



DEPARTMENT OF PHYSICS
SANT GADGE BABA AMRAVATI
UNIVERSITY, AMRAVATI-444 602
INDIA.

Website: www.sgbau.ac.in

Phone : 0721-26662279


Fax: 0721-2662135, 2660949

Certificate

This is to certify that **Mr. Akshay Pandurang Bangar** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the review work entitled ***“Evanescent wave based Cladding modified Optical Biosensor for Urea Detection”*** completed under the supervision of **Dr. G. G. Muley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Head
Department of Physics,
S.G.B. A. U. Amravati



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Website: www.sgbau.ac.in

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Certificate

This is to certify that **Miss. Anjali D. Landkar** is a bonafide student of this department studying in M.Sc.-II (Semester-III) during the academic session 2019-2020.

Further, it is certified that she has carried out the review work entitled “**Study of non-linear optical properties of phosphate glasses**” completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Certificate

This is to certify that **Miss. Anuja Rajendrarao Ingle** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that she has carried out the review work entitled **“Synthesis of pure and Sr doped CdO Nanoparticle Passivated with L-Arginine”** completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Certificate

This is to certify that **Mr. Arif Khan Noor Khan** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the review work entitled ***“Project on nonlinear optical properties of TiO_2 nanoparticles”*** completed under the supervision of **Dr. G. G. Muley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science. The report is ready for evaluation.

HEAD
Department of Physics
Sant Gadge Baba Amravati University
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Department of Physics,
S.G.B. A. U. Amravati

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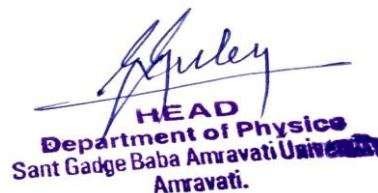
This is to certify that **Mr.Avinash Prabhakar Pariskar** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Review and Seminar Report** entitled “**Conjugated Polymers for the application of Supercapacitor**” completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date:-20/09/2020

Place:- Amravati



Dr.G.G.Muley

Head of Department of Physics

Sant Gadge Baba Amravati University,
Amravati -444 602

CERTIFICATE


This is to certify that **Miss. Chitralekha Anil Kolhe** is a bonafide student of this department studying in M.Sc.-II (Sem-Iv) during the academic session 2019-2020.

Further it is certified that she has carried out the project **Report** entitled "**Quality evaluation of Fabric using Electronic speckle pattern interferometer**" completed under the supervision of Dr G.G. Muley and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date:

Place: Amravati



HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Head of Department

Dr. G. G. Muley



CERTIFICATE


This is to certify that **Mr. Mahesh S. Kailuke** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled “**Synthesis and Applications of Ceramic Conducting Glasses**” completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date: 20/09/2020

Place: Amravati


HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Dr. G. G. Muley

Head

Department of Physics

Sant Gadge Baba Amravati
University, Amravati - 444602



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Certificate

This is to certify that **Miss. Meghana Dharmikrao Raut** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that she has carried out the project work entitled **“Project on nonlinear optical properties of ZnS nanoparticles”** completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Certificate

This is to certify that **Miss.Mohini D. Jumde** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that she has carried out the review work entitled “**Study of non-linear optical properties of lithium borate glasses**” completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Certificate


This is to certify that **Mr. Mujahid Ahmad Abdul Wajid** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the project work entitled “**Synthesis and nonlinear optical studies of pure and Strontium doped Zinc Thiourea Chloride crystals**” completed under the supervision of **Dr. G. G. MULEY sir** and submitted for the partial fulfilment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.

Date:

Place: Amravati.


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Certificate

This is to certify that **Ku. Namrata Ravindraro akarte** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the project work entitled “**Project report on a nonlinear optical crystal Zinc Thiourea Sulphate**” completed under the supervision of **Dr. G. G. MULEY sir** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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AMRAVATI, INDIA-444 602.**

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This is to certify that **Miss. Parinita P. Deshmukh** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020

Further it is certified that she has carried out the **Review and Seminar Report** entitled **“Study of Thermal conductivity of SnO₂-water based nanofluid”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty. The report is ready for evaluation.

