

A Numerical Study of the Properties of Harmonic and Anharmonic Quantum Oscillators

A Dissertation work submitted to Mangalore University for the completion of
Master of Science in Physics.



Submitted by

Abhishek N
(Reg.No: 175286002)

Under the guidance of

Prof. K B Vijayakumar
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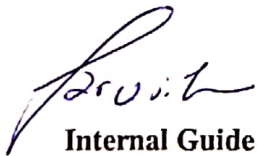
May 2019



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MANGALAGANGOTRI-574199

Certificate

This is to certify that the project entitled "**A NUMERICAL STUDY OF THE PROPERTIES OF HARMONIC AND ANHARMONIC QUANTUM OSCILLATORS**" has been successfully carried in the Department of Physics by **Mr. Abhishek N** (Reg.No: 175286002), a student of fourth semester M.Sc (Physics), under the supervision and guidance of **K B Vijayakumar**, Professor, Department of Studies in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science (Physics) Degree by Mangalore University** during the academic year 2018-2019.


Internal Guide

Internal Examiner


Chairman

External Examiner

Submitted for the Viva-Voice Examination held on:

Paper PHP559
Project Report on
DETECTION OF CRACKS IN RAILWAY TRACKS



Submitted by

AJNA R. A.

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MANGALAGANGOTRI-574199

CERTIFICATE

This is ^{to} certify that the project entitled "Detection of cracks in railway tracks" has been successfully carried out by Ms. AJNA R.A. (RegNo.175286003) IV semester M.Sc. Physics, Mangalore University to fulfill the requirement of paper PHP559 during the academic year 2018-19. This dissertation is approved for the award of the degree of Master of Science in Physics by Mangalore University during the academic year 2018-19.


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Internal examiner

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Paper PHP559
Project Report on
DETECTION OF CRACKS IN RAILWAY TRACKS



Submitted by

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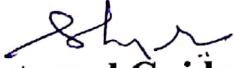
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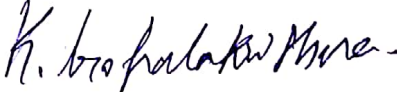
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CERTIFICATE

This is ^{to} certify that the project entitled "Detection of cracks in railway tracks" has been successfully carried out by Ms. AKHILA.K.M. (RegNo.175286004) IV semester M.Sc. Physics, Mangalore University to fulfill the requirement of paper PHP559 during the academic year 2018-19. This dissertation is approved for the award of the degree of Master of Science in Physics by Mangalore University during the academic year 2018-19.


Internal Guide

Internal examiner


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Project Report
On paper PHP 559
On
SYNTHESIS OF FLUORINE DOPED AND UNDOPED
TINOXIDE NANOPARTICLES BY
SOL-GEL TECHNIQUE
AND THEIR CHARACTERIZATION



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ANITHA

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**DEPARTMENT OF STUDIES
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This is to certify that the project entitled "**Synthesis of fluorine doped and undoped tin oxide nanoparticles by sol-gel technique and their characterization**" has been successfully carried by, in the fulfilment of the requirements for the paper PHP559 during the academic year 2018-19,
Ms. ANITHA (Reg no.-175286005) a student from fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics Degree** by Mangalore university during the academic year 2018-2019.

K. Sampath Kumar

Internal guide

K. Sampath Kumar

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Internal examiner

External examiner

Project Report on Paper PHP 559

On

SYNTHESIS OF ZnO AND ZnO: Cd THIN FILMS BY CHEMICAL SPRAY PYROLYSIS AND CHARACTERIZATION



Submitted by
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CERTIFICATE

This is to certify that the project entitled "**Synthesis of ZnO and ZnO:Cd thin films by chemical spray pyrolysis and characterization**" has been successfully carried as per the requirement of paper PHP 559 of MSc physics course for the academic year 2018-19 of Mangalore university by **Ms. ANUSHREE AV (Reg. No. 175286006)** a student of fourth semester M.Sc in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

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A report on the mini -Project entitled
"SMART IRRIGATION SYSTEM"

Submitted by

ARAVINDA P

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Under the Guidance of

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DEPARTMENT OF STUDIES IN PHYSICS

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Certificate

This is certify that the project entitled "Smart Irrigation System" has been successfully carried by, in the fulfillment of the requirement for the paper PHP 559 during the academic year 2018-19, submitted by Mr.ARAVINDA P, (Reg. No. 175286007) a student of fourth semester M.Sc. in Physics, Mangalore University -574199. This dissertation is approved for the award of Master of Science in Physics Degree by Mangalore University during the academic year 2018-19.

K. M. Balakrishna

Internal Guide

K. S. Prasad

Chairman

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Project Report

On Paper PHP 559

**Synthesis of Bismuth oxybromide
Nanosheets by Motor Pestle Method
and Characterization**



**Submitted by:
ARAVINDAKRISHNA M
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Under the supervision of

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CERTIFICATE

This is to certify that the project entitled by "Synthesis of Bismuth oxybromide nanosheets by Motor Pestle method and characterization" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19 by Mr. ARAVINDAKRISHNA M (Reg no:175286008) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.


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Internal examiner

External examiner

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A PROJECT REPORT ON "DIGITAL THERMOMETER"

Submitted to Mangalore University in partial fulfillment of
the requirements for the award of the degree of

MASTER OF SCIENCE IN PHYSICS

Submitted by

ARCHANA

M.Sc. PHYSICS

Register Number - 175286009

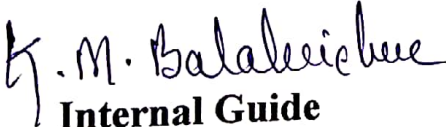
**Project work carried out at
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Mangalore University
Mangalagangothri - 574199**

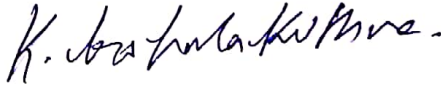
May 2019

DEPARTMENT OF STUDIES IN PHYSICS
Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled “**Digital Thermometer**” has been successfully carried by, in the fulfillment of the requirements for the paper PHP559 during the academic year 2018-19, **Ms. ARCHANA (Reg. No. 175286009)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics degree by Mangalore University** during the academic year 2018-19.


Internal Guide
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(Prof. K. GOPALAKRISHNA NAIK)

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Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite

Project Report Submitted to Mangalore University
For the award of the degree of

Master of Science in Physics



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**Department of studies in Physics
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CERTIFICATE

This is to certify that the project entitled by "Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms.Ashwini (Reg no:175286010) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of Masters of Physics degree by Mangalore University during the year 2018-19

Dr. Y Narayana

Project Guide

Dr. K Gopalkrishna Naik

Chairman

Project Report

On Paper PHP 559

**Synthesis of Bismuth oxybromide
Nanosheets by Motor Pestle Method
and Characterization**



**Submitted by:
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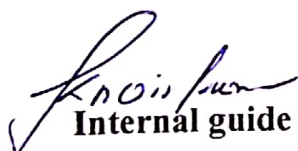
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This is to certify that the project entitled by "Synthesis of Bismuth oxybromide nanosheets by Motor Pestle method and characterization" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19 by Mr. AVANEESH RAI U K (Reg no:175286011) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.


