**CURRICULUM VITAE**  

**1. Name :** Dr. V. Jayalakshmi

**2. Total Experience :** 12 Years 3 Months

**3. Area of interest :** Electronic Band structure, Structural stability and Physical properties of the inorganic compounds

**4. Contact Address with phone no :** Plot1-D, Annamalaiyar Street,

B.T. Nagar Annexure Phase-III

Gergumbakkam,Chennai-600128

(Cell) 9790738299

**5. E-mail :** jayam6480@gmail.com

**6. Qualification :** M.Sc., Ph.D

**7. Experience in SRM : 11 Years 11Months**

1. Working as an **Asst. Professor** in the **Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus**, Chennai – 600089 from **21st July 2011** to **Till date**.
2. Worked as **Assistant professor** in the **Department of Physics, St. Joseph college of Engineering, Sripermbatur Chennai** from **24 February 2011** to **16th July 2011**

**8. (i) Research Publications - 16 Nos.**

1. [An ab-initio probe to predict the stability of SrLa, Sr2La and Sr3La intermetallic alloys with the aid of high pressures](https://www.researchgate.net/publication/358961967_An_ab-initio_probe_to_predict_the_stability_of_SrLa_Sr2La_and_Sr3La_intermetallic_alloys_with_the_aid_of_high_pressures)

[**V.Jayalakshmi**](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!), [G.Jaiganesh](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!), [S.Rameshkumar](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!)

[**Computational and Theoretical Chemistry**](https://www.researchgate.net/journal/Computational-and-Theoretical-Chemistry-2210-271X)**1211(13):113660 (2022)**

2. [Exploring the effect of partial RE (Nd, Eu, Tm) substitution on Sn sites on the electronic and physical properties of BaSnO3](https://www.researchgate.net/publication/363229277_Exploring_the_effect_of_partial_RE_Nd_Eu_Tm_substitution_on_Sn_sites_on_the_electronic_and_physical_properties_of_BaSnO3)

[S.Rameshkumar](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!), [G.Jaiganesh](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!),**[V.Jayalakshmi](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286" \l "!)**

[**Physica B Condensed Matter**](https://www.researchgate.net/journal/Physica-B-Condensed-Matter-0921-4526)**646(1):414306, (2022)**

# 3. Probing into the global structural prediction, physical and electronic properties of A-X (A = Ca, Sr, Ba; X = La, Nd, Sm) binary intermetallic alloys

**[V.Jayalakshmi](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286" \l "!)****,**[G.Jaiganesh](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286" \l "!), [S.Rameshkumar](https://www.sciencedirect.com/science/article/abs/pii/S0925838820327286#!)

## **Journal of Alloys and Compounds, Volume 848, 25 December 2020, 156364**

## 4. Structural, phonon, elastic, thermodynamic and electronic properties of Mg–X (X = La, Nd, Sm) intermetallics: The first-principles study

S. Rameshkumar, G. Jaiganesh, **V. Jayalakshmi**

**Journal of Magnesium and Alloys, Volume 7, Issue 1, March 2019, Pages 166 185**

5. The first principle calculations of structural, vibrational, elastic, thermodynamic and electronic properties of MgX (X = La, Nd, Sm) intermetallics

S. Rameshkumar, G. Jaiganesh, **V. Jayalakshmi**

**Computational Condensed Matter, Volume 16, September 2018, Article e00324**

6. An *ab-initio* investigation on SrLa intermetallic compound

S. Ramesh Kumar, G. Jaiganesh and **V. Jayalakshmi**

**AIP Conference proceedings. Volume 1953, (2018) Page 110015**

7. An *ab-initio* Study of Mechanical, Dynamical and Electronic Properties of MgEu

intermetallic

S. Ramesh Kumar, G. Jaiganesh and **V. Jayalakshmi**

**AIP Conference Proceedings Volume 1942, (2018) Page 090024.**

8. An *ab-initio* study of electronic and thermodynamic properties of Ag-Sc intermetallics

S.Rameshkumar, **V. Jayalakshmi** and G.Jaiganesh

**High Temperatures – High Pressures, Volume 47 No 2 Page 165–177(2018).**

9. Electronic Structure and Magnetic properties of TiMn3N, TiMn3 and MnTi3 compounds

using TB-LMTO method

V.Sathana, G. Meenakshi, **V.Jayalakshmi**

**International Journal of Research in Engineering and Technology 04 (2015) 125-131.**

10.Electronic and Magnetic properties of Ti4N and TiFe3N nitrides and ordered TiFe3 and

FeTi3 compounds

V.Sathana, Balan Palanivel, **Venkatachalam Jayalakshmi** and G.Meenakshi

**International Journal of Chemistry 04(1) (2015) 65-77.**

11. Ab-initio calculation of structural stability, electronic and optical properties of Ag2Se

S.RameshKumar, G. Jaiganesh, **V.Jayalakshmi** and B.Palanivel.

