions approved MOU). Other supportive documents follow.

**Consent from the Co-Investigator(s)**  
(Attach separate Certificate for each Co-Investigator)

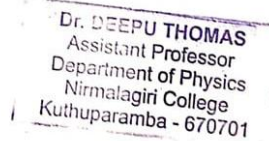
Project Title: **Project Title: Design and synthesis of mixed-spinel ferrites for memory applications based on their resistive switching performances**

I, Dr. DEEPU THOMAS, agree to work as the Co-Investigator of the above titled project and in the unforeseen event of discontinuance by the Principal Investigator, I will assume the responsibility of the fruitful completion of the project.

  
Name and signature of Co- Investigator

Date : 09/11/2022  
Place : Nirmalagiri

DR. DEEPU THOMAS

  
Dr. DEEPU THOMAS  
Assistant Professor  
Department of Physics  
Nirmalagiri College  
Kuthuparamba - 670701

**TOWARDS EXCELLENCE IN PHYSICS: STRATEGIES  
AND OPPORTUNITIES  
A ROADMAP**

WEBINAR 2020 (09<sup>TH</sup> October TO 13<sup>TH</sup> October 2020)

**DEPARTMENT OF PHYSICS  
MARYMATHA ARTS AND SCIENCE COLLEGE MANANTHAVADY**

Day 1: 09<sup>th</sup> October (Friday) 4:30 pm -6:30 pm

**DEEPU JOSEPH**

[Asst. Professor, Department of Physics, Nirmalagiri College, Kuthuparamba]

Day 2: 10<sup>th</sup> October (Saturday) 4:30 pm -6:30 pm

**BINNY DAVIS**

[JRF, Institute of Energy and Climate Research (IEK), Forschungszentrum Jülich, Germany]

**LISHIN T** [JRF, Department of Physics, IIT Roorkee]

Day 3: 11<sup>th</sup> October (Sunday) 4:30 pm -6:30 pm

**ARUN STANLY** [Scientist, Indira Gandhi Centre for Atomic Research -IGCR Kalpakkam]

**ANINA ANJU B** [JRF, CSIR-National Aerospace Laboratories, Bangalore]

**MATHEW K FRANCIS** [JRF, Department of Physics, Anna University]

Day 4: 12<sup>th</sup> October (Monday) 4:30 pm -6:30 pm

**AKHIL KRISHNAN** [MSc., Central University of Mysore]

**SANGEETHA U K** [MSc. Indian Institute of Technology, Madras]

**KAVYA P** [MSc., Central University of Kerala]

Day 5: 13<sup>th</sup> October (Tuesday) 4:30 pm -6:30 pm

**SUBIN V RAJ** [MSc. Cochin University of Science and Technology- CUSAT]



**ARUN JOHNY** [MSc. National Institute of Technology Surathkal]

**ANUSHA TOM** [MSc. Cochin University of Science and Technology- CUSAT]

**MIDHUNA V AJITH** [MSc. Cochin University of Science and Technology- CUSAT]

## INSTITUTIONAL COLLABORATIONS- DEPARTMENT LEVEL

S. No	Institution Name	Nature of Collaboration	Activities Done
1	Department of Physics, Devaswom Board Pampa College Parumala Mahatma Gandhi University Kottayam	Academic and Research Collaboration	<ol style="list-style-type: none"> <li>1. MSc Project Co-guidance</li> <li>2. International Conference Presentation</li> </ol>

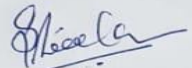
**LETTER OF COLLABORATION**  
Between  
**MARY MATHA ARTS AND SCIENCE COLLEGE, MANANTHAVADY**  
and  
**DEVASWOM BOARD PAMPA COLLEGE, PARUMALA**

This Letter of Collaboration is designed to foster a collaboration relationship through mutual cooperation in academic and research activities between the Department of Physics, Mary Matha Arts and Science College, Mananthavady and the Department of Physics, Devaswom Board Pampa College, Parumala. No financial obligations are assumed under this agreement.

Department of Physics, Mary Matha Arts and Science College, Mananthavady and Department of Physics, Devaswom Board Pampa College, Parumala, have reached an agreement on the following areas of cooperation, subject to mutual consent.

1. Research work Collaboration
2. Project assistance to MSc. & BSc. Students
3. Research facility sharing
4. Exchange of academic materials

This Letter of Collaboration shall commence on 08-10-2021 and be in effect for five years, at which time it shall be reviewed for possible extension.