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Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite

Project Report Submitted to Mangalore University
For the award of the degree of

Master of Science in Physics



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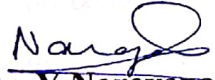
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This is to certify that the project entitled by "Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. Bhanupriya M(Reg no:175286012) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Physics degree by Mangalore University** during the year 2018-19


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Dr. K Gopalkrishna Naik

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**EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITE-
NICKEL FERRITE- POLYMER NANOCOMPOSITE.**

PROJECT REPORT

Submitted to Mangalore University for the degree of Master of Science in Physics.



by

BRANDON ARNOLD LOBO

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IN PHYSICS

MANGALAGANGOTTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITENICKEL FERRITE- POLYMER NANOCOMPOSITE" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, **Mr. BRANDON ARNOLD LOBO (Reg no:175286013)** a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Physics degree by Mangalore University** during the year 2018-19

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Internal examiner

External examiner

Paper PHP559
Project Report on
DETECTION OF CRACKS IN RAILWAY TRACKS



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This is certify that the project entitled "Detection of cracks in railway tracks" has been successfully carried out by Ms. CHAITHRA.K (RegNo.175286014) IV semester M.Sc. Physics, Mangalore University to fulfill the requirement of paper PHP559 during the academic year 2018-19. This dissertation is approved for the award of the degree of Master of Science in Physics by Mangalore University during the academic year 2018-19.

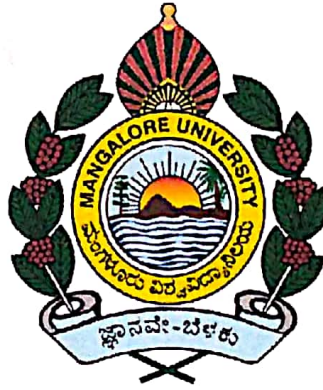

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Internal examiner

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Project Report
On Paper PHP 559
On
SYNTHESIS OF CADMIUM SULFIDE NANOPARTICLES
BY CHEMICAL PRECIPITATION METHOD AND
CHARACTERIZATION



Submitted by

CHETHANA

(Reg. No. – 175286015)

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CERTIFICATE

This is to certify that the project entitled "**Synthesis of Cadmium Sulfide Nanoparticle by Chemical Precipitation Method and characterization**" has been successfully carried as per the requirements for the paper PHP559 of M.Sc physics course for the academic year 2018-19 of Mangalore University by **Ms.CHETHANA (Reg. No.175286015)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

K. Gopalakrishna

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A PROJECT REPORT ON "DIGITAL THERMOMETER"

Submitted to Mangalore University in partial fulfillment of
the requirements for the award of the degree of

MASTER OF SCIENCE IN PHYSICS

Submitted by

DEEKSHA

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Register Number - 175286016

Project work carried out at
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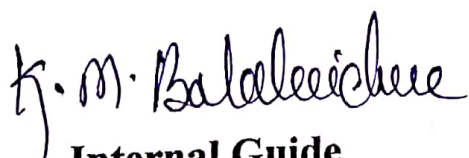
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CERTIFICATE

This is to certify that the project entitled “**Digital Thermometer**” has been successfully carried by, in the fulfillment of the requirements for the paper PHP559 during the academic year 2018-19, **Ms. DEEKSHA (Reg. No. 175286016)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics degree by Mangalore University** during the academic year 2018-19.


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(Prof. K. GOPALAKRISHNA NAIK)

Internal Examiner

External Examiner

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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199



A report on the mini -Project entitled
"SMART IRRIGATION SYSTEM"

Submitted by

DEEKSHITHA A

Reg No.175286017

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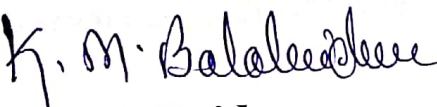
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MANGALAGANGOTHRI-574199

Certificate

This is certify that the project entitled " Smart Irrigation System" has been successfully carried by, in the fulfillment of the requirement for the paper PHP 559 during the academic year 2018-19, submitted by Mis.DEEKSHITHA A, (Reg. No. 175286017) a student of fourth semester M.Sc. in Physics , Mangalore University -574199. This dissertation is approved for the award of Master of Science in Physics Degree by Mangalore University during the academic year 2018-19.


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Internal Examiner


Chairman

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**EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITE-
NICKEL FERRITE- POLYMER NANOCOMPOSITE.**

PROJECT REPORT

Submitted to Mangalore University for the degree of Master of Science in Physics.



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DEPARTMENT OF STUDIES

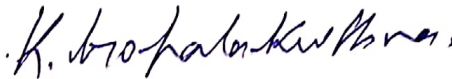
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CERTIFICATE

This is to certify that the project entitled by "EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITENICKEL FERRITE- POLYMER NANOCOMPOSITE" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. DHANYASHREE (Reg no:175286018) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of Masters of Physics degree by Mangalore University during the year 2018-19


Internal guide
Dr Y Narayana


Chairman
Dr K Gopalkrishna Naik

Internal examiner

External examiner

Project Report on Paper PHP 559

On

**SYNTHESIS OF ZnO AND ZnO: Cd THIN FILMS BY
CHEMICAL SPRAY PYROLYSIS AND CHARACTERIZATION**



Submitted by
DIANA N
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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of ZnO and ZnO: Cd thin films by chemical spray pyrolysis and characterization**" has been successfully carried as per the requirement of paper PHP 559 of MSc physics course for the academic year 2018-19 of Mangalore university by **Ms. DIANA N (Reg. No.175286019)** a student of fourth semester M.Sc in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

K. Anshu K. N. N.
Internal Guide

K. Anshu K. N. N.

Chairman

Internal examiner

External examiner

**STUDY OF MORPHOLOGICAL AND
PHOTOLUMINESCENCE PROPERTIES OF GRAPHENE
QUANTUM DOTS SUBJECTED TO GAMMA IRRADIATION**

Project Report Submitted to Mangalore University
for the award of the degree of

MASTER OF SCIENCE IN PHYSICS



by

GOPIKA P

(Reg.No. :175286020)

Under the supervision of

Dr. Y NARAYANA

Professor in Physics

Department of Studies in Physics

Mangalore University, Mangalagangothri-574199

Mangalagangothri-574199, Mangalore

May 2019

MANGALORE UNIVERSITY



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DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Study of Morphological and Photoluminescence properties of graphene quantum dots subjected to gamma irradiation" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. GOPIKA P (Reg no:175286020) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Physics degree by Mangalore University** during the year 2018-19


Dr Y Narayana

Project Guide



Dr K Gopalkrishna Naik

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A Numerical study of the properties of Harmonic and Anharmonic Quantum Oscillators

