

# Project Mapping - Project Report - Physics (2015-2016)



**ARULMIGU PALANIANDAVAR COLLEGE OF ARTS AND CULTURE**

(Reaccredited with "A" Grade by NAAC)

Run by Arulmigu Bhandayanthapani Swamy Thirakkoti, H.E & C.E Dept. Government of Tamilnadu

A Government Aided College - Affiliated to Madurai Kamaraj University, Madurai

Dindigul Road, Palani - 624601



## 1.3 CURRICULUM ENRICHMENT - SUPPORTIVE DOCUMENTS

DEPARTMENT: PHYSICS

CLASS: II M.Sc. PHYSICS

YEAR: 2015-2016

S.No.	UNIVERSITY REG. No.	NAME OF THE STUDENT	NAME OF THE PROJECT GUIDE	TITLE OF THE PROJECT
1	B4E16001	CHITRA. S	Dr. M. RAMESH BABU	STRUCTURAL ANALYSIS OF TiO <sub>2</sub> THIN FILM
2	B4E16002	MAHALAKSHMI. S	Mrs. R. PREMILA	LI ION CONDUCTION IN PMMA/PVC BASED BLEND ELECTROLYTES FOR SECONDARY BATTERY APPLICATION
3	B4E16003	MUTHUSELVI. S	Mr. K. KULATHURAN	SURFACE, MORPHOLOGICAL AND OPTICAL PROPERTIES OF POROUS SILICON TREATED WITH POLYVINYL PYROLIDINE (PVP)
4	B4E16004	SANGEETHA. M	Mr. V. RAMALINGAM	ULTRASONIC STUDY OF MOLECULAR INTERACTION IN BINARY LIQUID MIXTURE AT ROOM TEMPERATURE
5	B4E16005	SASIKALA. V	Dr. P. KOKILA	STRUCTURAL ANALYSIS OF TiO <sub>2</sub> THIN FILM ON ANNEALING TEMPERATURE
6	B4E16006	SUKANYA. P	Mr. V. RAMALINGAM	ULTRASONIC STUDY OF MOLECULAR INTERACTION IN BINARY LIQUID MIXTURE AT ROOM TEMPERATURE
7	B4E16007	ARUNKUMAR. K	Mr. K. PAKIYARAJ	PREPARATION AND CHARACTERIZATION OF Al-SnO <sub>2</sub> THIN FILM BY SPRAY PYROLYSIS TECHNIQUE
8	B4E16008	ARUNKUMAR. P	Mrs. M. SUBHA	GROWTH STRUCTURAL, SPECTRAL, OPTICAL, ELECTRICAL AND POWDER SHG STUDIES OF SALICYLIC ACID SINGLE CRYSTALS
9	B4E16009	BALAJI. A	Mrs. R. PREMILA	LI ION CONDUCTION IN PMMA/PVC

*L. J. Sanyal*  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
 of Arts & Culture,  
 PALANI - 624601

				BASED BLEND ELECTROLYTES FOR SECONDARY BATTERY APPLICATION
10	B4E16010	BALAJI. R	Dr. P. KOKILA	ANALYSIS OF TiO <sub>2</sub> THIN FILM PHASE TRANSITION BASED ON DIPPING LAYER THICKNESS
11	B4E16011	DURASITRARASU. S	Mrs. M. SUBHA	GROWTH STRUCTURAL, SPECTRAL, OPTICAL, ELECTRICAL AND POWDER SHG STUDIES OF SALICYLIC ACID SINGLE CRYSTALS
12	B4E16012	MUTHUKUMAR. A	Mr. K. KULATHURAN	SURFACE, MORPHOLOGICAL AND OPTICAL PROPERTIES OF POROUS SILICON TREATED WITH POLYVINYL PYROLIDINE (PVP)
13	B4E16014	SATHEES. P	Dr. M. RAMESH BABU	MORPHOLOGICAL ANALYSIS OF TiO <sub>2</sub> THIN FILM BY SOL GEL DIP COATING METHOD
14	B4E16015	SUNDHARAVADIV EL. P	Mr. K. PAKIYARAJ	PREPARATION AND CHARACTERIZATION OF Al-SnO <sub>2</sub> THIN FILM BY SPRAY PYROLYSIS TECHNIQUE

  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
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# PG - PROJECT REPORT-(2015 – 2016) - BATCH