**AIP Conference Proceedings, Volume 1665, pp. 090024[3 pages] (2015).**

12. Refractive index of AlAs and AlSb compounds: An *ab-initio* study

S.Rameshkumar, G.Jaiganesh and **V. Jayalakshmi**

**Indian Journal of Science 14(41) (2015) 29-34.**

13. Electronic and optical properties of AgMX2 (M=Al, Ga, In; X=S, Se, Te)

**V. Jayalakshmi,** S. Mageswari, B. Palanivel

**AIP Conference Proceedings, Volume 1447, pp. 1087-1088 (2012).**

14. Electronic and Structural Phase stability of CuAlX2 (X= S, Se, Te) under pressure

**V. Jayalakshmi**, S. Davapriya, R. Murugan, B. Palanivel

**Journal of Physics and Chemistry of solids 67 (2006) 669-674.**

15. Electronic and Structural properties of CuMO2 (M= Al, Ga, In).

**Venkatachalam Jayalakshmi**, Ramaswamy Murugan, Balan Palanivel

**Journal of Alloys and Compounds 388 (2005) 19-22**.

16. Electronic and Sstructural Properties of Zinc Chalcogenides ZnX (X=S, Se, Te).

Raje Gangadharan, **V. Jayalakshmi**, R. Murugan, B. Palanivel

**Journal of Alloys and Compounds 359 (2003) 22-26**.

# ii. Books Chapters Published : Electronic and Optical Properties of Delafossite Compounds AgMO2 (M = Al, Ga, In): A Theoretical Study- Fundamental Research and Application of Physical Science Vol. 2- (2023)

**iii. Funded projects**

1. **Title of the Project Work:** Structural, Electronic, and Physical Properties Of Lanthanum, Neodymium and Samarium Substituted Magnesium and Strontium Intermetallic Compounds”
2. **Field of Study** : Physics/Materials Science
3. **Funding Agency** : **DST–SERB**
4. **Amount Received** : **Rs. 15,69,600/-**
5. **Duration of Work** : 2014–2017(Completed in 2018)
6. **CODES Known**: : **TBLMTO, VASP, FPLMTO**

**iv. Consultancy : NIL**

**v. Research Guide ship details :**

Recognized as a **“Research Supervisor”** for guiding PhD Research scholars of SRM Institute of Science and Technology, Kattankulathur, under the faculty of Science and Humanities in Computational Materials Science.

No. of Candidate’s awarded with Ph.D : 01

No. of Candidate’s doing Ph.D : 01

**vi) Applied Projects:** one Project to DST- SERB in 2023

one Project to CSIR in 2023.

