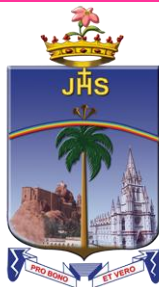



CURRICULUM VITAE

| | | |
|---|---|---|
|  | <p>Name : Dr. N. LAWRENCE mail ID : nlawdines@yahoo.co.in Mobile No : +91 94863 27821 Designation : Associate Professor</p> |  |
|---|---|---|

1. Skills

Specialist in Lattice Dynamics and Hydrogen Storage

Administrative Distinction

Internal Quality Assurance Cell: Member Secretary cum Coordinator, 2008-2012

Internal Quality Assurance Cell, Assistant Under Secretary, 2004-2008

Dean of Sciences St. Joseph's College, 2001-2003

2. Achievements / Awards / Recognition

College Management Award for Completing 25 years, 2013

Dr. R. Srinivasamoorthy Cash Award for the best research publications, 2008 and 2010

3. Global competency contributing to the international standing of the college

Twenty seven number of international journal publication is the major contribution.

4. Organizing Colloquia (Conference / Workshop / Seminar)

Convener, the National Conference on **The Role of ICT in Higher Education: Quality, Accessibility and Security**, 2010

Organizing Secretary, the National Conference on **Quality Enhancement and Sustenance in Higher Educational Institutions (HEIs) through Six Sigma (6σ) Quality Strategy**, 2008

5. Consultancy

Resource person for the new syllabus Training Programme for the PG teachers 2005

6. Research – Publications (International / National / Regional)

1. **Gowri S., Uma Devi T., Sajan D., Chandramohand A., and Lawrence N.** Synthesis, growth and characterization of 2-carboxypyridinium hydrogen (2R,3R)-tartrate monohydrate: A new organic nonlinear optical crystal. *Optik - International Journal for Light and Electron Optics*, (2013) 124: 2393–2396.
2. **Antony M., Lawrence N. and John Bosco Balaguru Rayappan,** Thermal Properties of Graphane: A Greens Function Approach. *Journal of Applied Sciences*, (2012) 12: 1746-1749.
3. **Lakshmi Narasimha Acharya Kandala, John Bosco Balaguru Rayappan, Jeyaprakash Beri Gopalakrishnan, Stalin Mano Gibson Manasai and Lawrence Nallathambi,** Effect of Least Variations in the Lattice Constant in the Lattice Dynamics of Nanostructured CdO. *Journal of Applied Sciences*, (2012) 12: 1726-1729.
4. **Gowri S., Anitha K., Suresh A., Uma Devi T., Selvanayagam S., Sajan D., Chandramohan A., and Lawrence N.** Synthesis, growth, spectral and thermal properties of a new organic crystal: 2-Carboxypyridin-1-ium trichloroacetate. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, (2012) 95, 73–79.
5. **Gowri S., Uma Devi T., Sajan D., Bheeter S. R, and Lawrence N.** Spectral, thermal and optical properties of adenosinium picrate: A nonlinear optical single crystal. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, (2012) 89, 119–122.
6. **Gowri S., Uma Devi T., Sajan D., Bheeter S. R, and Lawrence N.** Spectral, thermal and optical properties of 1-tryptophanium picrate: A nonlinear optical single crystal. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* (2011) 81, 257–260.
7. **Uma Devi T., Lawrence N., Ramesh Babu R., Selvanayagam S., Helen Stoeckli-Evans, and Ramamurthi K.** Synthesis, Crystal Growth, Structural, Optical, Thermal and Mechanical Properties of Semiorganic Nonlinear Optical Material: L-Cystine Dihydrochloride, *Journal of Minerals & Materials Characterization & Engineering*, (2010) 9, 495-507.
8. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and Bhagavannarayana G.** Structural and Optical Characterization Studies on 2, 4-

