

## PROF. V. VEERAI AH PROFILE



Prof. V. Veeraiah

Professor in Physics  
Department of Physics  
Andhra University, Visakhapatnam.

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### Personal Details

Name : VALAPARLA VEERAI AH  
Father's Name : VALAPARLA PAUL  
Date of Birth : 01-06-1955 (First June Nineteen Fifty Five)  
Address : Muppavaram (Village)  
J.Pangulur (Mandal), Prakasam (District)  
Andhra Pradesh, India.

### Academic Qualifications:

- Ph.D in Physics, Andhra University, Visakhapatnam, 1982
- M.Sc. Physics (Electronics specialization) First Class, S.V. University, Tirupati, 1977
- B.Sc. Maths, Physics and Chemistry (First class with Distinction), Silver Jubilee Govt. College, Kurnool, S.V.University, Tirupati – 1975.

### Present Position:

- Professor in Physics, Department of Physics, Andhra University, Visakhapatnam – 530 003., A.P.
- **Chairman, Faculty of Science, Andhra University, Visakhapatnam.**
- **Director, NMR Research Centre, A.U. Central Facility, Andhra University, Visakhapatnam.**

### **Positions held while in service:**

- Head of the Department of Physics – 3 years
- Chairman, P.G. Board of Studies in Physics – 3 years
- Warden, A.U. College of Science and Technology Hostels
- Chief Warden, A.U. College of Science and Technology Hostels
- Assistant Principal, A.U. College of Science and Technology
- Dean (Transport), Andhra University
- Coordinator, UGC Unit, Andhra University
- Chairman, Faculty of Science, Andhra University
- Principal, A. U. College of Science and Technology, Andhra University.

### **Association with university level administration:**

- Member, Academic Senate, Andhra University, Visakhapatnam
- Member, Academic Senate, Sri Krishnadevaraya University
- Member, Academic Council, DNR College, Bhimavaram
- Member, Academic Council, KGRL College, Bhimavaram
- Member, Academic Council, CR Reddy College, Eluru
- Member, Academic Council, MR College, Vizianagaram
- Member, Academic Council, Government College, Rajahmundry

### **Teaching experience at University level:**

- 35 Years

### **Field of Specialization: Theoretical Nuclear Physics**

- *Title of the Ph.D. Thesis :*  
“A study of the Pseudo SU(3) strong coupling limit” (of deformed nuclei), 1982, A.U.
- *Research Supervisor :* Prof. R.D. Ratna Raju, M.Sc., Ph.D. (Michigan)

### **Teaching positions held:**

- Professor in Physics – from 31-12-1992 till date
- Reader in Physics – from 31-12-1984 to 30-12-1992
- Lecturer in Physics – from 08-12-1977 to 30-12-1984

### **Number of books Authored/ Edited:**

1. Editor of “Statistical Mechanics and Quantum Mechanics” Published by Dr. B. R. Ambedkar Open University, Hyderabad for M.Sc. Physics students
2. Co-author of “Introductory Quantum Mechanics” Published by SDE, Andhra University, Visakhapatnam for M.Sc.(previous) Physics students
3. Co-author of “Advanced Quantum Mechanics” Published by SDE, Andhra University, Visakhapatnam for M.Sc.(Final) Physics students.
4. Co-author of “Mathematical methods of Physics” Published by SDE, Andhra University, Visakhapatnam

### **Curriculum design:**

- Framed the syllabus of several theory courses at M.Sc. level on the guidelines of UGC model curriculum for the year end pattern (earlier) and semester pattern (now)

### **Examiner:**

- Served as external examiner at M.Sc. Physics, M.Phil and Ph.D. in Physics programmes of some Universities such as
  1. S.V.University, Tirupati
  2. Acharya Nagarjuna University, Guntur
  3. Sri Krishnadevaraya University, Anantapur
  4. Kakatiya University, Warangal
  5. Rayalaseema University, Kurnool
  6. Yogi Vemana University, Kadapa
  7. Sambalpur University, Sambalpur, Orissa
  8. Berhampur University, Orissa

And also served as external examiner at 42 affiliated PG colleges offering M.Sc. Physics and M.Sc. Electronics courses in Andhra University area.

