Personal Information

Name	Dr. Anji Reddy Polu
Years of Experience	Teaching: 8 Years 1 month Research: 6 Years 5 months
Email Id	anjireddy.p@bvrithyderabad.edu.in
Areas of Specialization	Nanocomposite Materials for Energy Devices (Rechargeable Batteries, Solar Cells, Fuel Cells, Supercapacitors)

Educational Qualifications

Doctoral	Ph.D.	Rechargeable Batteries
PG Degree	M.Sc.	Condensed Matter Physics & Laser Technology
UG Degree	B.Sc.	Mathematics, Physics, Chemistry

➢ **Post Doctoral Researcher:** **1st June, 2014 – 30th April, 2016**

Polymer Materials Lab, Department of Chemical and Biomolecular Engineering, Sogang University, Seoul, South Korea.

Awards and Honors

- **Best Speaker Award** in International Webinar organized by AKS University, July 2020.
- Recipient of the prestigious "**2017, 2018 & 2019 Albert Nelson Marquis Lifetime Achievement Award**" from Marquis Who's Who. This is one of the outstanding achievements of Who's Who biographees.
- Post-doctoral fellow by "**National Research Foundation of Korea" (NRF)**, Sogang University, South Korea from June 2014-2016.

- "**Certificate of outstanding contribution in reviewing** – award" from Journal of Physics and Chemistry of Solids (Elsevier), March 2015.
- Biographical profile included in **Who's Who in the World® 2015, 2016 & 2019.**
- **Dr. D.S. Kothari Postdoctoral Fellowship** by the University Grants Commission **(UGC), New Delhi**, India (July 2013, August 2016, **not availed)**
- **Best Poster Award** in 57th International Symposium on Solid State Physics (DAE SSPS-2012) Organized by **IIT Bombay and BARC**, Mumbai Dec. 3-7, 2012
- Grant from **DAAD (Germany), CSIR (India)** and **INSA (India)** for presentation of paper in International conference Polychar-18, World forum on advanced polymeric materials, April 6-10, 2010, University of Siegen, **Germany.**
- Grant from **South Asian Physics Foundation (South Asia)** for presentation of paper in International conference Polychar-19, World forum on advanced polymeric materials, March 20-24, 2011, Tribhuvan University, Kathmandu, **Nepal**.
- **Prestigious UGC-Research Fellowship in Sciences for Meritorious Students (RFSMS), New Delhi** 2010-2012 (JRF).
- **All India 1151th Rank in JEST** – 2008 (74.28%).
- **University 3rd** position in **M.Sc.** (Physics).
- **Ist Rank** in the college at Graduation Level (**IIIrd B.Sc. - 94.4**%) and **Gold Medal.**
- Best Meritorious Student in the College (in **B.Sc.**)

Reviewer for the Journals

More than 15 reputed international Journals including

- Journal of Materials Chemistry A (RSC)
- RSC advances (RSC)
- The Journal Physical Chemistry (ACS)
- ACS Applied Polymer Materials (ACS)
- ACS Omega (ACS)
- Journal of Power Sources (Elsevier)
- Materials Science & Engineering B (Elsevier)
- Journal of Industrial & Engineering Chemistry (Elsevier)
- Journal of membrane science (Elsevier)
- Polymer Testing (Elsevier)
- Journal of Physics & Chemistry of Solids (Elsevier)

- Journal of Polymer Research (Springer)
- Ionics (Springer)
- Science of Advanced Materials (ASP) etc.

Text Book Publication (2012)

Title: "Synthesis and characterization of Solid Polymer Electrolytes"

ISBN NR: 978-3-959-19669-0

Publisher: Lambert Academic Publishing Inc., Saarbrucken, Germany.

Author: Dr. Anji Reddy Polu

Patents

1. "**Solid Polymer Electrolyte composition and Lithium Secondary Battery including the Same**" Korean Patent Granted.