Project Report Submitted to Mangalore University
For the award of the degree of

Master of Science in Physics



by

GREESHMA R

(Reg.No. : 175286021)

Under the supervision of

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Professor in Physics

**Department of studies in Physics
Mangalore University, Mangalagangothri-574199
Mangalore**

May 2019



MANGALORE UNIVERSITY

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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "A Numerical study of the properties of Harmonic and Anharmonic Quantum Oscillators" has been successfully carried in the fulfillment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. Greeshma R (Reg no:175286021) a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Physics degree by Mangalore University** during the year 2018-19

Dr. K B Vijayakumar

Project Guide

Dr. K Gopalkrishna Naik

Chairman

MANGALORE UNIVERSITY

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A PROJECT REPORT ON "DIGITAL THERMOMETER"

Submitted to Mangalore University in partial fulfillment of
the requirements for the award of the degree of

MASTER OF SCIENCE IN PHYSICS

Submitted by

HEMANTH K V

M.Sc. PHYSICS

Register Number - 175286022

**Project work carried out at
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May 2019

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DEPARTMENT OF STUDIES IN PHYSICS

Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled “**Digital Thermometer**” has been successfully carried by, in the fulfillment of the requirements for the paper PHP559 during the academic year 2018-19, **Mr. HEMANTH K V (Reg. No. 175286022)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics degree by Mangalore University** during the academic year 2018-19.

K. M. Balakrishna
Internal Guide
(Prof. K. M. BALAKRISHNA)

K. Gopalakrishna Naik
Chairman
(Prof. K. GOPALAKRISHNA NAIK)

Internal Examiner

External Examiner

MANGALORE UNIVERSITY

Accredited by NAAC with 'A' grade



A PROJECT REPORT ON

**“SMART ZONE SENSING AND LOCOMOTIVE
TRANSMISSION USING LIGHT FIDELITY”**

Submitted to Mangalore University in partial fulfilment of the

Requirements for the award of the degree of

MASTER OF SCIENCE

IN

PHYSICS

Submitted by

JEWEL JOSEPH

M.Sc PHYSICS

Register No. : 175286023

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MAY-2019

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DEPARTMENT OF STUDIES IN PHYSICS

Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled by **“Smart Zone Sensing and Locomotive transmission using light fidelity”** has been successfully carried in the fulfilment of the requirement for the paper PHP 559 during the academic year 2018-19, **Ms. Jewel Joseph (Reg no:175286023)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Science in Physics degree by Mangalore University** during the year 2018-19.

K. M. Balakrishna

Internal Guide

(Prof K.M. BALAKRISHNA)

K. Gopalakrishna Naik

Chairman

(Prof K. GOPALAKRISHNA NAIK)

Internal Examiner

External Examiner

**STUDY OF MORPHOLOGICAL AND
PHOTOLUMINESCENCE PROPERTIES OF GRAPHENE
QUANTUM DOTS SUBJECTED TO GAMMA IRRADIATION**

Project Report Submitted to Mangalore University
for the award of the degree of

MASTER OF SCIENCE IN PHYSICS



by

JIMSON C P

(Reg.No. 175286024)

Under the supervision of

Dr. Y NARAYANA

Professor in Physics

Department of Studies in Physics

Mangalore University, Mangalagangotri-574199

Mangalagangotri-574199, Mangalore

May 2019


MANGALORE UNIVERSITY

Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Study of Morphological and Photoluminescence properties of graphene quantum dots subjected to gamma irradiation" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Mr. JIMSON C P (Reg no:175286024) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of Masters of Physics degree by Mangalore University during the year 2018-19


Dr Y Narayana

Project Guide


Dr K Gopalkrishna Naik

Chairman

MANGALORE UNIVERSITY

Accredited by NAAC with 'A' grade



A PROJECT REPORT ON

**“SMART ZONE SENSING AND LOCOMOTIVE
TRANSMISSION USING LIGHT FIDELITY”**

**Submitted to Mangalore University in partial fulfilment of the
Requirements for the award of the degree of**

MASTER OF SCIENCE

IN

PHYSICS

Submitted by

JOSTOM A T

M.Sc PHYSICS

Register No. : 175286025

**Project work was carried out at
Department of Studies in Physics
Mangalore University
Mangalagangothri- 574199**

MAY-2019

MANGALORE



UNIVERSITY

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DEPARTMENT OF STUDIES IN PHYSICS

Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled by “**Smart Zone Sensing and Locomotive transmission using Light Fidelity**” has been successfully carried in the fulfilment of the requirement for the paper PHP 559 during the academic year 2018-19, **Mr. Jostom A T (Reg no:175286025)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Science in Physics degree by Mangalore University** during the year 2018-19.

K.M. Balakrishna
Internal Guide

(Prof K.M. BALAKRISHNA)

K. Gopalakrishna Naik

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External Examiner

Project Report

On Paper PHP 559

**Synthesis of Bismuth oxybromide
Nanosheets by Motor Pestle Method
and Characterization**



**Submitted by:
KAVYA NAIK
(Reg no:175286026)**

Under the supervision of

DR. K B VIJAYAKUMAR

**Department of Studies in Physics
Mangalore University, Mangalagangothri
Karnataka, India-574199**

MANGALORE UNIVERSITY



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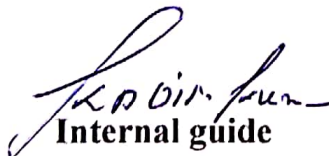
DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Synthesis of Bismuth oxybromide nanosheets by Motor Pestle method and characterization" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19 by Miss. KAVYA NAIK (Reg no:175286026) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.


Internal guide


Chairman

Internal examiner

External examiner

**STUDY OF MORPHOLOGICAL AND
PHOTOLUMINESCENCE PROPERTIES OF GRAPHENE
QUANTUM DOTS SUBJECTED TO GAMMA IRRADIATION**

Project Report Submitted to Mangalore University
for the award of the degree of

MASTER OF SCIENCE IN PHYSICS



by

LEKSHMI CHANDRAN

(Reg.No. :175286027)

Under the supervision of

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Mangalagangothri-574199, Mangalore

May 2019

MANGALORE UNIVERSITY



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DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Study of Morphological and Photoluminescence properties of graphene quantum dots subjected to gamma irradiation" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. LEKSHMI CHANDRAN (Reg no:175286027) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalaganthri. This dissertation is approved for the award of Masters of Physics degree by Mangalore University during the year 2018-19

Dr Y Narayana

Project Guide

Dr K Gopalkrishna Naik

Chairman

Paper PHP559

**Project Report on
DETECTION OF CRACKS IN RAILWAY TRACKS**



Submitted by

M.RAKSHITHA JOSHI

Reg.no.175286028

Department of Studies in Physics

Mangalore University, Mangalagangothri

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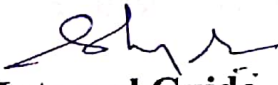
(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199

CERTIFICATE

This is certify that the project entitled "Detection of cracks in railway tracks" has been successfully carried out by Ms.M.RAKSHITHA JOSHI (RegNo.175286028) IV semester M.Sc. Physics, Mangalore University to fulfill the requirement of paper PHP559 during the academic year 2018-19. This dissertation is approved for the award of the degree of Master of Science in Physics by Mangalore University during the academic year 2018-19.


