

## CURRICULUM VITAE

Dr. Kalla Ramamohan  
Dept.of Physics  
B.T.Govt Degree College  
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### EDUCATIONAL QUALIFICATIONS:

- B.Sc : Major (Mathematics, Physics, Chemistry)(2001-2004) S.V.University, Tirupati, India
- M.Sc (Physics): Physics (2004-2006) Bharathidasan University, Tiruchirapalli, India
- Ph.D (Physics): “Polymer Film Characterization— Electrical, Optical and Structural Characterization of Na Doped PVC/PEMA Based Polymer Blend Electrolyte Films for Electrochemical Cell Applications”.(-2008-2013) S.V.University, Tirupati, India

### RESEARCH SKILLS AND INTERESTS:

#### Research skills:

Super capacitors for energy storage applications. The preparation of polymer blend electrolyte films by solution casting method and their characterization for battery applications, preparation of electrode material for energy storage materials. CV-IV Characteristics, XRD, SEM, FTIR, UV-VIS, DSC, Li ion batteries.

#### Research interest:

Electrochemical Energy Storage Materials like Supercapacitors, Solid state Lithium ion Batteries and nanocomposite polymer electrolyte thin films, Polymer thin film synthesis & characterization , nanomaterials for semiconducting electronic applications, polymer electronics and dye sensitized solar cells

### POST DOCTORAL EXPERIENCE:

1. Key laboratory of Biomass Chemical Engineering in college of chemical and biological engineering, Zhejiang University, Hangzhou, china ((2013 December to 2015 July).
2. School of Material Science and Engineering, Harbin Institute of Technology Shenzhen Graduate School, University town of Shenzhen, Shenzhen, china (2015-August to 2017 December)

### TEACHING EXPERIENCE:

1. 2006-2008 : Worked as a lecturer in C.N.R Arts & Science Degree College, Pileru, Andhra Pradesh, India.
2. 2009-2012 : Worked as a Academic consultant in the Dept. of Physics, S.V. University, Tirupati, A.P.
3. 2018-Till to date: Worked as an Asst. Professor in B.T.College, Madanapalle, A.P.

#### Trainings attended:

1. Five – Day Residential Training Programme for Teachers” on Content Delivery and Assessment methods pertaining to Skill Courses for I-Semester TOT on “**Electrical Appliances**” at **Royalaseema University, Kurnool** organized by Commissionerate of Collegiate Education, A.P., Mangalagiri- 7<sup>th</sup> to 11<sup>th</sup> December 2022
2. Faculty development programme on ENGLISH Medium Instruction, Proficiency in English 6<sup>th</sup> to 10<sup>th</sup> June 2023 at Nodal resource center S G Govt., Degree college Piler organized by Commissionerate of Collegiate Education, A.P., Mangalagiri.
3. International Faculty development programme on Technology Assisted Teaching and virtual learning through ICT tools during 25<sup>th</sup> to 30<sup>th</sup> MAY 2020 organized by Dept. of Physics S BV R Govt Degree & P.G College Badvel Andhrapradesh’
4. Faculty development programme on Nano Science and technology from 29<sup>th</sup> June to 7<sup>th</sup> July 2020 IIITDM Kanchipuram, Chennai, TN.

#### Additional Institutional Responsibilities

1. IQAC Member in B.T.College Madanapalli for the academic year 2019 to 2020
2. Student Grievance and welfare committee member for the academic year 2021-2022
- 3.

#### INTERNATIONAL RESEARCH PUBLICATIONS:

1. An activated carbon natural onion as an electrode material for Super capacitor. Kalla Ramamohan, Yu Jie Ionics (under review).
2. Sodium Ion Effect on PVC+PEMA+DMF Polymer Blend Electrolyte System for Electrochemical Applications, Kalla Ramamohan, International Journal of Scientific & Engineering Research (IJSER) 2019 ISSN 2229-5518
3. Effects of potassium iodide (KI) on crystallinity, thermal stability, and electrical properties of polymer blend electrolytes (PVC/PEO:KI) Reddeppa Nadimicherla Ramamohan Kalla, Ravi Muchakayala, XinGuo Solid State Ionics 278 (2015) 260–267.
4. Electrical and structural characterization of PVA/PEG polymer blend electrolyte films doped with NaClO<sub>4</sub> K. Rama Mohan\*, V.B.S. Achari, A.K. Sharma, Lu Xiuyang Ionics 2014; 21(5):1333-1340
5. Effect of Plasticizer on (PVC+PEMA+NaIO<sub>4</sub>) Solid Polymer blend electrolyte system for Battery characterization studies K. Rama Mohan\*, A.K. Sharma Advances in Polymer Science and Technology: An International Journal 3(4) (2013) 49-53.

