OII

Recycling Of Used Lube Oil Using Mixture of Solvents Having Different Dielectric
Constants
Registration number: HRD/STU.TRG/18-19/074



SUBMITTED BY

ARCHITA HANDIQUE

DEPARTMENT OF CHEMISTRY DEBRAJ ROY COLLEGE, GOLAGHAT

Under the Supervision of

Dr. U. N. GUPTA, Scientist

Polymer, Petroleum and Coal Chemistry Group Material Sciences & Technology Division CSIR-North East Institute of Science & Technology Jorhat-785006, Assam, India





CSIR - North East Institute of Science & Technology

Jorhat - 785 006, Assam INDIA

Connecting Science & Technology for a Brighter Tomorrow

This is to certify that Miss Archita Handique has satisfactorily completed the dissertation work titled "RECYCLING OF USED LUBE OIL USING MIXTURE OF SOLVENTS HAVING DIFFERENT DIELECTRIC CONSTANTS" for the partial fulfilment of the requirement for the completion of the training of Winter Internship in Petroleum Engineering, in CSIR-NEIST.

Project Supervisor

hu DA

Dr. Upendra Nath Gupta

Polymer, Petroleum and Coal Chemistry Group

Material Sciences and Technology Division

CSIR-North East Institute of Science & Technology (NEIST)

Jorhat-785006, Assam, India

This is to certify that the project entitled "Recycling of used lube oil using mixture of solvent having different dielectric constants" submitted by Miss Archita Handique a student of 6th Semester bearing Roll No. 10520095 and Registration No. S1634383 of Debraj Roy College (Centre Code 105 under Dibrugarh University), Golagaht has been complited at Department of Material Science & Technology Division, CSIR-NEIST, Jorhat under winter internship scheme. The project was accomplished under the guidance of Dr. U.N. Gupta (scientist of Polymer, Petroleum and Coal Chemistry group) and my guidance. The project report is result of her own investigation and she has fulfilled all the requirements prescribe under the project regulation of Dibrugarh University syllabus of 6th semester.

Date: 30-4-2019

Place: Golaghat

(Mr. Jyoti Prasad Dutta)

Co-Guide

Bachelor's Degree Project Report

on

Recycling of Used Lubricating Oil by Using Different Solvents Having Different Dielectric Constants Registration no:HRD/STU.TRG/18-19/073



SUBMITTED BY

MINAKSHI GOHAIN

DEPARTMENT OF CHEMISTRY DEBRAJ ROY COLLEGE, GOLAGHAT

Under the Supervision of

Dr. U. N. GUPTA, Scientist

Polymer, Petroleum and Coal Chemistry Group Material Sciences & Technology Division CSIR-North East Institute of Science& Technology Jorhat-785006, Assam, India



CSIR - North East Institute of Science & Technology

Jorhat - 785 006, Assam INDIA

Connecting Science & Technology for a Brighter Tomorrow

This is to certify that Miss Minakshi Gohain has satisfactorily completed this dissertation work titled "RECYCLING OF USED LUBRICATING OIL BY USING DIFFERENT SOLVENTS HAVING DIFFERENT DIELECTRIC CONSTANTS' for the partial fulfillment of the requirement for the completion of the training of Bachelor's Degree Project of Chemistry in CSIR-NEIST.

Project Supervisor

Dr. Upendra Nath Gupta

Scientist

Polymer, Petroleum and Coal Chemistry Group Material Sciences & Technology Division CSIR-North East Institute of Science and Technology

Jorhat-785006, Assam, India

This is to certify that the project entitled "Recycling of used lubricating oil by using different solvents having different dielectric constants" submitted by Miss Minakshi Goham a student of 6th Semester bearing Roll No. 10520114 and Registration No. \$1634438 of Debraj Roy College (Centre Code 105 under Dibrugarh University), Golagaht has been complited at Department of Material Science & Technology Division, CSIR-NEIST, Jorhat under winter internship scheme. The project was accomplished under the guidance of Dr. U.N. Gupta (scientist of Polymer, Petroleum and Coal Chemistry group) and my guidance. The project report is result of her own investigation and she has fulfilled all the requirements prescribe under the project regulation of Dibrugarh University syllabus of 6th semester.

Date: 30-4-2019

Place: Golaghat

(Mr. Jyoti/Prasad Dutta)

Co-Guide

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Basanta Hazarika ROLL NO: 10520010 YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Basanta Hazarika, a student of 6th semester bearing Roll No10520010 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Mriganka Protim Gogoi ROLL NO: 10520049

LL NO. 10320049

YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Mriganka Protim Gogoi, a student of 6th semester bearing Roll No10520049 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT,

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Miss Pallabi Dev ROLL NO: 10520121 YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Miss Pallabi Dev, a student of 6th semester bearing Roll No10520121 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Kaushik Kunal Saikia ROLL NO: 10520039 VEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Kaushik Kunal Saikia, a student of 6th semester bearing Roll No10520039 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019.

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Basanta Hazarika

ROLL NO: 10520010

YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Basanta Hazarika, a student of 6th semester bearing Roll No10520010 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Mriganka Protim Gogoi ROLL NO: 10520049

YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Mriganka Protim Gogoi, a student of 6th semester bearing Roll No10520049 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his her own investigations and he she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date 30.04.2010

Place Colaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Kaushik Kunal Saikia ROLL NO: 10520039 YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Kaushik Kunal Saikia, a student of 6th semester bearing Roll No10520039 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30 04 2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Miss Pallabi Dev ROLL NO: 10520121 YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Miss Pallabi Dev, a student of 6th semester bearing Roll No10520121 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT,

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Prachujya Phukon

ROLL NO: 10520063

YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Prachujya Phukon, a student of 6th semester bearing Roll No.- 10520063 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

On

"ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT,

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(As Per Syllabus of 6th Semester, Major Course, DU)

BY

Sri Prachujya Phukon

ROLL NO: 10520063

YEAR: 2019

This is to certify that the project entitled "ZnO Nanoparticle Decorated cellulose for Photocatalytic Applications" submitted by Sri Prachujya Phukon, a student of 6th semester bearing Roll No.- 10520063 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

on

Recycling Of Used Lube Oil Using Mixture of Solvents Having Different Dielectric
Constants
Registration number:HRD/STU.TRG/18-19/074



SUBMITTED BY

ARCHITA HANDIQUE

DEPARTMENT OF CHEMISTRY DEBRAJ ROY COLLEGE, GOLAGHAT

Under the Supervision of

Dr. U. N. GUPTA, Scientist

Polymer, Petroleum and Coal Chemistry Group Material Sciences & Technology Division CSIR-North East Institute of Science & Technology Jorhat-785006, Assam, India



CSIR - North East Institute of Science & Technology

Jorhat - 785 006, Assam INDIA

Connecting Science & Technology for a Brighter Tomorrow

This is to certify that Miss Archita Handique has satisfactorily completed the dissertation work titled "RECYCLING OF USED LUBE OIL USING MIXTURE OF SOLVENTS HAVING DIFFERENT DIELECTRIC CONSTANTS" for the partial fulfilment of the requirement for the completion of the training of Winter Internship in Petroleum Engineering, in CSIR-NEIST.

