

**STAFF PROFILE (2001 – till date)**  
(use Times New Roman Font size 11 or 12)



**Name** : M.PREMA RANI  
**Designation** : Associate Professor in Physics  
**Date of Entry into Service** : 20/06/2001  
**E-mail** : premaakumar91@gmail.com  
**Mobile (Optional)** :  
**Education** : M.Sc., M.Phil., M.Ed., Ph.D.  
**Areas of specialization** : Condensed Matter Physics

**Projects undertaken**

| Title of the Project | Name of the funding Agency | Duration | Completed/Ongoing | Amount | Remarks |
|----------------------|----------------------------|----------|-------------------|--------|---------|
| --                   | --                         | --       | --                | --     | --      |

**Seminars Organized**

| Title of the Seminar/Conference/Workshop    | Date       | Sponsoring Agency | National/State/International | Co-ordinator/Convener |
|---|------------|-------------------|------------------------------|-----------------------|
| Progress in Condensed Matter Physics.       | 07/01/2015 | UGC               | State                        | Convener              |
| International Women's day Celebrations-2015 | 06/03/2015 |                   |                              | Convener              |

### Seminars, Workshop and Conferences Attended

| Title of the Seminar/Conference/Workshop                                | Date   | Sponsoring Agency | National/State/International | Organization in which attended                    |
|---|--|-------------------|------------------------------|---|
| Computer simulation in Physics  | Feb 4 & 5, 2002                              | UGC-DRS           | State                        | Madurai Kamaraj University                        |
| Short term course in solid state physics one,two, three dimensions.     | Feb 7-9, 2002                                | JNASR, Bangalore  | State                        | American college.                                 |
| Photoacoustics in condensed matter physics, NDT                         | Feb 8 & 9, 2004                              | UGC-DRS           | State                        | Madurai Kamaraj University                        |
| The principles and practices of powder x-ray diffraction                | May 30 to June 2, 2005                       | UGC               | National                     | CECRI-Karaikudi,                                  |
| Condensed matter physics  | Feb 22, 23,2006                              | UGC               | National                     | Yadava college, Madurai                           |
| Emerging trends in physics  | August 30-31, 2007                           | UGC               | National                     | JayarajAnnapackiam college for women, Periyakuam. |
| Technologically important crystalline and amorphous solids (TICAS-2012) | March 2, 3, 2012                             | BRNS,CSIR, DST    | National                     | Kalasalingam university, Krishnanakoil, Madurai.  |
| Emerging trends in Physics  | Feb21,22, 2013                               | UGC               | International                | St.Joseph'sArts&Science College, Cuddalore        |
| Technologically important crystalline and amorphous solids (TICAS-2013) | March 1, 2, 2013                             | CSIR,DAE, DST     | National                     | Kalasalingam university, Krishnanakoil, Madurai.  |
| Current trends in Crystal growth and Solar Energy                       | Jan 22 <sup>nd</sup> 2013                    | UGC               | National                     | Sri Meenakshi Govt. College for Women, Madurai.   |
| Technologically Important Crystalline and Amorphous Solids (TICAS-2014) | Feb 28, March1, 2014                         | DAE(BRNS), DST    | National                     | Kalasalingam university, Krishnnankoil, Madurai.  |
| Competence Building Programme   | Feb 6 <sup>th</sup> & 7 <sup>th</sup> . 2015 | UGC               |                              | The Madura College Madurai                        |
| Recent trends in Material Science and Applications                      | Jan 6 <sup>th</sup> 2017                     | UGC               | International                | Sri Meenakshi Govt. College for Women, Madurai.   |
| Nanotechnology the fruition of Science                                  | Feb 15 <sup>th</sup> & 16 <sup>th</sup> 2017 | SERB-DST          | International                | Nesamony memorial Christian College, Marthandam   |

### Books Published:

| Title of the Book Published                     | ISBN No.          | Publisher if any | Year of Publishing | Authored/Edited |
|---|-------------------|------------------|--------------------|-----------------|
| Metal & Alloy bonding: An Experimental analysis | 978-1-4471-2203-6 | Springer         | 2012               | Co-Author       |

