

## Dr.C.RAVIDHAS

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Department of Physics,  
Bishop Heber College,  
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### Qualification

Degree	Branch	Institution / University	Year of Passing
Ph.D.	Physics	Alagappa University	2010
M.Phil.	Physics	Bharathidasan University	2000
M.Sc.	Physics	Madurai Kamaraj University	1990
B.Sc.	Physics	Madurai Kamaraj University	1988

### Ph.D. Details

Title of Thesis	Area of Specialization	Research Supervisor	Research Centre	Year of Award
Transparent and Conducting Magnesium Tin Oxide Films for Solar Cells	Thin films	Dr. C. Sanjeeviraja	Alagappa University	October 2010

### Additional Qualification

Name of Course	Place of Study	Date	Duration
M.Ed	Madras University	April 1992	1 year
PGDCA	Bharathidasan University	April 1993	1 year

### Work Experience

Name of Institution	Address of Institution	Designation	From	To
S.D.A Higher secondary school		Post-Graduate teacher in physics	1993	1994
Bishop Heber College		Assistant Professor in physics(Management staff)	1994	2006
Bishop Heber College		Asst. Professor and Head in physics	2006	Till Date

**Teaching / Research Experience****U.G. :** 25 years**P.G. :** 23 years**M.Phil. :** 11 years**Ph.D. :**

8 years

**Research Guidance****U.G. :****P.G. :** 50**M.Phil. :** 27**Ph.D. :** 8 Ongoing**Table of Contents**

1.	<b>Conferences / workshops / Seminars Attended</b>	<b>34</b>
2.	<b>Research Papers Presented</b>	<b>27</b>
3.	<b>Publication in Journals</b>	<b>56</b>
4.	<b>Publication in Books</b>	<b>1</b>
5.	<b>Books Published / Edited</b>	<b>6</b>
6.	<b>Conferences / Workshops / Seminars Organised</b>	<b>17</b>
7.	<b>Research Projects</b>	<b>3</b>
8.	<b>Resource Person</b>	<b>39</b>
9.	<b>Consultancy</b>	<b>2</b>
10.	<b>Awards Recieved</b>	<b>13</b>
11.	<b>Patent</b>	<b>0</b>
12.	<b>Extension Activities Undertaken</b>	<b>0</b>
13.	<b>Professional Membership</b>	<b>8</b>
14.	<b>M.Phil. / Ph.D. Produced</b>	<b>23 / 10</b>

1. International level Conference on **"International Conference on Material Physics"** sponsored by UGC organized by PG & Research Department of Physics, Bishop Heber College, at Trichy during 29/01/2018 to 29/01/2018.
2. International level Conference on **"ISER 90th International Conference - IC2NAM"** sponsored by ISER organized by ISER at Sydney, Australia during 04/12/2017 to 05/12/2017.
3. National level Conference on **"National Conference on Advances in Material Science (NCAMS – 2012)"** sponsored by Department of Physics, Annamalai University organized by Department of Physics, Annamalai University at Chidambaram during 01/03/2012 to 01/01/1900.
4. National level Workshop on **"Capacity Building Programme Organized by Internal Quality Assurance Cell"** sponsored by Bishop Heber College organized by Bishop Heber College at Trichy during 25/02/2012 to 25/02/2012.
5. International level Workshop on **"International Workshop on Advanced Energy Materials (IWAEM – 2012)"** sponsored by School of Physics, Alagappa University organized by School of Physics, Alagappa University at Karaikudi during 09/02/2012 to 09/02/2012.
6. National level Seminar on **"Campus Waste Management" as part of the titled "Conversion of Waste into Wealth using Appropriate Technology (CWWAT)"** sponsored by United Board for Christian Higher Education in Asia, Hong Kong by UBHPEA organized by Bishop Heber College at Trichy during 26/08/2011 to 26/08/2011.
7. National level Seminar on **"National Seminar on Recent Advancements in Materials Research"** sponsored by CSIR Govt of India sponsored organized by Department of Physics, Scott Christian College at Nagercoil during 03/03/2011 to 01/01/1900.
8. National level Seminar on **"Seminar on Science, Society and Religion"** sponsored by Bishop Heber College organized by Bishop Heber College at Trichy during 18/02/2011 to 01/01/1900.
9. National level Conference on **"National Conference on Perspectives in Laser, optics, Spectroscopy and Nano Science"** sponsored by UGC organized by Bishop Heber College at Trichy during 14/02/2011 to 14/02/2011.
10. National level Seminar on **"Fourth National Seminar on Advances in Material Science (NSAMS)"** sponsored by Department of Physics, Manonmaniam Sundaranar University organized by Department of Physics, Manonmaniam Sundaranar University at Tirunelveli during 23/01/2011 to 23/01/2011.
11. International level Conference on **"International Conference on Nano Technology & Ultrasound (ICNU-2011)"** sponsored by Department of Physics St. Joseph's College (Autonomous) organized by Department of Physics St. Joseph's College (Autonomous) at Trichy during 13/01/2011 to 01/01/1900.
12. International level Workshop on **"INDO-US workshop on Nanosonics and Ultrasonics (IUWONU-2011)"** sponsored by Department of Physics St. Joseph's College (Autonomous) organized by Department of Physics St. Joseph's College (Autonomous) at Trichy during 12/01/2011 to 01/01/1900.
13. National level Conference on **"National Conference on Nano materials (NCN12)"** sponsored by Department of Physics, Karunya University organized by Department of Physics, Karunya University at Coimbatore during 03/12/2010 to 03/12/2010.
14. National level Seminar on **"Proceedings of the National Seminar on New Material research and Nano technology (NSNMRN -2012)"** sponsored by Department of Physics, Government Arts College organized by Department of Physics, Government Arts College at Ooty during 12/09/2010 to 12/09/2010.
15. International level Conference on **"International Conference on Synthesis, Characterization, Consolidation and Modelling of Nanomaterials (ICON-2010)"** sponsored by Department of Metallurgical Engineering PSG College of Technology organized by Department of Metallurgical Engineering PSG College of Technology at Coimbatore during 05/03/2010 to 01/01/1900.