Project Supervisor

Dr. Upendra Nath Gupta

Polymer, Petroleum and Coal Chemistry Group

Material Sciences and Technology Division

CSIR-North East Institute of Science & Technology (NEIST)

Jorhat-785006, Assam, India

This is to certify that the project entitled "Recycling of used lube oil using mixture of solvent having different dielectric constants" submitted by Miss Archita Handique a student of 6° Semester bearing Roll No. 10520095 and Registration No. \$1634383 of Debraj Roy College (Centre Code 105 under Dibrugarh University), Golagaht has been complited at Department of Material Science & Technology Division, CSIR-NEIST, Jorhat under winter internship scheme. The project was accomplished under the guidance of Dr. U.N. Gupta (scientist of Polymer, Petroleum and Coal Chemistry group) and my guidance. The project report is result of her own investigation and she has fulfilled all the requirements prescribe under the project regulation of Dibrugarh University syllabus of 6° semester.

Date: 30-4-2019

Place : Golaghat

(Mr. Jyoti Prasad Dutta)

Co-Guide

Bachelor's Degree Project Report

on

Recycling of Used Lubricating Oil by Using Different Solvents Having Different Dielectric Constants Registration no:HRD/STU.TRG/18-19/073



SUBMITTED BY

MINAKSHI GOHAIN

DEPARTMENT OF CHEMISTRY DEBRAJ ROY COLLEGE, GOLAGHAT

Under the Supervision of

Dr. U. N. GUPTA, Scientist

Polymer, Petroleum and Coal Chemistry Group Material Sciences & Technology Division CSIR-North East Institute of Science& Technology Jorhat-785006, Assam, India





CSIR - North East Institute of Science & Technology

Jorhat - 785 006, Assam INDIA

Connecting Science & Technology for a Brighter Tomorrow

This is to certify that Miss Minakshi Gohain has satisfactorily completed this dissertation work titled "RECYCLING OF USED LUBRICATING OIL BY USING DIFFERENT SOLVENTS HAVING DIFFERENT DIELECTRIC CONSTANTS' for the partial fulfillment of the requirement for the completion of the training of Bachelor's Degree Project of Chemistry in CSIR-NEIST.

Project Supervisor

Dr. Upendra Nath Gupta

Scientist

Polymer, Petroleum and Coal Chemistry Group

Material Sciences & Technology Division

CSIR-North East Institute of Science and Technology

Jorhat-785006, Assam, India

This is to certify that the project entitled "Recycling of used lubricating oil by using different solvents having different dielectric constants" submitted by Miss Minakshi Gohain a student of 6th Semester bearing Roll No. 10520114 and Registration No. S1634438 of Debraj Roy College (Centre Code 105 under Dibrugarh University), Golagaht has been complited at Department of Material Science & Technology Division, CSIR-NEIST, Jorhat under winter internship scheme. The project was accomplished under the guidance of Dr. U.N. Gupta (scientist of Polymer, Petroleum and Coal Chemistry group) and my guidance. The project report is result of her own investigation and she has fulfilled all the requirements prescribe under the project regulation of Dibrugarh University syllabus of 6th semester.

Date: 30-4-2019

Place: Golaghat

(Mr. Jyoti Prasad Dutta)

Hutta

Co-Guide

A project report on

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by: Debashis Saikia 6th Semester, Dept. of Chemistry Roll no: 10520024

Year: 2019

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Debashis Saikia, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

D.R College, Golaghat - 785621 (Assam)

A project report on

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by:
Darshana Mohan
6th Semester, Dept. of Chemistry
Roll no: 10520101

Year: 2019

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Darshana Mohan, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

D.R College, Golaghat - 785621 (Assam)

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by: Nitumoni Hazarika 6th Semester, Dept. of Chemistry Roll no: 10520053

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Nitumoni Hazarika, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetis)

Assistant Professor, Dept. of Chemistry

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by: Rashmi Rekha Nath 6th Semester, Dept. of Chemistry Roll no: 10520131

Year, 2019

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Rashmi Rekha Nath, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

(Dr. Mildar Circus)

Assistant Professor, Dept. of Chemistry D.R College, Golaghat - 785621 (Assam)



2019

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by: Darshana Mohan 6th Semester, Dept. of Chemistry Roll no: 10520101

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Darshana Mohan, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

@/ 05/219

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University. (as per syllabus of 6th Semester Major, DU)

> Submitted by: Debashis Saikia 6th Semester, Dept. of Chemistry Roll no: 10520024

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Debashis Saikia, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University. (as per syllabus of 6th Semester Major, DU)

> Submitted by: Nitumoni Hazarika 6th Semester, Dept. of Chemistry Roll no: 10520053

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Nitumoni Hazarika, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

Assistant Professor, Dept, of Chemistry

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by:
Sumanjit Kaur
6th Semester, Dept. of Chemistry
Roll no: 10520141

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Sumanjit Kaur, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

lace:

(B) 2 1/02/1

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

WATER QUALITY ANALYSIS OF SOME PUBLIC WATER SUPPLY SCHEMES OF GOLAGHAT.



This project work has been submitted to the Department of Chemistry, D.R College, Golaghat, Assam for the partial fulfilment of award of Bachelors' Degree of Science of Dibrugarh University.