   Hee-Woo Rhee, **Anji Reddy Polu**, Dong Kyu Kim

Application Number	10-2015-0152483	Granted Date	05-11-2017

Life Member in Electrochemical Society of India (Membership No.: LM-252)

Keynote and Invited Talks

1. **"Ionic Liquid Doped PEO-Based Polymer Electrolytes for Lithium-Ion Polymer Batteries"**

   International Conference on Innovative Electrochemical Energy Materials and Technologies (**EEMT-2015**),

   November 8-11, 2015, Guangxi University, Nanning, **China**. (**Keynote**)
2. "**Organic-inorganic hybrid nanocomposite solid Polymer Electrolytes for Li-ion Batteries**"

   National Symposium on Electrochemical Science and Technology (**NSEST-2016**) July 15-16, 2016, **IISc Bangalore**, Bangalore, India (**Invited**)
3. **"Role of POSS Nanocomposite Electrolytes in Energy Storage & Conversion Devices"**

   International Conference on "Sustainable Energy Technologies for Smart and Clean cities (**SETS&CC-2016**)" July 27-29, 2016, Tirupathi, India (**Invited**).

4. **"Role of Organic-Inorganic Hybrid (POSS) Nanocomposite Polymer Electrolytes in Li-Ion and Li-Air Batteries"**

   "2nd International Conference on Science and Engineering of Materials (ICSEM - 2018)", 6-8 January 2018, Sharda University, Greater Noida, India. (**Invited**).
5. "**Novel Organic-Inorganic Hybrid (POSS) Nanocomposite Polymer Electrolytes and their Application in Rechargeable Li-Ion Batteries**"

   International Webinar on New Research Trends in Functional Physics, 1-4, July 2020, AKS University, India. (**Expert Talk**).
6. **"Advances in the high performance and Safer Nanocomposite Polymer Electrolytes for Rechargeable Li based Batteries"**

   National Conference on Functional Materials, 25-26 July, 2020. Sharda University, India. (**Invited**)
7. "**Novel Nanocomposite Polymer Electrolytes for Rechargeable Li-Ion Batteries**"

   International Conference on Futuristic Materials (ICFM-20), 18-20 December 2020, D.D.U. Gorakhpur University, Uttar Pradesh, INDIA. (**Invited**)

List of Publications in Peer Reviewed Journals (47)

(Total No. of Citations=1406, h-index= 22, i10-index = 32)

Review Articles

1. Anji Reddy Polu

   "Synthesis, Optimization and Applications of ZnO/polymer nanocomposites"

   '**Materials Science and Engineering: C**' **98, 1210-1240, 2019**. (**I.F. – 5.880**)
2. J Theerthagiri, R. A Senthil, B Senthil Kumar, ***Anji Reddy Polu***, Muthupandian Ashok kumar, Madhavan Jagannathan

   "Recent advances in MoS_2 nanostructured materials for energy and environmental applications - A Review"

   '**Journal of Solid State Chemistry**' 252, 43-71, **2017**. (**I.F. – 2.726**)
3. Rahul Singh, ***Anji Reddy Polu***, Hee-Woo Rhee, Canan Verlikli, Pramod K Singh

   "Perspective of Solid Biopolymer Electrolytes in Dye Sensitized Solar Cell and Battery Application"

   '**Renewable and Sustainable Energy Reviews**' 65, 1098-1117, **2016** (**I.F. – 12.110**)
4. K. Surana, R. M. Mehra, B. Bhattacharya, H-W Rhee, ***Anji Reddy Polu***, P. K. Singh

"A comprehensive study of chalcogenide Quantum Dot Sensitized Solar Cells with a new solar cell exceeding 1V output"

'**Renewable and Sustainable Energy Reviews**' 52, 1083-1092, **2015** (**I.F. – 12.110**)

