LUNAR MAGNETIC ANOMALY MODEL COMPARISON

Project report submitted to the

UNIVERSITY OF CALICUT

In partial fulfillment of the requirement for the award of degree in

MASTER OF SCIENCE IN PHYSICS

By

AKHILA RAPHAEL Reg. No: CCAWMPH001



Under the guidance of

Dr. DHANYA M. B

Scientist/Engineer - SF

Space Physics Laboratory, Vikram Sarabhai Space Centre (VSSC) Indian Space Research Organisation (ISRO), Thiruvananthapuram - India

EXPLORING CRYSTAL STRUCTURES AND INVESTIGATION OF Alsb under high pressure

Submitted by

Aleena A S

Reg No: CCAWMPH002



Department of Physics

Christ College Irinjalakuda (Autonomous)

In partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN PHYSICS



Under the guidance of,

Dr. Balmukund Shukla

High Pressure Studies Section

Condensed Matter Physics Division

Indira Gandhi Centre for Atomic Research [IGCAR]

Kalpakkam

EFFECT OF ETCHING IN SILICA CAPILLARY BASED LASING SYSTEM

Submitted to

UNIVERSITY OF CALICUT



In partial fulfilment of the requirements for the award of the Degree of

MASTER OF SCIENCE

IN

PHYSICS

Submitted by

ALEENA K J

Register number: CCAWMPH003

Under the guidance of

Prof. M. KAILASNATH

International School of Photonics

Cochin University of Science and Technology

Cochin-682022, Kerala, India



NUMERICAL STUDY OF ONE-DIMENSIONAL PHOTONIC CRYSTAL USING COMSOL MULTIPHYSICS

Submitted to,

UNIVERSITY OF CALICUT



In partial fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

IN

PHYSICS

Submitted by,

ASHLY JOSEPH

Register number: CCAWMPH004

Under the guidance of

Dr. PRIYA ROSE T

International school of photonics, CUSAT

Cochin-682022, Kerala, India



NUMERICAL STUDY OF ONE-DIMENSIONAL PHOTONIC CRYSTAL USING COMSOL MULTIPHYSICS

Submitted to,

UNIVERSITY OF CALICUT



In partial fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

IN

PHYSICS

Submitted by,

E A ATHIRA

Register number: CCAWMPH006

Under the guidance of

Dr. PRIYA ROSE T

International school of photonics, CUSAT

Cochin-682022, Kerala, India



Development of ZnTiO₃ – PB Composite Laminates for Microwave Applications

A PROJECT REPORT

Submitted to

Christ College (Autonomous), Irinjalakuda

In Partial fulfillment of the requirements

for the award of the Degree of

MASTER OF SCIENCE IN PHYSICS

by

GOKUL DAS

(Reg No. CCAWMPH007)

Under the guidance of

Dr. DNYANDEO PAWAR

SCIENTIST

CENTRE FOR MATERIALS FOE ELECTRONICS TECHNOLOGY

(C-MET) THRISSUR



CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA

THRISSUR, KERALA

STRUCTURE AND DYNAMICS ACROSS GLASS TRANSITION IN DENSE MICROGEL SUSPENSION

Submitted by

Krishnapriya T. L

Reg No: CCAWMPH010



Department of Physics

Christ College Irinjalakuda (Autonomous)

In partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE IN PHYSICS



Under the guidance of,

Dr. R.G. Joshi

Light Scattering Studies Section
Condensed Matter Physics Divison
Indira Gandhi Centre for Atomic Research [IGCAR]
Kalpakkam





Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com

Thrissur District Panchayat

Certificate of Internship

This is to certify that Mr. ATHUL KRISHWA, 3rd SEMESTER B.Sc. PHYSICS student of CHRIST COLLEGE (Autonomous) TRINJALAKKUDA has successfully completed the Internship held in Vijnan Sagar Science and Technology Park,

Thrissur 30.06.2024 C.T. Ajith Kumar Special Officer Viinan Sagar









Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com

Thrissur District Panchayat

Certificate of Internship

This is to certify that Ms. ANRIYA.K.A., 4th Semester B.Sc. Physics student of Christ College (Authoromous) Trindalakkuda, has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period APRIL-MAY 2024.