16. National level Conference on **"National Conference on Innovative Qualitative and Quantitative Research Techniques in Digital Era"** sponsored by PG and Research Department of Physics, Bishop Heber College organized by PG and Research Department of Physics, Bishop Heber College at Trichy during 13/02/2010 to 13/02/2010.
17. National level Workshop on **"Eighteenth National Symposium on Ultrasonics NSU – XVIII"** sponsored by Department of Physics St. Joseph's College (Autonomous) organized by Department of Physics St. Joseph's College (Autonomous) at Vellore during 21/12/2009 to 23/12/2009.
18. National level Conference on **"National Conference on Recent Advances in Chemistry"** sponsored by PG and Research Department of Physics, Bishop Heber College organized by PG and Research Department of Physics, Bishop Heber College at Trichy during 18/09/2009 to 01/01/1900.
19. International level Conference on **"International Conference on Food Technology (INCOFTECH 2009)"** sponsored by Indian Institute of Crop Processing Technology organized by Indian Institute of Crop Processing Technology at Thanjavur during 28/08/2009 to 30/08/2009.
20. College level Workshop on **"Inter-departmental Workshop supported by UGC on Cyclic Voltammetric studies and its Applications"** sponsored by UGC organized by PG and Research Department of Chemistry, Bishop Heber College at Trichy during 20/12/2008 to 20/12/2008.
21. National level Conference on **"National Conference on Nano Materials – Preparation, Characterization and Devices"** sponsored by PG and Research Department of Physics, Bishop Heber College organized by PG and Research Department of Physics, Bishop Heber College at Trichy during 14/03/2008 to 01/01/1900.
22. National level Workshop on **"Lecture Workshop on Frontier Topics in Physics"** sponsored by Indian Academy of Sciences, Bangalore Indian National Science Academy, New Delhi National Academy of Science, Allahabad organized by PG and Research Department of Physics, Bishop Heber College at Trichy during 04/02/2008 to 05/02/2008.
23. National level Workshop on **"Feedback Workshop for Physics Courses"** sponsored by Indira Gandhi National Open University Regional Centre organized by Indira Gandhi National Open University Regional Centre at Chennai during 23/01/2008 to 24/01/2008.
24. National level Workshop on **"XXX Indian Social Science Congress"** sponsored by Alagappa University organized by Alagappa University at Karaikudi during 27/12/2006 to 31/12/2006.
25. National level Seminar on **"National Seminar on New Frontiers in Exam Reforms"** sponsored by UGC organized by St. Francis College for Women at Hyderabad during 17/11/2006 to 18/11/2006.
26. National level Workshop on **"Curriculum development and Evaluation"** sponsored by TANCHE & UGC organized by Bishop Heber College at Trichy during 09/03/2006 to 11/03/2006.
27. National level Workshop on **"National Workshops on Principles and Practice of Powder X-ray diffraction"** sponsored by SAEST, CECRI organized by CECRI at Karaikudi during 30/05/2005 to 02/06/2005.
28. National level Conference on **"National Conference on Application Oriented Nanomaterials (NANOMAT)"** sponsored by UGC organized by Alagappa University at Karaikudi during 10/03/2005 to 11/03/2005.
29. National level Conference on **"Twelfth National Convention of Electrochemistry (NCE12)"** sponsored by SAEST & CECRI organized by Thiagarajar College of Engineering at Madurai during 18/02/2005 to 19/02/2005.
30. International level Conference on **"International Conference on Electrochemical Power systems (ICEPS-2)"** sponsored by SAEST & CECRI organized by SAEST & CECRI at Hyderabad during 20/12/2004 to 21/12/2004.
31. National level Workshop on **"Workshop on Thin Film Techniques and Applications – NWOTTA"** sponsored by UGC Sponsored organized by PSG College of Arts and Science at Coimbatore during 10/09/2004 to 11/09/2004.



32. Regional level Conference on **"Regional Conference on Photoacoustics in Condensed Matter Physics and NDT (PAC-2004)"** sponsored by UGC-DRS organized by Madurai Kamaraj University at Madurai during 08/03/2004 to 09/03/2004.
33. National level Conference on **"Eleventh National Convention of Electrochemists (NCE11)"** sponsored by SAEST & CECRI organized by Bishop Heber College at Trichy during 26/12/2003 to 27/12/2003.
34. College level Seminar on **"Seminar on Recent Trends in Thin Film Technology"** sponsored by St. Joseph's College organized by at Trichy during 14/02/2003 to 14/02/2003.



1. **"Calcination Temperature on the Photocatalytic Properties of Facile Synthesized Monoclinic Bismuth Vanadate Nanopowders"** in the International conference on *International Conference on Nanoscience, Nanotechnology & Advanced Materials (IC2NAM)* sponsored by , organized by ISER at Sydney, Australia during 04/12/2017 to 05/12/2017.
2. **"Nanocrystalline CIGS Counter Electrode by Nebulizer Spray Technique for Dye-Sensitized Solar cells"** in the International conference on *International Conference on Nanoscience, Nanotechnology & Advanced Materials (IC2NAM)* sponsored by , organized by ISER at Sydney, Australia during 04/12/2017 to 05/12/2017.
3. **"Tunable morphology with selective faceted growth of visible light active TiO<sub>2</sub> thin films by facile hydrothermal method: Structural, optical and photocatalytic properties"** in the National conference on *National Conference on Advances in Material Science (NCAMS – 2016)* sponsored by , organized by M.V.Muthiah Government Arts College for Women at Dindugal during 12/03/2016 to 12/03/2016.
4. **"CuInS<sub>2</sub> layer deposition through Nebulizer Spray Technique for Solar Cell Fabrication"** in the International conference on *International Conference on Recent trends in Materials Science and Applications ICRTMSA – 2016* sponsored by , organized by Jamal Mohammed College at Trichy during 29/02/2016 to 29/02/2016.
5. **"Simultaneous Glucose Sensing and Biohydrogen Evolution of Robust Cu<sub>2</sub>O–TiO<sub>2</sub> Electrodes from Photoelectrocatalytic Property"** in the International conference on *EMN Meeting on Photocatalysis 2015 Energy materials and nanotechnology* sponsored by , organized by at Las Vegas, USA during 21/11/2015 to 24/11/2015.
6. **"Structural Optical Electrical & Gas Sensing Properties of Nanostructured Zinc Oxide & Aluminium Doped Zinc Oxide Thin Films By Jet Nebulizer Spray Technique"** in the International conference on *The International Conference on Materials for Advanced Technologies (ICMAT-2015)* sponsored by , organized by at Singapore during 28/06/2015 to 03/07/2015.
7. **"Characterization of Cu (In Ga) p-type Semiconducting Stack Layer for Solar Cells prepared by Magnetron Sputtering"** in the National conference on *National Conference on Biodiversity and Environment, NCBE-2014*. sponsored by , organized by at Shillong, Meghalaya during 10/02/2014 to 12/02/2014.
8. **"Structural and Optical characterization of CuO thin films prepared by Spray Pyrolysis technique for solar Cell Application"** in the National conference on *National Conference on Nano materials (NCN12)* sponsored by , organized by Karunya University at Coimbatore during 03/12/2012 to 04/12/2012.
9. **"Structural and Optical characterization of Nano structure CuO thin films prepared by Spray Pyrolysis technique"** in the National conference on *Proceedings of the National Seminar on New Material research and Nano technology (NSNMRN -2012)* sponsored by , organized by Government Arts College at Ooty during 12/09/2012 to 14/09/2012.
10. **"Preparation and Characterization of Magnesium Tin Oxide thin films prepared by Spray Pyrolysis technique"** in the National conference on *National Conference on Advances in Material Science (NCAMS – 2012)* sponsored by , organized by Annamalai University at Chidambaram during 01/03/2012 to 02/03/2012.
11. **"The effect of Substrate temperature on Structural, Optical and Electrical Properties of CuO thin films prepared by Spray Pyrolysis"** in the National conference on *Fourth National Seminar on Advances in Material Science (NSAMS)* sponsored by , organized by Manonmaniam Sundaranar university at Tirunelveli during 23/01/2012 to 24/01/2012.
12. **"Structural, Optical and Electrical Characterization of Bismuth Oxide (BiO)"** in the National conference on *National Conference on Perspectives in Laser, optics, Spectroscopy and Nano Science* sponsored by , organized by Bishop Heber College at Trichy during 14/02/2011 to 14/02/2011.

