STRUCTURD ANALYSIS OF ZnO NANOPARTICLES PREPARED FROM HIBISCUS ROSA SINENSIS LEAVES EXTRACTS

A project report submitted in partial fulfillment of the requirement for The award of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted By

P.NANDHINI

C21PG121PHY001

21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil, Ph.D.,

Head & Assistant Professor

Department of physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS
GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN
(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

STRUCTURAL AND MORPHOLOGY ANALYSIS OF ZINC OXIDE

NANOPARTICLES USING AZADIRACHTA INDICA (NEEM) LEAF EXTRACT

PREPARED BY GREEN SYNTHESIS ROUTE.

A project report submitted in partial fulfillment of requirement for the award of the degree of

MASTER OF SCIENCE in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

M.AISHWARYA

REG NO: C21PG121PHY002

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K .KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

MORPHOLOGICAL ANALYSIS (FESEM) OF ZINC OXIDE NANOPARTICLES PREPARED FROM GREEN SYNTHESIS METHOD USING TULES (OCIMUM TENUIFLORUM) LEAF EXTRACT.

A project report submitted in partial fulfillment of the requirements for the award

Of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

T. ARCHANA

21PPHPR1

C21PG121PHY003

Under the guidance of

Dr.K.KANNAKI, M.Sc., M.Phil., Ph.D.,

HEAD & ASSISTANT PROFESSOR

DEPARTMENT OF PHYSICS



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN
(AFFILIATED TO PERIYAR UNIVERSITY) BARGUR

SYTNHESIS AND CHARACTERIZATION OF ZINC OXIDE

NANOPARTICLES BY ACALYPHA INDICA LEAVES EXTRACT

THROUGH GREEN METHOD

A project report submitted in partial fulfilment of the requirement for the award of the degree of

Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

V.ARCHANA

REG NO: C21PG121PHY004

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor of Physics.

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFICIATED TO PERIYAR UNIVERSITY)

BARUR-635 104

SYNTHESIS OF ZINC OXIDE NANOPARTICLE FROM HIBISCUS ROSA-SINENSIS LEAF EXTRACT AND THEIR CHARACTERIZATION

A project report submitted in partial fulfilment of requirement for the

Award of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

P. BAVATARANI

C21PG121PHY005

21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor

Department of physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN BARGUR-635104

GREEN SYNTHESIS AND CHARACTERATION OF ZnO NANOPARTICLES FROM LEAF EXTRACT OF AZADIRACHTA INDICA (NEEM).

A project report submitted in partial fulfillment of requirement for the award of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

G.GOPIKA

C21PG121PHY008

21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

MORPHOLOGICAL ANANYSIS OF ZnO NANOPARTICLES SYNTHESIED FROM HIBISCUS LEAF EXTRACT

A project report submitted in partial fulfillment of the requirement for the award of the degree of Master of Science in PHYSIC

To

PERIYAR UNIVERSITY

Submitted By

C.HINDHU

C21PG121PHY009

21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOME (AFFILIATED TO PERIYAR UNIVERSITY) BARGUR-63510

FABRICATION OF ZINC OXIDE NANOPARTICLES BY

USING POMEGRANATE LEAVES (PUNICA GRANATUM) EXTRACT

A project report submitted in partial fulfilment of requirement for the award of the degree of

Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

K. JEEVITHA

REG NO: C21PG121PHY011

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Barugur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TOPERIYAR UNIVERSITY)

BARGUR-635104

SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES BY HYBISCUS LEAVES EXTRACT THROUGH GREEN METHOD

A project report submitted in partial fulfilment of requirement for the

Award of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

S.KARTHIKA

REG NO: C21PG121PHY013

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor

Department of physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

BARGUR-635104

MORPHOLÓGICAL ANALYSIS OF ZINC OXIDE NANOPARTICLES BY USING PUNICA GRANATUM LEAF EXTRACT PREPARED FROM GREEN METHOD

A project report submitted in partial fulfilment of requirement for the award of the degree of

Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted by

Kulsum Fathima K.T.

REG NO: C21PG121PHY014

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K. KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Barugur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

SYNTHESIS AND CHARACTERIZATION (FESEM, XRD, FTIR) OF ZINC OXIDE NANOPARTICLES FROM CHEMICAL PRECIPITATION METHOD

A project report submitted in partial fulfilment of the requirements for the award of

Of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

SUBMITTED BY

NAME: G.NIVETHA

REG NO: C21PG121PHY017

PAPER CODE: 21PPHPR1

UNDER THE GUIDENCE OF

Dr. K. KANNAKI, M.SC., M.PHIL., PH.D.,

HEAD & ASSISTANT PROFESSOR

DEPARTMENT OF PHYSICS



GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

BARGUR-635104

"SYNTHESIS OF ZINC OXIDE NANOPARTICLES USING AZADIRACHTA INDICA LEAVES EXTRACT AND ITS CHARACTERIZATION"

A project report submitted in partial fulfilment of requirement for the award of the degree of Master of Science in **PHYSICS**

To

PERIYAR UNIVERSITY

Submitted by

K.NIVETHA

REG NO: C21PG121PHY018

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K. KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor



Department of Physics

Government Arts and Science College for Women

Barugur-635104

DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TOPERIYAR UNIVERSITY)

BARGUR- 635104

FESM, XRD And FT-IR Analysis Of ZnO Nanoparticles Prepared From Green Route Using Azadirachta Indica (Neem) Leaf Extract