(as per syllabus of 6th Semester Major, DU)

Submitted by:
Ayushman Kashyap
6th Semester, Dept. of Chemistry
Roll no: 10520009

This is to certify that the Project Work titled "Water Quality Assessment of some Public Water Supply schemes of Golaghat" submitted by Ayushman Kashyap, a student of B.Sc (Major Chemistry), Debraj Roy College, under DU has been completed under my supervision. This work is the result of his own investigation and to the best of my knowledge; this report has not been submitted to any other institution or University for a degree or diploma.

Date:

Place:

(Dr. Mridul Chetia)

Assistant Professor, Dept. of Chemistry

A Project Report On

⁶³ Preliminary Study of Nickel Oxide(NiO)/ Tim Oxide(SnO2) Nanocomposite Material²²



TIOTHE TIOTHE DEPARTMENT OF CHEMISTRY DECOMMENT COLACTIAN UNDERDIBRUCARH UNIVERSURY DIBRUCARH

(As Rer Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Stil Banker | Konwar
ROLL NO: 10520053
Reg. No. 8 S1694962
YEAR: 2019

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Sri Pankaj Konwar, a student of 6th semester bearing Roll No. 10520058, Reg. No. S1634462 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

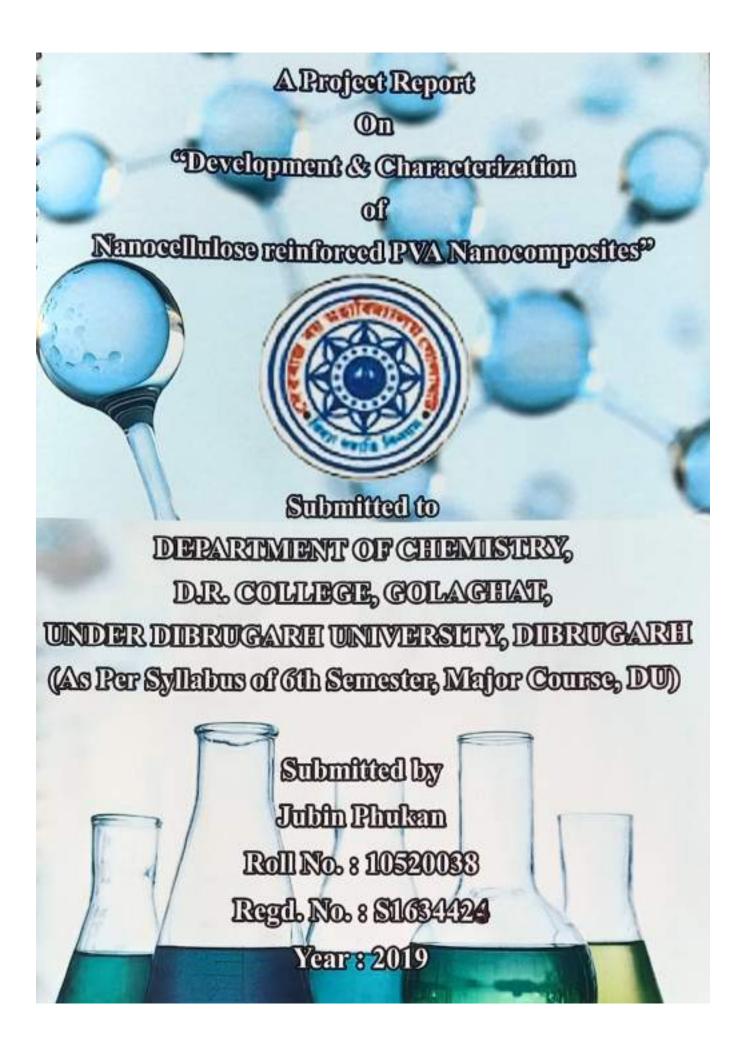
Date 30/4/2019

Yours Faithfully,

14/2 Tor/2019 (Dr. Mridul Chetia)

Assistant Professor.

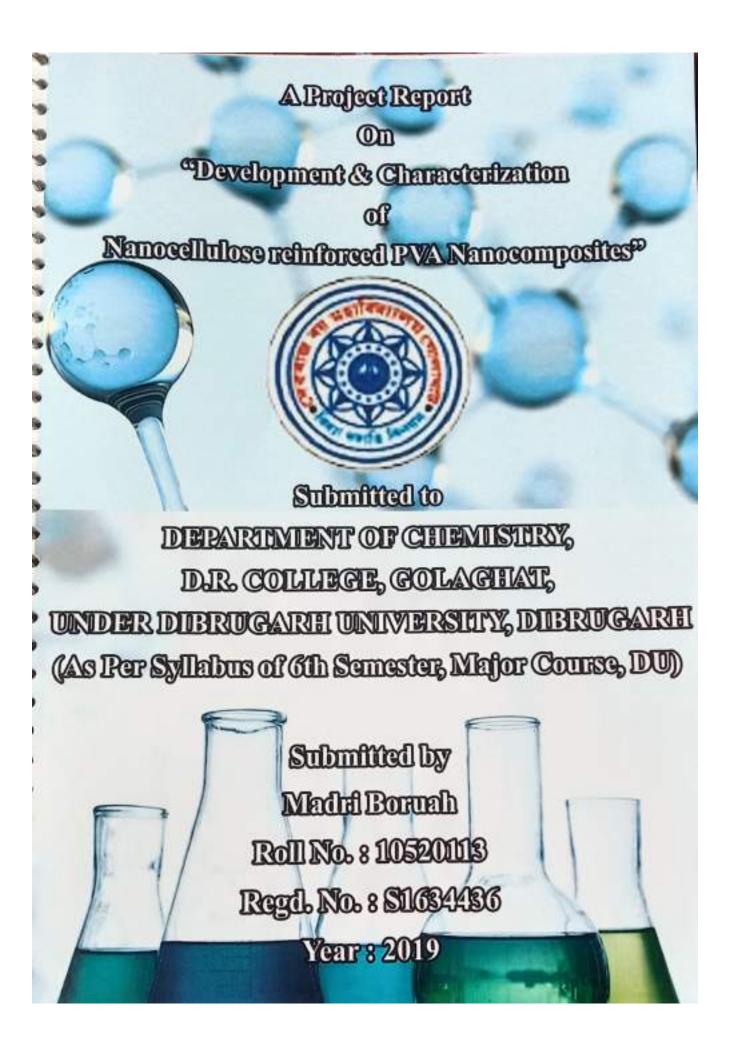
Deparatment of Chemistry



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Jubin Phukan, a student of 6th semester bearing Roll No10520038 and Registration No. \$1634426 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Miss Madri Boruah, a student of 6th semester bearing Roll No10520113 and Registration No. S1634436 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