13. **"A Study of Non Linear Sputtering using Molecular Ion Implantation"** in the National conference on *National Conference on Recent Advances in Chemistry* sponsored by , organized by Bishop Heber College at Trichy during 18/09/2009 to 18/09/2009.
14. **"Preparation and Characterization of Nano structured ITO Thin Films by Rf Sputtering"** in the National conference on *National conference on Thin Films and Applications* sponsored by , organized by Sastra university at Thanjavur during 06/03/2009 to 07/03/2009.
15. **"Structural and Optical characterization of Tin Oxide thin films by Spray Pyrolysis"** in the National conference on *National conference on Thin Films and Applications* sponsored by , organized by Sastra university at Thanjavur during 06/03/2009 to 07/03/2009.
16. **"Optical properties of Lithium tetraborate nano films"** in the International conference on *International conference on Cochin Nano 2009* sponsored by , organized by at Cochin during 03/01/2009 to 05/01/2009.
17. **"Synthesis and Characterization of Sol-Gel Derived Nano Crystalline Tin Oxide (SnO<sub>2</sub>)"** in the National conference on *National Conference on Nano Materials – Preparation, Characterization and Devices* sponsored by , organized by Bishop Heber College at Trichy during 14/03/2008 to 14/03/2008.
18. **"Structural and Optical Studies of Nanosized magnesium tin composite oxide films (MgSnO<sub>3</sub> and Mg<sub>2</sub>SnO<sub>4</sub>) prepared by pulsed laser deposition"** in the National conference on *National Conference on Nano Materials – Preparation, Characterization and Devices* sponsored by , organized by Bishop Heber College at Trichy during 14/03/2008 to 14/03/2008.
19. **"Structure and Surface Morphology of Electron Beam Evaporated magnesium tin oxide (MgSnO<sub>3</sub>) thin films"** in the National conference on *XXX Indian Social Science Congress* sponsored by , organized by Alagappa University at Karaikudi during 27/12/2006 to 31/12/2006.
20. **"Surface Morphological studies of pulsed laser deposited Magnesium Tin Composite Oxide Film (MgSnO<sub>3</sub> : Mg<sub>2</sub>SnO<sub>4</sub>)"** in the National conference on *National Conference on Application Oriented Nanomaterials (NANOMAT)* sponsored by UGC Sponsored, organized by Alagappa University at Karaikudi during 10/03/2005 to 11/03/2005.
21. **"Structural and Optical Studies of Nanosized magnesium tin composite oxide films (MgSnO<sub>3</sub> and Mg<sub>2</sub>SnO<sub>4</sub>) prepared by pulsed laser deposition"** in the National conference on *Twelfth National Convention of Electrochemistry (NCE12)* sponsored by SAEST & CECRI, organized by Thiagarajar College of Engineering at Madurai during 18/02/2005 to 19/02/2005.
22. **"Effect of Ionic (Ni, Li) Doped in Structural and Optical Properties of Poly Vinyl Alcohol (PVA) films"** in the National conference on *Twelfth National Convention of Electrochemistry (NCE12)* sponsored by SAEST & CECRI, organized by Thiagarajar College of Engineering at Madurai during 18/02/2005 to 19/02/2005.
23. **"Pulsed Laser Deposition of Nanocrystalline Magnesium Indate (MgIn<sub>2</sub>O<sub>4</sub>) transparent Oxide films"** in the International conference on *International Conference on Electrochemical Power systems (ICEPS-2)* sponsored by SAEST, CECRI, organized by CECRI at Hyderabad during 20/12/2004 to 21/12/2004.
24. **"Deposition and Characterization of CdSe thin Films in the presence of Polycyclic acid"** in the National conference on *Workshop on Thin Film Techniques and Applications – NWOTTA* sponsored by UGC Sponsored, organized by PSG College of Arts & Science at Coimbatore during 10/09/2004 to 11/09/2004.
25. **"Structured and Optical Studies on MgIn<sub>2</sub>O<sub>4</sub> Thin Films using Electron Beam Evaporation Technique"** in the Regional conference on *Regional Conference on Photoacoustics in Condensed Matter Physics and NDT (PAC-2004)* sponsored by , organized by Madurai Kamaraj University at Madurai during 08/03/2004 to 09/03/2004.
26. **"Absorption and Energy Band Studies on Cds, CdSe and Cds-Cdse Thin Films"** in the National conference on *Eleventh National Convention of Electrochemists (NCE111)* sponsored by SAEST & CECRI, organized by Bishop Heber College at Trichy during 26/12/2003 to 27/12/2003.