A project report submitted in partial fulfillment of the requirement for the award of the degree of Master of Science in **PHYSICS**

To

PERIYAR UNIVERSITY

Submitted By

S.PAVITHRA

REG.NO: C21PG121PHY019

PAPER CODE: 21PPHR01

Under the guidance of

Dr. K.KANNAKI, M.Sc., M. Phil, Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women's

Bargur - 635 104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN'S

(AFFILIATED TO PERIYAR UNIVERSITY)
BARGUR-635 104
APRIL-2023

FUNCTIONAL GROUP ANALYSIS OF ZnO NANOPARTICLES FABRICATED FROM GREEN METHOD USING TULSI (OCIMUM TENUIFLORUM) LEAF EXTRACT

A project report submitted in partial fulfilment of the requirements for the award of

Of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

SUBMITTED BY

NAME: B.POOVARASI

REG NO: C21PG121PHY020

PAPER CODE: 21PPHPR1

UNDER THE GUIDENCE OF

Dr. K. KANNAKI, M.SC., M.PHIL., PH.D.,

HEAD & ASSISTANT PROFESSOR

DEPARTMENT OF PHYSICS



GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

BARGUR-635104

MORPHOLOGICAL ANALYSIS OF ZnO NANOPARTICLES USING ACALYPHA INDICA LEAF EXTRACT

A project report submitted in partial fulfillment of the requirement for the award
Of the degree of Master of Science in PHYSICS

To

PERIYAR UNIVERSITY

Submitted By

R. SANGAVI C21PG121PHY021 21PPHPR1

Under the guidance of

Dr. K. KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women Bargur-635104



DEPARTMENT OF PHYSICS GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN (AFFILIATED TO PERIYAR UNIVERSITY) BARGUR-635104

STRUCTURAL ANALYSIS (FTIR) OF ZnO NANOPARTICLES SYNTHESIZED FROM GREEN METHOD USING TULASI (OCIMUM TENUIFLORUM) LEAVES EXTRACT

Submitted to the

PERIYAR UNIVERSITY

In partial fulfillment for the award of the degree

MASTER OF SCIENCE IN PHYSICS

Submitted by

Name: A. SARANYA

Reg.no: C21PG121PHY022

Paper code: 21PPHPR1

Under the guidance of

Dr. K. KANNAKI, M.Sc., M.Phil., P.hd

Head & Assistant professor

DEPARTMENT OF PHYSICS



Government Arts and Science College for women (Bargur)

Affiliated to Periyar University

Bargur

PREPARATION OF ZINC OXIDE NANOPARTICLES USING OF ACALYPHA INDICA PLANT LEAF EXTRACT AND THEIR STRUCTURAL ANALYSIS

A Project Report Submitted in Partial Fulfilment of the requirement for the award of the

Degree of Master Science in Physics

TO

PERIYAR UNIVERSITY

SUBMITTED BY

P. SUBALAKSHMI

C21PG121PHY025

21PPHPR1

UNDER THE GUIDANCE OF

Dr. K. KANNAKI M.Sc., M.Phil., Ph.D.,

Department Head &Assistant professor

Department of Physics

Government Arts and Science College for Women, Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN (AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR -635104.

STRUCTURAL STUDIES ON ZINC OXIDE NANOPARTICLES

SYNTHESIZED BY ACALYPHA INDICA LEAF EXTRACT

A project report submitted in partial fulfillment of the requirement for the

Award of the degree of Master of in Science PHYSICS

To

PERIYAR UNIVERSITY

Submitted By

B.SUMITHRA

C21PG121PHY027

21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor of Physics

Government Arts and Science College for Women

Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN
(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

STRUCTURAL ANALYSIS OF ZINC OXIDE NANOPARTICLES USISNG PUNICA GRANATUM (POME GRANATE) LEAF EXTRACT PREPARAED BY GREEN SYNTHESIS METHOD

A project report submitted in partial fulfilment of requirement for the award of the degree of Master of Science in **PHYSICS**

To

PERIYAR UNIVERSITY

Submitted by

S.THULASI

REG NO: C21PG121PHY028

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Barugur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TOPERIYAR UNIVERSITY)

BARGUR-635104

FUNCTIONAL GROUP ANALYISIS AND CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES BY USING PUNICA GRANATUM LEAF EXTRACT MEDIATED GREEN SYNTHESIS METHOD

A project report submitted in partial fulfillment of the requirement for the award of the degree of Master of Science in **PHYSICS**

To

PERIYAR UNIVERSITY

Submitted by

P.VAIDEKI

REG NO: C21PG121PHY029

PAPER CODE: 21PPHPR1

Under the guidance of

Dr. K.KANNAKI, M.Sc., M. Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women

Barugur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104

FABRICATION OF ZnO NANOPARTICLES USING GREEN EXTRACT OF ACALYPHA INDICA: FE-SEM, FT-IR AND XRD CHARACTERIZATION

A project report submitted in partial fulfilment of the requirement for the award

of the degree of Master of Science in PHYSICS

TO

PERIYAR UNIVERSITY

Submitted By

S. VIJI

C21PG121PHY030

21PPHPR1

Under the guidance of

Dr. K. KANNAKI, M.Sc., M.Phil., Ph.D.,

Head & Assistant Professor

Department of Physics

Government Arts and Science College for Women Bargur-635104



DEPARTMENT OF PHYSICS

GOVERNMENT ARTS AND SCIENCE COLLEGE FOR WOMEN

(AFFILIATED TO PERIYAR UNIVERSITY)

BARGUR-635104