Papers Published in International Journals

As first or Corresponding Author

1. ***Anji Reddy Polu*** & P K Singh, "Improved ion dissociation and amorphous region of PEO based solid polymer electrolyte by incorporating tetracyanoethylene",
   Materials Today: Proceedings, 2020, Elsevier Publisher (In Press).
2. ***Anji Reddy Polu*** & P K Singh, "Effect of POSS-PEG on ionic conductivity and relaxation of solid polymer electrolytes",
   Materials Today: Proceedings, 2020, Elsevier Publisher (In Press).
3. ***Anji Reddy Polu,*** "A Novel Nanocomposite Polymer Electrolyte for Application in Solid State Lithium Ion Battery"
   Proceedings of the IEEE Conference on Nanotechnology, **2019**, 2018-July, 8626268.
4. ***Anji Reddy Polu***, H W Rhee, M. Jeevan Kumar Reddy, A. M. Shanmugharaj, Sung Hun Ryu and Dong Kyu Kim
   "Effect of POSS-PEG hybrid nanoparticles on cycling performance of polyether-LiDFOB based solid polymer electrolytes for all solid-state Li-ion battery applications"
   'Journal of Industrial & Engineering Chemistry' 45, 68-77, **2017.** (**I.F. = 5.278**)
5. ***Anji Reddy Polu*** and H W Rhee
   "Ionic Liquid Doped PEO-Based Solid Polymer Electrolytes for Lithium-Ion Polymer Batteries"
   'International Journal of Hydrogen Energy' 42, 7212-7219, **2017** (**I.F. = 4.939**)
6. ***Anji Reddy Polu*** and H W Rhee
   "Effect of POSS-PEG(n=4) Hybrid Nanoparticles on Electrical, Thermal and Mechanical properties of PEO based Solid Polymer Electrolytes"
   '**Advances in Polymer Technology**' 36, 145-151, **2017** (**I.F. = 2.663**)
7. ***Anji Reddy Polu*** and H W Rhee
   "Effect of TiO_2 nanoparticles on structural, thermal, mechanical and ionic conductivity studies of PEO_{12}-LiTDI solid polymer electrolyte"
   'Journal of Industrial & Engineering Chemistry' 37, 347-353, **2016.** (**I.F. = 5.278**)
8. ***Anji Reddy Polu*** and H W Rhee

"The Effects of LiTDI Salt and POSS-PEG(n=4) Nanoparticles on Ionic Conductivity and Crystallinity of PEO-based Solid Polymer Electrolytes"

'**Science of Advanced Materials**' 8, 931-940, **2016**. (**I.F. = 1.671**)

9. ***Anji Reddy Polu***, H W Rhee and Dong Kyu Kim

"New Solid Polymer Electrolytes (PEO_{20}-LiTDI-SN) for Lithium Batteries: Structural, Thermal and Ionic Conductivity Studies"

'**J. Mater. Sci.: Materials in Electronics'** 26, 8548–8554, **2015**. (**I.F. = 2.324**)

10. ***Anji Reddy Polu*** and H W Rhee

"Nanocomposite Solid Polymer Electrolytes Based on Poly(ethylene oxide)/POSS-PEG(n=13.3) Hybrid Nanoparticles for Lithium Ion Batteries"

'**Journal of Industrial & Engineering Chemistry**' 31, 323-329, **2015**. (**I.F. = 5.278**)

11. ***Anji Reddy Polu,*** Dong Kyu Kim and H W Rhee

"Poly(ethylene oxide)-Lithium difluoro(oxalato) borate New Solid Polymer Electrolytes: Ion-Polymer Interaction, Structural, Thermal and Ionic Conductivity Studies"

'**Ionics**' 21, 2771-2780, **2015.** (**I.F. = 2.394**)

12. ***Anji Reddy Polu***, Ranveer Kumar and H W Rhee

"Magnesium ion conducting solid polymer blend electrolyte based on biodegradable polymers and application in solid-state batteries"

'**Ionics** ', 21, 125-132, **2015**. (**I.F. = 2.394**)

13. ***Anji Reddy Polu,*** Ranveer Kumar and H W Rhee

"Effect of ceramic fillers on polyethylene glycol-based solid polymer electrolytes for solid-state magnesium batteries"

'**High Performance Polymers**', 26, 628-631**, 2014.** (**I.F. = 1.584**)

14. ***Anji Reddy Polu***, Ranveer Kumar and G M Joshi

"Effect of Zinc Salt on Transport, Structural and Thermal properties of PEG - based polymer electrolytes for battery application"

'**Ionics**', 20, 675-679, **2014.** (**I.F. = 2.394**)

15. ***Anji Reddy Polu*** and Ranveer Kumar

"Preparation and Characterization of PEG-$Mg(CH_3COO)_2$-CeO_2 Composite Polymer Electrolytes for Battery Application"