27. **"Electrochemical Reaction of 3,5-Dinitrobenzoic Acid"** in the National conference on *Eleventh National Convention of Electrochemists (NCE111)* sponsored by SAEST & CECRI, organized by Bishop Heber College at Trichy during 26/12/2003 to 27/12/2003.





1. **"Template-free and cost-effective nebulizer spray-coated BiVO 4 nanostructured thin films for photocatalytic applications"** published in Applied Physics A (PEER REVIEW) Vol. 126, Issue No. , January 2020 ISSN : ---.
2. **"Effect of pH on visible-light-driven photocatalytic degradation of facile synthesized bismuth vanadate nanoparticles"** published in Materials Research Express (PEER REVIEW) Vol. 7, Issue No. , January 2020 ISSN : ---.
3. **"Influence of precursor aging time period on physical and photocatalytic properties of nebulizer spray coated BiVO4 thin films"** published in Solid State Sciences (PEER REVIEW) Vol. 92, Issue No. , April 2019 ISSN : ---.
4. **"Tailoring the physical properties and electrochromic performance of nebulizer spray coated Co3O4 films through copper doping"** published in Solid State Ionics (PEER REVIEW) Vol. 334, Issue No. , February 2019 ISSN : ---.
5. **"Substrate Temperature Induced (020) Growth Facets of Nebulizer Sprayed BiVO4 Thin Films for Effective Photodegradation of Rhodamine B"** published in Crystal Research and Technology (PEER REVIEW) Vol. 54, Issue No. , January 2019 ISSN : ---.
6. **"Electrochromic performance of chromium-doped Co3O4 nanocrystalline thin films prepared by nebulizer spray technique"** published in Journal of Alloys and Compounds (PEER REVIEW) Vol. 784, Issue No. , January 2019 ISSN : ---.
7. **"Jet nebulizer-spray coated CZTS film as Pt-free electrocatalyst in photoelectrocatalytic fuel cells"** published in Applied Surface Science (PEER REVIEW) Vol. 463, Issue No. , August 2018 ISSN : ---.
8. **"Analysis of optical dispersion parameters and electrochromic properties of manganese-doped Co3O4 dendrite structured thin films"** published in Journal of Physics and Chemistry of Solids (PEER REVIEW) Vol. 122, Issue No. , June 2018 ISSN : ---.
9. **"Jet nebulizer spray coated copper zinc tin sulphide films for low cost platinum free electrocatalyst in solar cells"** published in Materials Letters (PEER REVIEW) Vol. , Issue No. , February 2018 ISSN : ---.
10. **"Solvent volume dependent physical properties and electrocatalytic ability of nebulizer spray deposited CuInGaS2 counter electrode for dye – sensitized solar cells"** published in Thin Solid Films (PEER REVIEW) Vol. , Issue No. , February 2018 ISSN : ---.
11. **"Low – cost and eco – friendly nebulizer spray coated CuInAlS2 counter electrode for dye sensitized solar cells"** published in Physics B: Condensed Matter (PEER REVIEW) Vol. , Issue No. , February 2018 ISSN : ---.

12. **"Substrate Temperature induced (040) growth facets of nebulizer sprayed BiVO<sub>4</sub> thin films for effective photodegradation of Rhodamine B"** published in Crystal Research and Technology (PEER REVIEW) Vol. , Issue No. , January 2018 ISSN : ---.
13. **"Facile preparation of hierarchical nanostructured CuInS<sub>2</sub> counter electrodes for dye – sensitized solar cells"** published in Materials Research Express (PEER REVIEW) Vol. , Issue No. , November 2017 ISSN : ---.
14. **"Nebulizer spray – deposited CuInGaS<sub>2</sub> thin films, a viable candidate for counter electrode in dye – sensitized solar cells"** published in Solar Energy (PEER REVIEW) Vol. , Issue No. , August 2017 ISSN : ---.
15. **"Effect of solution molarity on optical dispersion energy parameters and electrochromic performance of Co<sub>3</sub>O<sub>4</sub> films"** published in Optical Materials (PEER REVIEW) Vol. , Issue No. , July 2017 ISSN : ---.
16. **"Self Assembled Sulfur Induced Interconnected Nanostructure TiO<sub>2</sub> Electrode for Visible Light Photoresponse and Photocatalytic Application"** published in Physica E (PEER REVIEW) Vol. , Issue No. , April 2017 ISSN : ---.
17. **"Structural, optical and ethanol gas sensing performance of aluminium doped zinc oxide (AZO) thin films by nebulizer spray technique"** published in Springer Proceedings in Physics (CONFERENCE PROCEEDING) Vol. , Issue No. , January 2017 ISSN : ---.
18. **"CuInS<sub>2</sub> layer deposition through nebulizer spray technique for solar cell fabrication"** published in Springer Proceedings in Physics (PEER REVIEW) Vol. , Issue No. , January 2017 ISSN : ---.
19. **"Optimization of CdO nanoparticles by Zr<sup>4+</sup> doping for better photocatalytic activity"** published in Journal of Material Science: Mater Electron (PEER REVIEW) Vol. 29, Issue No. 1, January 2017 ISSN : ---.
20. **"Electrochemical sensing of glucose and photocatalytic performance of porous Co<sub>3</sub>O<sub>4</sub> films by nebulizer spray technique"** published in Materials Chemistry and Physics (PEER REVIEW) Vol. 186, Issue No. , November 2016 ISSN : ---.
21. **"Enhanced electrical behaviour of monoclinic p-CuNb<sub>2</sub>O<sub>6</sub>"** published in Materials Research Bulletin (PEER REVIEW) Vol. 84, Issue No. , July 2016 ISSN : ---.
22. **"Effect of sputtering power on properties and photovoltaic performance of CIGS thin film solar cells"** published in Materials Research innovation (PEER REVIEW) Vol. , Issue No. , July 2016 ISSN : ---.
23. **"Effect of fluorine (an anionic dopant) on transparent conducting properties of Sb (a cationic) doped ZnO thin films deposited using a simplified spray technique"** published in Materials Research Bulletin (PEER REVIEW) Vol. 83, Issue No. , June 2016 ISSN : ---.