**Head, Department of Physics**  
**Mary Matha Arts & Science College**  
**Mananthavady**

Dr. Sijo AK  
Head & Asst. Professor  
Department of Physics  
Mary Matha Arts & Science College  
Vemom PO, Mananthavady, 670645





**Head, Department of Physics**  
**Devaswom Board Pampa College**  
**Parumala**



Indo-Europe Joint Conference

Proceedings of the

Second International Conference on  
Advancements in Materials Science and Technology – iCAM 2022



Venue:  
Sathyabama Institute  
of Science and  
Technology, India.

November 2-4, 2022

Jointly Organized by



Editors

D. Dinesh Kumar

T. S. Shyju

A.M. Kamalan Kirubaharan

ISBN: 978-93-83409-78-5

www.icamsist.com

Conference Proceedings

iCAM 2022

PP-FM-273

### Synthesis and characterization of nanoparticles via bottom-up methods

Athira Suresh<sup>a</sup>, Mary Metilda<sup>b</sup>, L. S. Kaykan<sup>c</sup>, Julia Mazurenko<sup>d</sup> and Sijo A K<sup>b</sup>

<sup>a</sup>Department of Physics, Devaswom Board Pampa College, Parumala, 689626, India.

<sup>b</sup>Department of Physics, Mary Matha Arts and Science College, Mananthavady, 670645, India.

<sup>c</sup>Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk 76018, Ukraine.

<sup>d</sup>Ivano Frankivsk National Medical University Halytska, Ivano-Frankivsk 76018, Ukraine.

#### ABSTRACT

Nanosized ZnFe<sub>2</sub>O<sub>4</sub> powder has been prepared by bottom-up methods such as sol-gel, solution self-combustion, and co-precipitation methods. Citric acid is used as fuel. The structural properties of the samples were studied by a Rigaku Mini Flex X-ray Diffractometer using the Ni filter with Cu K<sub>α</sub>-radiation. XRD pattern provided clear evidence of the formation of ferrite spinel phase in samples synthesized by sol-gel technique and solution combustion method. The broad XRD peak indicates that the ferrite particles are of fine nano-size. The crystallite size of the samples was calculated using the Scherer formula as well as Rietveld fitting within 3-35 nm.

**Keywords:** Nanoparticle synthesis, Bottom-up methods, X-ray spectroscopy, Nanomagnetism.

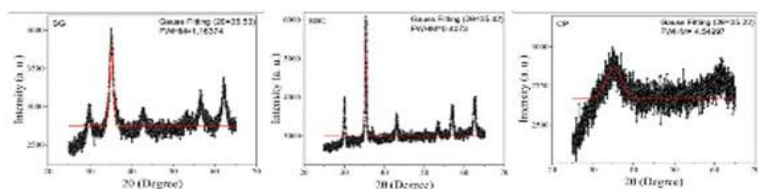
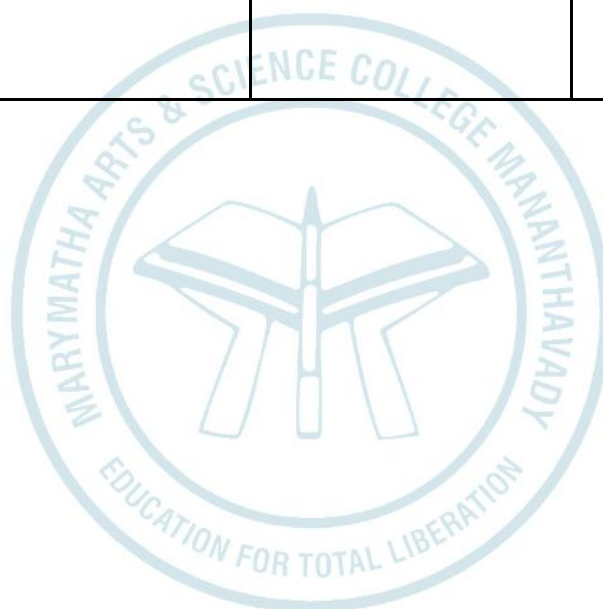


Fig.1: XRD pattern of ZnFe<sub>2</sub>O<sub>4</sub> synthesized by sol-gel (SG), solution-self combustion (SSC), and co-precipitation (CP) methods.