'**Bulletin of Materials Science**', 37, 309-314, **2014**. (**I.F. = 1.264**)

16. ***Anji Reddy Polu*** and Ranveer Kumar

"Mg^{2+}- ion Conducting PEG-TiO_2 Composite Polymer Electrolytes for Solid-State Batteries"

'**Materials Express**', 4, 79-84, **2014**. (**I.F. = 2.062**)

17. ***Anji Reddy Polu***

"Ionic conductivity and electrochemical studies of Mg^{2+} - ion conducting PEG-Al_2O_3 composite polymer electrolytes"

'**Res. J. Pharm. Biol. Chem. Sci.**', 5, 953-961, **2014**. (**I.F. = 0.35**)

18. ***Anji Redy Polu*** and Ranveer Kumar

"Ionic conductivity and discharge characteristic studies of PVA-$Mg(CH_3COO)_2$ Solid Polymer Electrolytes"

'**International Journal of Polymeric Materials**' 62, 76-80, **2013**. (**I.F. = 2.263**)

19. ***Anji Reddy Polu*** and Ranveer Kumar

"Preparation and Characterization of PVA Based Solid Polymer Electrolytes for Electrochemical Cell Application",

'**Chinese Journal of Polymer Science**' 31, 641-648, **2013**. (**I.F. = 2.804**)

20. ***Anji Reddy Polu*** and Ranveer Kumar

"Effect of Al_2O_3 ceramic filler on PEG-based composite polymer electrolytes for magnesium batteries"

'**Advanced Materials Letters**' 4, 543-547, **2013**. (**I.F. = 1.46**)

21. ***Anji Reddy Polu*****,** Ranveer Kumar and K Vijaya Kumar

"Ionic Conductivity and Electrochemical Cell Studies of New Mg^{2+} ion Conducting PVA/PEG based Polymer blend Electrolytes"

'**Advanced Materials Letters**' 3, 406-409, **2012**. (**I.F. = 1.46**)

22. ***Anji Redy Polu*** and Ranveer Kumar

"Ion-conducting polymer electrolyte based on poly (ethylene glycol) complexed with $Mg(CH_3COO)_2$- application as an electrochemical cell"

'**E-Journal of Chemistry**' **9,** 869-874, **2012**. (**I.F. = 1.727**)

23. ***Anji Reddy Polu,*** Ranveer Kumar and Harsha Dehariya

"Impedance Spectroscopy studies of PVA/PEG based polymer blend electrolytes"

'**Research & Reviews in Electrochemistry**' **3**, 30-35, **2012**.

24. ***Anji Reddy Polu*** and Ranveer Kumar,

"AC impedance and dielectric spectroscopic studies of Mg^{2+} ion conducting PVA-PEG blended polymer electrolytes"

'**Bulletin of Material Science**' **34**, 1063-1067, **2011**. (**I.F. = 1.264**)

25. ***Anji Redy Polu*** and Ranveer Kumar

"Impedance Spectroscopy and FTIR studies of PEG – based Polymer Electrolytes"

'**E-Journal of Chemistry**' **8,** 347-353, **2011**. (**I.F. = 1.727**)

26. ***Anji Reddy Polu*****,** Ranveer Kumar, Valerio Causin and Ramesh Neppalli

"Conductivity, XRD and FTIR Studies of New Mg^{2+} Ion Conducting Solid Polymer Electrolytes: [PEG: $(CH_3COO)_2Mg$]"

'**Journal of the Korean Physical Society**' **59**, 114-118, **2011**. (**I.F. = 0.63**)

As Co-author

27. *K Deshmukh, M B Ahamad,* ***Anji Reddy Polu****, K K Sadasivuni, S K K Pasha, D Ponnamma, M A A Almaadeed, R R Deshmukh, K Chidambaram*

"Solution Processed White Graphene Reinforced Ferroelectric Polymer Nanocomposites with Improved Thermal Conductivity and Dielectric Properties for Electronic Encapsulation"

'**Journal of Polymer Research**' 24, 27, 2017. (**I.F. = 1.615**)

