

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



**FOR THE DEGREE OF
BACHELOR OF SCIENCE
IN
PHYSICS
UNDER THE FACULTY OF SCIENCE
BY
Miss. AUTI SOMNATH UTTAM**

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

**UNDER THE GUIDANCE OF
Dr. SADEKAR H.K.**

M.Sc., M.Phil, Ph.D

**HEAD
DEPARTMENT OF PHYSICS,
ARTS, COMMERCE AND SCIENCE COLLEGE, SONAI**

MARCH-2021

Seat No.

43708

SAVITRIBAI PHULE PUNE UNIVERSITY

BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project report entitled "**GROWTH AND CHARACTERIZATION OF Pbs THIN FILMS BY CHEMICAL BATH DEPOSITION**" submitted to Savitribai Phule Pune University, Pune, is benefited work of **Mr. Auti Somnath Uttam** of B.Sc. (Physics) during the Academic year 2020-21, who carried out the project work under my supervision.



Dr. Sadekar H.K.

Guide

Department of Physics

Arts, Commerce and Science College, Sonai

Sonai-414105



Dr. Sadekar H.K.

Head

Department of Physics

Arts, Commerce and Science College,

Sonai-414105



Internal 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 to 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 in 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. Virkar A.A., Prof. Bhakare C.H., Prof. Shelke A.T.** who were directly but indirectly involved in my preparatory/practical work. I appreciate their contribution and thank them too.



Place: Sonai

Date: 8/7/2021

Signature of Research Student

Miss. Auti Somnath Uttam

(T.Y.B.Sc. Physics)