S. No	Institution Name	Nature of Collaboration	Activities Done
2	Department of Physics, St. Mary's College, Sulthan Bathery	Academic and Research Collaboration	<ol style="list-style-type: none"> <li>1. Submitted Major Project (SRS Scheme) to KSCSTE</li> <li>2. Published Collaborative Book Chapter- Springer publication-, Scopus indexed</li> <li>3. Guided 1MSc Projects of St. Mary's College- Shahla Nasrin</li> <li>4. Research facility sharing</li> </ol>





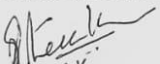
LETTER OF COLLABORATION  
Between  
MARY MATHA ARTS AND SCIENCE COLLEGE, MANANTHAVADY  
and  
ST. MARY'S COLLEGE, SULTHAN BATHERY

This Letter of Collaboration is designed to foster a collaboration relationship through mutual cooperation in academic and research activities between the Department of Physics, Mary Matha Arts and Science College, Mananthavady and the Department of Physics, Govt. College Mananthavady. No financial obligations are assumed under this agreement.

Department of Physics, Mary Matha Arts and Science College, Mananthavady and Department of Physics, St. Mary's College, Sulthan Bathery, have reached an agreement on the following areas of cooperation, subject to mutual consent.


1. Research work Collaboration
2. Research Publication
3. Major & Minor Research project submission
4. Faculty extension
5. Project assistance to MSc. Students
6. Research facility sharing
7. Exchange of academic materials

This Letter of Collaboration shall commence on 08-06-2019 and be in effect for five years, at which time it shall be reviewed for possible extension.


  
Dr. Sijo AK  
Head & Asst. Professor  
Department of Physics  
Mary Matha Arts & Science College  
Vemom PO, Mananthavady, 670645

Head, Department of Physics  
Mary Matha Arts and Science College  
Mananthavady



  
4/10/23  
Head of the Department  
P.G. Department of Physics  
St. Mary's College S. Bathery  
Head, Department of Physics  
St. Mary's College  
Sulthan Bathery

Detailed Proposal submission - ☆  
 SRS, KSCSTE External Inbox

 SRS Kerala 25 Jul  
 to me ^

From SRS Kerala • srskerala22@gmail.com  
 To aksijo@marymathacollege.ac.in  
 Date 25 Jul 2023, 3:27 pm  
 Standard encryption (TLS).  
[See security details](#)

**Greetings from KSCSTE !**

Kindly refer to the Pre-proposal submitted to KSCSTE under Science Research Scheme (SRS) for financial assistance.

Reference Number of the project is **SRS2023PS-10** (Please quote this reference number in all communications)


I am happy to inform you that the Project Advisory Committee for Science Research Scheme, KSCSTE has recommended your project titled "*Design and synthesis of mixed-spinel ferrites for memory applications based on their resistive switching performances*" to the next stage of submission of detailed project.

**Consent from the Co-Investigator(s)**

(Attach separate Certificate for each Co-Investigator)

DESIGN AND SYNTHESIS OF MIXED-SPINEL FERRITES FOR  
 MEMORY APPLICATIONS BASED ON THEIR RESISTIVE SWITCHING PERFORMANCES

I, Dr. Pranod K.S agree to work as the Co-Investigator of the above titled project and in the unforeseen event of discontinuance by the Principal Investigator, I will assume the responsibility of the fruitful completion of the project.

Name and signature of Co-Investigator  
  
 Dr. Pranod K.S

Date : 10/11/22  
 Place : S. Bathery

Book chapter: Characterization of Nontoxic Nanomaterials for Biological Applications. In: Mohanan, P.V., Kappalli, S. (eds) Biomedical Applications and Toxicity of Nanomaterials. Springer, Singapore. [https://doi.org/10.1007/978-981-19-7834-0\\_15](https://doi.org/10.1007/978-981-19-7834-0_15)

S. No	Institution Name	Nature of Collaboration	Activities Done
3	Govt. College, Mananthavady	Academic and Research Collaboration	1. Published Collaborative Book Chapter- Springer publication-, Scopus indexed 2. Research facility sharing. 3. Lab facility sharing





LETTER OF COLLABORATION  
Between  
MARY MATHA ARTS AND SCIENCE COLLEGE, MANANTHAVADY  
and  
GOVT. COLLEGE, MANANTHAVADY

This Letter of Collaboration is designed to foster a collaboration relationship through mutual cooperation in academic and research activities between the Department of Physics, Mary Matha Arts and Science College, Mananthavady and the Department of Physics, Govt. College Mananthavady. No financial obligations are assumed under this agreement.