ASSESSMENT OF DRINKING WATER
QUALITYPARAMETERS IN DIFFERENT
ATER SAMPLES OF GOLAGHAT DISTRICT,
ASSAM

SUBMITTED TO – DEPARTMENT OF CHEMISTRY, D.R COLLEGE, GOLAGHAT ER DIBRUGARH UNIVERSITY, DIBRUGARH ER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

BISHNU PRASAD BHUYAN

ROLL NO: 10520016

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR : 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Bishnu Prasad Bhuyan, a student of 6th semester bearing Roll No. 10520016 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date :14/4/2019



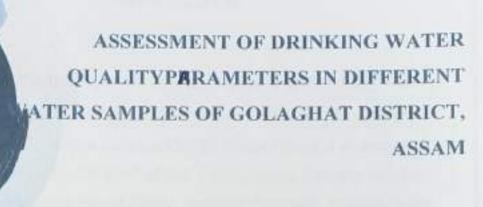
Yours Faithfully,

(Er. Jyoti Prasad Dutta)

Associate Professor,

Deparatment of Chemistry

PROJECT ON



SUBMITTED TO -

DEPARTMENT OF CHEMISTRY,

D.R COLLEGE, GOLAGHAT

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH
AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

PRASAD GHOSH

ROLL NO: 10520065

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Prasad Ghosh, a student of 6th semester bearing Roll No. 10520065 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

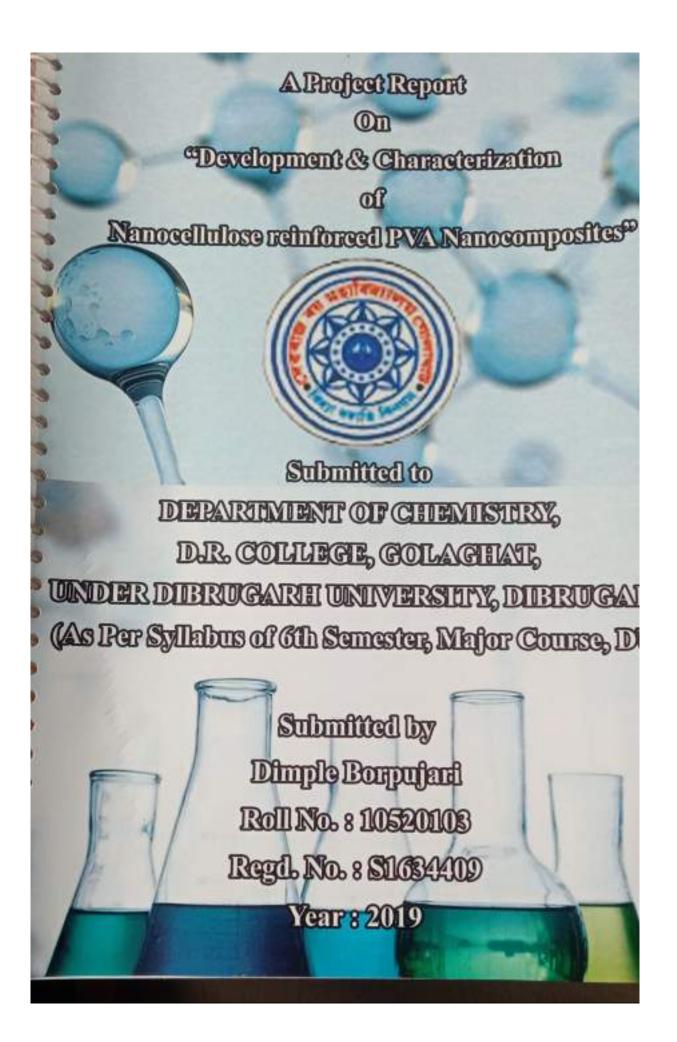
Date:14/4/2019

Yours Faithfully,

(Mr. Jyoti Prasad Dutta)

Associate Professor,

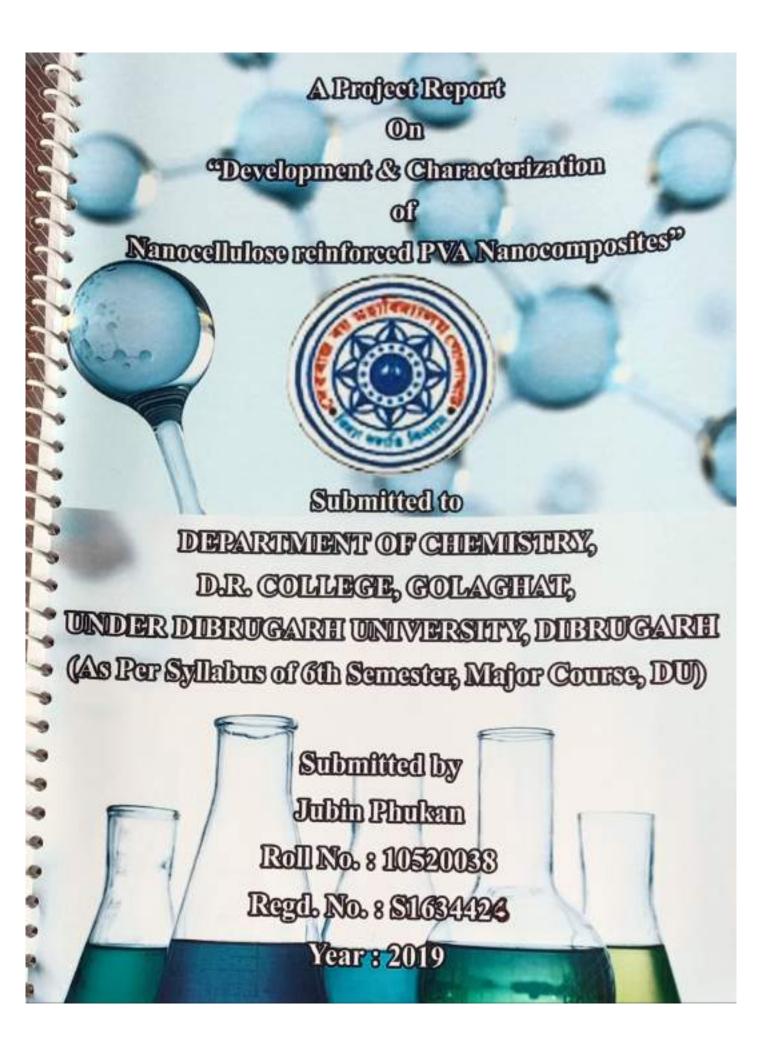
Deparatment of Chemistry



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Miss Dimple Borpujari, a student of 6th semester bearing Roll No10520103 and Registration No. S1634409 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