Thrissur 30.06.2024













Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com

Thrissur District Panchayat

Certificate of Internship

This is to certify that Ms. T. B. YASMIN, 41K Semester B. Sc. Physics student of Christ College (Autonomous) Irintalakkuda, has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period April—May 2024

Thrissur 30.06.2024



C.T. Ajith Kumar Special Officer Vijnan Sagar







Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com **Thrissur District Panchayat**

Certificate of Internship

This is to certify that Ms. SANDRA. P.P. AIK Semester BSc. Physics student of Christ College (Autonomous) Iringalaxkuda has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period APRIL - May 2024.

Thrissur 30.06.2024



C.T. Ajith kumar Special Officer Vijnan Sagar









Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com

Thrissur District Panchayat

Certificate of Internship

This is to certify that Mr. HARISANKAR. C.R., 4^{III} Semester B. Sc Physics student of CHRIST College (Autonomous) IRINT ALAKKUDA, has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period APRIL—MAY 2024.

Thrissur 30.06.2024











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(Funded by the MoE, Govt. of India)



This certificate is awarded to

ANAMIKA E R

for successfully completing the course

Soft Skill Development

with a consolidated score of

%

Online Assignments | 20.58/25 | Proctored Exam

40.5/75

Total number of candidates certified in this course: 8456

Jul-Sep 2024

(8 week course)

Prof. Haimanti Banerji

Coordinator, NPTEL IIT Kharagpur

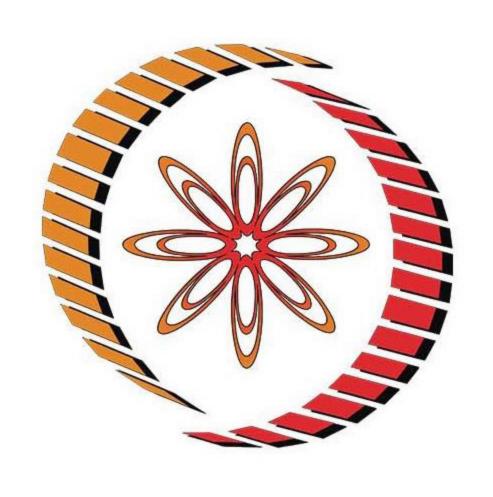


Indian Institute of Technology Kharagpur





FREE ONLINE EDUCATION



NPTEL Online Certification



(Funded by the MoE, Govt. of India)

This certificate is awarded to

KIRANDEV C V

for successfully completing the course

Atomic and Molecular Physics

with a consolidated score of

Online Assignments | 13.19/25 | Proctored Exam

Total number of candidates certified in this course: 129

Jan-Apr 2024

(12 week course)

Prof. Haimanti Banerji

Coordinator, NPTEL IIT Kharagpur



Indian Institute of Technology Kharagpur









This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Ms. PARVATHY GIREESH



Student of Christ College Irinjalakuda, Admission No. CCAVSPH033 for the completion of his/her

internship with our company. From date: 27/12/2023 | Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.







NovelSynergy Eng. Solutions Pvt.Itd. Konehodinjsmakkal Thrissur Dist. Kerala, Ph. No. 0400-200634













Anu Awereness Yatra Program-2023

Prize Certificate

This is to certify that Master/Miss. ANNA VARGHESE	-
OF CHRIST COLIEGE (AUTONOMOUS) IRINJALAKUDA	_
won First/Second/Third Prize in the Quiz/Slogan/Drawing/Elocution competition organized by	ЭΥ
Indira Gandhi Centre for Atomic Research & Christ College (Autonomous) Irinjalakuda, at Chri	st
College (Autonomous) Irinjalakuda on 11 th August 2023.	