- dinitrophenylhydrazine Single Crystal, Journal of Minerals & Materials Characterization & Engineering (2010) 9, 321-330.
9. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and Bhagavannarayana G.** Structural, Electrical and Optical Characterization Studies on Glycine Picrate Single Crystal : A Third Order Nonlinear Optical Material, Journal of Minerals & Materials Characterization & Engineering, (2009) 8, 755-763.
 10. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and Bhagavannarayana G.** Studies on L-valinium Picrate Single Crystal: A Promising NLO Crystal Journal of Minerals & Materials Characterization & Engineering, (2009) 8, 393-403
 11. **Uma Devi T., Lawrence N., Ramesh Babu R., Selvanayagam S., Helen Stoeckli-Evans, and Ramamurthi K.** Characterization of a newly synthesized organic nonlinear optical crystal: Urea ninhydrin monohydrate, Journal of Crystal Growth, (2009) 311, 3485-3490
 12. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and Bhagavannarayana G.** Synthesis, Crystal Structure, Growth and Characterization of L-proline lithium chloride monohydrate :A new semiorganic Nonlinear Optical Material, Cryst. Growth Des., (2009) 9, 1370 –1374.
 13. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and G. Bhagavannarayana,** Growth of ninhydrin single crystal and its Characterization, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, (2009) 71, 1667-1672.
 14. **Uma Devi T., Lawrence N., Ramesh Babu R., Ramamurthi K., and G. Bhagavannarayana,** Synthesis, crystal growth, optical, thermal and mechanical properties of organic nonlinear optical material: bis(glycinium) oxalate single crystal, Material Science Research India, (2008) 5, 397-402.
 15. **Uma Devi T., Lawrence N., Ramesh Babu R., and Ramamurthi K.,** Growth and characterization of glycine picrate single crystal, Spectrochimica Acta Part A : Molecular and Biomolecular spectroscopy, (2008) 71, 340-343.
 16. **Uma Devi T., Lawrence N., Ramesh Babu R., and Ramamurthi K.,** Growth and characterization of L-prolinium picrate single crystal: A promising NLO crystal, Journal of Crystal Growth, (2008) 310, 116–123.

17. **Francis Xavier A., John Bosco Balaguru A., Alfred Cecil Raj S., and Lawrence N.** Lattice Dynamics of $\text{Fe}_{0.72}\text{Pd}_{0.28}$, *Indian J.Phys.*, 81 (4) (2007) 455-463
18. **Kalai Arasi C., John Bosco Balaguru R., Alfred Cecil Raj S., and Lawrence N.** Lattice Dynamics of Hydrogen Interstice in $\text{Co}_{0.92}\text{Fe}_{0.08}$. *Electronics J. of Theoretical Physics* (2006) 9 66-77.
19. **Kalai Arasi C., John Bosco Balaguru R., Alfred Cecil Raj S., and Lawrence N.** Lattice Dynamics of the $\text{Ni}_{0.3}\text{Fe}_{0.7}\text{H}$. *Physica Scripta* (2006) 73, 11 – 16.
20. **Stalin Mano Gibson M., and Lawrence N.** Pressure Dependent Hydrogen Isotopic Diffusion in $\text{Cr}_{0.7}\text{Fe}_{0.3}$ Alloy. *Indian J. Physics* (2006) 80(3) 235 – 240.
21. **Stalin Mano Gibson M., and Lawrence N.** Hydrogen Diffusion in $\text{Fe}_{0.5}\text{Ti}_{0.5}$ -Quantum Isotope effect. *Indian J. of Pure and Applied Physics* (2005) 43 532-532.
22. **Stalin Mano Gibson M., and Lawrence N.** Diffusion of Hydrogen and Deuterium in $\text{Ni}_{0.5}\text{Fe}_{0.5}$ Alloy. Effect of Pressure, *Indian J. Physics* (2005) 79 (6) 601-606.
23. **Kalai Arasi C., John Bosco Balaguru R., Lawrence N., and Alfred Cecil Raj S.** Lattice Dynamics of $\text{Ni}_{0.55}\text{Pd}_{0.45}\text{H}$ System. *Convergence*(2005) 7 (1-4) 25-32.
24. **Nirmala W., Lawrence N., Alfred Cecil Raj S., and John Bosco Balaguru R.** Lattice Dynamics of $\text{Fe}_{0.775}\text{Al}_{0.225}\text{H}$ System *Convergence* (2005) 7 (1-4) 33 – 39.
25. **Francis Xavier A., Lawrence N., Alfred Cecil Raj S., and John Bosco Balaguru R.** Lattice Dynamical Investigation of PdH System. *Convergence* (2005) 7(1-4) 77 – 82.
26. **Sr. Jessie Fernando, Alfred Cecil Raj S., Lawrence N., and John Bosco Balaguru R.** Thermal Properties of 2H-NbSe₂ in the context of Charge Density Waves. *Convergence* (2005) 7 (1-4) 83-88.
27. **Sr. Jessie Fernando, Alfred Cecil Raj S., and Lawrence N.** Lattice Dynamical Investigation of 1T-VSe₂ in the context of CDW. *Convergence* (2003) 5 (1-4) 24 – 28.
28. **Sr. Jessie Fernando, Alfred Cecil Raj S., and Lawrence N.** Thermal Properties of T-TiSe₂ in the context of CDW. *AJP* (2001) 10(3) 1.
29. **Kalai Arasi C., John Bosco Balaguru R., Lawrence N., and Alfred Cecil Raj S.** Localized Defect Modes of Zinc Blend Structural System. *AJP* (2002) 11(1) 1-6.