## Guest Lectures delivered:

Guest Lectures delivered at

1. Department of Physics, SV University, Tirupati
2. Department of Physics, SK University, Anantapur
3. Department of Physics, Rayalaseema University, Kurnool
4. YN College, Narsapur
5. KGRL College, Bhimavaram
6. DNR College, Bhimavaram
7. Rajiv Gandhi College, Kakinada
8. VS Lakshmi College, Kakinada
9. CR Reddy College, Eluru
10. MR College, Vizianagaram

## Association with APSCHE:

- The A.P. State Council of Higher Education appointed as a member of several joint inspection commissions to grant new PG colleges, UG colleges and B.Ed colleges in Andhra Pradesh in the SV University, Kakatiya University, Osmania University, Acharya Nagarjuna University and Andhra University regions.
- The Andhra University appointed as a member of several affiliation inspection commissions to grant affiliation to PG / UG / B.Ed courses.

## Areas of Research:

- Theoretical Nuclear Physics, Density Functional Theory (DFT) Calculations, Molecular Spectroscopy, Modeling and Simulation in Materials Science.
- Experimental Work on Solid Electrolytes, Cathode and Anode materials for Lithium-ion batteries
- *Number of Research students guided so far :* Ph.D. – **9**  
M.Phil. – **7**
- *Number of Research students working at present :*  
Ph.D. – **7**

- *Number of Seminars/Symposium/Conferences/Workshops conducted -3*
  1. “National Symposium on Nuclear Models, August 24-25, 2002, Department of Physics, Andhra University, Visakhapatnam”.
  2. “Training programme on Nuclear Magnetic Resonance Spectroscopy”, 6<sup>th</sup> – 8<sup>th</sup> March, 2014, Department of Physics, Andhra University, Visakhapatnam.
  3. “IASc-Andhra University workshop on Functional Materials and their Applications in Devices” 3<sup>rd</sup> and 4<sup>th</sup> April 2014, Department of Physics, Andhra University, Visakhapatnam.
- Number of Research publications in National and International Journals – 28
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- Number of papers presented at Seminars/ Symposia/ Conferences/ Workshops – 55 (National -41 and International – 14)

### **Research Publications:**

1. K.Vijaya Babu, **V. Veeraiah** and P. S. V. Subba Rao "*Synthesis, Structural and Conductivity studies of Vanadium doped Lithium Lanthanum Titanate for Solid Electrolytes*", **International Journal of Scientific and Engineering Research** , Volume 3, Issue 2, February 2012.
2. K.Vijaya Babu, **V. Veeraiah** and P. S. V. Subba Rao "*Structural and Impedance studies of doped LLT Materials for Electrolytes of Lithium-ion Batteries*" **AIP conference proceedings**, Volume 1447, pages 1265-1266, 2012.
3. K.Vijaya Babu, **V. Veeraiah** and P. S. V. Subba Rao "*Structural, Impedance and Factor group Analysis of Lithium Lanthanum Titanate for electrolyte materials*", **Journal of Physical Science and Applications**, volume 2, pages 1-7, 2012.
4. K.Vijaya Babu, **V. Veeraiah** and P. S. V. Subba Rao "*Structural, Impedance, Dielectric and Modulus analysis of  $Li_{0.5-x}La_{0.5}Ti_{1-x}Nb_xO_3$  ( $x=0, 0.05, 0.1$  and  $0.15$ )*", **Acta Physica Polonica A**, Volume 122, No 4, 2012.

5. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao and S. T. Paulos, "Synthesis and Structural characterization Lithium Nickel Oxide at different temperatures", **AIP Conference Proceedings**, Volume 1512, Pages 1264-1265, 2013.
6. K. Vijaya Babu and **V. Veeraiah** "Improvement of Lithium-ion conductivity for A-site disordered Lithium Lanthanum Titanates by  $Nb^{5+} / V^{5+}$  substitution", **Research on Chemical Intermediates**, Volume 39, Issue 4, 2013.
7. D.Tirupathi swamy, K. Ephraim Babu, **V. Veeraiah** "Evidence for high ionic conductivity in Lithium lanthanum titanate  $Li_{0.29}La_{0.57}TiO_3$ " **Bulletin of Materials Science**, DOI:10.1007/s12034-013-0551-3
8. K. Chaitanya, G. Santhamma, K. V. Prasad and **V. Veeraiah**, "Molecular structure, vibrational spectroscopic (FT-Raman), first order hyperpolarizability, NBO analysis, HOMO and LUMO analysis, thermodynamic properties of 3,5-dimethylbenzophenone by ab initio HF and density functional method" **Journal of Atomic and Molecular Science**. Vol. 3, No. 1, pp.1-22, February 2012.
9. A.Veeraiah, Kadali Chaitanya, **V.Veeraiah**, M.V.S. Prasad, N. Udaya Sri, "Vibrational and Electronic Properties of 2-(Bromoacetyl)benzo(1 b)furan – An Experimental and Theoretical Study" **Journal of Vibrational Spectroscopy**", **Under Review**.
10. A.Veeraiah, Kadali Chaitanya, **V.Veeraiah**, M.V.S. Prasad, N. Udaya Sri, "Vibrational and Electronic spectroscopic studies on 5-Acetyluracil using DFT calculations", **Spectrochim Acta A: Molecular and Biomolecular Spectroscopy**, 95, 648-657, 2012.
11. A.Veeraiah, J. S. Reddy, K. Anand Solomon, G.Gopi Krishna, **V.Veeraiah** and K. Chaitanya, "Vibrational and UV-Vis absorption spectra of (Z)-2-(4-nitrobenzylidene)benzofuran-3(2H)-one using DFT calculations, *Journal of Molecular Structure*", **Journal of Molecular Structure**, Vol. 1026, pp. 36-43, October 2012,
12. N.Udaya Sri, Kadali Chaitanya, M. V. S. Prasad, **V.Veeraiah**, A.Veeraiah, "Experimental (FT-IR,FT-Raman and UV-Vis Spectra) and Density Functional Theory Calculations of Diethyl 3,5-pyrazoledicarboxylate", **Journal of Molecular Structure**, 1019, 68-79, 2012.
13. M. V. S. Prasad, N.Udaya Sri, A.Veeraiah, **V.Veeraiah**, K.Chaitanya, "Molecular structure, vibrational spectroscopic (FT-IR, FT-Raman),UV-Vis spectra, first order hyperpolarizability, NBO analysis, HOMO and LUMO analysis, thermodynamic

- properties of 2,6-dichloropyrazine by ab initio HF and Density functional method*" **Journal of atomic and molecular science**, Volume 4, No. 1, pp 1-17, 2013.
14. M. V. S. Prasad, Kadali Chaitany, N.Udaya Sri, **V.Veeraiah**, A.Veeraiah, "*Vibrational and Electronic Absorption Spectral studies of 5-amino-1-(4-bromophenyl)-3-phenyl-1-H-pyrazole*". **Spectrochimica Acta Part A, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 99, pp 379–389, 2012.
15. M. V. S. Prasad, Kadali Chaitanya, N.Udaya Sri, **V.Veeraiah**, A.Veeraiah, "*Vibrational and Electronic Absorption Spectral studies of 2-chloro-3-quinolinecarboxaldehyde*". **Comptes Rendus Chimie**. Published
16. N.Udaya Sri, Chaitanya, M.V.S.Prasad, **V.Veeraiah**, A.Veeraiah, "*Experimental (FT-IR, FT-Raman and UV-Vis Spectra) and Density Functional Theory Calculations of 3-Cyano-4-methylcoumarin*" **Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy**, 97, 728-736, 2012.
17. A. Venkateswara Rao, **V. Veeraiah**, A. V. Prasada Rao, B. Kishore Babu, "*Effect of Mn substitution on the electrochemical properties of  $\text{LiTi}_2(\text{PO}_4)_3$* " **Chemical Science Transactions**, Vol-2, 2(1), pp 105-112, 2013.
18. Paulos Taddesse Shibeshi, **V. Veeraiah**, A.V. Prasada Rao, "*Influence of Fluoride Substitution on the Physicochemical Properties of  $\text{LiMn}_2\text{O}_4$  Cathode Material for Lithium-ion Batteries*". **International Journal of Scientific and Engineering Research**, Volume 3, Issue, July-2012.
19. Paulos Taddesse Shibeshi and **V. Veeraiah** "*A study of the structural, morphological and electrochemical properties of  $\text{LiLa}_{0.01}\text{Mn}_{1.99}\text{O}_4$  cathode material*" **Abhinav**, volume No.2, Issue No.5, pages 33-39, 2013.
20. K. Ephraim Babu, A.Veeraiah, D. TirupathiSwamy, **V. Veeraiah** "*First-principles study of electronic and optical properties of cubic perovskite  $\text{CsSrF}_3$* ", **Materials Science-Poland**, December 2012, Volume 30, Issue 4, pp 359-367.
21. K. Ephraim Babu, A. Veeraiah, D. Tirupathi Swamy, **V. Veeraiah**, "*First-principles study of electronic structure and optical properties of cubic perovskite  $\text{CsCaF}_3$* ", **Chinese Physics Letters**, 2012, 29, 117102.
22. K. Ephraim Babu, A. Veeraiah, N. Murali, D. Tirupathi Swamy, **V. Veeraiah** "*Investigation of electronic structure and optical properties of cubic perovskite  $\text{RbCdF}_3$* ",