Internal Guide

Chairman

Internal examiner

External examiner

**SYNTHESIS AND CHARACTERIZATIONS OF PVA/MnFe₂O₄
NANOCOMPOSITE FILM FOR GAMMA RADIATION
SHIELDING**

Project Report Submitted to Mangalore University
for the award of the degree of

MASTER OF SCIENCE IN PHYSICS



by

MAIMUNA

(Reg. No. 175286029)

Under the supervision of

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Professor in Physics

Department of Studies in Physics

Mangalore University, Mangalagangothri-574199

Mangalagangothri-574199, Mangalore

May 2019



Dr. Y Narayana

Professor in Physics

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CERTIFICATE

This is to certify that the project entitled "Synthesis and Characterizations of PVA/MnFe₂O₄ nanocomposite film for Gamma radiation shielding" is the work carried out by Ms. MAIMUNA (Reg.no. 175286029) under my guidance and regulation. The candidate is herewith permitted to submit this project to Mangalore University, Mangalagangothri, for the award of Master of Science in Physics.


The information furnished in this project report has not been submitted elsewhere for the award of any Degree, Diploma, Associateship, Fellowship or any other University or Institution.

Mangalagangothri

Date: 6/5/19


(Dr. Y Narayana)

Project Guide



Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite

Project Report Submitted to Mangalore University
For the award of the degree of

Master of Science in Physics



by

NAVYASHREE A P

(Reg.No.: 175286030)

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Mangalore**

May 2019



MANGALORE UNIVERSITY


Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Synthesis and Characterization of Gamma Irradiated PMMA/CoFe₂O₄ Based Polymer Nanocomposite" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. Navyashree A P (Reg no:175286030) a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Physics degree by Mangalore University** during the year 2018-19


Dr. Y Narayana

Project Guide



Dr. K Gopalkrishna Naik

Chairman

Project Report
On paper PHP 559
On
SYNTHESIS OF FLUORINE DOPED AND UNDOPED
TINOXIDE NANOPARTICLES BY
SOL-GEL TECHNIQUE
AND THEIR CHARACTERIZATION



Submitted by

NELSON D'SOUZA

(Reg. no.- 175286031)

Under the supervision of

Dr. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore university, Mangalagangothri

Karnataka, India- 574199

MANGALORE UNIVERSITY



Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of fluorine doped and undoped tin oxide nanoparticles by sol-gel technique and their characterization**" has been successfully carried by, in the fulfilment of the requirements for the paper PHP559 during the academic year 2018-19,
Mr.NELSON D'SOUZA (Reg no.-175286031) a student from fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics Degree by Mangalore university** during the academic year 2018-2019.

K. Anandakrishnan

Internal guide

K. Anandakrishnan

Chairman

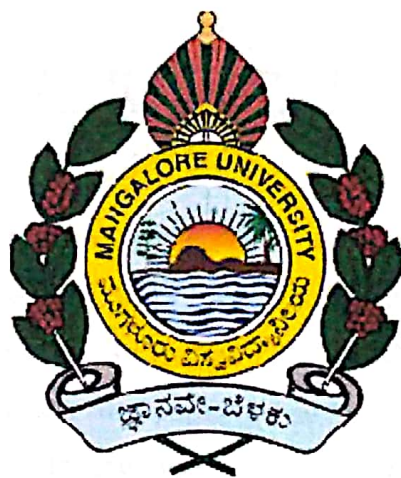
Internal examiner

External examiner

**SYNTHESIS AND CHARACTERIZATIONS OF PVA/MnFe₂O₄
NANOCOMPOSITE FILM FOR GAMMA RADIATION
SHIELDING**

Project Report Submitted to Mangalore University
for the award of the degree of

MASTER OF SCIENCE IN PHYSICS



by

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CERTIFICATE

This is to certify that the project entitled "Synthesis and Characterizations of PVA/MnFe₂O₄ nanocomposite film for Gamma radiation shielding" is the work carried out by Ms. NETHRA (Reg. no. 175286032) under my guidance and regulation. The candidate is herewith permitted to submit this project to Mangalore University, Mangalagangothri, for the award of Master of Science in Physics.

The information furnished in this project report has not been submitted elsewhere for the award of any Degree, Diploma, Associateship, Fellowship or any other University or Institution.

Mangalagangothri

Date: 6/5/19


(Dr. Y Narayana)

Project Guide



**EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITE-
NICKEL FERRITE- POLYMER NANOCOMPOSITE.**

PROJECT REPORT

Submitted to Mangalore University for the degree of Master of Science in Physics.



by

Nikhila P Y

(Reg. No. :175286033)

Under the supervision of

Prof. Y NARAYANA

Department of Studies in Physics

Mangalore University, Mangalagangothri-574199,

Mangalore

May 2019



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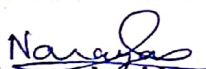
DEPARTMENT OF STUDIES

IN PHYSICS

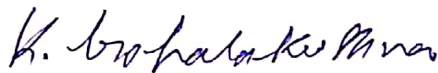
MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "EFFECT OF GAMMA IRRADIATION ON BISMUTH FERRITENICKEL FERRITE- POLYMER NANOCOMPOSITE" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19, Ms. NIHKILA P Y (Reg no:175286033) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of Masters of Physics degree by Mangalore University during the year 2018-19


Internal guide

Dr Y Narayana



Chairman

Dr K Gopalkrishna Naik

Internal examiner

External examiner

MANGALORE UNIVERSITY



(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199



A report on the mini-Project entitled
"SMART IRRIGATION SYSTEM"

Submitted by

Mr. NIRANJAN R. POOJARI

Reg No.175286034

Under the Guidance of

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Department of Studies in Physics

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MANGALORE UNIVERSITY


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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199



This is certify that the project entitled " Smart Irrigation System" has been successfully carried by, in the fulfillment of the requirement for the paper PHP 559 during the academic year 2018-19, submitted by Mr. NIRANJAN R POOJARY, (Reg. No. 175286034) a student of fourth semester M.Sc. in Physics , Mangalore University - 574199. This dissertation is approved for the award of Master of Science in Physics Degree by Mangalore University during the academic year 2018-19.