24. **"Influence of substrate temperature on crystalline copper aluminium oxide thin films synthesized through chemical spray pyrolysis (CSP) technique"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. , Issue No. , May 2016 ISSN : ---.
25. **"Electrochromic response of porous structured Cobalt Oxide (Co<sub>3</sub>O<sub>4</sub>) thin films by novel nebulizer spray pyrolysis technique"** published in Ionics (PEER REVIEW) Vol. 22, Issue No. , April 2016 ISSN : ---.
26. **"Fabrication of a novel low-cost triple layer system (TaZO/Ag/TaZO) with an enhanced quality factor for transparent electrode applications"** published in RSC Advances (PEER REVIEW) Vol. 6, Issue No. , April 2016 ISSN : ---.
27. **"Effect of size reduction on the magnetic and antibacterial properties of ZnO:Zr:Mn nanoparticles synthesized by a cost-effective chemical method"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. , Issue No. , February 2016 ISSN : ---.
28. **"Tunable morphology with selective faceted growth of visible light active TiO<sub>2</sub> thin films by facile hydrothermal method: Structural, optical and photocatalytic properties"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. 27, Issue No. , February 2016 ISSN : ---.
29. **"Ethanol sensing behaviour of CuMnO<sub>2</sub> nanostructured thin films"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. , Issue No. , January 2016 ISSN : ---.
30. **"Enhancement of Hall Effect Quality factor of Sol gel spin coated ZnO thin film by Mo doping"** published in Materials Science in Semiconductor Processing (PEER REVIEW) Vol. 41, Issue No. , July 2015 ISSN : ---.
31. **"Enhanced optical and electrical properties of SILAR deposited ZnO thin films through Fluorine doping and vacuum annealing for photovoltaic applications"** published in Materials Science in Semiconductor Processing (PEER REVIEW) Vol. 35, Issue No. , July 2015 ISSN : ---.
32. **"An insight in the structural, morphological, electrical and optical properties of spray pyrolysed Co<sub>3</sub>O<sub>4</sub> thin films"** published in Materials Chemistry and Physics (PEER REVIEW) Vol. 162, Issue No. , July 2015 ISSN : ---.
33. **"Influence of Mo doping on transparent conducting properties of ZnO films prepared by a simplified spray technique"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. , Issue No. , July 2015 ISSN : ---.
34. **"Effect of Zr + F doping and vacuum annealing on the transparent conducting properties of ZnO thin films"** published in Materials Research innovation (PEER REVIEW) Vol. , Issue No. , April 2015 ISSN : ---.
35. **"Visible light driven photocatalytic degradation of Rhodamine B and Direct Red using cobalt oxide nanoparticles"** published in Ceramics International (PEER REVIEW) Vol. 41, Issue No. , April 2015 ISSN : ---.

36. **"Effect of annealing on the transparent conducting properties of fluorine doped zinc oxide and tin oxide thin films A comparative study"** published in Superlattices and Microstructures (PEER REVIEW) Vol. 83, Issue No. 121-130, March 2015 ISSN : ---.
37. **"Assessment of CuO thin films for its suitability as window absorbing layer in solar cell fabrications"** published in Materials Research Bulletin (PEER REVIEW) Vol. 68, Issue No. , March 2015 ISSN : ---.
38. **"Effect of nitrogen doped titanium dioxide (N-TiO<sub>2</sub>) thin films by jet nebulizer spray technique suitable for photoconductive study"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. 26, Issue No. , March 2015 ISSN : ---.
39. **"Self cleaning and superhydrophobic CuO coating by jet nebulizer spray pyrolysis technique"** published in Crystal Engineering Communication (PEER REVIEW) Vol. 17, Issue No. , February 2015 ISSN : ---.
40. **"Facile synthesis of nanostructured monoclinic bismuth vanadate by a co-precipitation method: Structural, optical and photocatalytic properties"** published in Materials Science in Semiconductor Processing (PEER REVIEW) Vol. 30, Issue No. , January 2015 ISSN : ---.
41. **"Simultaneous glucose sensing and biohydrogen evolution from direct photoelectrocatalytic glucose oxidation on robust Cu<sub>2</sub>O-TiO<sub>2</sub> electrodes"** published in Physical Chemistry Chemical Physics (PEER REVIEW) Vol. 16, Issue No. , August 2014 ISSN : ---.
42. **"Preparation and Characterization of CuO Thin Films Prepared by Spray Pyrolysis Technique for Ethanol Gas Sensing Application"** published in Asian Journal of Applied sciences (PEER REVIEW) Vol. 7, Issue No. , June 2014 ISSN : ---.
43. **"Influence of spray flux density on the photocatalytic activity and certain physical properties of ZnO thin films"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. 25, Issue No. , April 2014 ISSN : ---.
44. **"Impact of spray flux density and vacuum annealing on the transparent conducting properties of doubly doped (Sn + F) zinc oxide films deposited using a simplified spray technique"** published in Vacuum (PEER REVIEW) Vol. 107, Issue No. , March 2014 ISSN : ---.
45. **"Property enhancement of transparent conducting zinc oxide thin film – effect of simultaneous (Sn+F) doping"** published in Journal of Physics and Chemistry of Solids (PEER REVIEW) Vol. 74, Issue No. , July 2013 ISSN : ---.
46. **"Effect of annealing on the properties of nanostructured CuO thin films for enhanced ethanol sensitivity"** published in Ceramics International (PEER REVIEW) Vol. 39, Issue No. , March 2013 ISSN : ---.
47. **"Effect of pyrolytic temperature on the properties of nano structural CuO optimized for ethanol sensing application"** published in Journal of Materials Science: Materials in Electronics (PEER REVIEW) Vol. 24, Issue No. , August 2012 ISSN : ---.