APPENDIX A

**MADHVAJ KUMARJI UNIVERSITY**  
*University with Potential for Excellence*

Faculty of Education, Department of Education

A Scheme of Studies for PG Project Report

(To be followed for those who did their PG Project in 2015)

Sl. No.	Topic	Assessment	Mark	Total
1	Introduction	10	10	10
2	Background	10	10	20
3	Methodology	10	10	30
4	Results and Discussion	10	10	40
5	Conclusion	10	10	50
6	References	10	10	60
7	Appendix	10	10	70
8	Total			70

Sl. No.	Topic	Assessment	Mark	Total
1	Introduction	10	10	10
2	Background	10	10	20
3	Methodology	10	10	30
4	Results and Discussion	10	10	40
5	Conclusion	10	10	50
6	References	10	10	60
7	Appendix	10	10	70
8	Total			70

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6	References	10	10	60
7	Appendix	10	10	70
8	Total			70

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2	Background	10	10	20
3	Methodology	10	10	30
4	Results and Discussion	10	10	40
5	Conclusion	10	10	50
6	References	10	10	60
7	Appendix	10	10	70
8	Total			70

1

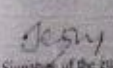
**CHITRA. S**  
**B4E16001**

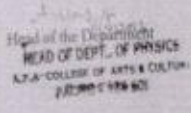
**UNDER THE GUIDANCE OF**  
**Dr. M. RAMESH BABU**

**CERTIFICATE**

This is to certify that the dissertation entitled " **STRUCTURAL ANALYSIS OF TIO, THIN FLIM** ", is a benefited record of the original research work done by Miss. **S.CHITRA ( REG.NO B4E16001)**, during the Academic year July 2015 to April 2016 of his study in the Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani, under my guidance and the Project work has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship of similar title to any candidate of any University.

Place : Palani  
 Date :

  
 Signature of the guide  
**Dr. M. RAMESH BABU**

  
 Head of the Department  
**HEAD OF DEPT. OF PHYSICS**  
 A.C.A. COLLEGE OF ARTS & CULTURE  
 PALANI - 624 601

  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
 of Arts & Culture,  
 PALANI - 624 601

<p>2</p>	<p><b>MAHALAKSHMI. S B4E16002</b></p> <p><b>UNDER THE GUIDANCE OF Mrs. R. PREMILA</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "EFFECT OF TEMPERATURE ON THE IONIC CONDUCTION IN PVA-GELATED BLEND ELECTROLYTES FOR SECONDARY BATTERY" submitted work done by Ms. A. SALANI (REG NO: B4E16002) and Ms. MAHALAKSHMI S (REG NO: B4E16002), Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani-624 601 was submitted for the partial fulfillment of the requirements of degree of Master of Science in Physics in the Madurai Kamaraj University, Madurai, under the supervision of Mrs. R. Premila during the academic year 2015-2016.</p> <p>This dissertation is an original work of the candidate and in the best of my knowledge has not been submitted in part or in full, for any diploma, associate degree, bachelors degree or for any other university. No portion of the dissertation is a reproduction of any other source, published or unpublished without acknowledgement.</p> <p style="text-align: right;">(R. PREMILA) Date: 11/04/16</p> <p style="text-align: center;">HEAD OF DEPT. OF PHYSICS A.P.A. COLLEGE OF ARTS &amp; CULTURE PALANI - 624 601</p>
<p>3</p>	<p><b>MUTHUSELVI. S B4E16003</b></p> <p><b>UNDER THE GUIDANCE OF Mr. K. KULATHURAN</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "STRUCTURAL AND OPTICAL PROPERTIES OF POROUS SILICON TREATED WITH POLYVINYL TERBOLOHOLONE (PVP)" submitted work done by Mrs. MUTHUSELVI S (REG NO: B4E16003) and Mr. MUTHU KULATHURAN (REG NO: B4E16003), Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani-624 601 was submitted for the partial fulfillment of degree of Master of Science in Physics in the Madurai Kamaraj University, Madurai, under the supervision of Mr. K. Kulathuran during the academic year 2015-2016.</p> <p>This dissertation is an original work of the candidate and in the best of my knowledge has not been submitted in part or in full, for any diploma, associate degree, bachelors degree or for any other university. No portion of the dissertation is a reproduction of any other source, published or unpublished without acknowledgement.</p> <p style="text-align: right;">(K. KULATHURAN) Date: 11/04/16</p> <p style="text-align: center;">HEAD OF DEPT. OF PHYSICS A.P.A. COLLEGE OF ARTS &amp; CULTURE PALANI - 624 601</p>