30. **John Bosco Balaguru R., Lawrence N., and Alfred Cecil Raj S.** Lattice instability of 2H – TaSe₂. Int. J. of Modern Physics B (2002) 16 (21) 4111 – 4125.
31. **John Bosco Balaguru R., Lawrence N., and Alfred Cecil Raj S.** Specific Studies on 1T-TaSe₂ in the Context of Commensurate Charge Density Waves. Physica Status Solidi (b) (2001), 223, 779.
32. **Alfred Cecil Raj S., Lawrence N., Sebastian R., and Haridasan T.M.** Pressure Dependent Hydrogen Diffusion in the Intermetallic Compound Fe_{0.5}Ti_{0.5}. Phys. Stat. Solidi. (1993) 180, 79.
33. **Alfred Cecil Raj S., Lawrence N., and Sebastian R.** Isotope Diffusion in ZnSe. Indian J. Physics (1990) 64A, 464.
34. **Lawrence N., and Haridasan T.M.** Mean Square Displacement Hydrogen Interstitial and its neighbours in the Intermetallic compound Fe_{0.3}Al_{0.7}. J. Phys. Chem. Solids (1987) 48, 1245.
35. **Haridasan T.M., and Lawrence N.** Self Diffusion of Sodium ion in NaCl. J. Phys. & Chem.of Solids (1986) 47, 967-970.
36. **Lawrence N., Sekar P., and Haridasan T.M.** Mean Square Displacement of Neighbours around a Vacancy in NaCl. J. Phy. C (1986) 3945-3948.
37. **Lawrence N., and Haridasan T.M.** Lattice Dynamics of 1TiSe₂ in the context of charge Density Waves. IJPA (1985) 298-301.
38. **Lawrence N., and Haridasan T.M.** Mean Square Amplitude of Transition metal Dischalcogenids 1T-TiSe₂ in the normal and CDW phases. Physia Status Solidi (b) (1985) 132 K77.
39. Self Diffusion in ZnSe. I JPAP (1988) 26, 722.

Conference/Seminar presentation

1. Comparative Study on Diffusion of Hydrogen Isotopes in Ni_{0.55}Pd_{0.45} and Fe_{0.72}Pd_{0.28}. Retell 7(2) (2007).
2. Lattice Dynamical Investigation of Pd-H System. Loyola Inst. Frontier Energy 7(1-4) 77-82 (2005).
3. Diffusion Studies in ZnSe for an active and passive role of Defects. National Conference on Recent Advances in material Sciences, Puthanampatti, Sept. 29, 30 (2000).

4. Pressure dependent Hydrogen Diffusion in CrFe Alloy. National Conference on Recent Advances in material Sciences, Puthanampatti, Sept. 29, 30 (2000).
5. Lattice Vibrations in the Charge Density states of 1T-TaS₂. National Conference on Recent Advances in material Sciences, Puthanampatti, Sept. 29, 30 (2000).
6. LVM's based on modified effective charge model. National Conference on Advances in Condensed Matter Physics, Pandicherry University (1999).
7. Moments of phonon Spectra of ZnSe and passive role of Vacancies. National Conference on Recent Trends in Modern Physics, March 10, 11 (1999).
8. Hydrogen Storage Metal Hydrides – An Overview – National Seminar on Material Science, Bharathidasan University, Tiruchirappalli. Jan. 19, 20 (1998).
9. Hydrogen Diffusion in Fe_{0.5}Ti_{0.5} – Quantum Effect. IUMRS – ICA 98, 5th International Conference in Asia, Bangalore, Oct 13-16 (1998).
10. LVM of Semi Conducting Compounds using Statistical – Approach. IUMRS – ICA 98, International Conference in Asia, Bangalore, Oct 13-16 (1998).
11. An energy Carrier – Solar Hydrogen. National Conference on Energy Crisis & Environment, Chennai. March 7,8. (1997).
12. Sodium Diffusion in NaCl. DAE Symposium on Solid State Physics, Bhopal.
13. Defect Studies in ZnSe system. DAE Symposium, Chennai (1989)32C, 149.
14. Defect Studies in GaAs System, DAE National Symposium on Solid State Physics. Bombay (1993) 36C 178.