28. *K Deshmukh, M B Ahamad, R R Deshmukh, S K K Pasha, K K Sadasivuni,* ***Anji Reddy Polu****, D Ponnamma, M A A Almaadeed, K Chidambaram*

"Fumed SiO_2 Nanoparticles Reinforced Biopolymer Blend Nanocomposites with High Dielectric Constant and Low Dielectric Loss for Flexible Organic Electronics"

'**J. Applied Polymer Science'** 134, 44427, **2016**. (**I.F. = 1.901**)

29. *K Deshmukh, M B Ahamad, R R Deshmukh, S K K Pasha, K K Sadasivuni,* ***Anji Reddy Polu****, D Ponnamma, M A A Almaadeed, K Chidambaram*

"Newly developed biodegradable polymer nanocomposites of cellulose acetate and Al_2O_3 nanoparticles with enhanced dielectric performance for embedded passive applications"

'**J. Mater. Sci.: Materials in Electronics'** 28, 973-986, **2017**. (**I.F. = 2.324**)

30. *K Deshmukh, M B Ahamad, R R Deshmukh, K K Sadasivuni, D Ponnamma, S K K Pasha, M A A Almaadeed,* ***Anji Reddy Polu****, K Chidambaram* "Eeonomer 200F_: A High-Performance Nanofiller for Polymer Reinforcement—Investigation of the Structure, Morphology and Dielectric Properties of Polyvinyl Alcohol/Eeonomer-200F_ Nanocomposites for Embedded Capacitor Applications"

'**Journal of Electronic Materials**' 46, 2406-2418, 2017. (**I.F. = 1.579**)

31. *K Karuppasamy, Hee-Woo Rhee, P Anil Reddy, Dipti Gupta, Liviu Mitu,* ***Anji Reddy Polu*** *and X S Shajan* (**DOI**: 10.1016/j.jiec.2016.06.020)

"Ionic liquid incorporated nanocomposite polymer electrolytes for rechargeable lithium ion battery: A way to achieve improved electrochemical and interfacial properties"

'Journal of Industrial & Engineering Chemistry' 40, 168-176, **2016.** (**I.F. = 4.841**)

32. *K Deshmukh, M B Ahamad,* ***Anji Reddy Polu****, K K Sadasivuni, S K K Pasha, D Ponnamma, M A A Almaadeed, R R Deshmukh, K Chidambaram*

"Impedance Spectroscopy, Ionic Conductivity and Dielectric Studies of New Li^+ ion Conducting Polymer Blend Electrolyte Based on Biodegradable Polymers for Solid State Battery Applications"

'**J. Mater. Sci.: Materials in Electronics'** 27, 11410-11424, **2016**. (**I.F. = 2.324**)

33. *X. Tang, M. Ravi, S Song,Z. Zhang,* ***Anji Reddy Polu***

"A study of structural, electrical and electrochemical properties of PVdF-HFP gel polymer electrolyte films for magnesium ion battery applications"

'**Journal of Industrial & Engineering Chemistry**' 37, 67-74, **2016**. (**I.F. = 4.841**)

34. *A. Kadian, S. Arora, A. Sharma, G. M. Joshi, M. Pandey,* ***Anji Reddy Polu****, M. J. Joshi, P. Thomas*

"Improved dielectric constant of thermoplastic blend as a function of alumina loading"

'**Measurement**' 90, 461-467, **2016**. **(I.F. = 2.791)**

35. *Mayank Pandey, Girish M. Joshi,* ***Anji reddy Polu***

"Electrical performance of soft polymer ionic membranes with mono and multi polymer systems" (**Elsevier**)

'**Karbala International Journal of Modern Science**' 1, 194-199, **2015**.

36. *Sunita Sundari, K. Vijaya Kumar*, N. Krishna Jyothi and* ***Anji Reddy Polu*** "Structural and A.C. Conductivity Studies of (PVdF + $NaClO_4$) Solid Polymer Electrolyte System for an Electrochemical Cell Applications",

'**Asian Journal of Chemistry**' 25, S459-S463, **2013**. (**I.F. = 0.45**)

Papers published in International Conference Proceedings

1. Satyanarayana Reddy S. S. and ***Anji Reddy Polu***

"A Novel Nanocomposite Polymer Electrolyte for Application in Solid State Lithium Ion Battery" **DOI:** 10.1109/NANO.2018.8626268

'Proceedings of the IEEE Conference on Nanotechnology' 1-4, **2019**.

