



## DR. C. STELLA

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Department : Physics  
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### Languages Proficiency

Read : Tamil & English  
Write : Tamil & English  
Speak : Tamil & English

### 1. QUALIFICATION

| S. No. | Degree / Diploma / Certificate | Discipline | Name of the Institution                       | Year of Passing |
|--------|--------------------------------|------------|-----------------------------------------------|-----------------|
| 1.     | UG                             | Physics    | Lady Doak College, Madurai                    | 2008            |
| 2.     | PG                             | Physics    | Lady Doak College, Madurai                    | 2010            |
| 3.     | M.Phil.                        | Physics    | School of Physics, Madurai Kamaraj University | 2011            |
| 4.     | Ph.D.                          | Physics    | School of Physics, Madurai Kamaraj University | 2017            |

### 2. TEACHING EXPERIENCE / OTHER EXPERIENCE

| S. No. | Institution / Organization         | From - To                    |
|--------|------------------------------------|------------------------------|
| 1.     | Fatima College, Madurai            | November 2011- April 2012    |
| 2.     | Fatima College, Madurai            | July 2016 – November 2018    |
| 3.     | Kings Engineering College, Chennai | June 2019 – July 2020        |
| 4.     | Stella Maris College, Chennai      | October 2020 – November 2024 |

### 3. POSITION HELD IN FATIMA (VICE PRINCIPAL, HOD, DEAN, COORDINATOR, MEMBER ETC.)

| S. No. | Name of the Position         | From - To      |
|--------|------------------------------|----------------|
| 1.     | EA Coordinator (Shift-II)    | 2017- Nov 2018 |
| 2.     | Enterprise resource planning | 2025 onwards   |

#### 4. ACHIEVEMENTS

| S. No. | Name of the Award | Award Received for | Sponsors / Source | Date       |
|--------|-------------------|--------------------|-------------------|------------|
| 1.     | Best Paper Award  | Paper Presentation | -                 | 01.10.2014 |

#### 5. MEMBERSHIP IN PROFESSIONAL / OTHER BODIES / COMMITTEES

| S. No. | Name of the Position   | Name of the Body | Name of the Institution       | Duration  |
|--------|------------------------|------------------|-------------------------------|-----------|
| 1.     | Coordinator (Shift-II) | Photography Club | Stella Maris College, Chennai | 2023-2024 |

#### 6. AREAS OF SPECIALIZATION

❖ NANOSCIENCE

❖ NANOMATERIALS

#### 7. FELLOWSHIP RECEIVED

❖ UGC Non-Net Fellowship

#### 8. ORIENTATION/REFRESHER/TRAINING PROGRAMMES/FDP ATTENDED

| S. No. | Programme                     | Theme                                                               | Organized by                                                  | Date                    |
|--------|-------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------|-------------------------|
| 1.     | Faculty Development Programme | The Use of Virtual Physics Labs – Creating Next Generation Teachers | Geethanjali College of Engineering and Technology             | May 20 - 24, 2020       |
| 2.     | Faculty Development Programme | Recent Advances in Nanomaterials                                    | St. Joseph's College of Engineering, Chennai                  | June 04 - 06, 2020      |
| 3.     | Faculty Development Programme | How to Write and Publish a Good Technical Paper                     | Rajalakshmi Engineering College                               | June 12, 2020           |
| 4.     | Faculty Development Programme | Advanced Materials Research                                         | Bharat Institute of Engineering and Technology                | June 15 - 19, 2020      |
| 5.     | Faculty Development Programme | Material Science and Nanotechnology                                 | B.S Abdur Rahman Crescent Institute of Science and Technology | Aug. 03 - 17, 2020      |
| 6.     | Faculty Development Programme | Contemporary Amelioration in Nanostructured Materials               | Jeppiaar Engineering College, Chennai                         | Aug. 21 - 27, 2020      |
| 7.     | Faculty Development Programme | Recent Trends in Physics                                            | St. Joseph's College of Engineering, Chennai                  | Aug. 31 - Sep. 02, 2020 |
| 8.     | Faculty Development Programme | Recent Developments in Materials Science - 21                       | Sree Saraswathi Thyagaraja College, Pollachi, Coimbatore      | June 16 - 22, 2021      |
| 9.     | Faculty Development Programme | AI Integrated Research                                              | Fatima College, Madurai                                       | Dec. 09 - 13, 2024      |
| 10.    | Faculty Development Programme | Electronic Theory of Solids                                         | NPTEL-AICTE                                                   | Jan-Apr 2025 (12 Weeks) |

|     |                             |                             |                |                    |
|-----|-----------------------------|-----------------------------|----------------|--------------------|
| 11. | Faculty Induction Programme | Faculty Induction Programme | Fatima College | June 09 - 14, 2025 |
|-----|-----------------------------|-----------------------------|----------------|--------------------|