Internal Guide


Chairman

Internal Examiner

External Examiner

Radiation shielding studies using lead and HDPE

Project Report Submitted to Mangalore University
in partial fulfillment of the requirements for the award of the degree of

Master of Science in Physics



PALLAVI S

(Reg.No. ;175286036)

Department of Studies in Physics

Mangalore University, Mangalagangotri-574199

Mangalore

May 2019



DEPARTMENT OF STUDIES IN PHYSICS

Dr Ganesh Sanjeev

Head, Microtron Centre & Professor

Mangalore University


Mangalagangothri - 574 199

Mangalore, Karnataka, India

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "Radiation shielding studies using lead and HDPE" is the work carried out by **Ms. PALLAVI.S (Reg.No. 175286036)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.

Paper PHP559
Project Report
on
A CAR SPEED DETECTOR



Submitted by
PAVITRA B
(Reg.no.175286037)

Department of Studies in Physics
Mangalore University, Mangalagangothri
Karnataka, India-574199



MANGALORE UNIVERSITY

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is certify^{to} that the project entitled "A Car Speed Detector" has been successfully carried out by, Ms.Pavitra B (Reg.No.175286037) IV semester M.Sc. Physics, Mangalore University to fulfill the requirements for the paper PHP559. This dissertation is approved for the award of degree of Master of Science in Physics by the Mangalore University during the academic year 2018-19.

Internal Guide

Chairman

Internal examiner

External examiner

Project Report on Paper PHP 559

On

**SYNTHESIS OF ZnO AND ZnO:Cd THIN FILMS BY
CHEMICAL SPRAY PYROLYSIS AND
CHARACTERIZATION**



Submitted by

PRAJNA

(Reg. No. 175286039)

Under the supervision of

Dr. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore University

Mangalagangothri

Karnataka, India-574199

MANGALORE



UNIVERSITY

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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of ZnO and ZnO: Cd thin films by chemical spray pyrolysis and characterization**" has been successfully carried as per the requirement of paper PHP 559 of MSc physics course for the academic year 2018-19 of Mangalore university by **Ms. PRAJNA (Reg. No. 175286039)** a student of fourth semester M.Sc in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

Internal Guide

Chairman

**Internal examiner
examiner**

External

Paper PHP559
Project Report
on
A CAR SPEED DETECTOR



Submitted by
PRAJNA KUMARI M R
(Reg.no.175286040)

Department of Studies in Physics
Mangalore University, Mangalagangothri
Karnataka, India-574199



MANGALORE UNIVERSITY

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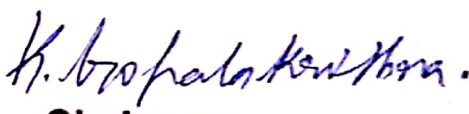
DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is certify that the project entitled "A Car Speed Detector" has been successfully carried out by , Ms.Prajna Kumari M R (Reg.No.175286040) IV semester M.Sc. Physics, MangaloreUniversity to fulfill the requirements for the paper PHP559. This dissertation is approved for the award of degree of Master of Science in Physics by the Mangalore University during the academic year 2018-19.


Internal Guide


Chairman

Internal examiner

External examiner

Project Report

PHP559

**SYNTHESIS AND CHARACTERIZATION OF
IRON DOPED TiO₂ NANOPARTICLES BY
HYDROTHERMAL METHOD**



Submitted by

PRANEETA BAPAT

(Reg. No. 175286041)

Under the supervision of

Prof. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore University, Mangalagangothri

Karnataka, India-574199

MANGALORE UNIVERSITY

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DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis and Characterization of Iron Doped TiO₂ Nanoparticles by Hydrothermal Method**" has been successfully carried out as per the requirement of paper PHP559 of M.Sc. Physics course for the academic year 2018-19 of Mangalore University by **Miss PRANEETA BAPAT (Reg. No. 175286041)** a student of fourth semester M.Sc. in Physics, Mangalore University, Managalagangotri-574199. This project is approved.



Internal Guide



Chairman

Internal Examiner

External Examiner

Preliminary studies on composite shielding material for an accelerator

Project Report Submitted to Mangalore University
in partial fulfillment of the requirements for the award of the degree of

Master of Science in Physics



PRIYANKA

(Reg.No. ;175286042)

**Department of Studies in Physics
Mangalore University, Mangalagangothri-574199
Mangalore
May 2019**



DEPARTMENT OF STUDIES IN PHYSICS

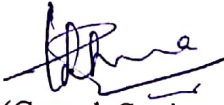
Dr Ganesh Sanjeev
Head, Microtron Centre & Professor

Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "Preliminary studies on composite shielding material for an accelerator" is the work carried out by **Ms. PRIYANKA (Reg.No. 175286042)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.

K. Brahmananda Murthy

EFFECT OF GAMMA RADIATION ON COPPER DOPED ZnO

Project Report Submitted to Mangalore University

in partial fulfillment of the requirements for the award of the degree of

Master of Science in Physics



by

RAJASHREE

Reg. No. : 175286043

Department of Studies in Physics

Mangalore University, Mangalagangothri -574199

Mangalore

May 2019



MICROTRON CENTRE

Department of Studies in Physics
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Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Professor of Physics & Head

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "EFFECT OF GAMMA RADIATION ON COPPER DOPPED ZnO" is the work carried out by **Ms. Rajashree (Reg.no. 175286043)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.

(Ganesh Sanjeev)

Examiners

1.

2.

MANGALORE UNIVERSITY

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A PROJECT REPORT ON

**“SMART ZONE SENSING AND LOCOMOTIVE
TRANSMISSION USING LIGHT FIDELITY”**

Submitted to Mangalore University in partial fulfilment of the

Requirements for the award of the degree of

MASTER OF SCIENCE IN

PHYSICS

Submitted by

RAJITHA K R

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Register No. : 175286044

Project work was carried out at

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MAY-2019

MANGALORE



UNIVERSITY

(Accredited by NAAC with 'A' Grade)

DEPARTMENT OF STUDIES IN PHYSICS

Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled by “**Smart Zone Sensing and Locomotive transmission using Light Fidelity**” has been successfully carried in the fulfilment of the requirement for the paper PHP 559 during the academic year 2018-19, **Ms. Rajitha K R (Reg no:175286044)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Science in Physics degree by Mangalore University** during the year 2018-19.

K.M. Balakrishna
Internal Guide

(Prof K.M. BALAKRISHNA)

K. Gopalakrishna Naik
Chairman

(Prof K. GOPALAKRISHNA NAIK)

Internal Examiner

External Examiner

Paper PHP559
Project Report
on
A CAR SPEED DETECTOR



Submitted by
RASHMI P S
(Reg.no.175286045)

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Mangalore University, Mangalagangothri
Karnataka, India-574199


MANGALORE UNIVERSITY

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is certify that the project entitled "A Car Speed Detector" has been successfully carried out by , **Ms.Rashmi P S (Reg.No.175286045)** IV semester M.Sc. Physics, MangaloreUniversity to fulfill the requirements for the paper PHP559. This dissertation is approved for the award of degree of Master of Science in Physics by the Mangalore University during the academic year 2018-19.