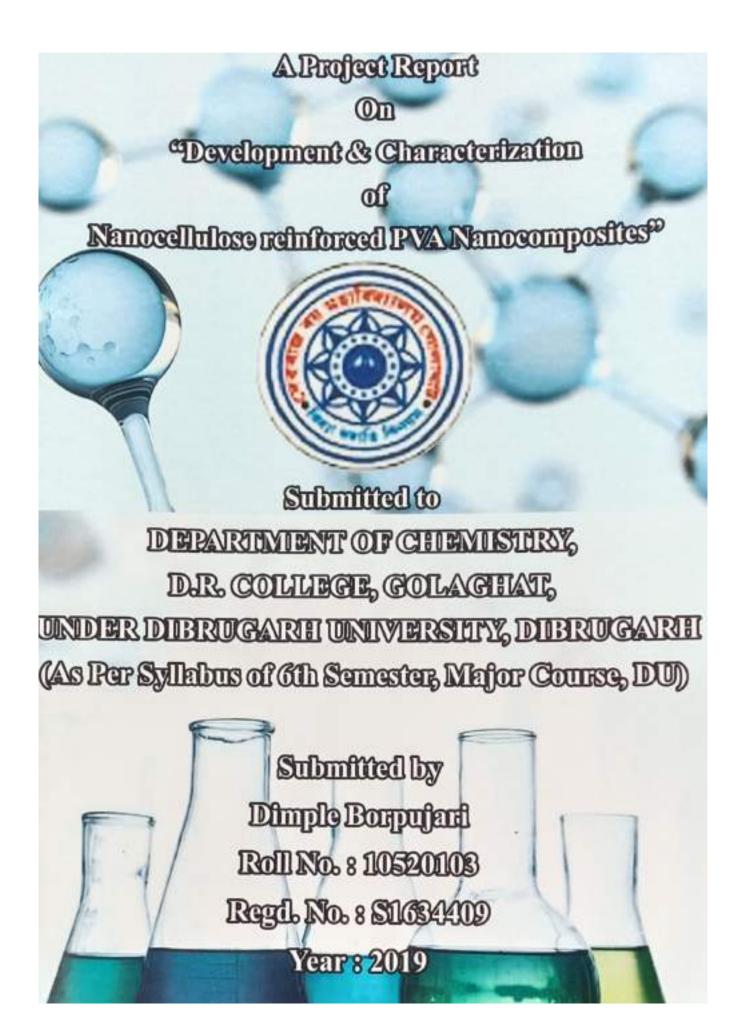
Place: Golaghat



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Jubin Phukan, a student of 6th semester bearing Roll No10520038 and Registration No. S1634426 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/ her own my estigations and he she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

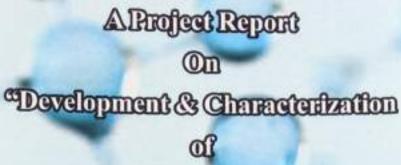
Place: Golaghat



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Miss Dimple Borpujari, a student of 6th semester bearing Roll No10520103 and Registration No. S1634409 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat



Nanocellulose reinforced PVA Nanocomposites®



Submitted to

DEPARTMENT OF CHEMISTRY,
DIR. COLLEGE, GOLAGIAT,
UNDER DIBRUGARH UNIVERSITY, DIBRUGARH
(AS Per Syllabus of 6th Semester, Major Course, DU))

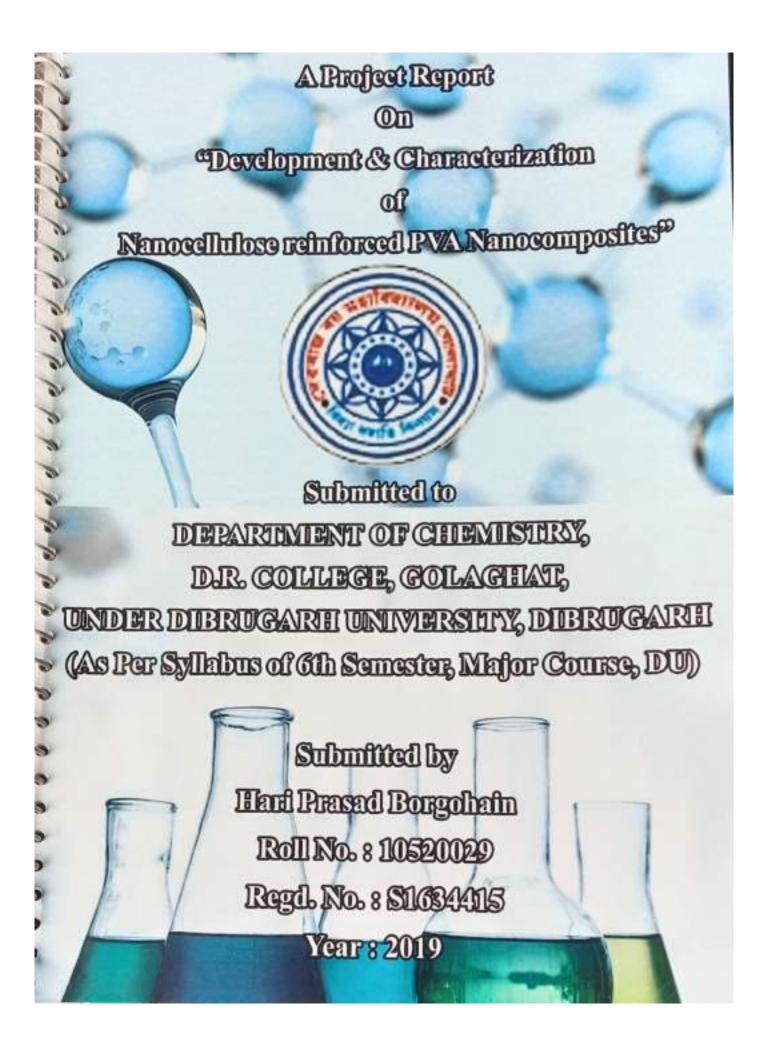
Submitted by
Madri Bornah
Roll No. 8 10520113
Regd. No. 8 81684486