Date: 20/09/2020


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Department of Physics
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Head Of Department

Dr. G.G. Muley

SGB Amravati university, Amravati

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AMRAVATI-444 602,INDIA


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This is to certify that Miss. Pooja V. Khadse is a bonafied student of this department studying in M.Sc.II (semester-IV) during the academic session 2019-2020.

Further, it is certified that she has carried out the project work entitled **“Thin Film Aluminum-Zinc Oxide (AZO) nanoparticles”**. Completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty of this university. The report is ready for evaluate.

Date:20/09/2020

Place:Amravati



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Amravati.

Head of Department

Dr. G.G. Muley

SGB Amravati University Amravati



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AMRAVATI, 444602

CERTIFICATE


This is to certify that **Miss. Prachi Rambhau Shirao** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled “**Antibacterial activity of Sodium Superoxide (NaO_2) Nanoparticles**” completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date: 20/09/2020

Place: Amravati


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Amravati - 444602

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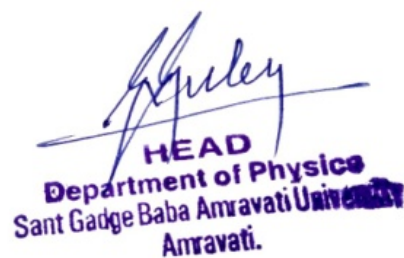
This is to certify that **Miss. Pranali Sitaram Hinge** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report entitled “Synthesis of Carbon Nanotubes for the Application of Battery Electrode”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation

Date: - 20/09/2020

Place: - Amravati



Head of Department

Dr. G.G. Muley.


CERTIFICATE

This is to certify that **Miss. Pranita Kashinathji Kodape.** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled **“Battery application of Nanoparticles”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty. The report is ready for evaluation.

Date:- 20/09/2020

Place:- Amravati


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Certificate

This is to certify that **Miss. Priya Kailas Akhare** is a bonafide student of this department studying in M.Sc.-II (Semester-III) during the academic session 2019-2020.

Further, it is certified that she has carried out the review work entitled “**Synthesis of pure and Na+Nd doped ZnS nanoparticles passivated with L-arginine**” completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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S.G.B. Amravati University, Amravati



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Sant Gadge Baba Amravati University
Amravati 444602


CERTIFICATE

This is to certify that **Miss. Priya Sanjayrao Kanade** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020. Further, it is certified that she has carried out the review work entitled **“Nonlinear Optical Properties of Cadmium Oxide nanoparticles ”** completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.

Date: 20/09/2020

Place: Amravati.


HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Head

**Department of Physics,
S.G.B. Amravati University, Amravati**

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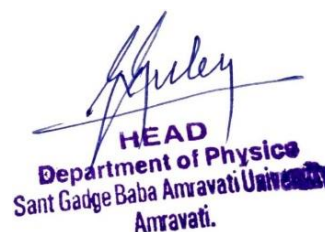
This is to certify that **Miss. Priyanka S. Dikondwar** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled on **“Application of Nanomaterials as a Gas Sensors”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date: -

Place: - Amravati



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Dr. G. G. Muley



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Certificate

This is to certify that is a bonafide student **Punam Baliram Wankhade** of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the review work entitled ***“Project on nonlinear optical properties of Cds nanoparticles”*** completed under the supervision of **Dr. G. G. Muley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Department of Physics
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Head
Department of Physics,
S.G.B. A. U. Amravati

CERTIFICATE


This is to certify that **Mr. Rahul D. Rathod** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Review and Seminar Report** entitled **“Application of Nanomaterial for Giant Magnetoresistance”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date: 20-09-2020

Place: Amravati


HEAD
Department of Physics
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Amravati.

Head



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SANT GADGE BABA AMRAVATI UNIVERSITY,
AMRAVATI, 444 602.

CERTIFICATE


This is to certify that **Miss. Renuka Nirmalkumar Yadav** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled “**Photovoltaic application of CdS Thin Film**” completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date: 20/9/220

Place: Amravati


HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati
Head of Department

Dr.G. G. Muley.