## 9. PAPER PRESENTED ON NATIONAL/INTERNATIONAL SEMINARS, WORKSHOPS, CONFERENCES & SYMPOSIUMS

| S. No. | Programme & Theme                                                        | Organized by                                       | Date                    | Title of the Paper                                                                                             |
|--------|--------------------------------------------------------------------------|----------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------|
| 1.     | International Conference on Advanced Materials and its Applications      | Kalasalingam University                            | Mar. 04 - 05, 2011      | ZnO: SnO <sub>2</sub> Nanocomposites for Ethanol Sensor                                                        |
| 2.     | International Conference on Nanoscience and Nanotechnology               | Coimbatore Institute of Technology, Coimbatore     | July 06 – 08, 2011      | Fiber Optic Ethanol Sensor using ZnO: SnO <sub>2</sub> Nanocomposites                                          |
| 3.     | 56 <sup>th</sup> DAE– Solid State Physics Symposium                      | SRM University, Kattankulathur                     | Dec. 19 - 23, 2011      | Dielectric Properties of Flower–Type ZnO Nanorods and ZnO-SnO <sub>2</sub> Nanocomposites                      |
| 4.     | 57 <sup>th</sup> DAE - Solid State Physics Symposium                     | IIT Bombay, Mumbai                                 | Dec. 03 - 07, 2012      | Synthesis and Characterization of Chunk-shaped ZnO Nanoparticles for Ethanol Sensing                           |
| 5.     | 58 <sup>th</sup> DAE - Solid State Physics Symposium                     | Thapar University, Patiala, Punjab                 | Dec. 17 – 21, 2013      | Magnetic Properties of $\alpha$ -MnO <sub>2</sub> and Co-Doped $\alpha$ -MnO <sub>2</sub> Nanowires            |
| 6.     | International conference on Materials and Characterization Techniques    | VIT University, Vellore, Chennai                   | Mar. 10 - 12, 2014      | Structural, optical and dielectric properties of MnO <sub>2</sub> and Co doped MnO <sub>2</sub> nanowires      |
| 7.     | National Seminar on X-ray crystallography                                | Madurai Kamaraj University, Madurai                | Sep. 29 - Oct. 01, 2014 | Ethanol Gas Sensor Using Co <sub>3</sub> O <sub>4</sub> Nanorods by Fiber-optic method                         |
| 8.     | 59 <sup>th</sup> DAE - Solid State Physics Symposium                     | VIT University, Vellore,                           | Dec. 16 – 20, 2014      | Structural and Optical Property of Co <sub>1-x</sub> Mn <sub>x</sub> WO <sub>4</sub>                           |
| 9.     | 60 <sup>th</sup> DAE - Solid State Physics Symposium                     | Amity University, Noida, Uttar Pradesh,            | Dec. 21 – 25, 2015      | Effect of Cobalt Doping on Structural, Optical and Dielectric Properties of TiO <sub>2</sub>                   |
| 10.    | 61 <sup>th</sup> DAE - Solid State Physics Symposium                     | KIIT University, Bhubaneswar, Odisha               | Dec. 26 - 30, 2016      | Effect of Cobalt Doping on sensing behavior of (Ba <sub>0.6</sub> Sr <sub>0.4</sub> ) TiO <sub>3</sub>         |
| 11.    | 65 <sup>th</sup> DAE - Solid State Physics Symposium                     | Bhabha Atomic Research Centre, Mumbai, Maharashtra | Dec. 15 - 19, 2021      | Synthesis and Characterization of Yttrium doped Carbon Nitride                                                 |
| 12.    | International Conference on Advanced Materials and Computational Physics | SIMATS School of Engineering, Chennai              | Apr. 25 - 26, 2024      | A Study on the Effect of Synthesis Methods on the Properties of Zn <sub>2</sub> SnO <sub>4</sub> nanoparticles |
| 13.    | International Conference on                                              | BTC DAV College, Baniket                           | May 17 - 18, 2025       | Synthesis and characterization                                                                                 |

| S. No. | Programme & Theme                                                          | Organized by                        | Date | Title of the Paper                                   |
|--------|----------------------------------------------------------------------------|-------------------------------------|------|------------------------------------------------------|
|        | Recent Trends in Advanced Functional Materials for Sustainable Development | Dalhousie, Chamba, Himachal Pradesh |      | of TiO <sub>2</sub> /ZrO <sub>2</sub> Nanocomposites |

