

**GROWTH AND CHARACTERIZATION OF  $CuS$  THIN  
FILMS BY CHEMICAL BATH DEPOSITION  
A PROJECT REPORT SUBMITTED TO  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



FOR THE DEGREE OF  
**MASTER OF SCIENCE**  
IN  
**PHYSICS**

UNDER THE FACULTY OF SCIENCE

BY

**Miss. DEVTARSE KAVERI BABASAHEB**

*Department of Physics, Arts, Commerce and Science College, Sonai*

UNDER THE GUIDANCE OF

**Dr. SADEKAR H.K**

DEPARTMENT OF PHYSICS,  
ARTS, COMMERCE AND SCIENCE COLLEGE, SONAI  
SONSI-414105


**2022-23**

Seat No.

SAVITRIBAI PHULE PUNE UNIVERSITY

**BONAFIDE CERTIFICATE**

This is to certify that the work incorporated in the project report entitled "**Growth and Characterization of CuS Thin Films by Chemical Bath Deposition**" submitted to Savitribai Phule Pune University, Pune, is benefited work of **Mis Devtarse Kaveri Babasaheb** of during the academic year 2022-23, who carried out the project work under my supervision

  
**Dr. Sadekar H.K.**

Department of Physics  
Arts, Commerce and Science College  
Sonai-414105  
Date-

*Darandalemp.*  
*23/05/2023*  
Internal Examiner

Date

  
**Dr. Sadekar H.K.**

**Head**  
Department of Physics  
Arts, Commerce and Science College,  
Sonai-414105

  
External Examiner

## ACKNOWLEDGEMENT

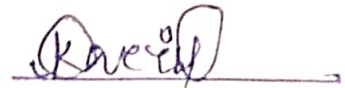
I wish to thank the Principal **Dr. Shankar Laware** of my college for permitting me to use all the facilities available in the institution for my project work. I would also like thank the Head of the Physics Department **Dr. Sadekar H.K.**, the teaching faculty and all the non-teaching staff of my college for their support in completing the work successfully.

I am grateful to my Guide **Dr.Sadekar H.K** for his encouragement, guidance and supervision of my project work during the year. I must acknowledge the financial support given to this project by my parent without which it would have been difficult to complete the work in time.

My classmates have been of great help to me the project work. My ideas were shaped and refined progressively through my discussions with them from time to time. I cannot miss to thank them all. There were some persons like **Prof. Darandale M.P**, who were directly but indirectly involved in my preparatory/practical work. I appreciate their contribution and thank them too.

**Place: Sonai**

**Date: 23 - 05 - 2023**



**Signature of Research Student**

**Miss. Devtarse K.B.**