### Research Publications:

| S.No. | Title of the Journal  | ISSN No. if any                   | Volume No. & Page No. if any | Year | International/National/State | Peer reviewed/ Non-Peer reviewed | Impact factor/h-index |
|-------|---|-----------------------------------|------------------------------|------|------------------------------|----------------------------------|-----------------------|
| 1.    | Journal of Physics: Condensed matter (IOP)                        | 0953-8984                         | Vol. 19<br>p.266221I         | 2007 | International                | Peer-reviewed                    | 2.223                 |
| 2.    | Journal of Alloys and Compound, (Elsevier)                        | 0925-8388                         | Vol. 431<br>p.121-129        | 2007 | International                | Peer-reviewed                    | 2.407                 |
| 3.    | The Open Crystallography journal, (Bentham Open, USA)             | 1074-1542                         | Vol. I<br>p.64 – 68          | 2008 | International                | Peer-reviewed                    | 0.479                 |
| 4.    | Defect and Diffusion Forum, (Trans Tech pub., Switzerland)        | DOI:10.4028                       | Vol. 278<br>p. 33-44         | 2008 | International                | Peer-reviewed                    | 0.31                  |
| 5.    | Z.Naturforsch. (Germany)  | 0340-4811                         | Vol.64a<br>p. 1 – 9          | 2009 | International                | Peer-reviewed                    | 0.908                 |
| 6.    | Materials Science Forum (Trans Tech publications, Switzerland)    | ISBN-13:<br>978-3-<br>03785-012-1 | Vol. 671<br>p. 153-163       | 2011 | International                | Peer reviewed                    | 0.483                 |
| 7.    | Journal of Materials Science Materials in Electronics             | DOI:10.1007/s10854-013-1654-8     | Vol. 25(2)<br>p.1654-8       | 2013 | International                | Peer reviewed                    | 1.97                  |
| 8.    | Roots International journal of multidisciplinary researches       | 2349-8684                         | Vol.1, N0.1<br>p.1-8         | 2014 | International                | Peer reviewed                    | 0.811                 |
| 9.    | Materials Research Foundations, Novel Ceramic materials           | 2471-8890                         | Vol. 2<br>p.69-80            | 2016 | International                | Peer reviewed                    | 0.29                  |
| 10.   | Materials Research Foundations, Novel Ceramic materials           | 2471-8890                         | Vol. 2<br>p.163-176          | 2016 | International                | Peer reviewed                    | 0.29                  |
| 11.   | Materials Research Foundations, Contemporary dielectric materials | 2471-8890                         | Vol. 7<br>p.128-144          | 2016 | International                | Peer reviewed                    | 0.29                  |

### Research Publications in Conferences:

| S.No. | Title  | ISBN No.           | Volume No. & Page No. | Year | International/<br>National/State |
|-------|--|--------------------|-----------------------|------|----------------------------------|
| 1.    | Bonding in CoAl and NiAl metal alloys using multipole and MEM techniques,  |                    |                       | 2006 | State                            |
| 2.    | Electronic structure of Aluminium with iron impurities analysed using multipole and MEM techniques   |                    | OP10 - p.29.          | 2007 | National                         |
| 3.    | Synthesis and structural charecterisation of nano NiO and NiFe <sub>2</sub> O <sub>4</sub> (Technologically important crystalline and amorphous solids (TICAS-2012))     | 978-81-921249-4-0. | pp.61.                | 2012 | National                         |
| 4.    | Synthesis and charecterisation of CdO and Al doped CdO nanocrystals” (Technologically important crystalline and amorphous solids (TICAS-2012))                           | 978-81-921249-4-0. | pp.17.                | 2012 | National                         |
| 5.    | Synthesis and electron density analysis of nano semiconducting systems on Zr <sub>1-x</sub> Mn <sub>x</sub> O <sub>2</sub> (Emerging trends in Physics-2013(ICEPT 2013)) | 978-81-8209-353-9. | pp.239                | 2013 | International                    |
| 6.    | Synthesis and electron density analysis of NiO:Fe (Technologically important crystalline and amorphous solids (TICAS-2013))  | 978-81-921319-0-0. | pp.71                 | 2013 | National                         |
| 7.    | Electronic bonding analysis on dilute doping of Iron in Nickeloxide nanocrystals (Technologically important crystalline and amorphous solids (TICAS-2014))               | 978-81-921319-4-8  | pp.93                 | 2014 | National                         |
| 8.    | Optical, Electronic and magnetic analysis of Cu doped NiO nanopowders ( Recent trends in material science and applications)  | 978 8193314029     | pp.46                 | 2017 | International                    |
| 9.    | Structural analysis of Dy doped ZrO <sub>2</sub> nanostructures synthesized by sol-gel process ( Recent trends in material science and applications)                     | 978 8193314029     | pp.56                 | 2017 | International                    |
| 10.   | Preparation & characterization of Cu doped Hap for biomedical applications (Nanotechnology the fruition of Science)  |                    | pp.77                 | 2017 | International                    |