Internal Guide

Chairman

Internal examiner

External examiner

EFFECT OF GAMMA IRRADIATION ON GREEN SYNTHESIZED SILVER NANOPARTICLES

Project Report Submitted to Mangalore University in partial fulfilment of the
requirements for the award of the degree of

Master of Science in Physics



By

REKHA K

(Reg. No.: 175286046)

Department of studies in Physics

Mangalore University, Mangalagangotri, Mangalore,

May 2019



DEPARTMENT OF STUDIES IN PHYSICS


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Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Head, Microtron Centre & Professor

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "EFFECT OF GAMMA IRRADIATION ON GREEN SYNTHESIZED SILVER NANOPARTICLES" is the work carried out by **Ms. REKHA K (Reg. No. 175286046)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.

MANGALORE UNIVERSITY

Accredited by NAAC with 'A' grade



A PROJECT REPORT ON

**“SMART ZONE SENSING AND LOCOMOTIVE
TRANSMISSION USING LIGHT FIDELITY”**

Submitted to Mangalore University in partial fulfilment of the

Requirements for the award of the degree of

MASTER OF SCIENCE

IN

PHYSICS

Submitted by

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M.Sc PHYSICS

Register No. : 175286047

Project work was carried out at

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MAY-2019

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(Accredited by NAAC with 'A' Grade)

DEPARTMENT OF STUDIES IN PHYSICS

Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled by **“Smart Zone Sensing and Locomotive transmission using Light Fidelity”** has been successfully carried in the fulfilment of the requirement for the paper PHP 559 during the academic year 2018-19, **Ms. Rishma R Rai (Reg no:175286047)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri. This dissertation is approved for the award of **Masters of Science in Physics degree by Mangalore University** during the year 2018-19.

K.M. Balakrishna
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Chairman

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External Examiner

Project Report

PHP559

**SYNTHESIS AND CHARACTERIZATION OF
IRON DOPED TiO₂ NANOPARTICLES BY
HYDROTHERMAL METHOD**



Submitted by

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(Reg. No. 175286048)

Under the supervision of

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(Accredited by NAAC with "A" Grade)

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MANGALAGANGOTRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis and Characterization of Iron Doped TiO₂ Nanoparticles by Hydrothermal Method**" has been successfully carried out as per the requirement of paper PHP559 of M.Sc. Physics course for the academic year 2018-19 of Mangalore University by **Miss ROOPASHREE D (Reg. No. 175286048)** a student of fourth semester M.Sc. in Physics, Mangalore University, Managalagangotri-574199. This project is approved.



Internal Guide



Chairman

Internal Examiner

External Examiner

Project Report
On Paper PHP 559
On
SYNTHESIS OF CADMIUM SULFIDE NANOPARTICLES
BY CHEMICAL PRECIPITATION METHOD AND
CHARACTERIZATION



Submitted by
SHARON KURIAKOSE
(Reg. No. – 175286049)
Under the supervision of
Dr.GOPALAKRISHNA NAIK K
Department of Studies in Physics
Mangalore University, Mangalagangothri
Mangalore, Karnataka, India - 574199



(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled **"Synthesis of Cadmium Sulfide Nanoparticle by Chemical Precipitation Method and characterization"** has been successfully carried as per the requirements for the paper PHP559 of M.Sc physics course for the academic year 2018-19 of Mangalore University by **Ms.SHARON KURIAKOSE (Reg. No.175286049)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

K. Bopala Krishna
Internal Guide

K. Bopala Krishna
Chairman

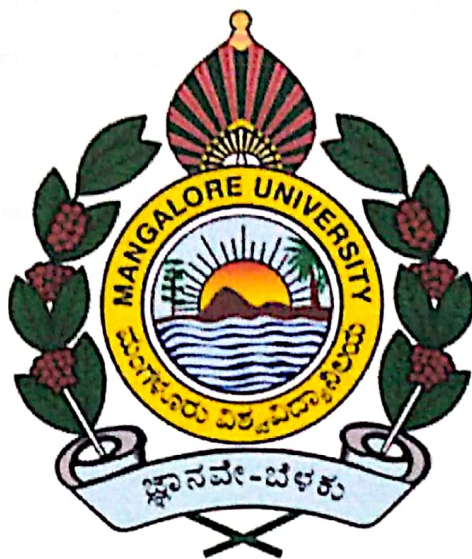
Internal examiner

External examiner

Project Report on Paper PHP 559

On

SYNTHESIS OF ZnO AND ZnO: Cd THIN FILMS BY CHEMICAL SPRAY PYROLYSIS AND CHARACTERIZATION



Submitted by
SHEETHAL KM
(Reg. No. 175286050)

Under the supervision of
Dr. K. GOPALAKRISHNA NAIK
Department of Studies in Physics
Mangalore University
Mangalagangothri
Karnataka, India-574199.



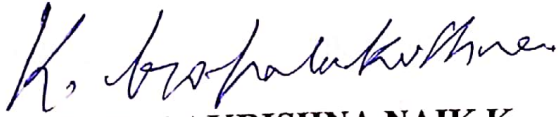
(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that **Ms. SHEETHAL KM** has worked under my supervision for her Master's project entitled "**Synthesis of ZnO thin films and Cd:ZnO thin films by Spray pyrolysis and characterization**" for the fulfilment of the requirement of paper PHP 559 of MSc physics course during the academic year 2018-19.



Prof. GOPALAKRISHNA NAIK K

Project Guide,

Department of Studies in Physics,

Mangalore University

Mangalagangothri-574199.

Project Report
On paper PHP 559
On
SYNTHESIS OF FLUORINE DOPED AND UNDOPED
TINOXIDE NANOPARTICLES BY
SOL-GEL TECHNIQUE
AND THEIR CHARACTERIZATION



Submitted by

SHEETHALA

(Reg. no.- 175286051)

Under the supervision of

Dr. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore university, Mangalagangothri

Karnataka, India- 574199



MANGALORE UNIVERSITY

Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "Synthesis of fluorine doped and undoped tin oxide nanoparticles by sol-gel technique and their characterization" has been successfully carried by, in the fulfilment of the requirements for the paper PHP559 during the academic year 2018-19,

Ms. SHEETHALA (Reg no.-175286051) a student from fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics Degree by Mangalore university** during the academic year 2018-2019.

Internal guide

Chairman

Internal examiner

External examiner

**RADIATION MAPPING INSIDE MICROTRON ROOM
USING FRICKE DOSIMETER**

Project Report Submitted to Mangalore University in partial fulfillment of the
requirements for the award of the degree of
Master of Science in Physics



By

SHILPA C K

(Reg. No. : 175286052)

**Department of Studies in Physics
Mangalore University, Mangalagangotri-574199
Mangalore,
May 2019**



DEPARTMENT OF STUDIES IN PHYSICS


Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Head, Microtron Centre & Professor

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "RADIATION MAPPING INSIDE MICROTRON ROOM USING FRICKE DOSIMETER" is the work carried out by **Ms. SHILPA C K (Reg.No. 175286052)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.