CERTIFICATE

This is to certify that **Miss. Samruddhi Anilrao Kadu** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project Report** entitled **“Nanocomposites for Supercapacitor Application”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc(Physics) in science faculty.

The report is ready for evaluation.

Date:- 20.09.2020

Place:- Amravati



Head of Department

Dr.G.G.Muley .



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Certificate

This is to certify that **Mr. Shivaji Lakshman Salwant** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that he has carried out the review work entitled “**Synthesis and study of non-linear optical properties of borate glasses**” completed under the supervision of **Dr. G. G. MULEY** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


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Department of Physics
Sant Gadge Baba Amravati University
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S.G.B. Amravati University, Amravati



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SANT GADGE BABA AMRAVATI UNIVERSITY
AMRAVATI**

CERTIFICATE


This is to certify that Miss. Shweta R. Waghmare is a bonafide student of this department studying in M.Sc.–II (Sem-VI) during the academic session 2019-2020.

Further it is certified that she has carried out the Project Report entitled **“Graphene oxide Nanocomposites for Antibacterial Activity”** completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date:-
20/09/2020

Place:- Amravati



HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Head of Department

Dr.G.G.Muley.



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Certificate

This is to certify that **Mr. Sumit Anil Borode** is a bonafide student of this department studying in M.Sc.-II (Semester-IV) during the academic session 2019-2020.

Further, it is certified that she has carried out the project work entitled **“To Study Non Linear Optical Properties of Tellurite Glasses”** completed under the supervision of **Dr. G. G. MULEY SIR** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in faculty of science.

The report is ready for evaluation.


HEAD
Department of Physics
Sant Gadge Baba Amravati University
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Head
Department of Physics,
S.G.B. Amravati University, Amravati

"4PHY6"

PROJECT REPORT

Entitled

**"METAL OXIDE NANOMATERIAL FOR HUMIDITY SENSING
APPLICATION"**

In the partial fulfillments of requirements
For
The award of degree of Master of science (M.Sc) in Physics

Submitted by:
MR. SURAJ VASANT TAYADE

Under the supervision of

Dr S.A.Waghuley
Assistant Professor



DEPARTMENT OF PHYSICS
SANT GADGE BABA AMRAVATI UNIVERSITY AMRAVATI



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SANT GADGE BABA AMRAVATI UNIVERSITY,

AMRAVATI, 444602

CERTIFICATE

This is to certify that **Miss. Vaishnavi Sanjay Raut** is a bonafide student of this department studying in M.Sc-II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried **Seminar Report** entitled "**Biocompatible Nanocomposite Ni doped ZnO**" completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty. The report is ready for evaluation.

Date:- 20/09/2020

Place :-
Amravati



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Head of department

Dr. G. G. Muley



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CERTIFICATE

This is to certify that **Miss. Vaishnavi Sanjay Raut** is a bonafide student of this department studying in M.Sc-II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried **Seminar Report** entitled "**Biocompatible Nanocomposite Ni doped ZnO**" completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfillment of the award of degree of M.Sc. (Physics) in science faculty. The report is ready for evaluation.

Date:- 29/09/2020

Place :-
Amravati

HEAD
Department of Physics
Sant Gadge Baba Amravati University
Amravati.

Head of department

Dr.G.G.Muley

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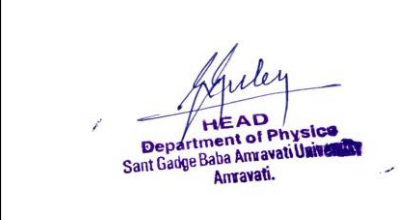
This is to certify that **Mr. Vivek Bharat Meshram** is a bonafide student of this department studying in M.Sc.–II (Sem-IV) during the academic session 2019-2020.

Further it is certified that she has carried out the **Project and Seminar Report** entitled “**Synthesis of graphene/graphene oxide and its application as water purifier**” completed under the supervision of **Dr. S. A. Waghuley** and submitted for the partial fulfilment of the award of degree of M.Sc. (Physics) in science faculty.

The report is ready for evaluation.

Date:-20/09/2020

Place:- Amravati



HEAD
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Head of Department
Dr.G.G.Muley.