2. Girish M. Joshi, Kalim Deshmukh, Mayank Pandey, ***Anji Reddy Polu***, Pankaj Tambe, M. Basheer Ahamed, VP senthil

"Modern Trends in Nanodielectrics"

'**Int. J. ChemTech Res.**', 6, 1824-1826, **2014.** (**I.F. = 0.34**)

3. ***Anji Reddy Polu*** *and* Ranveer Kumar

"Effect of TiO_2 Ceramic Filler on PEG-Based Composite Polymer Electrolytes for Magnesium Batteries",

'**American Institute of Physics Proceedings***',* 1512, 996-997, **2013**. (**I.F. = 0.22**)

4. ***Anji Reddy Polu*****,** *Ranveer Kumar and Harsha Dehariya,*

"AC Conductivity and Electrochemical Studies of PVA/PEG Based Polymer Blend Electrolyte Films"

'**American Institute of Physics Proceedings***'* 1447, 969-970, **2012.** (**I.F. = 0.22**)

5. *Harsha Dehariya, Ranveer Kumar and* ***Anji Reddy Polu***

"Effect of Mixed Glass former on Ionic Conductivity of Silver Boro Tungstate glass system $x[0.75AgI: 0.25AgCl]: (1-x) [Ag_2O\text{-}\{B_2O_3{:}WO_3\}]$"

'**Journal of Physics: Conference Series**' 365, 012034, **2012**. (**IOP**) (**I.F. = 0.45**)

6. *Ranveer Kumar, Harsha Dehariya and* ***Anji Reddy Polu****,*

"Frequency And Temperature Dependence Of Conductivity Studies Of New Silver-Calcia-Borate Glass System",

'**American Institute of Physics Proceedings**' **1349**, 523-524, **2011**. (**I.F. = 0.22**)

7. ***Anji Reddy Polu* and** *Ranveer Kumar*,

"Charge Transport and Discharge Mechanism in [PVA+PVP+$Mg(NO_3)_2$] Polymer Electrolyte Films"

'**Electrochemical Society (ECS)**' MA2011-02, 369, **2011.**

Papers presented in conferences

International

1. **Anji Reddy Polu**, Ranveer Kumar, "Electrical and optical properties of pure and $(CH_3COO)_2Mg$ – doped PEG polymer electrolytes", 'International Conference on Electroceramics', Delhi University, India, Dec. 13-17, 2009.
2. **Anji Reddy Polu**, Ranveer Kumar, Harsha Dehariya, "Temperature dependence of conductivity studies of mechano-chemically synthesized Lithium –Borate glass system", 'International conference on materials for millennium (MATCON-2010)', Cochin university of science and technology, Kerala, India, Jan. 11-13, 2010.
3. **Anji Reddy Polu**, Ranveer Kumar, "Conductivity and Dielectric Studies on New Mg^{2+} ion Conducting Blends of PVA/PVP Based Polymer Electrolytes", 'International Polymer Conference POLYCHAR 18', University Of Siegen, Siegen, **Germany**, April 7-10, 2010.
4. **Anji Reddy Polu**, Ranveer Kumar**, "**Effect of Al_2O_3 Nano particles on Conductivity and Dielectric studies of PEO Based Solid polymer electrolytes", 'International Conference on Nanoscience and Nanotechnology', SRTMU, Nanded, India, Jan.11-13, 2011.
5. **Anji Reddy Polu**, Ranveer Kumar, "Study of Mg^{2+} Ion Conduction in PVA-$Mg(NO_3)_2$ Solid Polymer Electrolytes", 'World Forum on Advanced Materials POLYCHAR 19', Tribhuvan University, Kathmandu, Nepal, March 20-24, 2011.
6. **Anji Reddy Polu**, Ranveer Kumar and Harsha Dehariya **"**AC Conductivity and Electrochemical Studies of PVA/PEG Based Polymer Blend Electrolyte Films", '56^{th} DAE-SSP Symposium, SRM University, Chennai, Dec. 19-23, 2011.
7. **Anji Reddy Polu**, Ranveer Kumar and Harsha Dehariya, "Effect of nanoscale Al_2O_3 on PEG-based nanocomposite polymer electrolytes for Mg-ion batteries", 'FNE-2012', Sharda University, Noida, India, Jan. 9-11, 2012.
8. **Anji Reddy Polu**, Ranveer Kumar and Harsha Dehariya, "Effect of Al_2O_3 Ceramic Filler on PEG-based Composite Polymer Electrolytes for Magnesium Batteries", 'ICRAM-2012', VIT, Vellore, India, Feb. 20-22, 2012.