GAMMA RADIATION INDUCED CHANGES IN SILVER NANOPARTICLE PROPERTIES

Project Report Submitted to Mangalore University in partial fulfilment of the
requirements for the award of the degree of

Master of Science in Physics



By

SHILPA R

(Reg. No.: 175286053)

Department of studies in Physics

Mangalore University, Mangalagangotri, Mangalore,

May 2019



DEPARTMENT OF STUDIES IN PHYSICS


Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Head, Microtron Centre & Professor

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "GAMMA RADIATION INDUCED CHANGES IN SILVER NANOPARTICLE PROPERTIES" is the work carried out by **Ms. SHILPA R (Reg. No. 175286053)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.



(Ganesh Sanjeev)

Examiners

1.

2.

A Numerical Study of the Properties of Harmonic and Anharmonic Quantum Oscillators

A Dissertation submitted to Mangalore University for the completion of
Master of Science in Physics.



Submitted by

Shreevathsa C S
(Reg.No.: 175286054)

Under the guidance of

Prof. K B Vijaya Kumar
Professor
Department of Physics
Mangalore University
Mangalagangothri - 574 199
Mangalore, India.

May 2019

Mangalore University
Department of Studies in Physics

Mangalagangothri - 574 199



CERTIFICATE

This is to certify that the project work entitled "A Numerical Study of the Properties of Harmonic and Anharmonic Quantum Oscillators" is successfully carried out by Mr. Shreevathsa C S (Reg.No.:175286054) under the guidance of Prof. K B Vijaya Kumar, Department of Studies in Physics, Mangalore University. This dissertation is approved for the partial fulfillment of Master of Science (Physics) degree by Mangalore University during the academic year 2018-19.

Chairman

Prof. K Gopalakrishna Naik

Project Guide

Prof. K B Vijaya Kumar

External Examiner

Internal Examiner

Submitted for the viva-voce examination held on

Project Report

PHP559

**SYNTHESIS AND CHARACTERIZATION OF
IRON DOPED TiO₂ NANOPARTICLES BY
HYDROTHERMAL METHOD**



Submitted by

SHUBHANGI NARVEKAR

(Reg. No.-175286055)

Under the supervision of

Prof. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore University, Mangalagangotri

Karnataka, India-574199

MANGALORE UNIVERSITY

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis and Characterization of Iron Doped TiO₂ Nanoparticles by Hydrothermal Method**" has been successfully carried out as per the requirement of paper PHP559 of M.Sc. Physics course for the academic year 2018-19 of Mangalore University by **Miss SHUBHANGI NARVEKAR (Reg. No. 175286055)** a student of fourth semester M.Sc. in Physics, Mangalore University, Managalagangotri-574199. This project is approved.



Internal Guide



Chairman

Internal Examiner

External Examiner

INFLUENCE OF GAMMA RADIATION ON THE PROPERTIES OF HPMC-PVA BLEND

Project Report Submitted to Mangalore University

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

of

Master of Science in Physics



by

SHWETHA K

(Reg.No. : 175286056)

Department of studies in Physics

Mangalore University, Mangalagangothri-574199

Mangalore, Karnataka, India

May 2019



DEPARTMENT OF STUDIES IN PHYSICS


Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr GaneshSanjeev
Head, Microtron Centre & Professor

May 08, 2019

CERTIFICATE

This is to certify that the project entitled “**INFLUENCE OF GAMMA RADIATION ON THE PROPERTIES OF HPMC-PVA BLEND**” is the work carried out by **Ms. SHWETHA K (Reg.No. 175286056)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.



(Ganesh Sanjeev)

Examiners

1.

2.

Project Report
On paper PHP 559
On
**SYNTHESIS OF FLUORINE DOPED AND UNDOPED
TINOXIDE NANOPARTICLES BY
SOL-GEL TECHNIQUE
AND THEIR CHARACTERIZATION**



Submitted by

SHWETHA V

(Reg. no.- 175286057)

Under the supervision of

Dr. K. GOPALAKRISHNA NAIK

Department of Studies in Physics

Mangalore university, Mangalagangothri

Karnataka, India- 574199


MANGALORE UNIVERSITY

Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES

IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of fluorine doped and undoped tin oxide nanoparticles by sol-gel technique and their characterization**" has been successfully carried by, in the fulfilment of the requirements for the paper PHP559 during the academic year 2018-19,

Ms. SHWETHA V (Reg no.-175286057) a student from fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This dissertation is approved for the award of **Master of Science in Physics Degree** by Mangalore university during the academic year 2018-2019.



Internal guide



Chairman

Internal examiner

External examiner

**FRICKE DOSIMETRY BASED ANGULAR DOSE
DISTRIBUTION
INSIDE MICROTRON ROOM**

Project Report Submitted to Mangalore University in partial fulfillment of the
requirements for the award of the degree of
Master of Science in Physics



By

SITHARA C

(Reg. No. : 175286058)

**Department of Studies in Physics
Mangalore University, Mangalagangothri-574199
Mangalore,
May 2019**



DEPARTMENT OF STUDIES IN PHYSICS

Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Head, Microtron Centre & Professor

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "Fricke Dosimetry Based Angular Dose Distribution inside Microtron Room" is the work carried out by **Ms. SITHARA C (Reg .No. 175286058)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

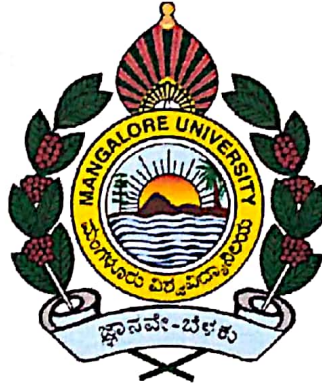
Examiners

1.

2.



Project Report
On Paper PHP 559
On
SYNTHESIS OF CADMIUM SULFIDE NANOPARTICLES
BY CHEMICAL PRECIPITATION METHOD AND
CHARACTERIZATION



Submitted by

SOWMYA

(Reg. No. – 175286059)

Under the supervision of

Dr.GOPALAKRISHNA NAIK K

Department of Studies in Physics

Mangalore University, Mangalagangothri

Mangalore, Karnataka, India - 574199



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(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of Cadmium Sulfide Nanoparticle by Chemical Precipitation Method and characterization**" has been successfully carried as per the requirements for the paper PHP559 of M.Sc physics course for the academic year 2018-19 of Mangalore University by **Ms. SOWMYA (Reg. No.175286059)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.