Year 8 2019

Nanocellulose reinforced PVA Nanocomposites" submitted by Miss Madri Boruah, a student of 6th semester bearing Roll No10520113 and Registration No. S1634436 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

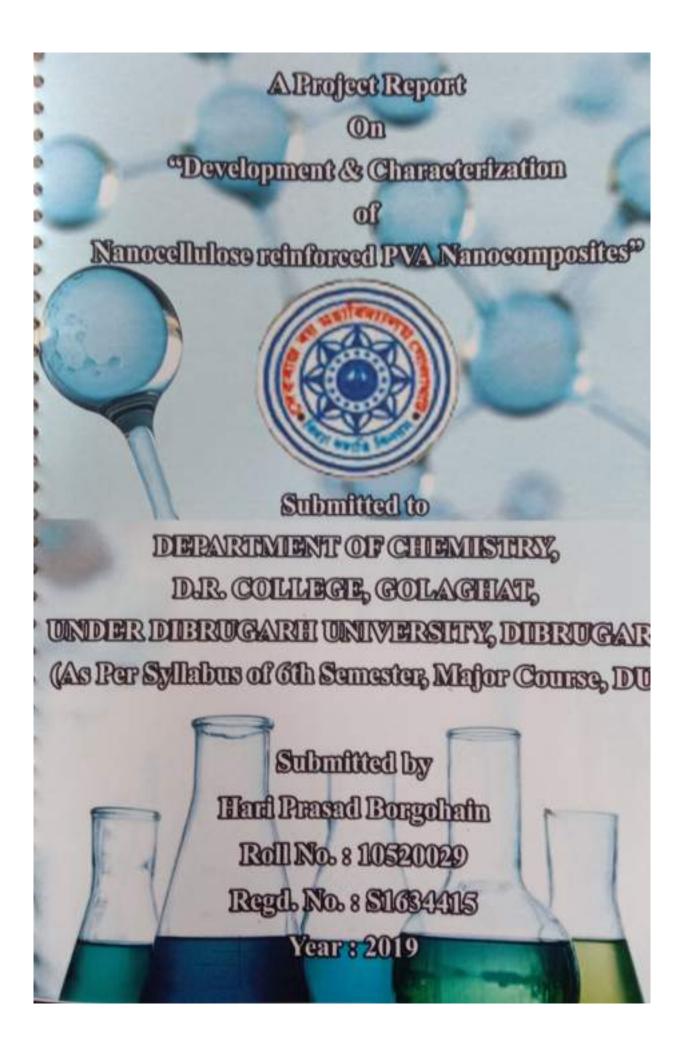
Place: Golaghat



This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Hari Prasad Borgohain, a student of 6th semester bearing Roll No10520029 and Registration No. S1634415 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

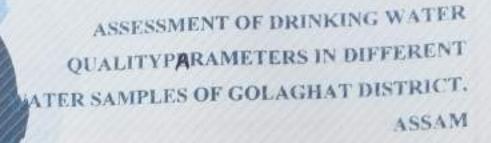


This is to certify that the project entitled "Development & Characterisation of Nanocellulose reinforced PVA Nanocomposites" submitted by Hari Prasad Borgohain, a student of 6th semester bearing Roll No10520029 and Registration No. S1634415 of D.R. College, Golaghat has been completed under my supervision at D.R. College, Golaghat. The project report is the result of his/her own investigations and he/ she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

Brown En



SUBMITTED TO -

DEPARTMENT OF CHEMISTRY,

D.R COLLEGE, GOLAGHAT

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

PARAG JYOTI SAIKIA

ROLL NO: 10520060

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Parag Jyoti Saikia, a student of 6th semester bearing Roll No. 10520060 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:14/4/2019

Yours Faithfully,

(Er. Jyoti Prasad Dutta)

Associate Professor.

Deparatment of Chemistry

2,019

A Project Report

On

"Study on the Renewable Energy Systems and Their Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (As Per Syllabus of 6th Semester, Major Course, DU)

BY

Miss Pankhi Borphukan

ROLL NO: 10520123 YEAR: 2019

Under the Guidance of

Dr. Pradyumna Kumar Choudhury

Dept. of Energy Tezpur University, Tezpur-784028, Assam

Dr. Suvangshu Dutta

Dept. of Chemistry D.R. College, Golaghat-785621, Assam

This is to certify that Ms. Pankhi Borphukan, a TDC 4TH Semester, Chemistry Major student of Debraj Roy College, Golaghat has studied on "The Renewable Energy Systems & Their Applications" during one month Summer Internship Programme 2018 of Tezpur University. The topic studied by Ms Pankhi Borphukan is reported under the title study on the "Renewable Energy Systems & Their Applications" for partial fulfilment of Summer Internship Programme 2018 requirement.

Ms Pankhi Borphukan during the period of Summer Internship was under supervision and guidance of

Date: 3/9/18

Place: Tezpur

(Signature)

Dr.Pradyumna Kumar Choudhury

Department of Energy Tezpur University

Their Applications" submitted by Miss Pankhi Borphukan, a student of 6th semester bearing Roll No. 10520123 of D.R. College centre (Centre Code: 105 under DU). Golaghat has been completed at Dept. of Energy, Tezpur University under Summer Internship Scheme. The project was accomplished under the guidance of Dr. Pradyumna Kumar Choudhury of Tezpur University and my co-guidance. The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30 04/2019

Place: Golaghat

(Dr. Suvangshu Dutta)

Co-Guide

On

"Study on the Renewable Energy Systems and Their Applications"



SUBMITTED TO

DEPARTMENT OF CHEMISTRY, D.R. COLLEGE, GOLAGHAT, UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (As Per Syllabus of 6th Semester, Major Course, DU)

BY

Miss Pankhi Borphukan

ROLL NO: 10520123 YEAR: 2019

Under the Guidance of

Dr. Pradyumna Kumar Choudhury

Dept. of Energy Tezpur University, Tezpur-784028, Assam &

Dr. Suvangshu Dutta

Dept. of Chemistry D.R. College, Golaghat-785621, Assam

This is to certify that Ms. Pankhi Borphukan, a TDC 4⁷⁸ Semester, Chemistry Major student of Debraj Roy College, Golaghar has studied on "The Renewable Energy Systems & Theoretic Applications" during one month Summer Internship Programme 2018 of Terpur University. The topic Studied by Ms Pankhi Borphukan is reported under the title study on the "Renewable Energy Systems & Their Applications" for partial fulfilment of Summer Internship Programme 2018 requirement.