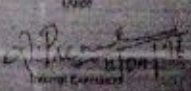
  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
 of Arts & Culture,  
 PALANI - 624 601

4	<p><b>SANGEETHA. M</b>  <b>B4E16004</b></p> <p><b>UNDER THE GUIDANCE OF</b>  <b>Mr. V. RAMALINGAM</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "ULTRASONIC STUDY OF MOLECULAR INTERACTION IN BINARY LIQUID MIXTURE AT ROOM TEMPERATURE" is a bonafide work done by Mrs. M. SANGEETHA (REG. NO. B4E16004) and Mrs. P. SUGANYA (REG. NO. B4E16006), Department of physics, Arulmigu Palaniandavar College of Arts and Culture, Palani. Department of physics, Arulmigu Palaniandavar College of Arts and Culture, Palani. And submitted to Madurai Kamaraj University in partial fulfillment of the requirement for the degree for Master of Science in Physics under the supervision and guidance during academic year 2014-2016.</p> <p>This dissertation is an original work of the candidate to the best of my knowledge and has not been submitted in part or in full for any diploma, degree, associate ship, Fellowship or any other title in this or any other university. No portion of the dissertation is a reproduction of any other than sources published or unpublished without acknowledgement.</p> <p>Place: Palani  Date: 22/04/2016</p> <p style="text-align: center;">SIGNATURE OF THE GUIDE:</p> <p style="text-align: center;">HEAD OF THE DEPARTMENT <span style="float: right;">INTERNAL EXAMINATOR</span></p>
5	<p><b>SASIKALA. V</b>  <b>B4E16005</b></p> <p><b>UNDER THE GUIDANCE OF</b>  <b>Dr. P. KOKILA</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "STRUCTURAL ANALYSIS OF TiO<sub>2</sub> THIN FILM ON ANNEALING TEMPERATURE", is a bonafide record of the original research work done by Miss. V.SASIKALA ( REG.NO. B4E16005), during the Academic year July 2015 to April 2016 of his study in the Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani, under my guidance and the Project work has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship of similar title to any candidate of any University.</p> <p>Place: Palani  Date:</p> <p style="text-align: center;">Head of the Department  <b>HEAD OF DEPT. OF PHYSICS</b>  <b>ARULMIGU PALANIANDAVAR COLLEGE OF ARTS &amp; CULTURE</b>  <b>PALANI - 624 601</b></p> <p style="text-align: center;">Signature of the guide  <b>Dr. P. KOKILA</b></p>

  
**PRINCIPAL**  
**Arulmigu Palaniandavar College**  
**of Arts & Culture,**  
**PALANI - 624 601.**

<p>6</p>	<p>SUKANYA. P B4E16006</p> <p>UNDER THE GUIDANCE OF Mr. V. RAMALINGAM</p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled, "ULTRASONIC STUDY OF MOLECULAR INTERACTION IN BINARY LIQUID MIXTURE AT ROOM TEMPERATURE" is a bonafide work done by Mrs. M. SANGEETHARAJU, B4E16006 and Mrs. P. SUKANYA (REG. NO. B4E16006), Department of physics, Arulmigu Palaniandavar College of Arts and Culture, Palani. Department of physics, Arulmigu Palaniandavar College of Arts and Culture, Palani. And submitted to Arulmigu Palaniandavar College of Arts and Culture in partial fulfillment of the requirement for the degree for Master of Science in Physics under the supervision and guidance during academic year 2014-2015.</p> <p>The dissertation is an original work of the candidate to the best of my knowledge and has not been submitted in part or in full for any diploma, degree, associate ship, fellowship or other similar titles in this or any other university. No portion of the dissertation is a reproduction of any other work, published or unpublished without acknowledgment.</p> <p>Place: Palani Date: 11/04/2016</p> <p style="text-align: center;">SIGNATURE OF THE GUIDE</p> <p style="text-align: center;">SIGNATURE OF THE DEPARTMENT HEAD</p> <p style="text-align: right;">INTERNAL EXAMINER</p>
<p>7</p>	<p>ARUNKUMAR. K B4E16007</p> <p>UNDER THE GUIDANCE OF Mr. K. PAKIYARAJ</p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "PREPARATION AND CHARACTERIZATION OF ALNAIL THIN FILM BY SPRAY PYROLYSIS TECHNIQUE" is a bonafide work of the original research work done by Mr. A. SUNDARAJADEVI (REG. NO. B4E16007) &amp; Mr. K. ARUNKUMAR (REG. NO. B4E16007) during the Academic year July 2012 to April 2016 of his study in the Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani, under the guidance and the funding from her own limited fund for the award of the Degree / Diploma / Associate ship / Fellowship or similar title to any candidate of any University.</p> <p>Place: Palani Date: 13/04/16</p> <p style="text-align: center;">SIGNATURE OF THE GUIDE</p> <p style="text-align: center;">SIGNATURE OF THE DEPARTMENT HEAD</p> <p style="text-align: right;">INTERNAL EXAMINER</p>