**9. Conference / Seminar / Workshop Presentations:**

1. Electronic and structural properties of CuAlO2 – 2ndinternationoal conference of materials for advanced technologies & IUMRS- International Conference in Asia(2003) Singapore.
2. Electronic properties of Americium under High pressure- UGC sponsored National Seminar on Modern Trends in applied Spectroscopy (2004) – Annamalai University- Tamil Nadu.
3. Structural Phase stability of Americium III under high pressure - UGC sponsored National Seminar on Emerging Trends in Molecular Physics (2004) – Annamalai University- Tamil Nadu
4. Electronic structure of Thorium Dioxide – National Conference on Science and Technology of Advanced Materials – (2005)- Pondicherry Engineering College – Pondicherry.
5. Structural Phase Transition of CuGaX2 (X= S, Se, Te) under high pressure - National Conference on Science and Technology of Advanced Materials – (2005)- Pondicherry Engineering College – Pondicherry.
6. Electronic and Optical Properties of p-type Transparent Conducting Oxides- PonnaiyahRamajayam Group of Institutions PREC Campus (2007)- Vallam, Thanjavur.
7. Electronic and Optical Properties of some Chalcopyrite Semiconductors- 10th International Conference on Advanced Materials- (2007)- IUMRS- ICAM- Bangalore.
8. Electronic Structure and Linear Compressibilities of Some Ternary Semiconductor under Pressure- 10th International Conference on Advanced Materials-(2007)- IUMRS- ICAM- Bangalore.
9. Electronic Structure of CuMX2 (M= Ga, In; X= S, Se, In) Under Pressure- International Conference on Nano and Micro Electronics- Pondicherry Engineering College- Puducherry-(2008).
10. Optical Properties of CuMO2 (M = Al, Ga, In) Compounds- International Conference on Nano and Micro Electronics- Pondicherry Engineering College – Puducherry-(2008).
11. Structural stability and electronic properties of Silver-Scandium Compounds-DAE-BRNS SPONSORED National Conference on Materials for Modern World NCMMW-2014 Easwari Engineering College, Ramapuram – Chennai-(2014).
12. “Ab initio Calculation of Structural Stability, Electronic and Optical Properties of Ag2Se”-59thDAE Solid State Physics Symposium,VIT University, Vellore. (December 16-20,2014)
13. Refractive index of AlAs and AlSb compounds: An ab-initio study- International Conference on Frontier areas of physics, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kanchipuram (2014)
14. Electronic and Ground State Properties of Ag4Sc intermetallic compound-Workshop on Computational Techniques for Energy Materials/National Conference on Materials for Energy Conversion and Storage (NCMECS 2015).
15. Electronic and Thermodynamic properties of Mg2Ge and Mg2Sn-National conference on Advanced Functional Materials (NCAFM-2015)-SRM University, Vadpalani, 2015.
16. “The Structural Prediction and Electronicpropertiesof SrNd, Sr2Nd and Sr3Nd Intermetallic Compounds”2nd International Conference on “Sustainable Materials and Technologies for Bio and Energy Applications SMTBEA-2022”,during 13-15th, July 2022 Organized by SSN Institutions, Kalavakkam,

**10. Seminar / Workshop Participations/FDP:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Name of the event** | **Level** | **Place/dates** |
| 01 | International Virtual Conference on Recent Trends in Physics | International | Jayaraj Annapackiam College for Women  16th -17th March 2023. |
| 02 | International online FDP on Current Scenario in Advanced Materials Research and Nanotechnology | International | Rajapalayam Raju’s College  14th-18th Nov 2022 |
| 03 | International Virtual Conference on chemical research for sustainable development (ICCRSD-2021) | International | SRM institute of science and technology,Ramapuram Campus , Chennai |
| 04 | International e- Workshop on Science and Technology of Emerging Materials (e STEM) | International | Department of Science and Humanities  Chettinadu College of Engineering and Technology  19th -21st April (2021) |
| 05 | Online lectures in Solid State Physics-Series 1: Electrons in Solids | National | Department of Theoretical Physics,  University of Madras  May 26th-30th (2020) |
| 06 | Indian Summer school on crystal growth | National | SSN Research Centre,  SSN Institutions, Chennai  May 14th -23rd (2020) |
| 07 | Two-week FDP on Managing Online classes and Co-creating Moocs (online) | National | Teaching Learning Centre, Ramanujan College, University of Delhi  April 20th – May6th (2020) |
| 08 | One week FDP on open source tools for research (online) | National | Teaching Learning Centre, Ramanujan College, University of Delhi  June8th-4th (2020) |
| 09 | Workshop on computational techniques for Energy Material | National | VIT University –Chennai campus  March-19-21st (2015) |
| 10. | Awareness Programme – Antibiotic Resistance – ‘A Global Threat’ – Phase II | National | SRM Dental College  Ramapuram, Chennai – 600089  16th February 2013 |
| 11. | Seminar and workshop on electronic structure methods and their applications | International | JNCASR, Bangalore  July 10-22 (2006) |
| 12 | Workshop on Instrumentation and measurement techniques | National | School of Physics  Bharathidasan University,  Tiruchirappalli-620 024  March 14-15 (2005) |
| 13 | Workshop on scientific research instrumentation | National | Pondicherry University  Puducherry-605014  November 9-11(2004) |
| 14. | International workshop on crystal growth and characterization of technologically important materials | International | Crystal growth Centre,  Anna University-Chennai  February 24-28 (2004) |