Ms Pankhs Borphukan during the period of Summer Internship was under supervision and guidance of

(Pradyumna Kumar Choudhury)

Date: 3 3 11 1

Place: Тегрит

(Signature)

Prof. Rupam Kataki

Head of Department Department of energy Tezpur University

This is to certify that Ms. Pankhi Borphukan, a TDC 4⁷¹¹ Semester, Chemistry Major student of Debray Roy College, Golaghat has studied on "The Renewable Energy Systems & Their Applications" during one month Summer Internship Programme 2018 of Tezpur University. The topic studied by Ms Pankhi Borphukan is reported under the title study on the "Renewable Energy Systems & Their Applications" for partial fulfillment of Summer Internship Programme 2018 requirement.

Ms Pankhi Borphukan during the period of Summer Internship was under supervision and guidance of

Date: 3/9/18

Place: Tezpur

(Signature)

Dr.Pradyumna Kumar Choudhury

Department of Energy Tezpur University

Their Applications" submitted by Miss Pankhi Borphukan, a student of 6th semester bearing Roll No. 10520123 of D.R. College centre (Centre Code: 105 under DU), Golaghat has been completed at Dept. of Energy, Tezpur University under Summer Internship Scheme. The project was accomplished under the guidance of Dr. Pradyumna Kumar Choudhury of Tezpur University and my co-guidance. The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date: 30/04/2019

Place: Golaghat

(Dr. Suvangshu Dutta)

Co-Guide



ASSESSMENT OF DRINKING WATER
QUALITYPARAMETERS IN DIFFERENT
ATER SAMPLES OF GOLAGHAT DISTRICT,
ASSAM

SUBMITTED TO – DEPARTMENT OF CHEMISTRY, D.R COLLEGE, GOLAGHAT UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

CHAYANIKA SAIKIA

ROLL NO: 10520099

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Miss Chayanika Saikia, a student of 6th semester bearing Roll No. 10520099 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:14/4/2019

Yours Faithfully,

(Efr. Jyoti Prasad Dutta)

Associate Professor,

Deparatment of Chemistry



ASSESSMENT OF DRINKING WATER
QUALITYPARAMETERS IN DIFFERENT
ATER SAMPLES OF GOLAGHAT DISTRICT
ASSAM

SUBMITTED TO – DEPARTMENT OF CHEMISTRY, D.R COLLEGE, GOLAGHAT UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

PARAG JYOTI SAIKIA

ROLL NO: 10520060

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Parag Jyoti Saikia, a student of 6th semester bearing Roll No. 10520060 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:14/4/2019

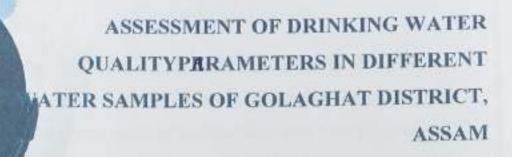
Yours Faithfully,

(Er. Jyoti Prasad Dutta)

Associate Professor.

Deparatment of Chemistry

PROJECT ON



SUBMITTED TO – DEPARTMENT OF CHEMISTRY, D.R COLLEGE, GOLAGHAT UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

CHAYANIKA SAIKIA ROLL NO: 10520099

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Miss Chayanika Saikia, a student of 6th semester bearing Roll No. 10520099 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:14/4/2019

Yours Faithfully,

(Dr. Jyoti Prasad Dutta

Associate Professor.

Deparatment of Chemistry

PROJECT ON

ASSESSMENT OF DRINKING WATER
QUALITYPHRAMETERS IN DIFFERENT
ATER SAMPLES OF GOLAGHAT DISTRICT,
ASSAM

SUBMITTED TO – DEPARTMENT OF CHEMISTRY, D.R COLLEGE, GOLAGHAT UNDER DIBRUGARH UNIVERSITY, DIBRUGARH (AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

ANKUR GOGOI ROLL NO: 10520005

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Ankur Gogoi, a student of 6th semester bearing Roll No. 10520005 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:14/4/2019

Yours Faithfully,

(Mr. Jyoti Prasad Dutta)

Associate Professor,

Deparatment of Chemistry



ASSESSMENT OF DRINKING WATER
QUALITYPERAMETERS IN DIFFERENT
ATER SAMPLES OF GOLAGHAT DISTRICT,
ASSAM

SUBMITTED TO -

DEPARTMENT OF CHEMISTRY,

D.R COLLEGE, GOLAGHAT

UNDER DIBRUGARH UNIVERSITY, DIBRUGARH

(AS PER SYLLABUS OF 6TH SEMESTER, MAJOR, COURSE)

SUBMITTED BY -

PRASAD GHOSH

ROLL NO: 10520065

DEBRAJ ROY COLLEGE, GOLAGHAT

YEAR: 2019

This is to certify that, the project entitled "Assessment of drinking water quality parameters in different water samples of Golaghat District, Assam" has been completed by Sri Prasad Ghosh, a student of 6th semester bearing Roll No. 10520065 of D.R. College centre, Golaghat under the supervision of Mr. Jyoti Prasad Dutta, Associate Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date ;14/4/2019

Yours Faithfully,

(Mr. Jyoti Prasad Dutta)

Associate Professor,

Deparatment of Chemistry

⁶³ Preliminary Study of Nickel Oxide (NiO)/ Tim Oxide (SnO2) Nanocomposite Material²⁹



TOTHE DEPARTMENT OF CHEMISTRY DECOMPCE COLACTIVE UNDERDIERUCARH UNIVERSITY DIERUCARH

As Rer Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Miss Atshwarya Rani Bhorali
ROLLNO: 10520020
Reg. No. 8 \$11323272
YEAR: 2010

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Miss Aishwarya Rani Bhorali, a student of 6th semester bearing Roll No. 10520090, Reg. No. S1634372 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

(Dr. Mridul Chetia) Is os 2019

Assistant Professor,

Deparatment of Chemistry

© Preliminary Study of Nickel Oxide (NiO)/ Tim
Oxide (SnO2) Nanocomposite Material?