|     |   |  |       |      |               |
|-----|---|--|-------|------|---------------|
| 11. | Characterisation of Ni doped Hap nanopowders synthesized by solgel method.<br>( Nanotechnology the fruition of Science) |  | pp.85 | 2017 | International |
| 12. | Phase and optical analysis of synthesized Dysprosium doped Zirconia (Nanotechnology the fruition of Science)            |  | pp.88 | 2017 | International |

### Research Activities

| Degree            | No. Awarded | No. Submitted | No. Guiding |
|-------------------|-------------|---------------|-------------|
| M.Phil.,          | 10          | --            | 02          |
| Ph.D.,(Part-time) | --          | --            | 01          |
| Ph.D. (Full-time) | --          | --            | --          |

### Details of Invited Lecture / Resource Person

| Place   | Date       | Sponsoring Agency | Topic                     | Audience type           | International/National /State Level |
|---|------------|-------------------|---------------------------|-------------------------|-------------------------------------|
| Vellammal college of Engineering & Technology , Madurai | 24/08/2015 | ---               | Crystal growth techniques | Students of I year B.E. | ---                                 |

### Academic council/Board of Studies Member

| Institution                                     | For a period of | Dept.   |
|---|-----------------|---------|
| Yadava Women's College, Madurai                 | 2014-2015       | Physics |
| Sri Meenakshi Govt. College for Women, Madurai. | 2016-2017       | Physics |

### Honours Achieved

| Agency | Recognition IN/National/State | Cash award if any(Amount) | For the service of |
|--------|-------------------------------|---------------------------|--------------------|
| --     | --                            | --                        | --                 |

**Service in Extra Curricular Activities (NSS/NCC/AEEP/YRC/MCCA/Club etc.,)**

| <b>Whether NSS/NCC/AEEP/YRC</b>                        | <b>Period</b> |
|--|---------------|
| Convenor of Einstein Club, The Madura College, Madurai | 2014-2015     |
| Convenor of PHYSOTSAV, Physics Dept.Club activites     | 2016-2017     |
| Coordinator of Extension activities of Physics Dept.   | 2016-2017     |

**Reviewer/editor of a journal**

| Title of the Journal | ISSN No. if any | International/<br>National/State | Impact factor/h index |
|----------------------|-----------------|----------------------------------|-----------------------|
| --                   | --              | --                               | --                    |

**Details of Orientation and Refresher attended**

| Orientation/Refresher | University/College/Institute at which attended                        | Duration   |            |
|-----------------------|---|------------|------------|
| Orientation course    | Academic Staff College, Madurai Kamaraj University, Madurai -625 021. | 27/08/2003 | 23/09/2003 |
| Refresher course      | Academic Staff College, Madurai Kamaraj University, Madurai -625 021. | 09/02/2005 | 01/03/2005 |
| Refresher course      | Academic Staff College, Madurai Kamaraj University, Madurai -625 021. | 15/11/2007 | 05/12/2007 |
| Refresher course      | Academic Staff College, Madurai Kamaraj University, Madurai -625 021. | 03/11/2009 | 23/11/2009 |

**Any Other Information:**

Nil