48. **"Structural and electrochemical impedance spectroscopic studies on reactive magnetron sputtered titanium oxynitride (TiON) thin films"** published in of Applied Electrochemistry (PEER REVIEW) Vol. 41, Issue No. , April 2011 ISSN : ---.
49. **"Influence of Deposition Parameter and Heat Treatment on the NO<sub>2</sub> sensing properties of Nano structured ITO thin film"** published in Thin Solid Films (PEER REVIEW) Vol. 519, Issue No. , December 2010 ISSN : ---.
50. **"Spray deposition and property analysis of anatase phase titania (TiO<sub>2</sub>) nanostructures"** published in Thin Solid Films (PEER REVIEW) Vol. 256, Issue No. , August 2010 ISSN : ---.
51. **"NO<sub>2</sub> sensing properties of nanostructured ITO thin films"** published in Materials Science Research in India (PEER REVIEW) Vol. 7, Issue No. , December 2009 ISSN : ---.
52. **"XRD and XPS characterization of mixed valence Mn<sub>3</sub>O<sub>4</sub> hausmannite thin films prepared by chemical spray pyrolysis technique"** published in Applied Surface Science (PEER REVIEW) Vol. 256, Issue No. , November 2009 ISSN : ---.
53. **"Effect of embedded lithium nanoclusters on structural, optical and electrical characteristics of MgO thin films"** published in Radiation Physics Chemistry (PEER REVIEW) Vol. 78, Issue No. , June 2009 ISSN : ---.
54. **"Optimized deposition and characterization of nanocrystalline magnesium indium oxide thin films for opto-electronic applications"** published in Materials Research Bulletin (PEER REVIEW) Vol. 44, Issue No. , October 2008 ISSN : ---.
55. **"Magnesium indium oxide (MgIn<sub>2</sub>O<sub>4</sub>) spinel thin films: Chemical spray pyrolysis (CSP) growth and materials characterizations"** published in Journal of Colloid and Interface Science (PEER REVIEW) Vol. 328, Issue No. , October 2008 ISSN : ---.
56. **"Role of fluorine doping on luminescence centres and enhanced photocatalytic performance of nebulizer sprayed TiO<sub>2</sub> films under visible light"** published in Journal of Luminescence (SELECT) Vol. , Issue No. , January 1900 ISSN : ---.

#### Publication in Books

- 1

1. **Synthesizing Green Photocatalyst Using Plant Leaf Extract for Water Pollutant Treatment.** *Green Photocatalysts.* :Springer, July 2019.

- \* . **Audio and Video Systems.** : Jazym , March 2018.
- \* . **Research Methodology and Scientific Writing – A Researchers' Handbook.** : Jazym , January 2018.
- \* . **Frontier Topics in Advanced Materials.** 2015 : , March 2015.
- \* . **Introduction to Characterization of Nanomaterials and Thin Films.** : Jazym , January 2015.
- \* . **Multiple choice question Bank for UG Physics.** : , January 1900.
- \* . **Multiple choice question Bank for PG Physics.** : , January 1900.



1. State level Workshop Entitled **"An Online Training Programme for CSIR-NET Physical Sciences"** at Bishop Heber College, Tiruchirappalli, sponsored by , during 02/06/2020 to 05/06/2020.
2. International level Conference Entitled **"International conference on Applied Basic Sciences-2019"** at Bishop Heber College, Trichy, sponsored by , during 19/11/2019 to 21/11/2019.
3. State level Workshop Entitled **"Faculty Development Programme on Problem Solving in Physics"** at PG & Research Department of Physics, sponsored by DBT, during 06/06/2019 to 08/06/2019.
4. State level Workshop Entitled **"Summer Research Training Programme On Materials Science (STMS-2019)"** at PG & Research Department of Physics, sponsored by , during 28/05/2019 to 01/06/2019.
5. International level Conference Entitled **"India - UK Second International Conference on "Advanced Nanomaterials for Energy, Environment and Healthcare Applications"** at Bishop Heber College, Tiruchirappalli, sponsored by Thermofisher and Virogreen, during 04/02/2019 to 06/02/2019.
6. National level Workshop Entitled **"National Workshop on Powder X – ray Diffraction & Data Analysis"** at Bishop Heber College, Trichy, sponsored by , during 23/02/2018 to 24/03/2018.
7. College level Workshop Entitled **"Faculty Improvement Programme on Experimental Physics"** at Bishop Heber College, Trichy, sponsored by DBT, during 12/02/2018 to 13/03/2018.
8. College level Workshop Entitled **"Summer Research Training Programme (SRTP-2015)"** at Bishop Heber College, Trichy, sponsored by R& D cell, Bishop Heber College, Trichy, during 11/05/2015 to 18/05/2015.
9. College level Workshop Entitled **"Photovoltaic System Designing and Installation"** at Bishop Heber College, Trichy, sponsored by UGC, during 16/03/2015 to 17/03/2015.
10. College level Workshop Entitled **"Summer Research Training Programme (SRTP-2014)"** at Bishop Heber College, Trichy, sponsored by R& D cell, Bishop Heber College, Trichy, during 21/05/2014 to 31/05/2014.
11. National level Conference Entitled **"National Conference on Frontier Topics in Advanced Materials"** at Bishop Heber College, Trichy, sponsored by UGC, during 11/03/2013 to 01/01/1900.
12. National level Conference Entitled **"National Conference on Perspective in Laser, Optics, Spectroscopy and Nano Science"** at Bishop Heber College, Trichy, sponsored by UGC, during 01/02/2011 to 01/01/1900.
13. National level Conference Entitled **"National Conference on Nano Materials – Energy Conversion and Conservation"** at Bishop Heber College, Trichy, sponsored by UGC, during 01/03/2009 to 01/01/1900.
14. National level Conference Entitled **"National Conference on Nano Materials - Preparation Characterisation and Devices"** at Bishop Heber College, Trichy, sponsored by Bishop Heber College, Trichy, during 01/03/2008 to 01/01/1900.
15. National level Conference Entitled **"Eleventh National Convention of Electrochemists (NCE111)"** at Bishop Heber College, Trichy, sponsored by SAEST & CECRI, during 01/12/2003 to 01/01/1900.
16. College level Workshop Entitled **"Training Programme on Laboratory Safety Issues for the Lab Assistants"** at Bishop Heber College, Trichy, sponsored by DBT, during 01/01/1900 to 01/01/1900.
17. College level Workshop Entitled **"Workshop on Non – Destructive testing"** at Bishop Heber College, Trichy, sponsored by , during 01/01/1900 to 01/01/1900.