  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
 of Arts & Culture,  
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<p>8</p>	<p>ARUNKUMAR. P B4E16008</p> <p>UNDER THE GUIDANCE OF Mrs. M. SUBHA</p>	<p>Dr. M. SUBHA, Assistant Professor Department of physics Arulmigu Palaniandavar College of Arts and culture, Palani - 624601</p> <p><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "Growth, Structural, Spectral, Optical, Electrical and Powder XRD Studies of Salicylic Acid Single Crystals" submitted in the partial fulfillment of the requirements for the Degree of Master of Philosophy is a bonafide work done by <b>P. ARUNKUMAR</b> (Reg. No. B4E16008) under my guidance during the academic year 2015-2016.</p> <p>Palani, Palani</p> <p>Date: 11/04/16</p>  <p>(Dr. M. SUBHA)</p>
<p>9</p>	<p>BALAJI. A B4E16009</p> <p>UNDER THE GUIDANCE OF Mrs. R. PREMILA</p>	<p><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "LIJON CONDUCTION IN PEG-DMSO BASED BLEND ELECTROLYTES FOR SECONDARY BATTERY" submitted with title by <b>M. A. BALAJI</b> (REGNO B4E16009) and REGNO B4E16002; Department of Physics, Arulmigu Palaniandavar College, Palani-624 601 and submitted for the partial fulfillment of the requirements for the Degree of Master of Philosophy to the Madurai Kamaraj University, Madurai, under my guidance and patronage during the academic year 2015-2016.</p> <p>The dissertation is an original work of the candidate and is the best of my knowledge submitted in part or in full, for any diploma, associate ship, fellowship or any other work in this or any other university. No portion of the dissertation is a reproduction of any other work, published or unpublished without acknowledgement.</p> <p>Palani, Palani</p> <p>Date: 11/04/16</p> <p>HEAD OF DEPT. OF PHYSICS A.P.A. COLLEGE OF ARTS &amp; CULTURE PALANI - 624 601</p>  <p>(R. PREMILA)</p>

*L. Samp*

**PRINCIPAL**  
Arulmigu Palaniandavar College  
of Arts & Culture,  
PALANI - 624 601.

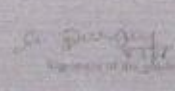
10	<p><b>BALAJI. R</b> <b>B4E16010</b></p> <p><b>UNDER THE GUIDANCE OF</b> <b>Dr. P. KOKILA</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "ANALYSIS OF THO- THIN FLIM PHASE TRASITION BASED ON DIPPING LAYERS THICKNESS", is a bonafied record of the original research work done by Mr. R.BALAJI ( REG. NO. B4E16010), during the Academic year July 2015 to April 2016 of his study in the Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani, under my guidance and the Project work has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship of similar title to any candidate of any University.</p> <p>Place: Palani Date: 12/09/2016</p> <p>Head of the Department HEAD OF DEPT. OF PHYSICS A.P.A. COLLEGE OF ARTS &amp; CULTURE PALANI - 624 601</p> <p style="text-align: right;">Signature of the guide Dr. P. Kokila</p>
11	<p><b>DURASITRARASU. S</b> <b>B4E16011</b></p> <p><b>UNDER THE GUIDANCE OF</b> <b>Mrs. M. SUBHA</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that this dissertation entitled "Growth Structural, Spectral, Optical, Electrical and Powder SHG Studies of Salicylic Acid Single Crystals" submitted in the partial fulfillment of the requirements for the Degree of Master of Philosophy is a bonafide work done by S.DURAI SITRARASU (Reg. No: B4E16011) under my guidance during the academic year 2015 - 2016.</p> <p>Place: Palani Date: 11-09-2016</p> <p style="text-align: right;">Signature M. SUBHA Mrs. M. SUBHA, M.Phil. Studies, Arulmigu Palaniandavar College, Department of Physics, Arulmigu Palaniandavar College of Arts &amp; Culture, PALANI - 624 601</p> <p>Head of the Department HEAD OF DEPT. OF PHYSICS A.P.A. COLLEGE OF ARTS &amp; CULTURE PALANI - 624 601</p>