**11. Experience in Organizing Seminars/Conferences/FDP’s**

* **Coordinator – “One Week National Faculty Development Program on Advanced Computational and Experimental Research in Physics-2022”** organized by Department of Physics, SRM Institute of Science and Tehcnology, Ramapuram Campus, Chennai – 600089 during 20th -27thJune2022
* **Organizing Member – “ International Conference on Hierarchically Structured Materials (ICHSM 2022)”** organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai – 600089 during 24th -25thMarch 2022
* **Organizing Member – “ International Conference on Hierarchically Structured Materials (ICHSM 2021)”** organized by Department of Physics, SRM Institute of Science and Tehcnology, Ramapuram Campus, Chennai – 600089 during 8th -10thApril 2021
* **Coordinator – “Two Week International Faculty Development Program on Advanced Computational and Experimental Research in Physics-2021”** organized by Department of Physics, SRM Institute of Science and Tehcnology, Ramapuram Campus, Chennai – 600089 during 13th -25thSeptember2021
* **Coordinator – “Two Week Faculty Development Program on Advanced Computational and Experimental Research in Physics-2020”** organized by Department of Physics, SRM Institute of Science and Tehcnology, Ramapuram Campus, Chennai – 600089 during 27thJuly -8thAugust 2020
* Organizing Member – “8th National Conference on Hierarchically Structured Materials (NCHSM 2020)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 21st& 22nd February 2020.
* Organizing Member – “7th National Conference on Hierarchically Structured Materials (NCHSM 2019)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 22nd& 23rd February 2019.
* Organizing Member – “6th National Conference on Hierarchically Structured Materials (NCHSM 2018)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 16th& 17th February 2018.
* Organizing Member – “5th National Conference on Hierarchically Structured Materials (NCHSM 2017)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 31st March and 1st April 2017.
* Organizing Member– "Two Days National Workshop on Alternate Energy Resources, Conversion and Storage" organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 24th and 25th January 2017.
* Organizing Member – “Workshop on Materials Characterization Techniques” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 2nd& 3rd September 2016.
* Organizing Member – “4th National Conference on Hierarchically Structured Materials (NCHSM 2016)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 4th& 5th March 2016.
* Organizing Member– “Workshop on Powder X-Ray Diffraction Data Analysis” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 3rd& 4th July 2015.
* Organizing Member – “3rd National Conference on Hierarchically Structured Materials (NCHSM 2015)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 25th& 26th February 2015.
* Organizing Member – “2nd National Conference on Hierarchically Structured Materials (NCHSM 2014)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 24th& 25th March 2014.
* Organizing Member – “National Conference on Hierarchically Structured Materials (NCHSM 2013)” organized by Department of Physics, SRM University, Ramapuram Campus, Chennai – 600089 during 24th& 25th January 2013.

**12. Academic Qualification**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Degree/ Certificate** | **Year of completion** | **Name of Institution** | **Major** | **Ancillary** | **Class** | **Marks** |
| Ph.D. | May, 2008 | Pondicherry University | Physics | --- | --- | --- |
| M.Sc. | 2002 | Annamalai University | Physics |  | 1st Class | **7.54GPA** |
| B.Sc. | 2000 | Govt. Arts College | Physics | Maths /Chemistry | 1st Class | 76.9% |

**13. Courses Handled**

Handled Physics for technologies, Materials Science, Semiconductor Physics, Electromagnetic theory, Solid State Physics for I year B.Tech and B.Sc Physics Students

**14. Other Details**

1. Worked in the **paper evaluation camp** for Entire SRM Institute of Science and

Technology Ramapuram Campus, Chennai

2. Worked in **University Exam Cell** from 2018 to till now

3. Given responsibility in NAAC as a coordinator for **CRITERIA –V** (for Physics

Department)

4. **Awarded as Senior Research Fellow -Direct from CSIR New Delhi India.**

**5.** Completed **NPTEL Swayam online course** on Human Behaviour (Ellite),

Nanotechnology Science and Applications

**15. Personal Details**

**Marital Status :** Married

**Religion :** Hindu

**Languages Known :** Tamil & English

**Computer Knowledge :** Windows and Linux

**15. Reference**

**1. Dr. Balan Palanivel,**

Professor

Department Of Physics

Puducherry Engineering College

Puducherry

[Email- bpvel@ptuniv.edu.in](mailto:Email-%20bpvel@ptuniv.edu.in)

Contact No: 9442066355

2. **Dr. B.J. Kalaiselvi**

Professor

Department Of Physics

Puducherry Engineering College

Puducherry

[Email:- bjk@ptuniv.edu.in](mailto:Email:-%20bjk@ptuniv.edu.in)

Contact No: 9442647579

Hereby I declare that the details furnished by me are all true to the best of knowledge

**Signature**