



St Berchmans College

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College with Potential for Excellence | Reaccredited by NAAC with A Grade

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

CERTIFICATE

This is to certify that the project entitled "CHEMOSENSORS FOR METAL ION DETECTION"- A Review" is a bonafide work done JERIN JOSEPH (Reg. No. 11902101) is under the guidance of Dr. Renchu scaria , Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of degree, Bachelor of Science in Chemistry under the faculty of science, St. Berchmans Autonomous College, Changanassery.

Dr. Tomlal Jose

Head of the Department

Department of Chemistry

SB College, Changanassery

Place: Changanassery

Date: 5th May 2022



Dr. TOMLAL JOSE E.
Associate Professor & Head
Department of Chemistry
St. Berchmans College (Autonomous)
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Mob. 9447145098



St Berchmans College

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Founded 1922

CHANGANASSERY, KERALA

Certificate

This is to certify that **Kaja Sahib**, has worked on "A Study On Cure Characteristics And Mechanical Properties Of Graphene Filled Styrene Butadiene Rubber Nanocomposites." under the supervision of **Mr. Subin Joseph**, at St. Berchmans College, Changanassery for the partial fulfillment of the Bachelor Degree in Chemistry at St. Berchman's College, Changanassery, Kottayam during the year 2019-2022, of the Mahatma Gandhi University, is a genuine record of the project work carried out under my guidance.

Date: 12 May 2022
Place: Changanassery



Dr. Tomlal Jose E
Head of the Department,
Department of Chemistry
St. Berchmans College
Changanassery

Dr. TOMLAL JOSE E.
Associate Professor & Head
Department of Chemistry
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Certificate

I hereby certify that the project entitled “Carbon Quantum Dots” submitted by **Sony Mathew** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. SAM JOHN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

13 May 2022

Dr. Tomlal Jose E

Head of the Department

Dr. TOMLAL JOSE E.
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St Berchmans College

Founded 1992

AUTONOMOUS

College with Potential for Excellence | Reaccredited by NAAC with A Grade

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Changanassery, Kottayam, Kerala, India-686101

CERTIFICATE

This is to certify that the project entitled "CHEMOSENSORS FOR METAL ION DETECTION "- A Review" is a bonafide work done ANTO C MATHEW (Reg. No. 11902081) is under the guidance of Dr. Renchu Scaria , Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of degree, Bachelor of Science in Chemistry under the faculty of science, St. Berchmans Autonomous College, Changanassery.

Place: Changanassery

Date: 5th May 2022

Dr. Tomlal Jose

Head of the Department

Department of Chemistry

SB College, Changanassery



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DEPARTMENT OF CHEMISTRY
ST. BERCHMANS COLLEGE (AUTONOMOUS)

College with potential for Excellence. NAAC Reaccredited A Grade College


CHANGANASSERY-686101, Kerala, India

Phone: 0481-3012345, 2420025 Fax: 0481-2401472

CERTIFICATE

This is to certify that the project entitled 'A review on the impact of single-use plastics and personal protective equipment's in post Covid 19 era 'is a bonafide work done by THOMAS CHACKO (Reg. No. 11902091), under the supervision and guidance of Dr. Benny Thomas in partial fulfilment of the requirements for the award of Bachelor Degree of Science in Chemistry under the faculty of science, Mahatma Gandhi University, Kottayam




Dr. Tomlal Jose E

HOD, Department of Chemistry

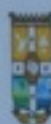
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St Berchmans College

AUTONOMOUS College with Special facilities for Students with Disabilities, Hostels, and a Club

Affiliated to Mahatma Gandhi University, Kottayam, Kerala

Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled **“Two photon Absorption and its Applications”** submitted by **Nikhumon Babu** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. AJITH R MALLIA**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

17 March 2022

Dr. Tomlal Jose E

Head of the Department



Dr. TOMLAL JOSE E.
Associate Professor & Head
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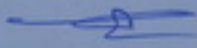
DEPARTMENT OF CHEMISTRY
ST. BERCHMANS COLLEGE (AUTONOMOUS)

College with potential for Excellence. NAAC Reaccredited A Grade College
CHANGANASSERY-686101, Kerala, India

CERTIFICATE

This is to certify that the project entitled 'FUEL CELLS' is a bonafide work done by
SREEJITH SASIDHARAN (11902090), *under the supervision and guidance*
of Prof ARAVIND.K impartial fulfillment of the requirements for the award of
Bachelor Degree of Science in Chemistry under the faculty of science, Mahatma
Gandhi University, Kottayam.

PLACE: CHANGANASSERY
DATE:


Dr TOMLALJOSE.E
HOD, Department of Chemistry
S B College, Changanasherry

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

CERTIFICATE

This is to certify that the project entitled "Green Synthesis of Nanoparticles- A Review" is a bonafide work done MUHAMMAD HASHIM K S (Reg. No. 11902086) is under the guidance of Dr. Sajini T, Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of degree, Bachelor of Science in Chemistry under the faculty of science, St. Berchmans Autonomous College, Changanassery.