Department of Physics, Mary Matha Arts and Science College, Mananthavady and Department of Physics, Govt. College Mananthavady have reached an agreement on the following areas of cooperation, subject to mutual consent.

1. Research Collaboration
2. Faculty extension
3. Project assistance to BSc. Students
4. Lab facility sharing
5. Exchange of academic materials

This Letter of Collaboration shall commence on 10-06-2019 and be in effect for five years, at which time it shall be reviewed for possible extension.

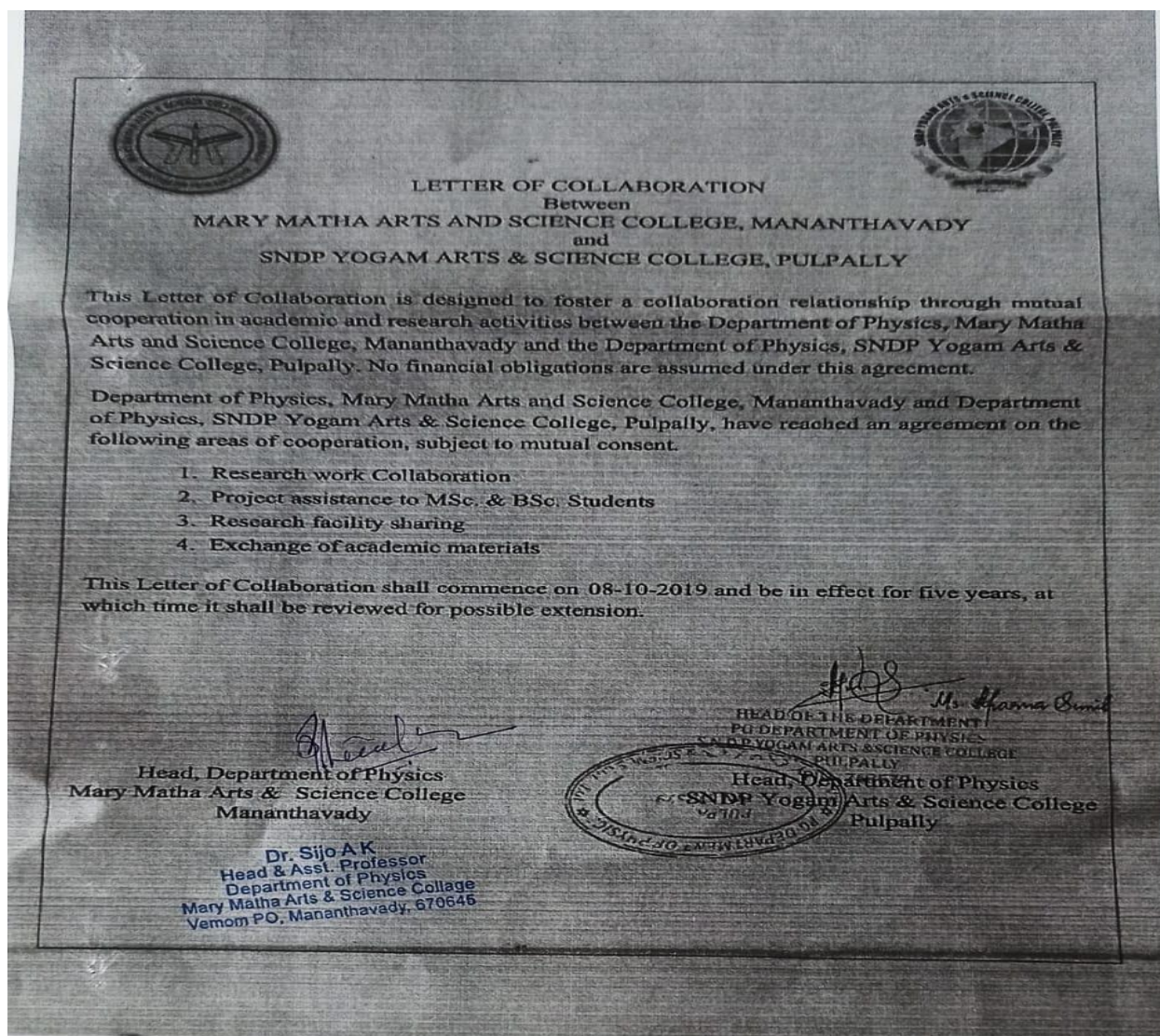
Head, Department of Physics  
Mary Matha Arts and Science College,  
Mananthavady

