

CURRICULUM VITAE

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ACADEMIC CHRONICLE:-

Qualification	School/ College	Board/ University
M.Tech (Nano Science and Technology)	Mepco Schlenk Engineering College,Sivakasi	Anna University, Tirunelveli.
M.Phil (Physics)	Directorate of Distance Education	Madurai Kamaraj University, Madurai.
M.Sc (Physics)	Madurai Kamaraj University, Madurai	Madurai Kamaraj University, Madurai.
B.Sc (Physics)	Thiagarajar College, Madurai.	Madurai Kamaraj University, Madurai.
H.S.C	Gandhi Niketan Hr.Sec.School, T.Kallupatti.	State Board
S.S.L.C	Gandhi Niketan Hr.Sec.School, T.Kallupatti.	State Board

PROJECT DETAILS:-

M.Tech:

“Hydrogen Storage in ZrMnFe_{0.5}Ni_{0.5}/CNTs (MWNTs) Composite” at Alternative Energy and Nano Technology Laboratory, Department of Physics, Indian Institute of Technology-Madras, Chennai.

M.Phil:

“Synthesis and characterization of Carbon Nanotubes (CNT) by Chemical Vapor Deposition(CVD) method” at Alternative Energy and Nano Technology Laboratory, Department of Physics, Indian Institute of Technology-Madras, Chennai.

M.Sc:

“Determination of the time period of the oscillation of the simple pendulum using 8085 microprocessor” at Department of Laser Studies, School of Physics, Madurai Kamaraj University, Madurai.

TECHNICAL SOFTWARE KNOWLEDGE:-

Materials Studio, Matlab, Matlab/Simulink, Origin,

RESEARCH EXPERIENCE:

Worked as a **PROJECT ASSOCIATE** in **ALTERNATIVE ENERGY AND NANO TECHNOLOGY LABORATORY (AENL), NANO FUNCTIONAL MATERIALS TECHNOLOGY CENTRE (NFMTC), DEPARTMENT OF PHYSICS, INDIAN INSTITUTE OF TECHNOLOGY-MADRAS(IIT-MADRAS), CHENNAI** from **NOVEMBER-2009** to **JUNE-2012**.

TEACHING EXPERIENCE:

- Working as a **TEACHING ASSISTANT** in **CENTRE FOR NANOSCIENCE AND TECHNOLOGY, ANNA UNIVERSITY, CHENNAI** from 02.07.2012 to till date.
- Taking class for B.Tech and M.Tech degree course.
- Assisted B.Tech, M.Sc and M.Tech students in performing Lab experiments and project.

RESEARCH WORK:

- SYNTHESIS OF DIFFERENT CARBON NANOTUBES (Single wall, Multi wall, Double wall, and Aligned Nanotubes) BY CHEMICAL VAPOR DEPOSITION(CVD) METHOD.
- SYNTHESIS OF CARBON NANOCOILS.
- SYNTHESIS OF GRAPHENE BY VARIOUS EXFOLIATION TECHNIQUES.
- HYDROGEN STORAGE STUDIES OF CARBON BASED NANO MATERIALS.






HANDLED INSTRUMENTS FOR EXPERIMENTS:

- (1) CHEMICAL VAPOR DEPOSITION UNIT(SEMI AND FULLY AUTOMATED)
- (2) HYDROGEN STORAGE APPARATUS(SEIVERT'S APPARATUS)
- (3) FIELD EMISSION SETUP
- (4) SOLAR SIMULATOR
- (5) MAGNETRON SPUTTERING UNIT
- (6) RF SPUTTERING UNIT
- (7) DC SPUTTERING UNIT
- (8) ARC MELTING UNIT
- (9) HOT PRESS UNIT
- (10) SPIN COATING UNIT
- (11) ELECTRO SPIN COATING UNIT
- (12) CNC MILLING MACHINE
- (13) FOUR BALL TESTER UNIT
- (14) ELECTROCHEMICAL TEST STATION
- (15) SONO CHEMICAL REACTOR/ULTRASONIC PROCESSOR
- (16) ELECTROCHEMICAL WORK STATION/ANALYSER
- (17) HIGH ENERGY BALL MILLING

HANDLED INSTRUMENTS FOR CHARACTERIZATION:

- (A) X-RAY DIFFRACTOMETER (XRD)
- (B) RAMAN SPECTROMETER
- (C) FOURIER TRANSFORM INFRA-RED SPECTROMETER (FT-IR)
- (D) THERMO GRAVIMETRY ANALYSIS INSTRUMENT (TGA)
- (E) FIELD EMISSION SCANNING ELECTRON MICROSCOPE (FESEM)
- (F) HIGH RESOLUTION TRANSMISSION ELECTRON MICROSCOPE (HRTEM)
- (G) ULTRA VIOLET-VISIBLE SPECTROMETER (UV-VIS)

PAPERS PRESENTED IN COFERENCES/JOURNALS:

-  "**Occupational Health Hazards In Nano Powder Handling**" in a national level conference.
-  "**Synthesis And Characterization Of Carbon Nanotubes**" in a national level conference.
-  "**Hydrogen Storage In Nanomaterials**" in a national level conference.
-  "**Facile Synthesis Of Graphene Oxide And Graphene For Energy Related Applications**" in a international level workshop.
-  "**Synthesis And Characterization Of Graphene/TiO₂ Nanocomposite For Photovoltaic Applications**" in a national level seminar.

CONFERENCE ATTENDED:

- ❖ Attended the seminar on “**Frontiers in Condensed Matter Physics**” at School of Physics in Madurai Kamaraj University, Madurai.
- ❖ Attended the seminar on “**Photonics**” at School of Physics in Madurai Kamaraj University, Madurai.
- ❖ Attended one day national workshop on “**Nano Materials-Synthesis, charecterization and Applications**” in Mepco Schlenk Engineering College, Sivakasi.
- ❖ Worked as a volunteer in “**International Conference on Computational Intelligence and Multimedia Application**” conducted by Mepco Schlenk Engineering Collge, Sivakasi.

- ❖ Participated in “**The Chennai Science Festival-2013**” conducted by Science city and Department of Higher Education, Government of Tamilnadu at Anna Gem Science Park School, Chennai-600 025.
- ❖ Participated in “**Two Days Workshop On Nanomaterials Characterization**” organized by National Centre for Nanoscience and Nanotechnology, University of Madras, Guindy Campus, Chennai-600 025.

PERSONAL PROFILE:-

- **Name** : **R.Selvarajan**
- **Father’s name** : **A.Rajendran**
- **Mother’s Name** : **R.Rajeswari**
- **Gender** : **Male**
- **Marital Status** : **Married**
- **Date of birth** : **19-March-1984**
- **Nationality** : **Indian**
- **Languages known** : **Tamil, English.**