6. Conductivity Studies on (PVC/PEMA) Solid Polymer blend Electrolyte Films Complexed with NaIO<sub>4</sub> K. Rama Mohan\*, C.Umadevi, V.B.S. Achari, A.K. Sharma International Journal of Plastics Technology 17 (2) 2013, 139-148.
7. Electrical and optical properties of (PEMA/PVC) polymer blend electrolyte doped with NaClO<sub>4</sub> K. Rama Mohan\*, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma Polymer Testing 30(2011)881.
8. Discharge Characteristics of Polymer blend (PVP/PVA) Electrolyte Films Doped with Potassium Bromide. C.Umadevi, K. Rama Mohan\*, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma Ionics (2010) 16:751-756.
9. Ion Transport and Discharge Characteristics of Polymer blend (PVP/PVA) Electrolyte Films Doped with Potassium Iodide. C.Umadevi, K. Rama Mohan\*, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma American Institute of Physics Proceedings International Conference on Physics of Emerging functional materials (2010) 168.
10. A comparative study of the discharge characteristics of (PVP/PVA) polymer blend electrolyte films doped with different potassium salts K. Rama Mohan\*, C.Umadevi, A.K. Sharma, Lu xiuyang International Journal of Plastics Technology

#### **CONFERENCE PROCEEDINGS:**

1. Electrical properties of PEMA/PVC Polymer blend electrolyte films doped with NaClO<sub>4</sub> K. Rama Mohan\*, C.Umadevi, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma Conference Proceedings in ICMST-2010.
2. Electrical and optical properties of (PEMA/PVC) polymer blend electrolyte doped with NaIO<sub>4</sub> K. Rama Mohan\*, C.Umadevi, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma International Conference On Advanced Materials and its Applications (ICAMA - 2011), Kalasalingam University, Krishnankoil, Tamilnadu, India.
3. A comparative study of the discharge characteristics of (PVP/PVA) polymer blend electrolyte films doped with different potassium salts C.Umadevi, K. Rama Mohan\*, V.B.S. Achari, V.V.R.N. Rao, A.K. Sharma (AMST-2012) Kakathiya University, Warangal, India

#### **PAPERS PRESENTED IN CONFERENCES/SYMPOSIA:**

1. Ionic conductivity studies of (PEMA/PVC) solid polymer electrolyte blind films doped with NaIO<sub>4</sub> Advances in Materials Science and Technology (AMST-2012) during 19-21st November, 2012 Kakathiya University, Warangal.
2. Effect of Plasticizers on (PVC+PEMA+NaClO<sub>4</sub>) Solid State Polymer Electrolytes System for Battery Studies International Conference on current Trends and Issues of Renewable Energy (CTIRE-2012), Nalgonda, March, 2012
3. Electrical, Optical and Structural Characterization of Polymer blend (PVP/PVA) Electrolyte Films Doped with NaNO<sub>3</sub> Third International Multicomponent Polymer Conference, ([IMPC-2012](#)) on march 23, 24 and 25, 2012, Kerala, India.

4. Ion Transport and Discharge Characteristics of Polymer blend (PEMA/PVC) Electrolyte Films Doped with NaBrO<sub>4</sub> International Conference on Multifunctional Materials, B.H.U, Varanasi, Decmber-2010
5. Electrical and Optical Characterization of Polymer blend (PVP/PVA) Electrolyte Films Doped with Potassium Chloride. International Conference on Recent Trends in Materials Science and Technology, Thiruvananthapuram, October, 2010.
6. Discharge Characteristics of Polymer blend (PVP/PVA) Electrolyte Films Doped with Potassium Bromide. Internationals Conference on Current Trends in Chemistry and Biochemistry Bangalore, December, 2010.
7. Optical Studies on PVA Solid Polymer Electrolyte Films "Presented at National Conference on EMERGING MATERIALS, DEVICES AND TECHNOLOGIES held at Tirupati, during 24-25<sup>th</sup> February 2009
8. Structural and optical characterization of PEMA polymer electrolyte films doped with NaClO<sub>4</sub>" Presented at 8<sup>th</sup> National Conference on Solid State Ionics: Material for Novel Devices held at Sagar, during 7-9<sup>th</sup> December -2009
9. Electrical properties of pva/peg based polymer blend electrolyte films Presented at National Conference on NCANDT-2009 held at Kadapa
10. Discharge characteristics of polymer blend (PVP / PVA) electrolyte films doped with potassium chloride Presented at A.P.Science Congress held at Tirupati.
11. Conductivity and discharge Character tics of Solid Polymer Electrolyte films Presented at National Conference on Experimental Tools for Materials Science Research (ETMSR-2010) held at B.H.U, Varanasi

#### **National workshop attended**

1. National workshop on "Materials Science for Energy Storage"  
18-22<sup>nd</sup> January, 2010 Anna University, Chennai, TN, India.

#### **CHARACTERIZATION TECHNIQUES USED :**

1. X-ray diffraction
2. Fourier transforms infrared spectroscopy (FTIR)
3. Differential scanning calorimetry (DSC)
4. Transference number measurements (AC Impedance & DC polarization)
5. Impedance analyzer (AC conductivity)
6. Optical absorption spectrophotometer (direct, indirect and optical band edge values)
7. SEM analysis
8. Battery charge-discharge characteristics
9. I.V Characteristic
10. DC conductivity.
11. CV Characteristics