## Awards Recieved - 13

Award Name	Presented by	Year	Level	Instituted by / Place	amount
Best Researcher Award in Sciences (Senior)	Bishop Heber College, Tiruchirappalli	13/03/2020	COLLEGE		
Best Researcher Award	College Management	01/03/2017	COLLEGE	Bishop Heber College	
Best Research paper award sciences		19/03/2016	COLLEGE	Bishop Heber College, Trichy	
Travel Grant	DST SERB	21/01/2016	INTERNATIONAL	DST SERB	1,02671
International Travel Grant	CSIR	09/07/2015	INTERNATIONAL	CSIR	14,827
Best Research paper award		19/03/2015	COLLEGE	Bishop Heber College, Trichy	
Best paper		30/10/2014	INTERNATIONAL	BITS Pillani Dubai	
Best Oral award		14/02/2014	NATIONAL	Bishop Heber College, Trichy	
Best Poster presentation award		14/03/2008	NATIONAL	Bishop Heber College, Trichy	
Best Oral presentation award		14/03/2008	NATIONAL	Bishop Heber College, Trichy	
Best paper presentation award	SAEST CECRI	19/02/2005	NATIONAL	Thiagarajar College, Madurai	
Best Paper Award	SAEST, CECRI	21/12/2004	INTERNATIONAL	Viceroy Hotel, Hyderabad	
Award of excellence	International Organization of Scientific Research Community of Researchers.	01/01/1900	INTERNATIONAL		

## RESEARCH PROJECTS - 3

1. Major project entitled **"Development of FTO / N- Ion- Implanted TiO<sub>2</sub> Window Layer for Large Area Stacked Cu (In Ga) Se<sub>2</sub> / Mo/Glass – Based Thin Film Solar Cells"** (*PRINCIPAL INVESTIGATOR*), Sponsored by UGC, during 01/04/2013 to Till Date [Ongoing].
2. Minor project entitled **"Preparation and characterization of Lithium Tetraborate (Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub>) Nano thin films for NLO Applications"** (*PRINCIPAL INVESTIGATOR*), Sponsored by UGC, during 01/03/2009 to 2/28/2010 [Completed].
3. Minor project entitled **"Development of Transparent and conducting magnesium Tin Oxide thin film for solar cells"** (*PRINCIPAL INVESTIGATOR*), Sponsored by BISHOP HEBER COLLEGE, during 01/01/2009 to 2010 [Completed].



- \* Board of studies of Jamal Mohammed College, Trichy during 27/02/2017 - Till Date
- \* Board of studies of Scott Christian College, Nagercoil during 18/07/2013 - Till Date
- \* Board of studies of Seethalakshmi Ramasamy College, Trichy during 10/07/2012 - Till Date
- \* Board of studies of St. Joseph's College, Trichy during 12/03/2012 - Till Date
- \* Board of studies of Bharathidasan University, Trichy during 13/07/2011 - Till Date
- \* Board of studies of Holy Cross College, Trichy during 15/06/2011 - Till Date
- \* Life time of Indian Science Congress Association during 01/01/2008 - Till Date
- \* Life time of Indian Physics Association during 01/01/2008 - Till Date

## TRAINING PROGRAMME

- 10

- # NATIONAL level REFRESHER on **"Refresher Course in Physics"** Sponsored by UGC-HRGC, Organized by Bharathidasan University, at Trichy during 23/10/2019 - 11/05/2019.
- # COLLEGE level Academic Training on **"Faculty Training Programme"** Sponsored by , Organized by PSGR Krishnammal College at Coimbatore during 03/08/2019 - 03/08/2019.
- # STATE level ORIENTATION on **"Orientation Programme"** Sponsored by , Organized by Scott Christian College at Nagercoil during 29/07/2019 - 29/07/2019.
- # COLLEGE level Academic Training on **"Faculty Recharging Programme"** Sponsored by , Organized by IQAC, Bishop Heber College at Trichy during 12/06/2019 - 13/06/2019.
- # REGIONAL level ORIENTATION on **"Cluster College Meet - 2018 Research Orientation Programme for Aspirants in Materials Characterization for Device Applications"** Sponsored by , Organized by PG & Research Department of Physics at Bishop Heber College, Trichy during 16/02/2018 - 17/03/2018.
- # COLLEGE level on **"Faculty Improvement Programme on Experimental Physics"** Sponsored by DBT, Organized by PG & Research Department of Physics at Bishop Heber College, Trichy during 12/02/2018 - 13/02/2018.
- # COLLEGE level on **"Faculty Empowerment Programme"** Sponsored by , Organized by at Bishop Heber College, Trichy during 14/06/2017 - 14/06/2017.
- # NATIONAL level REFRESHER on **"UGC sponsored Refresher Course"** Sponsored by UGC, Organized by Bharathidasan University at Tiruchirapalli during 25/10/2014 - 14/11/2014.
- # NATIONAL level REFRESHER on **"UGC sponsored Refresher Course"** Sponsored by UGC, Organized by Bharathiar University at Coimbatore during 15/06/2011 - 29/06/2011.
- # NATIONAL level ORIENTATION on **"UGC sponsored Orientation Programme"** Sponsored by UGC, Organized by Bharathidasan University at Tiruchirapalli during 01/11/2008 - 28/11/2008.

1. National level Invited Lectures on **"Role of Material physics in the fabrication of Tandem thin film heterojunction solar cells"** at St. Joseph's College of Arts and Science Cuddalore, 24/01/2020.
2. College level Invited Lectures on **"Role of Material physics in thin film heterojunction solar cells"** at Madras Christian College, Chennai, 20/08/2019.
3. International level Invited Lectures on **"Advancements in photovoltaic energy technology through nanostructured thin film materials"** at Umayal Ramanathan College for Women, Karaikudi, 08/08/2019.
4. College level Invited Lectures on **"Novel topics in electrochemistry related to lithium ion batteries for locomotives"** at Scott Christian college, Nagercoil, 29/07/2019.
5. College level Invited Lectures on **"Solar Cells"** at Holy Cross College, Tiruchirappalli, 19/07/2019.
6. National level Seminar on **"Material Physics for Energy Conversion Applications"** at Bon Secours College for women, Tanjore, 21/02/2018.
7. State level Invited Lectures on **"Solar Cell & Material Physics"** at St. Xavier's College, Palayamkottai, 15/02/2018.
8. State level Invited Lectures on **"The Role of Material Physics and Chemistry in Energy Applications"** at Sri Sarada College for Women, Salem, 24/01/2018.
9. National level Chair Person on **"3rd National Seminar on Advanced Oxidation processes (AOP-2017)"** at Anna University – BIT Campus, Trichy., 18/12/2017.
10. International level Chair Person on **"Material science - IC2NAM"** at Sydney, Australia, 04/12/2017.
11. State level Invited Lectures on **"Role of Material Physics in Thin Film Heterojunction Solar Cells"** at Alagappa Chettiar Government College of Engineering and Technology, 22/11/2017.
12. State level Seminar on **"Materials in Future Electronics"** at Sri Parasakthi College for Women, Tirunelveli, 10/10/2017.
13. State level Invited Lectures on **"Nanostructures for Photovoltaic Application"** at Scott Christian College, Nagercoil, 28/09/2017.
14. State level Seminar on **"Nanostructure for Photovoltaic Devices"** at St. Jerome's College, Tirunelveli, 27/09/2017.
15. College level on **"Tribal Camp"** at Pachamalai, 13/08/2017.
16. State level Seminar on **"Seminar on Developing New Curriculum-2017"** at Chennai, 20/07/2017.
17. National level Chair Person on **"Recent Challenges in Materials Science (RCMs-17)"** at Sree Sevugan Annamalai College, 15/07/2017.
18. Regional level Invited Lectures on **"ECHOS"** at Seventh-Day Adventist Matric. Hr. Sec. School, Trichy, 28/11/2016.
19. Regional level Chair Person on **"Workshop on Theatre for Transformation"** at Bishop Heber College, Trichy, 25/11/2016.
20. State level Chair Person on **"Prof.J.M.Arthur Endowment Lecture & Inter-School Quiz Contest-2015"** at Scott Alumni Association, Scott Christian College, Nagercoil, 15/10/2016.
21. College level Chair Person on **"CATHARSIS 2016"** at Bishop Heber College, Trichy, 24/09/2016.
22. National level Invited Lectures on **"Physics of Nanostructured Thin Film Materials for Energy Conversion Application"** at Mother Teresa Women's University, Kodaikanal, 22/09/2016.
23. National level Invited Lectures on **"Solar cell and Material Physics"** at Seethalakshmi Ramaswami College, 15/09/2016.