Principal
Christ College (Autonomous)
Irinjalakuda



Coordinator

Anu Awareness Yatra-2023 IGCAR, Kalpakkam



CERTIFICATE OF INTERNSHIP



This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Ms. ANNA VARGHESE



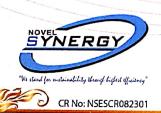
Student of Christ College Irinjalakuda, Admission No. 10547 for the completion of his/her internship with our company.

From date: 30/10/2023 Date of Completion: 03/11/2023.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.





www.synergyfze.com, India@synergyfze.com



(MANAGING DIRECTOR)

NovelSynergy Eng. Solutions Pvt.ltd. Kombodinjamakkal Thrissur Dist. Kerala, Ph No: 0480 2990534 SCHOOL

Christ College (Autonomous)

IRINJALAKUDA



CERTIFICATE OF MERIT

This is to certify that Mr. / Ms. ANNA VARCILESE is awarded prof. p.o kochuvaneed Cash award to the Bs.c Secured Semested top Scored.

Date 17. 03 - 2023



Christ College (Autonomous) SO CONTROL OF THE PROPERTY OF **CERTIFICATE OF MERIT** This is to certify that Mr. /Ms. PNND VARONESE is awarded priof. Joseph Mani Cash award to the BSc top Sconer in the Dayens Mechanics I and I

Date 17-03-2023

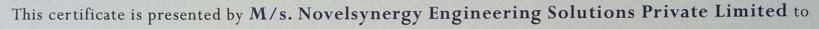


PRINCIPAL

Associate Professor In-charge of Principal

૱ૡૡૡૢઌૢૡૢૡ૽ૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡૡ

CERTIFICATE OF INTERNSHIP



Ms. ALINA N.A



Student of Christ College Irinjalakuda, Admission No. CCAVSPH036 for the completion of his/her

internship with our company. From date: 27/12/2023 Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.



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Thrissur District Panchayath VIJNAN SAGAR SCIENCE AND TECHNOLOGY PARK Ramavarmapuram.P.O.,Thrissur-680631

Certificate of Participation

This is to Certify that !	E.V. Vishnupriya, Bsc. Physics of Christ college		
Trinjalakuda	had completed the Internship program in Vijnan Sagar		
Science and Technology Park, Ramavarmapuram during the Period of May 23 to 27, 2022			

P K Davis Master President Thrissur jilla Panchayath. A.W. Vallabhan
Standing Committee Chairman
Health and Education
Thrissur jilla Panchayat

V.S.Sreejith Special Officer Vijnan Sagar Science and Technology Park



This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Ms. E.V VISHNUPRIYA



Student of Christ College Irinjalakuda, Admission No. CCAVSPH026 for the completion of his/her internship with our company. From date: 27/12/2023 | Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.





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JOSEPHGEE VATTOLY

NovelSynergy Eng. Solutions Pvt.ltd. Kombodinjamakkal Thrissur Dist. Kerala, Ph No: 0480 2990534

CERTIFICATE



This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Mr. MILAN PRASAD

Student of Christ College Irinjalakuda, Admission No. CCAVSPH009 for the completion of his/her

internship with our company. From date: 27/12/2023 Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.



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Thrissur District Panchayath VIJNAN SAGAR SCIENCE AND TECHNOLOGY PARK Ramavarmapuram.P.O., Thrissur-680631

Certificate of Participation

This is to Certify that .A.T.H.RA. YINAYAN, Bsc. Physics of Christ college

Irinjalakuda had completed the Internship program in Vijnan Sagar

Science and Technology Park, Ramavarmapuram during the Period of May 23 to 27, 2022

P K Davis Master President Thrissur jilla Panchayath. A.V. Vallabhan
Standing Committee Chairman
Health and Education
Thrissur jilla Panchayat

V.S.Sreejith
Special Officer
Vijnan Sagar
Science and Technology Park



CERTIFICATE OF INTERNSHIP



This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Ms. ATHIRA VINAYAN



Student of Christ College Irinjalakuda, Admission No. CCAVSPH006 for the completion of his/her internship with our company. From date: 27/12/2023 | Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.









