

**Development of suitable ferroelectric nanocomposites in thin film  
form for energy applications**

**Thesis submitted for the partial fulfillment of the requirements for  
the degree Doctor of Philosophy in Science**

**by**

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**Kolkata, India**

**2022**

**Thesis Title: Development of suitable ferroelectric nanocomposites in thin film form for energy applications**

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# Declaration

I hereby declare that this thesis contains original research work carried out by me under the guidance of Dr. Rabindra Nath Gayen, assistant professor, Dept. of Physics, Presidency University, Kolkata, India as part of the Ph.D. program.

All information in this document has been obtained and presented in accordance with academic rules and ethical conduct.

I also declare that, as required by these rules and conduct, I have fully cited and referenced all materials and results that are not original to this work.

I also declare that this work has not been submitted for any degree either in part or in full to any other institute or University before.

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## *Dedication*

**This work is dedicated to my parents**

# Certificate

This is to certify that the thesis entitled “Development of suitable ferroelectric nanocomposites in thin film form for energy applications” submitted by Shri Eheta Samul Kadir, who got his name registered for PhD programme under my supervision (Registration Number R-18RS09160149 and date of registration 28.08.2019.) and that neither his thesis nor any part of the thesis has been submitted for any degree/diploma or any other academic award anywhere before.

  
Signature of the Supervisor 06.12.22

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# Acknowledgments

Studies presented in thesis titled “Development of suitable ferroelectric nanocomposites in thin film form for energy applications” was commenced in October 2018 under supervision of Dr. Rabindra Nath Gayen at the Department of Physics, Presidency University. A brief elucidation of the work performed is described in the “Abstract”.

The author is extremely grateful to Dr. R. N. Gayen for his proficient guidance, expert advice and continuous encouragement in performing this work.

The author expresses his gratitude to Dr. R. Paul, Dr. S. Biswas and Dr. M. Pal Chowdhury for their valuable cooperation and active participation in executing this work. The author wishes to thank all the members of the Department of Physics, Presidency University for their constant help and providing instrumental facilities throughout the period. Author is thankful to The Central Instrumentation Laboratory and Department of Chemistry, Kalyani University for providing necessary facilities for XRD, SEM and FTIR measurements.

The author is extremely gratified to Council of Scientific & Industrial Research (CSIR), Government of India for providing research fellowship (file no. 08/155(0070)/2019-EMR-I). Author is also thankful to Presidency University (FRPDF grant to RNG) and DST-FIST, Govt. of India (SR/FST/PSI-188/2013) for their financial support to execute this work. Author is also thankful to Mr. M. Chakraborty for his assistance in laboratory work. Finally, yet importantly author expresses his wholehearted gratitude to parents, family members, friends and well-wishers for their moral support without which it won't be possible to accomplish.

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