24. State level Invited Lectures on **"Thin Film Technology for Energy Applications"** at AVVM Sri Pushpam College, Thanjavur, 19/08/2016.
25. National level Invited Lectures on **"Thin Film Sensor"** at Chidambaram Pillai College for Women, trichy, 25/07/2016.
26. Regional level Invited Lectures on **"Electromagnetic induction"** at Amritha vidyalayam Trichy, 11/05/2016.
27. Regional level Invited Lectures on **"Kalam 2020"** at Annai Indira Gandhi Memorial High Secondary School, 08/04/2016.
28. National level Chair Person on **"Recent Trends in Materials Science and Applications"** at Jamal Mohammed College, Trichy, 29/02/2016.
29. State level Invited Lectures on **"Conduction Mechanism in Dielectric Thin Films"** held at **Department of Physics** at Meenakshi Chandrasekaran College of Arts & Science, 23/02/2016.
30. State level Invited Lectures on **"New Frontiers in Nano and Crystalline Materials"** at Holy Cross College, Nagercoil, 18/02/2016.
31. College level Chair Person on **"Christmas Day celebrations"** at Bishop Heber College, Trichy, 22/12/2015.
32. Regional level Invited Lectures on **"Pugai Illa Pogi Pongal Celebration"** at Panchayat Union Middle School, Trichy, 16/07/2015.
33. National level Conference on **"RTNMTR 15"** at AVVM Sri Pushpam College, Thanjavur, 04/03/2015.
34. College level Invited Lectures on **"RTMSA 15"** at Kunthavai Naachiyaar Govt. Arts College for Women, Thanjavur, 27/01/2015.
35. College level Chair Person on **"Science Exhibition"** at Cauvery College for Women Trichy, 20/12/2014.
36. National level Seminar on **"One day seminar"** at SRCollege, trichy, 01/03/2011.
37. National level Invited Lectures on **" Dielectric Thin Films"** at UDC, Trichy, 24/02/2011.
38. National level Invited Lectures on **"Crystal Growth and Thin film physics"** at Holy Cross College, Trichy, 19/02/2010.
39. College level Chair Person on **"Advanced trends in communication"** at SRCollege, trichy, 12/02/2010.



## JOURNAL REFEREE

1. **Reviewer** of International Journal "*Molecular Simulation*"(vol. ) at during 01/04/2020 - Till Date.
2. **Reviewer** of International Journal "*Superlattices and Microstructures*"(vol. ) at during 01/02/2020 - Till Date.
3. **Reviewer** of International Journal "*ACS Applied Electronic materials*"(vol. ) at during 01/10/2019 - Till Date.
4. **Reviewer** of International Journal "*Materials Research Express*"(vol. ) at during 27/08/2019 - Till Date.
5. **Reviewer** of International Journal "*Material letters*"(vol. ) at during 21/02/2019 - Till Date.
6. **Reviewer** of International Journal "*Journal of Porous materials*"(vol. ) at during 20/02/2019 - Till Date.
7. **Reviewer** of International Journal "*Journal of Electrochemical Society*"(vol. ) at during 07/02/2019 - Till Date.
8. **Reviewer** of International Journal "*International journal for Hydrogen energy*"(vol. ) at during 05/02/2019 - Till Date.
9. **Reviewer** of International Journal "*Solar Energy*"(vol. ) at during 13/09/2018 - Till Date.
10. **Reviewer** of International Journal "*Optik*"(vol. ) at during 01/01/2017 - Till Date.
12. **Reviewer** of International Journal "*Physica E: Low Dimensional Systems and Nanostructures – Elsevier*"(vol. ) at during 01/01/2017 - Till Date.
13. **Reviewer** of International Journal "*Results in Physics – Elsevier*"(vol. ) at during 01/01/2017 - Till Date.
14. **Reviewer** of International Journal "*Physical Chemistry Chemical Physics*"(vol. ) at during 01/08/2016 - Till Date.
15. **Reviewer** of International Journal "*Journal of Hazardous materials*"(vol. ) at during 15/06/2016 - .
16. **Reviewer** of International Journal "*Materials Science and Engineering B*"(vol. ) at during 01/05/2016 - Till Date.
17. **Reviewer** of International Journal "*Chemical Engineering Journal*"(vol. ) at during 01/05/2016 - Till Date.
18. **Reviewer** of International Journal "*Journal of Materials Science:Materials in Electronics*"(vol. ) at during 01/11/2015 - Till Date.
19. **Reviewer** of International Journal "*Journal of Nanoparticle Research*"(vol. ) at during 16/07/2015 - .
20. **Reviewer** of International Journal "*Ceramic International*"(vol. ) at Elsevier Amsterdam during 15/05/2015 - Till Date.



State four probe from June 2014 - .

State Electrical measurement from April 2014 - .



**Signature of Staff**  
**(C.RAVIDHAS)**