CURRICULUM VITAE

PERSONAL DETAILS:

Name Rohini Neendoor Mohan
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Date of Birth 31st May 1987
Nationality Indian
Marital Status Married
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CAREER OBJECTIVE:

To gain expertise and build a strong research career in the frontier areas of Material Science and apply the same in high end research in order to develop futuristic applications.

AREAS OF INTEREST:

- Synthesis of Nanomaterials and their characterization.
- Semiconductor Thin films for photovoltaic applications.

EDUCATION QUALIFICATIONS:

COURSE	*INSTITUTION*	*UNIVERSITY/ BOARD*	*YEAR OF PASSING*	*PERCENTAGE*
Ph.D	CINVESTAV	Insituto Politecnico Nacional, Mexico.	2012 to till date	till now
M.Sc. (Physics)	PSG College of Arts and Science Vellore Institute of Technology, Coimbatore, TamilNadu, India	Bharathiyar University, Tamilnadu, India.	June 2010	87.6 %
B.Sc. (Physics)	Sree Krishna College, Guruvayur. Kerala India	Calicut university, Kerala, India.	June 2008	91.8 %
Intermediate (Mathematics, Physics, Chemistry and Biology)	Gvt.Model Higher secondary school, Kunnamkulam. India	Higher secondary Board, Kerala, India.	June 2004	85%
S.S.L.C	St.Mary's Girls High School, Chowannur. Kerala, India	Board of Education, Kerala, India.	June 2002	92.8%

RESEARCH EXPERIENCE:

- **PhD project:**

  Title : Synthesis and characterization of CIGS thin film by sputtering /co-evaporation and optimization of selenization.

  Place : CINVESTAV (School of Electrical and Electronic Sciences),
  Mexico City, Mexico
  Duration : January 2012 to till date (expected date of completion Dec 2015)
  Summary : Deposition of CIGS thin film to apply as absorber layer in CIGS solar cells. Primarily CIGS nano powders are prepared by planetary ball milling which is used to form pellet to use as sputter target in RF sputtering. Also, CIGS ink is formulated using the mechanochemically synthesised CIGS powder to deposit film by non vacuum techniques.

- **Masters projects:**

  Title : Synthesis and characterization of Pectin –MgO nanocomposite .
  Place : PSG College of Arts and Science, Coimbatore, Tamilnadu,India.
  Duration : 6 Months (December 2010- May 2010).
  Summary : To study structural, morphological properties of as synthesised Pectin –MgO nano composite for further application in biological and photo electrical system.

CONFERENCE PRESENTATIONS:

- Presented a paper on "Structural properties of CIGS thin film deposited by spin coating" in IMRC congress in august 2014 at Cancun, Mexico.
- Presented a paper on "Effect of milling time on mechanically alloyed Cu(In,Ga)Se_2 nanoparticles", in 11th International Conference on Electrical Engineering, Computing Science and Automatic Control, CCE in September 2014 at Ciudad del Carmen, Campeche, Mexico.
- Presented a Paper on "Preparation of CuInGaSe2 thin film by non vacuum mechanochemical and doctorblade techniques" in IMRC congress in august 2013 at Cancun, Mexico.
- Presented a poster on "Synthesis and optimization of cigs nanoparticle by mechanochemical process" in IMRC congress held in 2014 at Cancun, Mexico.

- Presented a poster on “Structural and morphological studies of cigs thin film deposited using nanoparticle based ink" in the Global photovoltaic conference held in November at Busan, Korea.
- Presented a Poster on “Influence of RF power on CIGS thin films deposited by RF sputtering from a single quaternary target” in IMRC congress in august 2013 at Cancun, Mexico.
- Presented a Poster on “Deposition of CIGS thin film by radio frequency (RF) sputtering from a single quaternary target” in Fourth Mexican workshop on nano structured material in March 2013 at Puebla, Mexico.
- Presented a Poster on “Preparation of sputtering target based on mechanochemically synthesised CIS powder” in IMRC congress in august 2012 at Cancun, Mexico.

ARTICLES PUBLISHED:

1. Effect of Milling Time on Mechanically Alloyed Cu(In,Ga)Se2 Nanoparticles, M.Rohini, P.Reyes,S.Velumani and I.G.Becerril, 2014 11th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), 10.1109/ICEEE.2014.6978309.
2. Parametric Optimization of mechanochemical process for the synthesis of Cu(In,Ga)Se2 nanoparticles, M.Rohini,P.Reyes,S.Velumani,M.Latha,Goldie Oza,I.Becerril Juarez, R.Azomosa,Material Science in semiconductor processing , doi:10.1016/j.mssp.2015.02.046
3. Synthesis of CuIn1−xGaxSe2 Nanoparticles by Thermal Decomposition Method with Tunable Ga Content, M. Latha , R. Aruna Devi, S. Velumani, Goldie Oza, P. Reyes-Figueroa,M. Rohini, I. G. Becerril-Juarez, and Junsin Yi, Journal of Nanoscience and Nanotechnology, Vol. 15, 1–7, 2015.
4. Synthesis and Characterization of Cadmium Sulfide Nanoparticles by Chemical Precipitation Method, R. Aruna Devi, M. Latha, S. Velumani, Goldie Oza, P. Reyes-Figueroa, M. Rohini, I. G. Becerril-Juarez, Jae-Hyeong Lee, and Junsin Yi, Journal of Nanoscience and Nanotechnology, Vol. 15, 1–6, 2015.

HANDS-ON EXPERIENCE:

- RF Sputtering
- Planetary Ball Milling (PM 400 RETSCH)
- Pneumatic Spray Pyrolysis (Home Made)
- Ultrasonic spray pyrolysis
- Spin coating
- Manual pellet pressing machine
- Field emission scanning electron microscopy
- Atomic Force Microscope (CP II, Veeco)
- High Resolution Optical Microscope
- Hall Effect

- UV-Visible Spectroscopy,
- Four point probe resistance Measurement

SIMULATION TOOLS:

- MATLAB 7.0
- ORIGIN
- Gwyddion (Atomic Force microscopy)
- SimulaTEM
- DIAMOND 3
- Digital Micrograph

LANGUAGES:

- **Spanish** : Moderate
- **English** : Fluent
- **Hindi** (India's National language) : Moderate
- **Malayalam** : Mother tongue
- **Tamil**: Moderate

ACADEMIC ACHIEVEMENTS

Batch Rank in Master in Physics: **1** of a class of 18.

ENGLISH PROFICIENCY:

TOEFL:

Reading : 20/30
Listening : 23/30
Writing : 22/30
Speaking : 26/30

MEMBERSHIP:

MRS from 2012 to 2014

DECLARATION:

I hereby declare that all of the above information provided by me is correct and up to date to the best of my knowledge. I bear the responsibility for any wrong or incorrect data provided by me.

Place:
Date:

ROHINI NEENDOOR MOHAN