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# MSc CHEMISTRY

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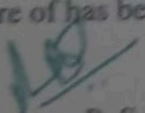
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DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that the dissertation work entitled 'Design and Development of CuO incorporated  $\text{Fe}_2\text{O}_3\text{TiO}_2@ \text{NiP}/\text{Cu}$  Plates for Sustainable Photo catalytic and Electro catalytic Water Splitting Reactions.' here with submitted by Alfiya N for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of Dr. Arun P. S., Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part there of has been presented before for any other degree.


  
Dr. Arun P. S.

Assistant Professor

Department of Chemistry

St. John's College, Anchal



  
Simi Saju

Head of the Department

Department of Chemistry

St. John's College, Anchal



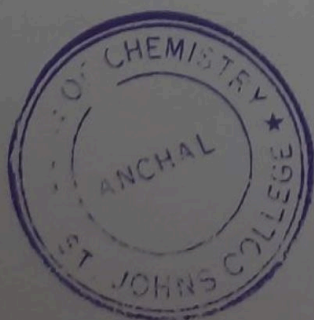
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KOLLAM, KERALA**

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**DEPARTMENT OF CHEMISTRY**

**CERTIFICATE**

This is to certify that the dissertation work entitled '**Photocatalytic dye degradation with Silver doped Alumina Copper oxide Nanocomposite materials**' here with submitted by **Alfiya R** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of Simi Saju, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.



**Simi Saju**

**Assistant Professor**

**St. John's College,**

**Anchal, Kollam**



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DEPARTMENT OF CHEMISTRY

**CERTIFICATE**

This is to certify that the dissertation work entitled "Synthesis and Characterisation of  $\text{NiTiO}_3$  Nanoparticles for Photocatalytic Hydrogen Production" here with submitted by **APARNA VIJAYAKUMAR** (63521138003) for the partial fulfilment of the requirements for the award of degree of Master of Science in Chemistry of the University of Kerala is an authentic record of work carried out by her under the supervision of Dr. Thomas Mathew, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part has been presented before for any other degree.

**Dr. Thomas Mathew**  
Assistant Professor  
Department of Chemistry  
St. John's College Anchal



**Mrs. Simi Saju**  
Head of the Department  
Department of Chemistry  
St. John's College Anchal



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This is to certify that the dissertation work entitled “**Synthesis, Characterization And Antibacterial Activity Of Cobalt (II) Complex With The Schiff base N-Salicylidene – p- aminophenol**” submitted here by **ATHULYA L PILLAI** in partial fulfilment of Degree of Master of Science in Chemistry of the University of Kerala, is an authentic record of the work carried out by her under the supervision of **Simi Saju**, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.



**Dr. Niecy Elsa Mathews**  
Assistant professor  
St John's college,  
Anchal, Kollam



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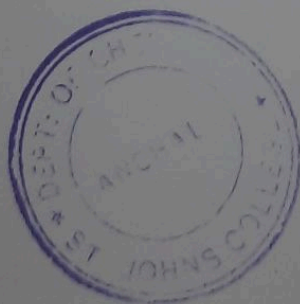
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**DEPARTMENT OF CHEMISTRY**

### **CERTIFICATE**

This is to certify that the dissertation work entitled '**Photo/electrochemical study of silver doped alumina copper oxide and alumina iron oxide nanocomposite materials**' here with submitted by **Rajalekshmi M. R.** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of Simi Saju, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.



**Simi Saju**

**Assistant Professor**

**St. John's College,**

**Anchal, Kollam**



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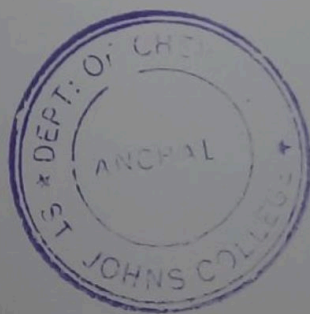
This is to certify that the dissertation work entitled the '**Synthesis, Characterization and Photocatalytic application of  $\text{CuTiO}_3$  Nanoparticles**' here with submitted by **Sajitha Beevi S.** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of **Dr. Thomas Mathew**, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.

**Dr. Thomas Mathew**

**Assistant Professor**

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**Mrs. Simi Saju**

**Head of the Department**

**Department of Chemistry**

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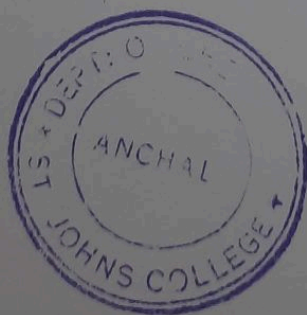
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DEPARTMENT OF CHEMISTRY

### CERTIFICATE

This is to certify that the dissertation work entitled the '**Development of ZnO incorporated NiFeO<sub>x</sub> @NiP Plates for Photo and Electro catalytic Water Splitting.**' here with submitted by **SIJI THOMAS** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of Dr. Arun P. S., Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.

**Dr. Arun P. S.**  
Assistant Professor  
Department of Chemistry  
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Head of the Department  
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**CERTIFICATE**

This is to certify that the dissertation work entitled "**Synthesis, Characterization and Total Antioxidant Capacity (TAC) studies of N-salicylidene-p-aminophenol Schiff base ligand and its copper complex**" submitted here by **SREELEKSHMI M** in partial fulfilment of Degree of Master of Science in Chemistry of the University of Kerala, is an authentic record of the work carried out by her under the supervision of Niecy Elsa Mathews, Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.



**Dr. Niecy Elsa Mathews**

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**DEPARTMENT OF CHEMISTRY**

**CERTIFICATE**

This is to certify that the dissertation work entitled '**SYNTHESIS, CHARACTERISATION AND ANTIFUNGAL STUDIES OF SCHIFF BASE LIGAND AND ITS NICKEL(II) COMPLEX**' here with submitted by **Megha Binu** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of **Niecy Elsa Mathews**, Assistant Professor, Department of Chemistry, St. John's college, Anchal during the academic year 2021-2023 and no part thereof has been presented before for any other degree.



**DR NIECY ELSA MATHEWS**

Assistant professor

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Anchal, kollam



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DEPARTMENT OF CHEMISTRY

### CERTIFICATE

This is to certify that the dissertation work entitled **ZINC OXIDE INCORPORATED  $MnO_2-CoO_x$  @ NIP COATING FOR HIGHLY EFFICIENT PHOTO AND ELECTRO CATALYTIC WATER SPLITTING** here with submitted by **NAJIHA.R.** for the award of Degree of Master of Science in Chemistry of the University of Kerala is an authentic record of the work carried out by her under the supervision of Dr. Arun P. S., Assistant Professor, Department of Chemistry, St. John's College, Anchal during the academic year 2021-2023 and that no part thereof has been presented before for any other degree.

*AP*  
Dr. Arun P. S.

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*Spmi Saju*  
Mrs. Spmi Saju

~~Dr. Thomas Mathew~~

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