THIS PROTECT REPORTES SUBMITTED TO THE DEPARTMENT OF CHEMISTRY DIR COULERS COLACHIAS UNDERDIENT CARH UNIMERS LIX

(As Per Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Shi Safia Hussain
ROLLNO: 10520074
Reg. No. 8 S1633439
YEAR: 2019

Oxide (NiO)/Tin Oxide (SnO₂) Nanocomposite Material" has been completed by Sri Sajid Hussain, a student of 6th semester bearing Roll No. 10520074, Reg. No. S1634499 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

(Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry

Oxfile (SnO2) Nanocomposite Material?



TOTHE DEPARTMENT OF CHEMISTRY DECOMPCE COLACIAN UNDERDIERUCARH UNIVERSITY DIERUGARH

(As Per Syllabus of 6th Semester, Major Course, Dibrugarh University)

Submitted by
Miss Telshim Hazarilan
ROLLLNO: 10520143
Reg. No. 8 S1634523
YEAR: 2019

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Miss Trishna Hazarika, a student of 6th semester bearing Roll No. 10520146, Reg. No. S1634528 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully.

Chity 11/11/2419 (Dr. Mridul Chetia)

Assistant Professor.

Deparatment of Chemistry

⁶⁵ Preliminary Study of Nickel Oxide (NiO)/ Tim Oxide (SnO2) Nanocomposite Material?



TOTHE DEPARTMENT OF CHEMISTRY DR. COLLEGE, COLACHAT, UNDERDIERUCARII UNIMERSIETA DIERUCARII

(As Per Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Miss This bus Hezerika
ROLLINO: 10520143
Reg. No. 8 S1634523
YEAR: 2010

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO₂) Nanocomposite Material" has been completed by Miss Trishna Hazarika, a student of 6th semester bearing Roll No. 10520146, Reg. No. S1634528 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

(Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry

65 Prefinitery Study of Nickel Oxide (Nio)/ Tim Oxfile(SnO2) Nanocomposite Material^{PP}



THIS EROLE GETRE FORFIS SUBMILITIED TO THE DEPAREMENT OF CHEMISTERY, DIR. COLLEGE, COLLAGIAR, UNDERDIERUGARH UNIVERSITY, DIERUGARH (As Ref Syllabus of 6th Semester, Major Course, Dibrugarh University) Submitted by Miss Afshwaren

YEARs 2019

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Miss Aishwarya Rani Bhorali, a student of 6th semester bearing Roll No. 10520090, Reg. No. S1634372 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

Sharis 15/05/2019 (Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry

© Preliminary Study of Nickel Oxide(Nio)/ Tim Oxide(SnO2) Nanocomposite Material?



THIS PRODUCT REPORT IS SUBMITTED TO THE DEPARTMENT OF CHEMISTRY DEPARTMENT OF CHEMISTRY ONDER COLLEGE, COLAGIAGE UNDER DIERUGARIE UNIMPRESERY DIERUGARIE

(As Per Syllabus of 6th Semester, Major Course, Dibrugarh University)

Submitted by
Miss Pallevi Cogol
ROULNO: 10520122
Reg. No. 8 S1639431
YEAR: 2019

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Miss Pallabi Gogoi, a student of 6th semester bearing Roll No. 10520122, Reg. No. S1634461 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

Cheristos / 2019 (Dr. Mridul Chetia

Assistant Professor.

Deparatment of Chemistry

⁶³ Preliminary Study of Nickel Oxide(NiO)/ Tim Oxide(SnO2) Nanocomposite Material²⁹



TOTHE DEPARTMENT OF CHEMISTRY DECOLUERS COLACIAN UNDERDIERUCARII UNIMERSITY DIERUCARII

(As Rer Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Shi Rankaj Konwar
ROULNO: 10520053
Reg. No. 8 \$1634452
YEAR: 2010

Oxide (NiO)/Tin Oxide (SnO₂) Nanocomposite Material" has been completed by Sri Pankaj Konwar, a student of 6th semester bearing Roll No. 10520058. Reg. No. S1634462 of D.R. College under Dibrugarh University. Golaghat under the supervision of Dr. Mridul Chetia. Assistant Professor. Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

(Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry

⁶³ Prefinitery Study of Nickel Oxide (NiO)/ Tim Oxide (SnO2) Nanocomposite Material^P



TOTHE DEPARTMENT OF CHEMISTRY DR. COLUMN COLLACTIVE UNDERDIERUCARIL UNIMERSTRY DIERUCARIL

(As Per Syllabus of 6th Samester, Major Course, Dibrugarh University)

Submitted by
Miss Pallovi Gogoi
ROLLNO: 10520122
Reg. No. 8 S1634461
YEAR: 2019

This is to certify that, the project entitled "Preliminary Study of Nickel Oxide (NiO)/Tin Oxide (SnO2) Nanocomposite Material" has been completed by Miss Pallabi Gogoi, a student of 6th semester bearing Roll No. 10520122, Reg. No. S1634461 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of her own investigations and she has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

@Misselos/2419 Yours Faithfully,

(Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry

⁶³ Preliminary Study of Niekel Oxide (NiO)/ Tim Oxide (SnO2) Nanocomposite Material?



THIS PROJECT REPORTS SUBMISSED TO THE DEPARTMENT OF CHEMISTRY DR. COURSEL COLACHAE UNIVERSELL DIBRUCARH UNIVERSELL DIBRUCARH

(As Rer Syllebus of 6th Senester, Mejor Course, Dibugach University)

Submitted by Strict production ROPLEND: 10520074 Reg. No. 8 S1694420 TEAR: 2019

Oxide (NiO)/Tin Oxide (SnO₂) Nanocomposite Material" has been completed by Sri Sajid Hussain, a student of 6th semester bearing Roll No. 10520074, Reg. No. S1634499 of D.R. College under Dibrugarh University, Golaghat under the supervision of Dr. Mridul Chetia, Assistant Professor, Department of Chemistry, D. R. College, Golaghat.

The project report is the result of his own investigations and he has fulfilled all the requirements prescribed under the project regulations of Dibrugarh University syllabus of 6th semester.

Date:30/4/2019

Yours Faithfully,

(Dr. Mridul Chetia)

Assistant Professor,

Deparatment of Chemistry