**Defence Science Journal**, Accepted on 2-3-2013

23. K. Ephraim Babu, A. Veeraiah, N. Murali, D. Tirupathi Swamy, **V. Veeraiah**, "*Structural and optoelectronic properties of cubic perovskite  $RbPbF_3$* ", **Bulletin of Materials Science**, DOI:10.1007/s12034-014-0652-7
24. K. Ephraim Babu, N. Murali, K. Vijaya Babu, **V. Veeraiah** "*First-principles study of structural, elastic, electronic and optical properties of cubic perovskite  $CsCaCl_3$  compound*" **Acta Physica Polonica A**, Accepted for publication on 15-01-2014.
25. "*Experimental and theoretical (HOMO, LUMO, NBO analysis and NLO properties) study of 7-hydroxy-4-phenylcoumarin and 5,7-dihydroxy-4-phenylcoumarin*", **Journal of Molecular Structure**, Volume 1047, 5 September 2013, Pages 216–228.
26. Y.L.N. Murthy, K.P. Suhasini, **V. Veeraiah**, G. Umesh, K.B. Manjunatha, V. Christopher, "*Synthesis, characterization and evaluation of the photophysical and nonlinear optical behaviour of novel 4-substituted arylidene-2-[5-(2,6-dichlorophenyl)-3-methyl-1,2-oxazol-4-yl]-1,3-oxazol-5-ones*", **Dyes and Pigments**, Volume 99, Issue 3, December 2013, Pages 713–719.
27. A. Venkateswara Rao, V. Veeraiah, A. V. Prasada Rao, B. Kishore Babu, M. Brahmayya "Spectroscopic characterization and conductivity of Sn-substituted  $LiTi_2(PO_4)_3$ " Res Chem Intermed, DOI: 10.1007/s11164-014-1532-x.

### **INTERNATIONAL CONFERENCES**

1. B. Swarna Latha, **B. Kishore Babu**, Venkateswara Rao Alaparthi, **Veeraiah VALAPARLA**, International Conference of Young Researchers on Advanced Materials, Singapore, July 1-6, 2012, Poster presentation "*Recent Advances in Li-ion batteries*".
2. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, 1<sup>st</sup> International Conference on Functional Materials for Defence May 18-20, 2012-Pune, Poster Presentation "*Synthesis and Structural characterization of Mg doped Lithium Nickel Oxide at different temperatures*".
3. K. Ephraim Babu, N. Murali, A. Veeraiah, D. Tirupathi Swamy, **V. Veeraiah**, 1<sup>st</sup> International Conference on Functional Materials for Defence, May 18-20, 2012-



Pune, “*Investigation of electronic structure and optical properties of cubic perovskite RbCdF<sub>3</sub>*”. (**ORAL PRESENTATION**)

4. M.V.S. Prasad, N. Udaya Sri, A. Veeraiah and **V. Veeraiah**, “2<sup>nd</sup> International conference on *Science, Engineering and Technology* (ICSET-2011)” Organized by the Department of Physics, VIT University, VELLORE, Tamilnadu, during April 20-21, 2011. (**ORAL PRESENTATION**)
5. M.V. S. Prasad, N. Udaya Sri, A. Veeraiah and **V. Veeraiah**, “XX INTERNATIONAL CONFERENCE ON *THE CHEMISTRY OF THE ORGANIC SOLID STATE*” (ICCOSS-XX), organized by the Department of Solid State and Structural Chemistry Division, Indian Institute of Science, Bangalore, INDIA, during June 25-31, 2011 (**Participated**).
6. M.V. S. Prasad, N. Udaya Sri, A. Veeraiah and **V. Veeraiah**, International symposium on “*FACETS OF WEAK INTERACTIONS IN CHEMISTRY*” organized by Department of Chemistry, UNIVERSITY OF CALCUTTA, INDIA during January 13-15, 2011 (**Participated**).
7. Paulos Taddesse Shibeshi, **V. Veeraiah**, A.V.Prasada Rao, K. Vijaya Babu, international conference on “material science and technology” held during 10-14 June 2012 at Department of Physics, St.Thomas College Pala, Kottayam DT, Kerala, India (**Participated**).
8. A.Veeraiah, M.V.S Prasad, Udaya Sri, **V. Veeraiah**, International Symposium on “Facets of weak interactions in Chemistry” held during 13-15 January 2011 at University of Calcutta, Kolkata, India. “*Electronic Structure calculations and vibrational analysis of Furacrinic acid*” (**POSTER PRESENTATION**).
9. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, *International Conference* on Science, Engineering and Technology during 20-21 April 2011. Ab initio (HF) and DFT Studies on Molecular Structure and Vibrational Spectra of 2-Benzofuranylboronic ACID” during an international conference held at Vellore Institute of Technology University, Vellore, India.
10. A.Veeraiah, M.V.S Prasad, Udaya Sri, **V. Veeraiah**, 3<sup>rd</sup> *International conference* on “Current Developments in Atomic, Molecular, Optical and Nano Physics” held during 14-16 December 2011, at University of Delhi, *Molecular structure, vibrational and NBO analysis of 4-Aminopyrazolo [3, 4-d] pyrimidine by ab initio and DFT calculations*” at University of Delhi, India(**Poster presentation**).