CERTIFICATE OF INTERNSHIP



This certificate is presented by M/s. Novelsynergy Engineering Solutions Private Limited to

Mr. AUSTIN FRANCIS



Student of Christ College Irinjalakuda, Admission No. CCAVSPH025 for the completion of his/her internship with our company. From date: 27/12/2023 | Date of Completion: 02/01/2024.

During the period of internship, she/he had been exposed to different process of our company.

Over this time we found him/her to be diligent, hardworking and inquisitive.

We wish her/him every success in her/his life and career.





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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Ramapuram Campus Faculty of Engineering and Technology

DEPARTMENT OF PHYSICS

CERTIFICATE OF PARTICIPATION

This is to certify that

Sovin V.S. Bsc Physics

Christ College (Autonomous) Irinjalakuda

has participated the "Workshop on Quantum Mechanical calculations through Computational Techniques" organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai – 600089, Tamil Nadu on 27th July, 2024.

Convener

Dr. A. Nataraj

SRMISTPHY 2024 169

Dr. Sakthi Ganesh. M Dean (E&T)



फ्लूइड कंट्रोल रिसर्च इंस्टिट्यूट Fluid Control Research Institute

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01/05/2024

CERTIFICATE

This is to certify that Ms. Mythili R Warrier (11784), Undergraduate Degree Physics student from Christ College (Autonomous), Irinjalakuda has undergone Internship Training at Fluid Control Research Institute, Kanjikode West, Palakkad from 22nd April 2024 to 29th April 2024.

Mr. C. Suresh HOD-Training



Dr. M. Suresh





Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com **Thrissur District Panchayat**

Certificate of Internship

This is to certify that Mr. THEJAS. N.S. 3rd Semester B.Sc. Physics student of CHRIST COLLEGE, IRINJALAKKUDA (Automous) has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period May – June 2024

Thrissur 30.06.2024 C.T. Ajith kumar Special Officer Vijnan Sagar







SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Ramapuram Campus Faculty of Engineering and Technology

DEPARTMENT OF PHYSICS

CERTIFICATE OF PARTICIPATION

This is to certify that

Thejas N S Bsc Physics

Christ College (Autonomous) Irinjalakuda, Kerala

has participated the "Workshop on Quantum Mechanical calculations through Computational Techniques" organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai – 600089, Tamil Nadu on 27th July, 2024.

Convener

Dr. A. Nataraj

SRMISTPHY 2024 337

Dr. Sakthi Ganesh. M Dean (E&T)

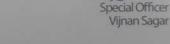


Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com **Thrissur District Panchayat**

Certificate of Internship

This is to certify that Mr. AN TONY JOY, 3^{td} S EMESTER B. Sc. Physics student of CHRIST COLLEGE (Autonomous), TRINJALAKKUDA, has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period May June 2024

Thrissur 30.06.2024



C.T. Ajith/Kumar





Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com **Thrissur District Panchayat**

Certificate of Internship

This is to certify that Ms. ANJANA. A.R. 4th Semester B. Sc. Physics student of CHRIST COLLEGE (Autonomous) JEINJALAKKNOA has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period ARRIL - MAY 2024

Thrissur 30.06.2024



LT. Ajith Kumar Specal Officer Vijnan Sagar





Ramavarmapuram.P.O., Thrissur - 680631, Kerala Ph: 0487 233 0800, E mail: vijnansagar@gmail.com Thrissur District Panchayat

Certificate of Internship

This is to certify that Ms. SONIYA K. JOBY, 4th Semester B. Se Parsics student of CHRIST COLLEGE (Autonomous) I rinjalakkuda, has successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period ... APRIL-MAY 2024

Thrissur 30.06.2024









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Thrissur District Panchayat

Certificate of Internship

This is to certify that Mr. Shalwin Jose, 41^F Semester B.Sc. Physics student of Christ College (Autonomous), Tringalakkunas successfully completed the Internship held in Vijnan Sagar Science and Technology Park, Ramavarmapuram, Thrissur during the period April May 2024

Thrissur 30.06.2024



Special Officer

Vijnan Sagar