Place: Changanassery

Date: 5th May 2022

Dr. Tomlal Jose E

Head of the Department

Department of Chemistry

SB College, Changanassery



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CHANGANASSERY, KERALA

CERTIFICATE

This is to certify that **ANATO JACOB**, has worked on “**Electrospinning Technique for the Production of Nanofibers**” under the supervision of **Dr. Tomlal Jose E**, at St. Berchmans College, Changanassery for the partial fulfillment of the Bachelor Degree in Chemistry at St. Berchman’s College, Changanassery, Kottayam during the year 2019-2022, of the Mahatma Gandhi University, is a genuine record of the project work carried out under my guidance.

Date : 11 May 2022
Place: Changanassery

Dr. Tomlal Jose E
Associate Professor
Department of Chemistry
St. Berchmans College
Changanassery

Dr. TOMLAL JOSE E.
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St Berchmans College

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "NATURAL FIBER COMPOSITES:EXTRACTION METHODS,CHEMICAL TREATMENTS AND APPLICATIONS" submitted by SHALIN SHAJAN for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of Dr. Benson Joseph, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

11 May 2022

Dr. Tomlal Jose E

Head of the Department



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Changanassery, Kottayam, Kerala, India-686101

CERTIFICATE

This is to certify that the project entitled "Green Synthesis of Nanoparticles- A Review" is a bonafide work done Alan Raju (Reg. No. 11902117) is under the guidance of Dr. Sajini T, Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of degree, Bachelor of Science in Chemistry under the faculty of science, St. Berchmans Autonomous College, Changanassery.

Place: Changanassery

Date: 5th May 2022

Dr. Tomlal Jose E

Head of the Department

Department of Chemistry

SB College, Changanassery



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Phone: 0481-3012345, 2420025 Fax: 0481-2401472

CERTIFICATE

This is to certify that the project entitled 'A review on the impact of single-use plastics and personal protective equipment's in post Covid 19 era 'is a bonafide work done by ADITHYAN.V(Reg. No. 11902077), under the supervision and guidance of Dr. Benny Thomas in partial fulfilment of the requirements for the award of Bachelor Degree of Science in Chemistry under the faculty of science, Mahatma Gandhi University, Kottayam



Dr. Tomlal Jose E

HOD, Department of Chemistry

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St Berchmans College

AUTONOMOUS

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "**Chelation Therapy**" submitted by **Amal M Nair** for the award of the Degree of Bachelor of Science is a record of Bonafide research work done by him. He has worked under the guidance of **Dr.CYRIL AUGUSTIN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

17 March 2022

Dr. Tomlal Jose E

Head of the Department



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St Berchmans College

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala

Certificate

This is to certify that the review entitled "**Natural Fibre Reinforced Composites**" is an authentic record carried out by **Naveen Jimmy** (Reg No:11902122) under the supervision of **Dr. Bejoy Francis**, Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

Dr. Tomlal Jose E

Head Department of Chemistry

Dr. TOMLAL JOSE E.
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St Berchmans College

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CHANGANASSERY, KERALA

Certificate

This is to certify that **Aswin Thankachan**, has worked on “**A Study On Cure Characteristics And Mechanical Properties Of Graphene Filled Styrene Butadiene Rubber Nanocomposites.**” under the supervision of **Mr. Subin Joseph**, at St. Berchmans College, Changanassery for the partial fulfillment of the Bachelor Degree in Chemistry at St. Berchman’s College, Changanassery, Kottayam during the year 2019-2022, of the Mahatma Gandhi University, is a genuine record of the project work carried out under my guidance.

Date: 12 May 2022
Place: Changanassery

Dr. Tomlal Jose E
Head of the Department,
Department of Chemistry
St. Berchmans College
Changanassery



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St Berchmans College

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College with Powers to Constitute/Discontinue by UAC, 2002, with a View

Affiliated to Mahatma Gandhi University, Kottayam, Kerala

Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled “**Two photon Absorption and its Applications**” submitted by **Ajay Krishnan** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. AJITH R MALLIA**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

17 March 2022



Dr. Tomlal Jose E

Head of the Department

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St Berchmans College

AUTONOMOUS

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Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled “**Application of Chemistry in Development of Fingerprints**” submitted by **BRAYAN SEBASTIAN MUKKADAN** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. JINESH M. KUTHANAPILLIL**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

17 March 2022

Dr. Tomlal Jose E

Head of the Department



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St Berchmans College

AUTONOMOUS (Affiliated with Mahatma Gandhi University, Kottayam, Kerala)

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "Carbon Quantum Dots" submitted by **Thomas Sebastian** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. SAM JOHN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

13 May 2022

Dr. Tomlal Jose E

Head of the Department



Dr. TOMLAL JOSE E,
Associate Professor & Head
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Email: tomlal.jose@sbccollege.ac.in
Mobile: 9447145098

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St Berchmans College

AUTONOMOUS College with facilities for Graduate (Sciences) Undergraduate (B.A.C. with 4 Years)

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled “**Carbon Quantum Dots**” submitted by **Rahul Muraleedharan** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. SAM JOHN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

13 May 2022

Dr. Tomlal Jose E

Head of the Department

DEPARTMENT OF CHEMISTRY

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St Berchmans College

AUTONOMOUS College with Potential for Excellence, Accredited by NAAC with A Grade