11. M.V.S Prasad, N. Udaya Sri, K. Chaitanya and **V. Veeraiah**, 4th International Congress on Computational Mechanics and Simulation, held during 9-12 December 2012 at Indian Institute of Technology, Hyderabad, "Vibrational and UV-Visible Spectral Studies of Ethyl 3-coumarincarboxylate using HF and DFT calculations".
12. K. Ephraim Babu, N. Murali, K. Ramarao, **V. Veeraiah** 100<sup>th</sup> Indian Science Congress, held during 3-7 January 2013, at University of Kolkata, Kolkata "Structural and Optoelectronic Properties of cubic perovskite CsCaCl<sub>3</sub> for novel applications"
13. K. Ephraim Babu, N. Murali, Paulos Teddesse Shibeshi, P.Himakar, **V. Veeraiah**, "*DFT study of structural, electronic, elastic and optical properties of cubic perovskite BiInO<sub>3</sub> by using mBJ method*" First annual International conference and Industry-CCRS Congress (ICC) -2013, July 13<sup>th</sup> -14<sup>th</sup>, 2013.
14. K. Ephraim Babu, K. Vijaya Babu, Paulos Taddesse, K. Ramarao, N. Gnana Praveena, N. Murali, Y. B. Shankar Rao, **V. Veeraiah**\* "Theoretical studies of structural and magnetic properties of cubic perovskite NdAlO<sub>3</sub>", accepted for presentation at International conference on Multifunctional Materials, Energy and Environment to be held at Sharda University, Greater Noida, India from 21-23 August 2013.
15. N.C. Bhanumathi Devi, T. Ghosh, Alok Mukherjee, **V. Veeraiah**, N. Someswara Rao "15N-NMR spectral data of selected Anti-Cancer Drugs", 20<sup>th</sup> National Magnetic Resonance Society Symposium cum Annual Meeting, February 2-5, 2014, Tezpur University, Assam, India.

### **NATIONAL CONFERENCES**

1. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, National Seminar on *Recent Advances in Physics-2011*, "Structural, Spectroscopic and Impedance studies of lithium lanthanum titanate for electrolytes of lithium-ion batteries" (Oral presentation).
2. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, National Seminar on *Advances in Materials Chemistry-2011*, *Synthesis and Characterization of Vanadium doped*

*Perovskite Lithium Lanthanum Titanate for Electrolytes of Lithium-ion Batteries” (Oral presentation).*

3. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, National Conference on *Advanced Research Concepts in Physics-2011*, “*Synthesis and Electrical properties of the perovskite compound  $Li_{0.5}Ln_{0.5}TiO_3$  ( $Ln=La$  and  $Sm$ )” (Oral presentation).*
4. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, National Conference on *Advanced Research Concepts in Physics-2011*, “*Synthesis and characterization of spinel  $LiMn_2O_4$  and  $LiMn_2O_{4-x}F_x$  ( $x = 0.02, 0.04, 0.06, \text{ and } 0.1$ ) cathode materials for lithium-ion batteries” (Oral presentation).*
5. Paulos Taddesse Shibeshi, K. Vijaya Babu, **V. Veeraiah**, Sixteenth National Convention of Electrochemists (NCE-16)-2011, “*Synthesis and Improving the Performance of spinel Manganese Oxide Cathode Materials for Lithium-ion Batteries” (Oral presentation).*
6. K. Vijaya Babu, **V. Veeraiah**, P. S. V. Subba Rao, National seminar on Recent trends in Advanced Materials-2012, “*Synthesis of lithium nickel oxide and its structural characterization” (Oral presentation).*
7. Paulos Taddesse Shibeshi, **V. Veeraiah**, A.V.Prasada Rao, K. Vijaya Babu, National seminar on Recent trends in Advanced Materials-2012, “*Influence of fluoride substitution on the physicochemical properties of  $LiM^{n2-}O_4$  cathode material for Lithium-ion Batteries” (Oral presentation).*
8. A.Venkateswara Rao, **V.Veeraiah**, B.Swarna Latha, National Seminar on *Recent Trends in Advanced materials-2012*, “*Structural and Vibrational spectroscopic study of  $LiTi_2(PO_4)_3$ ” (Oral presentation).*
9. A.Venkateswara Rao, **V.Veeraiah**, B.Swarna Latha National Seminar on *Recent Advances in Physics-2011*, “*Structural and impedance spectroscopic study of  $LiTi_2(PO_4)_3$ ”.(participated).*
10. A.Venkateswara Rao, **V.Veeraiah**, B.Swarna Latha National Seminar on *Recent Advances in Applied Chemistry-2011*, (participated)
11. D.Tirupathi Swamy, **V. Veeraiah**, National seminar on Recent trends in Advanced Materials-2012, *Structural and Impedance spectroscopic studies of solid electrolyte materials for Li-ion batteries” (Oral presentation).*