7. Projects under Extramural funding (Completed / Ongoing)

Preparation and Characterization of Semiconducting Photovoltaic Materials for Solar Cell fabrication, 2009. **Completed**

8. Ph D Supervised

| S. No. | Scholar's Name | Title of the Thesis | Declaration |
|--------|-----------------------|---|-------------|
| 1 | Stalin Mano Gibson M | Lattice Dynamical Investigation of some Metallic Hydrides | 23.04.2001 |
| 2 | John Bosco Balaguru R | Lattice Dynamical Investigation on some Charge Density Wave Systems | 14.08.2003 |
| 3 | Kalai Arasi C | Lattice Dynamical Investigation on Some Defect Systems | 02.05.2007 |

| | | | |
|---|-------------------|---|------------|
| 4 | Nirmala W | Lattice Dynamical Investigation on Some Metal Alloy – Hydrogen Systems | 05.07.2007 |
| 5 | Jessie Fernando | Lattice Dynamical Investigation on Charge Density Waves in Transition – Metal Compounds | 02.11.2007 |
| 6 | Victor Williams R | Synthesis and Characterization of Insulating Polymer Films | 04.09.2008 |
| 7 | Francis Xavier A | Lattice Dynamical Investigation on some Hydrogen Storage Materials | 13.07.2009 |
| 8 | Uma Devi T | Studies on Growth and Characterization of some Organic and Semiorganic Crystals | 04.12.2009 |

9. Ph D Under Supervising

| S. No. | Scholar's Name | Title of the Thesis | Declaration |
|--------|----------------|---|-------------|
| 1 | Gowri S | Growth and Characterization of some NLO Materials | 2009 -2013 |
| 2 | Antony M | Diffusion study on hydrogen storage in AB alloys | 2010 – 2013 |
| 3 | Charles J | Thin Film Physics and its Applications | 2010- 2014 |
| 4 | Lakshmi B | Lattice Dynamical Investigation on Hydrogen Diffusion in Nano Materials | 2012 - 2016 |
| 5 | Rajandran P | Thin Film | 2012 - 2016 |

10. Education

| Degree | Subject | College, University | Year | Class / Division / Grade |
|--------|---------|---|------|---------------------------------|
| PhD | Physics | Madurai Kamaraj University | 1988 | Commended |
| M Sc | Physics | Madurai Kamaraj University | 1982 | I Class [University II Rank] |
| B Sc | Physics | Christian College Marthandam, Madurai Kamaraj University | 1980 | I Class |

| 11. Research Thesis | |
|----------------------------|--|
| Degree | Thesis / Dissertation |
| Ph D | Lattice Dynamical Investigation on Hydrogen in metals in relation to their application in Energy Storage |

| 12. In-service Training attended (Orientation / Refreshers) | | |
|--|--|--------------------------|
| Course | Place | Date |
| Orientation Course | Academic Staff College Bharathidasan University, Tiruchirappalli | 03.10.1988 to 31.10.1988 |
| Refresher Course in Physics | Academic – Staff College Madras University | 25.10.1993 to 20.11.1993 |
| Refresher Course in Recent Trends in Crystal Growth | Crystal Growth University Centre, Anna University, Chennai – 25. | 18.01.1999 to 07.02.1999 |

| 13. Books / Manuals / Course Materials created |
|---|
| Encyclopedia of Physics, 1997 |

| 14. As a member in different capacities helped in conducting |
|--|
| Life Member Indian Association of Physics Teachers, 1987 - |
| Member of the Editorial Advisory Board for the interdisciplinary journal Convergence 1999- |
| Member Academic Council, St. Joseph's College, 2001-2003 |
| Member Governing Body, St. Joseph's College, 2001-2003 and 2008 - 2012 |
| External Member IQAC, Fatima College (Autonomous), Madurai-18, 2012 - |
| Member Academic Council, Selvam Arts & Science College, Namakkal, 2013 - |
| Member Governing Body, Selvam Arts & Science College, Namakkal, 2013 - |

| 15. Contribution in Curriculum Development |
|---|
| Member Board of Studies Physics, Bishop Heber College (Autonomous), Trichy -17, 2006 - 2008 |
| Member Board of Studies Electronics, Bharathidasan University, Trichy – 24, 2012 - |
| Member Board of Studies Physics, National College (Autonomous), Trichy -1, 2012 - |