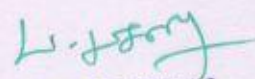
  
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 Arulmigu Palaniandavar College  
 of Arts & Culture,  
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<p>12</p>	<p><b>MUTHUKUMAR. A</b>  <b>B4E16012</b></p> <p><b>UNDER THE GUIDANCE OF</b>  <b>Mr. K. KULATHURAN</b></p>	<p><b>K. KULATHURAN</b>      Assistant Professor      Department of Physics      Arulmigu Palaniandavar College of Arts and Culture      PALANI - 624 601</p> <p><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "SURFACE MORPHOLOGICAL AND OPTICAL PROPERTIES OF POLYMER SURFACES TREATED WITH POLY(VINYL PYRROLIDONE (PVP))" is a bonafide work done by Mr. MUTHUKUMAR. A (REG. NO. B4E16012), Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani - 624 601 and submitted for the partial fulfillment of Degree of Master of Science in Physics in the Arulmigu Palaniandavar University, Madurai, under my supervision and guidance during the academic year 2015-2016.</p> <p>This dissertation is an original work of the candidate and to the best of my knowledge has not been submitted to any or for any other diploma, degree, certificate or any fellowship or other similar title to this or any other university. The portion of the dissertation is a dissertation made by other students, provided an appropriate written acknowledgment.</p> <p>Place: Palani      Date: 17/04/2016</p> <p><b>K. KULATHURAN</b>      HEAD OF THE DEPARTMENT      HEAD OF DEPT. OF PHYSICS      A.P.A. COLLEGE OF ARTS &amp; CULTURE      PALANI - 624 601</p>
<p>13</p>	<p><b>SATHEES. P</b>  <b>B4E16014</b></p> <p><b>UNDER THE GUIDANCE OF</b>  <b>Dr. M. RAMESH BABU</b></p>	<p><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "MORPHOLOGICAL ANALYSIS OF TiO<sub>2</sub> THIN FILM BY SOL-GEL DIP COATING METHOD", is a bonafide record of the original research work done by Mr. P. SATHEES (REG. NO. B4E16014), during the Academic year July 2015 to April 2016 of his study in the Department of Physics, Arulmigu Palaniandavar College of Arts and Culture, Palani, under my guidance and the Project work has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship of similar title to any candidate of any University.</p> <p>Place: Palani      Date:</p> <p><i>A. Chandrasekhar</i>      17/04/2016      Head of the Department      HEAD OF DEPT. OF PHYSICS      A.P.A. COLLEGE OF ARTS &amp; CULTURE      PALANI - 624 601</p> <p><i>P. Sathees</i>      Signature of the guide</p>

*L. Jeyapriya*  
**PRINCIPAL**  
 Arulmigu Palaniandavar College  
 of Arts & Culture,  
 PALANI - 624 601

<p>14</p>	<p><b>SUNDHARAVADIVEL. P</b>  <b>B4E16015</b></p> <p><b>UNDER THE GUIDANCE OF</b>  <b>Mr. K. PAKIYARAJ</b></p>	<p style="text-align: center;"><b>CERTIFICATE</b></p> <p>This is to certify that the dissertation entitled "PREPARATION AND CHARACTERIZATION OF ALGOL THIN FILM BY SPRAY PYROLYSIS TECHNIQUE", is a bonafide work of the student research work done by Mr. A. SUNDHARAVADIVEL Reg no (B4E16015) &amp; MR. K. ARUNKUMAR Reg no (B4E16007) during the Academic year July 2017 to April 2018 in his name in the Department of Physics, Annamalai University College of Arts and Culture, Palani under the supervision of the Project work, has the normal demands for the award of any Degree / Diploma / Associate ship / Fellowship of studies title as per guidelines of our University.</p> <p>Date: 07/04/18</p> <p style="text-align: center;">       K. Pakiyaraj      Head of the Department      DEPT. OF PHYSICS      CPA, COLLEGE OF ARTS &amp; CULTURE      PALANI - 624 601   </p> <p style="text-align: center;">     Principal's Signature      K. Pakiyaraj   </p>
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**PRINCIPAL**  
 Annamalai Palaniandavar College  
 of Arts & Culture,  
 PALANI - 624 601.