Dr. Sijo A K  
Head & Asst. Professor  
Department of Physics  
Mary Matha Arts & Science Collage  
Vemom PO, Mananthavady, 670645

Head, Department of Physics  
Govt. College Mananthavady

**SREEJITH. T**  
ASSISTANT PROFESSOR  
DEPARTMENT OF PHYSICS  
GOVT. COLLEGE MANANTHAVADY  
WAYANAD - 670 645

S. No	Institution Name	Nature of Collaboration	Activities Done
4	SNDP Yogam Arts & Science College, Pulpally	Academic and Research Collaboration	MSc Project Guidance to students of SNDPAS College – Guided 5 MSc projects 1. Bhavan Dinesh (2021-22) 2. Anamika Ramachandran (2021-22) 3. Anju Varghese (2021-22) 4. Aneeta (2021-22) 5. Praveena M (2022-23)



S. No	Institution Name	Nature of Collaboration	Activities Done
5	WMO College Muttill	Academic and Research Collaboration	MSc Project Guidance to students of WMO College- Guided 4 MSc projects 1. Thajunisa (2022-23) 2. Najeem Marakkar (2022-23) 3. Nishana Parveen K (2019-20) 4. RAHNA (2019-20)

\* MOU not signed yet, MOU ready for signing

\*Image of other supporting documents are not with us now, we will collect them from WMO College at the time of signing the MOU



S. No	Institution Name	Nature of Collaboration	Activities Done
6	Govt. Brannen College, Thalassery	Academic and Research Collaboration	MSc Project Guidance to students of Brannen College – Guided 3 MSc projects 1. Keerthana V V (2018-19) 2. Yajna P Nambiar (2018-19) 3. Anusree B (2018-19)

\* MOU not signed yet, MOU ready for signing

\* Image of other supporting documents are not with us now, we will collect them from Brennen College at the time of signing the MOU

S. No	Institution Name	Nature of Collaboration	Activities Done
7	M G College, Iritty	Academic and Research Collaboration	1. Seminar 2. Research work on progress

**DEPARTMENT OF PHYSICS**

**MAHATMA GANDHI COLLEGE**  
 മഹാത്മാ ഗാന്ധി കോളേജ്, ഇരിട്ടി (രാഷ്ട്രീയ സ്കൂൾ)  
 (Accredited by NAAC with 'A' Grade)  
 IRITTY, Koozhur P.O.,  
 Kannur Dt., Kerala-670703

Tel: 0490 - 2491666 (O)  
 Fax: 2491666  
 E-mail: mgcollege.ac.in@gmail.com  
 Website: www.mgcollege.ac.in

Date: 13.11.2021

**DUTY CERTIFICATE**

This is to certify that Dr. Sijo A K, Assistant Professor, Department of Physics, Mary Matha Arts and Science College, Mananthavady has delivered a lecture on 'nano materials' organized by Department of Physics, MG college, Iritty on 13.11.2021 as part of academic collaboration signed between the Department Physics of our institution and Department of Physics, Mary Matha Arts and Science College, Mananthavady.



*WS*  
13/11/2021

**SANDHYA C.V**  
ASSOCIATE PROFESSOR & HEAD  
DEPARTMENT OF PHYSICS  
MAHATMA GANDHI COLLEGE, IRITTY

**DEPARTMENT OF PHYSICS**

**MAHATMA GANDHI COLLEGE**  
 മഹാത്മാ ഗാന്ധി കോളേജ്, ഇരിട്ടി (രാഷ്ട്രീയ സ്കൂൾ)  
 (Accredited by NAAC with 'A' Grade)  
 IRITTY, Koozhur P.O.,  
 Kannur Dt., Kerala-670703


Tel: 0490 - 2491666 (O)  
 Fax: 2491666  
 E-mail: mgcollege.ac.in@gmail.com  
 Website: www.mgcollege.ac.in

Date: 02.11.2021

**CERTIFICATE OF COLLABORATION**

This is to certify that the Department of Physics, Mary Matha Arts and Science College, Mananthavady is actively collaborating with the Department Physics of our institution in various academic activities for the academic year 2021-22.

1. Knowledge sharing through faculty exchange
2. Conducting Seminars



*WS*  
2/11/2021

**SANDHYA C.V**  
ASSOCIATE PROFESSOR & HEAD  
DEPARTMENT OF PHYSICS  
MAHATMA GANDHI COLLEGE, IRITTY