## 10. ARTICLES PUBLISHED IN JOURNALS/PROCEEDINGS/MAGAZINES/BOOKS

| S. No. | Journal/Proceeding/Magazine/Book Name                  | Title of the Article                                                                                                  | Month/Year | Vol. No. | Issue No. | Page No.           | ISSN | Publisher                      |
|--------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------|----------|-----------|--------------------|------|--------------------------------|
| 1.     | Advanced Science Letters                               | Role of Heterojunction and Oxygen Vacancies on Ethanol Detection by ZnO:SnO <sub>2</sub> Nanocomposite                | 2012       | 17       | 1         | 56-63              |      | American Scientific Publishers |
| 2.     | AIP Conference Proceedings                             | Dielectric Properties of Flower-Type ZnO Nanorods and ZnO:SnO <sub>2</sub> Nanocomposites                             | 2012       | 1447     |           | 369-370            |      | AIP Publishing                 |
| 3.     | AIP Conference Proceedings                             | ZnO Nanorods/SnO <sub>2</sub> Nanoparticles Based Composites: Synthesis and Characterization                          | 2012       | 1447     |           | 391-392            |      | AIP Publishing                 |
| 4.     | AIP Conference Proceedings                             | Synthesis and Characterization of Chunk-shaped ZnO Nanoparticles for Ethanol Sensing                                  | 2013       | 1512     |           | 368-369            |      | AIP Publishing                 |
| 5.     | Superlattices and Microstructures                      | Structural, optical, dielectric and magnetic properties of Mn <sub>1-x</sub> Co <sub>x</sub> O <sub>2</sub> nanowires | 2014       | 71       |           | 203-210            |      | Academic Press                 |
| 6.     | AIP Conference Proceedings                             | Magnetic Properties of $\alpha$ -MnO <sub>2</sub> and Co-Doped $\alpha$ -MnO <sub>2</sub> Nanowires                   | 2014       | 1591     |           | 423-425            |      | AIP Publishing                 |
| 7.     | Journal of Materials Science: Materials in Electronics | Undoped and Mn-doped Co <sub>3</sub> O <sub>4</sub> nanorods for ethanol sensing                                      | 2015       | 26       |           | 4178-4184          |      | Springer US                    |
| 8.     | AIP Advances                                           | Structural, optical, and magnetic properties of Mn and Fe-doped                                                       | 2015       | 5        |           | 087104-1/087104-10 |      | AIP Publishing                 |

| S. No. | Journal/Proceeding/Magazine/Book Name                     | Title of the Article                                                                                                           | Month/Year | Vol. No. | Issue No. | Page No.          | ISSN          | Publisher      |
|--------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|----------|-----------|-------------------|---------------|----------------|
|        |                                                           | Co3O4 nanoparticles"                                                                                                           |            |          |           |                   |               |                |
| 9.     | AIP Conference Proceedings                                | Structural and optical property of Co <sub>1-x</sub> Mn <sub>x</sub> WO <sub>4</sub>                                           | 2015       | 1665     |           | 050153-1–050153-3 |               | AIP Publishing |
| 10.    | Journal of Materials Science: Materials in Electronics    | Oxygen vacancies induced room temperature ferromagnetism and gas sensing properties of Co-doped TiO <sub>2</sub> nanoparticles | 2016       | 27       |           | 1636-1644         |               | Springer US    |
| 11.    | Advance Materials Letters                                 | Chunk shaped ZnO/Co <sub>3</sub> O <sub>4</sub> nanocomposites for ethanol sensor                                              | 2016       | 7        | 8         | 652-658           |               | VBRI Press     |
| 12.    | AIP Conference Proceedings                                | Effect of Cobalt Doping on Structural, Optical and Dielectric Properties of TiO <sub>2</sub>                                   | 2016       | 1731     |           | 050020            |               | AIP Publishing |
| 13.    | AIP Conference Proceedings                                | Effect of cobalt doping on the sensing behavior of (Ba <sub>0.6</sub> Sr <sub>0.4</sub> )TiO <sub>3</sub>                      | 2017       | 1832     |           | 050080            |               | AIP Publishing |
| 14.    | Proceedings of the 65th DAE Solid State Physics Symposium | Synthesis and Characterization of Yttrium doped Carbon Nitride                                                                 | 2021       | 55       |           | 279-280           | 81-8372-085-4 |                |
| 15.    | Advanced Materials Letters                                | On the improvement of Ethanol sensing by Co <sub>3</sub> O <sub>4</sub> loaded SnO <sub>2</sub> nanoparticles                  | 2024       | 15       | 4         | 1-7               |               | IAAM           |

## 11. BOOKS PUBLISHED

| S. No. | Book Name                                | Year | Publisher                  | ISBN              |
|--------|------------------------------------------|------|----------------------------|-------------------|
| 1.     | Thermodynamics and Statistical Mechanics | 2022 | Tamil Nadu Open University | 978-93-5706-279-4 |

## 12. MAJOR ASSIGNMENTS (CHIEF GUEST / KEYNOTE / JUDGE ETC.)

| S. No. | Major Assignment | Institution          | Theme/Title            | Date       |
|--------|------------------|----------------------|------------------------|------------|
| 1.     | Guest Lecture    | Stella Maris College | Conservation of Energy | 04.12.2021 |

### 13. PROJECTS UNDERTAKEN

| S. No. | Title of Project                                                                                        | Position               | Sponsored By | Date & Year | Sanctioned Amount |
|--------|---------------------------------------------------------------------------------------------------------|------------------------|--------------|-------------|-------------------|
| 1.     | Preparation and Study of ZnSnO <sub>3</sub> /rGO Nanocomposite for Photoelectrochemical Water Splitting | Principal Investigator | TNSCST       | 03.03.2023  | 7500              |