

SYNTHESIS AND BIOLOGICAL EFFECTS OF CARBON SOAP FROM GUM ARABIC

PROJECT REPORT

Submitted to D.G.Vaishnav College (Autonomous) Chennai

Affiliated to University of Madras

In partial fulfilment of the award of degree of chemistry

MASTER OF SCIENCE

IN CHEMISTRY

BY

YUVASHREE H (Reg no: 2213092049126)

UNDER THE GUIDANCE OF AND SUPERVISION OF

Dr. R. MYTHILY, M.Sc., M.Phil., Ph.D.

ASSISTANT PROFESSOR



POSTGRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV

COLLEGE(AUTONOMOUS)

March – 2024

Heliconia psittacorum- A PHYTOCHEMICAL
INVESTIGATION.

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous)

affiliated to the

UNIVERSITY OF MADRAS

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

IN

CHEMISTRY

BY

HARIPRIYA. S (Reg No. 2213092049115)

SILVIYA DORATHI. P (Reg No. 2213092049125)

Under the supervision of

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PG & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(Autonomous)

CHENNAI - 600 106

March - 2024

**ANALYZING INDUCED EMISSION: AGGREGATION INDUCED EMISSION
STUDIES OF DIPYRIDOPHENAZENE BIS (1,10-PHENANTHROLINE)
RUTHENIUM(II) PHOSPHORUS HEXAFLUORIDE COMPLEX IN BINARY SOLVENT
MIXTURE**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous) A++

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in partial fulfillment of the requirements for the degree of

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IN

CHEMISTRY

BY

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CHENNAI-600106

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**SPECTROSCOPIC INVESTIGATION AND MOLECULAR DOCKING STUDIES OF
AZO-ESTER DYE WITH OVALBUMIN- A PHOTOPHYSICAL STUDY**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous) A++

Affiliated to the

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MASTER OF SCIENCE

IN

CHEMISTRY

BY

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P.G. & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (AUTONOMOUS)

CHENNAI-600106

MARCH-2024

**PHOTOPHYSICAL AND ELECTROCHEMICAL
STUDIES OF DICYANO METHYLENE-4H-PYRAN
DERIVATIVE IN THE PRESENCE OF STRONG AND
WEAK ACIDS**

PROJECT REPORT

Submitted to

Dwaraka Doss Goverdhan Doss Vaishnav College (Autonomous),

Arumbakkam, Chennai- 600106.

Affiliated to University of Madras

In partial fulfillment of the award of the degree of

**MASTER OF SCIENCE IN
CHEMISTRY**

By

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE(AUTONOMOUS)
ARUMBAKKAM CHENNAI-600106**

MARCH - 2024

**“PHOTOPHYSICAL STUDIES OF HUMAN SERUM
ALBUMIN WITH SINAPIC ACID IN PRESENCE OF
HYDROGEN BONDING SOLUTES”**

PROJECT REPORT

Submitted to

**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
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affiliated to the

UNIVERSITY OF MADRAS

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

IN

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BY

ASHWINI. S 2213092049114

NERANJANA VARRSHA. M 2213092049120

Under the supervision of

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**PG & RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous)
CHENNAI - 600 106
March - 2024**

“STUDY ON THE CATALYTIC EFFICIENCY OF REDUCED GRAPHENE OXIDE SUPPORTED Mn/Co FOR THE SELECTIVE OXIDATION OF ETHYL LACTATE TO ETHYL PYRUVATE & PHOTOCATALYSIS OF 4 - CHLOROPHENOL”

PROJECT REPORT

Submitted to

**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(AUTONOMOUS)**

Re-accredited with A++ Grade by NAAC (3rd Cycle)

College with Potential for Excellence

Affiliated to UNIVERSITY OF MADRAS

In partial fulfillment of the award of the degree of

MASTER OF SCIENCE

IN

CHEMISTRY

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous), ARUMBAKKAM, CHENNAI – 600106.**

MARCH -2024

**ABSORPTION SPECTROSCOPY STUDIES FOR THE
DETECTION OF 4-CHLORO PHENOL AND CTAB USING
FLOWER (BUTTERFLY PEA) EXTRACT**

Submitted to

Dwaraka Doss Goverdhan Doss Vaishnav College (Autonomous), Chennai-106

Affiliated to University of Madras

In partial fulfilment of the award of degree of

MASTER OF SCIENCE

IN

CHEMISTRY

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POST GRADUATE & RESARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

CHENNAI – 600 106

MARCH 2024

**CONTINUOUS PROCESSING OF JP-10 PRODUCTION:
HYDROISOMERIZATION OF ENDO-
TETRAHYDRODICYCLOPENTADIENE TO EXO-
TETRAHYDRODICYCLOPENTADIENE USING A NOVEL
BIMETAL CATALYST OF Ba/Se SUPPORTED ON TiO₂/SO₄**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(AUTONOMOUS)

Re-accredited with A⁺⁺ Grade by NAAC (3rd cycle)

Affiliated to UNIVERSITY OF MADRAS

In partial fulfilment of the award of the degree of

MASTER OF SCIENCE

IN

CHEMISTRY

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POST GRADUATE & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

CHENNAI – 600 106

March-2024.