9. **Anji Reddy Polu** and Ranveer Kumar **"**Effect of TiO_2 Ceramic Filler on PEG-Based Composite Polymer Electrolytes for Magnesium Batteries" '57th DAE-SSP Symposium, IIT Bombay, Mumbai, Dec. 3-7, 2012.
10. **Anji Reddy Polu "**Ionic conductivity and battery discharge studies of magnesium ion conducting PEG based composite polymer electrolytes" 'IETC-2013, VIT University, Vellore, TN, India, Dec. 5-7, 2013.
11. **Anji Reddy Polu,** Ranveer Kumar and Girish M Joshi, **"**Effect of Ceramic Fillers on PEG-based Solid Polymer Electrolytes for Solid-State Magnesium Batteries" 'ICSEM-2014, Sharda University, Greater Noida, India, Jan. 6-8, 2014.
12. **Anji Reddy Polu** and Hee-Woo Rhee "Structural, Thermal and Ionic conductivity studies of PEO: LiDFOB Solid Polymer Electrolytes" 'Korean Polymer Society Conference-2014, ICC, Jeju Island, South Korea, Sept.8-10, 2014.
13. **Anji Reddy Polu** and Hee-Woo Rhee "Enhanced Ionic conductivity, Mechanical and electrochemical properties of PEO based solid polymer electrolytes by incorporating POSS-PEG(n=4) hybrid nanoparticles" 'IUPAC-2015 (45th World Chemistry Congress)', Bexco, Busan, South Korea, August 9-14, 2015.
14. **Anji Reddy Polu**, "International webinar on Interdisciplinary & Innovative Research", **12th Sept., 2020, Sharda University, India.**
15. **Anji Reddy Polu**, International Webinar on Optical Materials for 21st Century, **21st Sept., 2020, UTM, Malaysia.**
16. **Anji Reddy Polu**, International Webinar on Potential Anti-Viral and Anti-Bacterial Nanomaterials Applications including Covid Pandemic, **2**8th **Sept., 2020, UTM, Malaysia.**
17. **Anji Reddy Polu**, Two Days International Webinar On Advanced Materials and Their Applications, 16-17 June 2020, Dr. H S Gour Central University, M.P.

National

18. **Anji Reddy Polu**, Ranveer Kumar, Vijay Verma, **"**Solid state studies on Phenylbutazone drug", 'National symposium on Advances in Lasers and Spectroscopy – 2009', Dr. H. S. Gour University, Sagar, India, Feb. 27-28, 2009.
19. **Anji Reddy Polu**, Harsha Dehariya "Developments in High power, ultrashort-pulse, Fiber laser systems: A Review", 'National symposium on Advances in Lasers and Spectroscopy – 2009', Dr. H. S. Gour University, Sagar, India, Feb. 27-28, 2009.
20. **Anji Reddy Polu**, Ranveer Kumar, " Study of Ionic Conductivity and Dielectric behaviour in a New Mg^{2+} Ion Conducting Solid Polymer Electrolyte: [PEG: $(CH_3COO)_2Mg$]", 'National

Conference on Advances in Nanomaterials , Devices and Technologies', S.V. Degree College, Kadapa, A.P, India, July 11-12, 2009.