12. Paulos Tadesse Shibeshi, **V. Veeraiah**, A.V.Prasada Rao, K. Vijaya Babu, National conference on "Recent Trends in Advanced Materials" held during 27th & 28th of January 2012 at Sir C.R. Reddy (A) College, ULURU-534007 at Sir CRR College, Eluru, A.P., India. *Influence of Fluoride Substitution on the Physicochemical Properties of  $\text{LiMn}_2\text{O}_4$  Cathode Material for Lithium-ion Batteries* (Oral presentation).
13. Paulos Tadesse Shibeshi, **V. Veeraiah**, A.V.Prasada Rao, K. Vijaya Babu, national conference on "Advanced Research Concepts in Physics" held during 24th & 25th of November 2011 at Government College, Rajahmundry, Andhra Pradesh, India, "Synthesis and Characterization of Spinel  $\text{LiMn}_2\text{O}_{4-x}\text{F}_x$  ( $x = 0.02, 0.04, 0.06$  and  $0.1$ ) Cathode Materials for Lithium-ion Batteries" (Oral presentation).
14. Paulos Tadesse Shibeshi, **V. Veeraiah**, A.V.Prasada Rao, K. Vijaya Babu, National Convention of Electrochemists held during 15th & 16th of December 2011 at Coimbatore, India "Synthesis and Improving the Performance of Spinel Manganese Oxide Cathode Materials for Lithium-ion Batteries"
15. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National conference on "Recent Advances in Physics" held during 5-6 January 2011 at P. R. Govt. College, Kakinada, A.P., India, "Electronic structure calculations and vibrational analysis of Trioxsalen".
16. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National Conference on "Emerging Trends in Material Science-An Application to Amorphous, Nano and Liquid Crystals" held on 30<sup>th</sup> October 2010, "Electronic Structure calculations and Vibrational analysis of 2, 3-Diethylnaphtho furan".
17. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National seminar on "Recent developments in nano materials" on 30<sup>th</sup> January 2011, *Ab initio HF and DFT studies of Cloridarol: A comparative theoretical study* during a national conference at M.R.College, Vizianagaram, A.P., India.
18. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National conference on "2<sup>nd</sup> DAE-BRNS Symposium on Atomic Molecular and Optical Physics" during 22-25 February 2011., *Electronic Structure Calculations and Vibrational analysis of Etofuradine* during a national conference at Karnatak University, Dharwad, Karnataka, India.
19. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National seminar on "Future Chemistry for Human Development and Better Environment" on 21<sup>st</sup> and 22<sup>nd</sup> October