K. Prof. K. K. K. K.

Internal Guide

K. Prof. K. K. K. K.

Chairman

Internal examiner

External examiner

GAMMA RADIATION EFFECTS ON HPMC-PVA BLEND

Project Report Submitted to Mangalore University

In partial fulfilment of the requirement for the award of the degree
of
Master of Science in Physics



by

SUMITHRA B

(Reg.No. : 175286060)

**Department of studies in Physics
Mangalore University, Mangalagangothri-574199
Mangalore, Karnataka, India**

May 2019



DEPARTMENT OF STUDIES IN PHYSICS

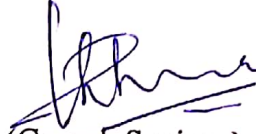
Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr GaneshSanjeev
Head, Microtron Centre & Professor

May 08, 2019

CERTIFICATE

This is to certify that the project entitled “**GAMMA RADIATION EFFECTS ON HPMC-PVA BLEND**” is the work carried out by **Ms. SUMITHRA B (Reg.No. 175286060)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.



Project Report

On Paper PHP 559

**Synthesis of Bismuth oxybromide
Nanosheets by Motor Pestle Method
and Characterization**



**Submitted by:
SUNITHA
(Reg no:175286061)**

Under the supervision of

DR. K B VIJAYAKUMAR

**Department of Studies in Physics
Mangalore University, Mangalagangothri
Karnataka, India-574199**

MANGALORE  UNIVERSITY

Accredited by NAAC with "A" Grade

DEPARTMENT OF STUDIES

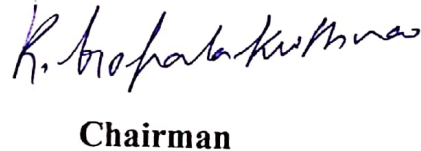
IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled by "Synthesis of Bismuth oxybromide nanosheets by Motor Pestle method and characterization" has been successfully carried in the fulfilment of the requirement for the paper PHH 559 during the academic year 2018-19 by Miss. SUNITHA (Reg no:175286061) a student of forth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.


Internal guide


Chairman

Internal examiner

External examiner

MANGALORE UNIVERSITY

(Accredited by NAAC with 'A' Grade)



A PROJECT REPORT ON "DIGITAL THERMOMETER"

Submitted to Mangalore University in partial fulfillment of
the requirements for the award of the degree of

MASTER OF SCIENCE IN PHYSICS

Submitted by

SURAJ KUMAR S

M.Sc. PHYSICS

Register Number - 175286062

Project work carried out at
Department of Studies in Physics
Mangalore University
Mangalagangothri - 574199

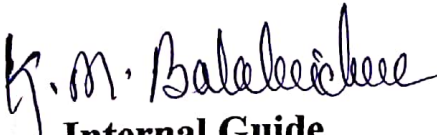
May 2019


DEPARTMENT OF STUDIES IN PHYSICS
Mangalagangothri – 574 199

CERTIFICATE

This is to certify that the project entitled “**Digital Thermometer**” has been successfully carried by, in the fulfillment of the requirements for the paper PHP559 during the academic year 2018-19, **Mr. SURAJ KUMAR S (Reg.No. 175286062)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199.

This dissertation is approved for the award of **Master of Science in Physics degree by Mangalore University** during the academic year 2018-19.


Internal Guide
(Prof. K. M. BALAKRISHNA)


Chairman
(Prof. K. GOPALAKRISHNA NAIK)

Internal Examiner

External Examiner

Project Report
On Paper PHP 559
On
SYNTHESIS OF CADMIUM SULFIDE NANOPARTICLES
BY CHEMICAL PRECIPITATION METHOD AND
CHARACTERIZATION



Submitted by
SWATHI D NAIR
(Reg. No. – 175286063)
Under the supervision of
Dr.GOPALAKRISHNA NAIK K
Department of Studies in Physics
Mangalore University, Mangalagangothri
Mangalore, Karnataka, India - 574199

MANGALORE  **UNIVERSITY**

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

CERTIFICATE

This is to certify that the project entitled "**Synthesis of Cadmium Sulfide Nanoparticle by Chemical Precipitation Method and characterization**" has been successfully carried as per the requirements for the paper PHP559 of M.Sc physics course for the academic year 2018-19 of Mangalore University by **Ms.SWATHI D NAIR (Reg. No.175286063)** a student of fourth semester M.Sc. in Physics, Mangalore University, Mangalagangothri-574199. This project is approved.



Internal Guide



Chairman

Internal examiner

External examiner

MANGALORE UNIVERSITY



(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTRI-574199



A report on the mini -Project entitled
"SMART IRRIGATION SYSTEM"

Submitted by

SWATHI K

Reg No.175286064

Under the Guidance of

Prof. K M Balakrishna

Department of Studies in Physics

Mangalore University, Mangalagangothri

Karnataka , India -574199

MANGALORE UNIVERSITY

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTHRI-574199

Certificate

This is certify that the project entitled " Smart Irrigation System" has been successfully carried by, in the fulfillment of the requirement for the paper PHP 559 during the academic year 2018-19, submitted by Mis. SWATHI K, (Reg. No. 175286064) a student of fourth semester M.Sc. in Physics , Mangalore University -574199. This dissertation is approved for the award of Master of Science in Physics Degree by Mangalore University during the academic year 2018-19.

K. M. Balakrishna

Internal Guide

K. Gopalakrishna

Chairman

Internal Examiner

External Examiner

Paper PHP559
Project Report
on
A CAR SPEED DETECTOR



Submitted by
VASUDHA G R
(Reg.no.175286065)

Department of Studies in Physics
Mangalore University, Mangalagangothri
Karnataka, India-574199


MANGALORE UNIVERSITY

(Accredited by NAAC with "A" Grade)

DEPARTMENT OF STUDIES IN PHYSICS

MANGALAGANGOTTHRI-574199

CERTIFICATE

This is certify that the project entitled " A Car Speed Detector" has been successfully carried out by , Ms.Vasudha G R(Reg.No.175286065) IV semester M.Sc. Physics, MangaloreUniversity to fulfill the requirements for the paper PHP559. This dissertation is approved for the award of degree of Master of Science in Physics by the Mangalore University during the academic year 2018-19.


Internal Guide

Chairman

Internal examiner

External examiner

**RADIATION INDUCED CHANGES IN THE PROPERTIES OF
COPPER DOPPED ZnO**

Project Report Submitted to Mangalore University

in partial fulfillment of the requirements for the award of the degree of

Master of Science in Physics



by

VIJAYASHREE N

Reg. No. : 175286066

Department of Studies in Physics

Mangalore University, Mangalagangothri -574199

Mangalore

May 2019



MICROTRON CENTRE

Department of Studies in Physics
Mangalore University
Mangalagangothri - 574 199
Mangalore, Karnataka, India

Dr Ganesh Sanjeev
Professor of Physics & Head

May 06, 2019

CERTIFICATE

This is to certify that the project entitled "RADIATION INDUCED CHANGES IN THE PROPERTIES OF COPPER DOPPED ZnO" is the work carried out by **Ms. Vijayashree N (Reg.no. 175286066)** under my supervision. The information furnished in this project report has not been submitted for the award of any Degree / Diploma in any University / Institution.


(Ganesh Sanjeev)

Examiners

1.

2.