21. **Anji Reddy Polu**, Ranveer Kumar, "Impedance spectroscopy studies of PEG-$(CH_3COO)_2Mg$-TiO_2 Polymer Electrolytes". 'National Conference on advanced manufacturing technology', Shri Mata Vaishno Devi University, Jammu & Kashmir, India, Nov. 5-6, 2009.
22. **Anji Reddy Polu**, Ranveer Kumar, "Electrical Conductivity Studies on PVA/PVP-$Mg(NO_3)_2$ Solid Polymer Blend Electrolyte" '8th National Conference on Solid State Ionics', Dr. H. S. Gour University, Sagar, India, Dec. 7-9, 2009.
23. **Anji Reddy Polu**, Ranveer Kumar, "Conductivity and Dielectric studies on Zn^{2+} ion Conducting PEG-$(CH_3COO)_2Zn$ Polymer Electrolytes" '8th National Conference on Solid State Ionics', Dr. H. S. Gour University, Sagar, India, Dec. 7-9, 2009.
24. **Anji Reddy Polu**, Ranveer Kumar, Valerio Causin, Ramesh Neppalli and Harsha Dehariya "Synthesis and Characterization of New Zn^{2+} ion Conducting PEG based Solid Polymer Electrolytes" '9th National Conference on Solid State Ionics', JIIT, Noida, India, Dec. 15-17, 2011.
25. **Anji Reddy Polu**, Ranveer Kumar, K. Vijay Kumar, "Effect of Al_2O_3 Nano Fillers on PEG-based Solid Polymer Electrolytes and their Performance in Magnesium Batteries" 'National Conference on Recents Trends in Nanoscience and Technology for Device Applications', K L University, Guntur, India, April 4-5, 2013.
26. **Anji Reddy Polu**, "Ionic Conductivity, XRD and DSC Studies of new Solid Polymer Electrolyte (PEG+KNO_3) for Solid-State Battery Application" 'National Seminar on Solar Energy Harvesting Through Photovoltaic Cells and Storage', RVR & JC Engineering College, Guntur, India, June 21-22, 2013.
27. **Anji Reddy Polu,** National Webinar on "Nanophotonic Materials and Devices" 18th July 2020, Dr. H S Gour Central University, M.P.
28. **Anji Reddy Polu**, National webinar on **"**Nano Composite Ion-Conducting Solid Polymer Electrolyte Materials**",** 10th June, 2020 Vignan's Institute of Management & Technology for Women, Hyderabad.
29. **Anji Reddy Polu**, National Webinar on "Emerging Fields of Modern Electronics & Role of MATLAB in Physics", 30th June 2020, Dr. H S Gour Central University, M.P.
30. **Anji Reddy Polu**, National Conference on Environment & Energy Materials, **27-28, June, 2020, Sharda University, India.**
31. **Anji Reddy Polu, "**A One-day webinar on Recent Advances in Materials Chemistry**" 3rd June, 2021, VFSTR, Guntur.**

32. **Anji Reddy Polu, "**National Webinar on World Environment Day with the theme Ecosystem and Restoratio**" 5th June, 2021, VFSTR, Guntur.**
33. **Anji Reddy Polu, "**Webinar on Rare earth doped Phosphors for Photonic Applications**" 7th June, 2021 VFSTR, Guntur.**
34. **Anji Reddy Polu, "**One day National Webinar on Emerging Techniques in Polymers**" 12th June, 2021 VFSTR, Guntur.**

Workshops/FDP Attended

35. Workshop on "***Materials Science for energy storage***", Anna University, Chennai, India, Jan. 18-22, 2010.
36. National Workshop on "*X-ray Diffraction Techniques and Applications"* Saurashtra University, Rajkot, India, March 17-19, 2010.
37. Workshop on "*Physical Techniques for the Investigation of Fast Ion Conducting Materials*" The M. S. University of Baroda, Vadodara, India, March 20-22, 2010.
38. "*One day Short Course on Polymer Characterization*", University of Siegen, Siegen, **Germany**, April 6, 2010.
39. "*One day Short Course on Polymer Characterization*", Tribhuvan University, Kathmandu, **Nepal**, March 20, 2011.
40. "*Workshop on Electronic and Ionic materials and Devices*" Banaras Hindu University, Varanasi, India, March 25-27, 2011.
41. FDP on "NBA-OBE: Attainment of Course Outcomes(COs),Program Outcomes (POs) and Program Specific Outcomes (PSOs)", Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, Andhra Pradesh, 4-5, July 2020