- 2011, *Electronic structure calculations and vibrational analysis of benzofuran 2-carboxylic acid: a comparative theoretical study*” at A.C.College, Guntur, India.
20. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National conference on “Advanced Research Concepts in Physics” during 24-25 November, 2011, *Ab initio HF and DFT computational modeling studies on 3,5 dimethyl-1-benzofuran-2-carboxylic acid* at Govt. College, Rajahmundry, A.P., India.
  21. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, National seminar on “*Frontier Research areas in organic synthesis*” during 29-30 November, 2011. *Ab initio computational modeling studies on “2-Phenyl-benzofuran* at Andhra University, Visakhapatnam, A.P., India.
  22. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, *National seminar* on “Recent trends in Advance Materials held during 27-28 January, 2012, Molecular structure, vibrational analysis of 5-Bromo-7-methoxy-1-benzofuran-2-carboxylic acid at Sir C.R.R.College, Eluru, A.P., India.
  23. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, *National seminar* on “Advances in Material Chemistry” during 24-25 February, 2012, *electronic structure calculations and vibrational analysis of Amiodarone*” at Andhra University, Visakhapatnam, A.P., India.
  24. A.Veeraiah, M. V.S Prasad, Udaya Sri, **V. Veeraiah**, *National conference* on “Recent Advances of Spectroscopy in Chemistry” on 27<sup>th</sup> February, 2012, *Ab Initio & DFT Studies on Molecular structure & Vibrational spectra of 3-Bromo Imidazo(1,2-A) Pyrazine*” at B.V. K. College (PG Courses), Visakhapatnam, A.P., India.
  25. K. Ephraim Babu, A. Veeraiah, D. Tirupathi Swamy, N .Murali, **V. Veeraiah**, “Electronic Structure Properties of Cubic Pervoskite CsSrF<sub>3</sub> A First-Principles Study”, National Conference on “Advanced Research Concepts in Physics”, (24<sup>th</sup> -25<sup>th</sup> November 2011), Department of Physics, Government College (A), Rajahmundry, Andhra Pradesh.
  26. A. Veeraiah, K. Ephraim Babu, M.V.S.Prasad, N .Murali, **V. Veeraiah**, “Ab initio and DFT computational modeling studies on 3,5 dimethyl-1-benzofuran-2-carboxylic acid”, National Conference on “Advanced Research Concepts in Physics”, (24<sup>th</sup> -25<sup>th</sup> November 2011), Department of Physics, Government College (A), Rajahmundry, Andhra Pradesh.

27. K. Ephraim Babu, A. Veeraiah, D. Tirupathi Swamy, N .Murali, **V. Veeraiah**, “Electronic Structure Properties of Cubic Perovskite CsCaF<sub>3</sub>: A First-Principles Study”, National Conference on “Frontier Research Areas in Organic Synthesis”, (29th-30th November 2011), Department of Organic Chemistry & FDW, Andhra University, Visakhapatnam.
28. A. Veeraiah, K. Ephraim Babu, K. Ramarao, N .Murali, **V. Veeraiah**, “Ab initio HF and DFT Computational Modeling Studies on 2-phenyl-benzofuran ”, National Conference on “Frontier Research Areas in Organic Synthesis”, (29th-30th November 2011), Department of Organic Chemistry & FDW, Andhra University, Visakhapatnam.
29. K. Ephraim Babu, A. Veeraiah, D. Tirupathi Swamy, N .Murali, **V. Veeraiah**, “Electronic structure properties of cubic perovskite BaMoO<sub>3</sub>: A first-principles study”, “International Symposium on Effect of Emissions & Effluents on Environment”, (EEEE-2012) (23rd-24th December 2011), Department of Engineering Chemistry, AU College of Engineering, Andhra University, Visakhapatnam.
30. N .Murali, K. Ephraim Babu, K. Rama Rao, **V. Veeraiah**, “Structural and electronic Properties of YBiO<sub>3</sub> from First-Principles Calculations”, National seminar on “Recent trends in Advanced Materials”, (27th-28th January 2012), Departments of Physics and Chemistry, Sir. C. R. Reddy (A) College, Eluru, Andhra Pradesh.
31. K. Ephraim Babu, A. Veeraiah, N. Murali, **V. Veeraiah**, “First-Principles Study of Structural, Electronic and Optical Properties of the Cubic Perovskite RbCaF<sub>3</sub>”, National seminar on “Recent trends in Advanced Materials”, (27th-28th January 2012), Departments of Physics and Chemistry, Sir. C. R. Reddy (A) College, Eluru, Andhra Pradesh.
32. N .Murali, K. Ephraim Babu, K. Rama Rao, **V. Veeraiah**, “First-Principles Study on electronic Structure Properties of Y<sub>3</sub>AlC”, National seminar on “Recent Advances of Spectroscopy in Chemistry”, (27th February 2012), Departments of Organic Chemistry, B V K College, PG Courses, Visakhapatnam, Andhra Pradesh.
33. K. Ephraim Babu, A. Veeraiah, N. Murali, **V. Veeraiah**, “First-Principles Study of Structural, electronic and Optical Properties of The Cubic Perovskites KCaF<sub>3</sub> and RbCaF<sub>3</sub>”, National seminar on “Recent Advances of Spectroscopy in Chemistry”, (27th

February 2012), Departments of Organic Chemistry, B V K College, PG Courses, Visakhapatnam, Andhra Pradesh.