**EFFECTIVE PRODUCTION OF OXYGEN AND
HYDROGEN WITH A TRIMETALLIC CATALYST
SUPPORTED BY TiO₂**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous)

affiliated to the

UNIVERSITY OF MADRAS

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

IN

CHEMISTRY

BY

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PG & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(Autonomous)

CHENNAI - 600 106

March - 2024

***Heliconia psittacorum- A PHYTOCHEMICAL
INVESTIGATION.***

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous)

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

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CHENNAI - 600 106

March - 2024

**“PHOTOPHYSICAL STUDIES OF HUMAN SERUM
ALBUMIN WITH SINAPIC ACID IN PRESENCE OF
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PROJECT REPORT

Submitted to

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**PG & RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous)
CHENNAI - 600 106
March - 2024**

**SYNTHESIS, CHARACTERISATION AND
PHOTOCATALYTIC DYE (RHODAMINE-B) DEGRADATION
STUDIES OF $M_3(BTC)_2$ (M=Cu, Co & Ni) MOFs**

A Project Report Submitted for the Degree of

MASTER OF SCIENCE

Submitted by

Anushree Raju

Project supervisor

Mrs. Kavitha K



**POST GRADUATE & RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
CHENNAI 600106**

May 2024

**SPECTROSCOPIC INVESTIGATION AND MOLECULAR DOCKING STUDIES OF
AZO-ESTER DYE WITH OVALBUMIN- A PHOTOPHYSICAL STUDY**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous) A++

Affiliated to the

UNIVERSITY OF MADRAS

in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE

IN

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BY

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (AUTONOMOUS)

CHENNAI-600106

MARCH-2024

**A SUPERHYDROPHOBIC GELATOR BASED ON POLY
(ARYL ETHER) DENDRON CORED WITH
BENZOTHIADIAZOLE (BTDA)**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (AUTONOMOUS)

affiliated to the

UNIVERSITY OF MADRAS

in partial fulfilment for the award of degree of

MASTER OF SCIENCE

IN CHEMISTRY

BY

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SRIRAM.S (REGNO: 2213092049111)

UNDER THE GUIDANCE OF

Dr. N. Vidhya Lakshmi, M.Sc., CSIR NET (JRF), GATE, Ph.D.

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**PG AND RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(AUTONOMOUS)**

MARCH 2024

SYNTHESIS, CHARACTERIZATION AND CATALYTIC STUDIES OF CALCIUM (II) - DOPED ZINC OXIDE MATERIAL

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous)

affiliated to the

UNIVERSITY OF MADRAS

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN CHEMISTRY

BY

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PG & RESEARCH DEPARTMENT OF CHEMISTRY

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CHENNAI - 600 106.

MARCH – 2024.

**EFFECTIVE PRODUCTION OF OXYGEN AND
HYDROGEN WITH A TRIMETALLIC CATALYST
SUPPORTED BY TiO₂**

PROJECT REPORT

Submitted to

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IN

CHEMISTRY

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PG & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(Autonomous)

CHENNAI - 600 106

March – 2024

“Effect of bimetal (Mn, Zn) catalyst supported on activated carbon for Selective Oxidation of Ethyl Lactate to Ethyl Pyruvate & Photocatalytic degradation of 4-Chlorophenol”

PROJECT REPORT

Submitted to

***Dwaraka Doss Goverdhan Doss Vaishnav College
(Autonomous),***

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College with Potential for Excellence

Affiliated to University of Madras

In partial fulfillment of the award of the degree of

MASTER OF SCIENCE

IN

CHEMISTRY

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POST GRADUATE & RESEARCH DEPARTMENT OF CHEMISTRY

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (Autonomous),

ARUMBAKKAM, CHENNAI – 600106.

**EVALUATION OF PHOTOCATALYTIC DEGRADATION OF
ERIOCHROME BLACK T DYE USING PALLADIUM
NANOPARTICLES - AN ENVIRONMENTALLY FRIENDLY
APPROACH**

PROJECT REPORT

Submitted to

**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous)**

Affiliated to the

UNIVERSITY OF MADRAS

In Partial Fulfillment of the Requirements for the Degree of

**MASTER OF SCIENCE
IN
CHEMISTRY
BY**

**DHIVAKAR A K (REG NO:2213092049103)
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**Under the supervision of
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**PG & RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous) ARUMBAKKAM, CHENNAI – 600106**

MARCH-2024

**A SUPERHYDROPHOBIC GELATOR BASED ON POLY
(ARYL ETHER) DENDRON CORED WITH
BENZOTHIADIAZOLE (BTDA)**

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (AUTONOMOUS)

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in partial fulfilment for the award of degree of

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IN CHEMISTRY

BY

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Dr. N. Vidhya Lakshmi, M.Sc., CSIR NET (JRF), GATE, Ph.D.

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**PG AND RESEARCH DEPARTMENT OF CHEMISTRY
DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(AUTONOMOUS)**

*Continuous processing: Selective aerobic oxidation of ethyl lactate
to ethyl pyruvate using Zn/Ni catalyst on mesoporous SBA-15
support*

PROJECT REPORT

Submitted to

DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(AUTONOMOUS)

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College with Potential for Excellence

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MASTER OF SCIENCE

IN

CHEMISTRY

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

CHENNAI – 600 106

MARCH 2024

**EVALUATION OF PHOTOCATALYTIC DEGRADATION OF
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MARCH-2024

**ANALYZING INDUCED EMISSION: AGGREGATION INDUCED EMISSION
STUDIES OF DIPYRIDOPHENAZENE BIS (1,10-PHENANTHROLINE)
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PROJECT REPORT

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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE (AUTONOMOUS)
CHENNAI-600106**

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**PHOTOPHYSICAL AND ELECTROCHEMICAL
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DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE(AUTONOMOUS)
ARUMBAKKAM CHENNAI-600106**

MARCH - 2024