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "**Carbon Quantum Dots**" submitted by **Sony Mathew** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. SAM JOHN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

13 May 2022

Dr. Tomlal Jose E

Head of the Department

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St Berchmans College

AUTONOMOUS

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "NATURAL FIBER COMPOSITES:EXTRACTION METHODS,CHEMICAL TREATMENTS AND APPLICATIONS" submitted by NITHIN K VARGHESE for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of Dr. Benson Joseph, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

11 May 2022

Dr. Tomlal Jose E

Head of the Department



Dr. TOMLAL JOSE E.
Associate Professor & Head
Department of Chemistry
St. Berchmans College (Autonomous)
Changanassery, Kerala-686101
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St Berchmans College

AUTONOMOUS

Affiliated to Mahatma Gandhi University, Kottayam, Kerala

Certificate

This is to certify that the review entitled "**Natural Fibre Reinforced Composites**" is an authentic record carried out by **Daine Babychen** (Reg No:11902082) under the supervision of **Dr. Bejoy Francis**, Assistant Professor, Department of Chemistry, in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

Dr. Tomlal Jose E

Head Department of Chemistry

Dr. TOMLAL JOSE E.
Associate Professor & Head
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Mob: 9447226098

Date: 11/05/2022



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St Berchmans College

AUTONOMOUS

College established by the Government of Kerala in 1964

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled "NATURAL FIBER COMPOSITES:EXTRACTION METHODS,CHEMICAL TREATMENTS AND APPLICATIONS" submitted by JORTIN K SEBASTIAN for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of Dr. Benson Joseph, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

11 May 2022

Dr. Tomlal Jose E

Head of the Department



Dr. TOMLAL JOSE E.
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CHANGANASSERY, KERALA

Certificate

This is to certify that **Aby Anil**, has worked on “**A Study On Cure Characteristics And Mechanical Properties Of Graphene Filled Styrene Butadiene Rubber Nanocomposites**” under my supervision for the partial fulfillment of the Bachelor Degree in Chemistry at St. Berchman’s College, Changanassery, Kottayam during the year 2019-2022, of the Mahatma Gandhi University, is a genuine record of the project work carried out under my guidance.

Date : 12 May 2022
Place: Changanassery

Mr. Subin Joseph
Assistant Professor,
Department of Chemistry
St. Berchmans College
Changanassery

DEPARTMENT OF CHEMISTRY

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St Berchmans College

AUTONOMOUS Under the Faculty of Science, Mahatma Gandhi University

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled **"NON-THERMAL EFFECTS OF MICROWAVES IN ORGANIC SYNTHESIS"** submitted by **ANAND. K.P** for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of **Dr. SHIJO K CHERIAN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

Dr. Tomlal Jose E

Head of the Department



Dr. TOMLAL JOSE E.
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St Berchmans College

AUTONOMOUS

Affiliated to Mahatma Gandhi University, Kottayam, Kerala
Changanassery, Kottayam, Kerala, India-686101

Certificate

I hereby certify that the project entitled “**Chelation Therapy**” submitted by **Amal Raji** for the award of the Degree of Bachelor of Science is a record of Bonafide research work done by him. He has worked under the guidance of **Dr.CYRIL AUGUSTIN**, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

Changanassery

17 March 2022

Dr.Tomlal Jose E

Head of the Department





St Berchmans College
founded 1922

AUTONOMOUS

College with Potential for Excellence | Reaccredited by NAAC with A Grade

CHANGANASSERY, KERALA

Certificate

This is to certify that the project entitled **"RECENT ADVANCES AND APPLICATIONS OF BIOPOLYMERS"** is a bonafide work done by **Aby Thomas (Reg. No:11902092)**, under the supervision and guidance of **Dr. Ajith James Jose** in partial fulfillment of the requirements for the award of Bachelor Degree of Science in Chemistry under the faculty of science, Mahatma Gandhi University, Kottayam.

Changanassery

Dr. Tomlal Jose
Head of the Department
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This is to certify that the project entitled **“RECENT ADVANCES AND APPLICATIONS OF BIOPOLYMERS”** is a bonafide work done by **Akhil A Kolathu (Reg. No:11902078)**, under the supervision and guidance of **Dr. Ajith James Jose** in partial fulfillment of the requirements for the award of Bachelor Degree of Science in Chemistry under the faculty of science, Mahatma Gandhi University, Kottayam.

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I hereby certify that the project entitled "NON-THERMAL EFFECTS OF MICROWAVES IN ORGANIC SYNTHESIS" submitted by DONALD RICHARD for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of Dr. SHIJO K CHERIAN, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

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I hereby certify that the project entitled “Application of Chemistry in Development of Fingerprints” submitted by Alexander P Prasad for the award of the Degree of Bachelor of Science is a record of bonafide research work done by him. He has worked under the guidance of Dr. JINESH M. KUTHANAPILLIL, Assistant Professor at this Department. The results presented in this report have not been submitted in part or full to any other University or Institute for the award of any other degree or diploma.

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17 March 2022



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