34. K. Ephraim Babu, N. Murali, K. Vijaya Babu, K. Ramarao, N. Gnana Praveena, V. Veeraiah, "Full-potential study of the optoelectronic properties of cubic perovskite  $\text{BiScO}_3$ " National seminar on "Emerging Trends in Soft Materials" (ESTM-2012) (1st-2nd November, 2012), Department of Physics, Sri Krishna Devaraya University, Anantapur.
35. K. Ephraim Babu, N. Murali, K. Vijaya Babu, A. Venkateswarao, K. Ramarao, N. Gnana Praveena, A. Mary Vijaya Ratna and V. **Veeraiah**, "First-Principles Study on the Structural, Electronic and Optical Properties of Cubic Perovskite  $\text{BiGaO}_3$ " National Conference on "Green Energy and Sustainable Methods to meet the growing energy needs of the Nation" (GESM-2012) (9th-10th November 2012) at Department of Physics, M. R. College, Vizianagaram.
36. K. Ephraim Babu, N. Murali, K. Vijaya Babu, A. Venkateswarao, K. Ramarao, N. Gnana Praveena, A. Mary Vijaya Ratna and V. **Veeraiah**, "Density functional theoretical study of structural, electronic and optical properties of cubic perovskite semiconductor  $\text{BiAlO}_3$ " National Conference on "Green Energy and Sustainable Methods to meet the growing energy needs of the Nation" (GESM-2012) (9th-10th November 2012) at Department of Physics, M. R. College, Vizianagaram.
37. K. Ephraim Babu, N. Murali, K. Vijaya Babu, A. Venkateswarao, K. Ramarao, V. **Veeraiah**, "Computational Study of Structural, Electronic and Optical Properties of Cubic  $\text{BiInO}_3$ ", 2nd National Seminar on Computational Techniques for Engineering Applications (NSCTEA-12) (8th-10th November 2012), Corporate group of Institutions, Hataikheda, Near Patel Nagar, Raisen Road, Bhopal-462 022 (M.P.).
38. K. Ephraim Babu, N. Murali, K. Vijaya Babu, K. Ramarao, N. Gnana Praveena and V. **Veeraiah**, "First-Principles Study on the Structural, Electronic and Optical Properties of Cubic Perovskite  $\text{RbHgF}_3$ ", AP Science Congress, (14th-16th November, 2012), Acharya Nagarjuna University, Guntur, Andhra Pradesh.
39. K. Ephraim Babu, N. Gnana Praveena, N. Murali, A. Mary Vijaya Ratna and V. **Veeraiah**, "Computational study of optoelectronic properties of  $\text{KMgCl}_3$ ", National seminar on "Mathematical Modeling in Natural and Physical Sciences", (16th-17th

November 2012), Departments of Mathematics, Ch.S.D.St. Theresa's (A) College for Women, Eluru, Andhra Pradesh.

40. K. Ephraim Babu, N. Murali, K. Ramarao, N. Gnana Praveena and **V. Veeraiah**, "Theoretical prediction of the structural, electronic and optical properties of  $\text{CsHgF}_3$ ", National Conference on Advances in materials Science and Technologies, (19th-21th November 2012), Department of Physics, Kakatiya University, Warangal, Andhra Pradesh.
41. K. Ephraim Babu, N. Murali, K. Ramarao, N. Gnana Praveena, **V. Veeraiah**, National Conference on Advanced Functional Materials (NCAFM-2013), held during 21-23 January 2013, at Dept. of Chemistry, Visvesvaraya National Institute of Technology, Nagpur, Maharashtra, " Density Functional Theoretical Study of Structural, electronic and optical properties of cubic perovskite  $\text{BaPrO}_3$  "

**EXTENSION / COMMUNITY SERVICE:**

- Served as Founder member of OCRCD (Organization for Comprehensive Rural Community Development), a Voluntary Social Service organization started in 1982 at Visakhapatnam to educate and organize the rural poor towards development. Several training programs, educational and employment oriented programs were conducted during the last 30 years in Visakhapatnam district.
- House sites to the rural poor at Narava village, Visakhapatnam District have been arranged through OCRCD by the District Administration.
- Coaching classes were conducted for EAMCET candidates and guided the rural students for pursuing engineering and medical education.
- Eye camps in rural areas were conducted and arranged for free eye operations and supply of glasses.
- Training programmes for artisans and handicrafts were organized for rural youth and guided them to utilize the government development schemes.

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