

Curriculum Vitae

Dr. M. BALAJI, M.Sc., M.Phil., Ph.D., P.G.D.C.A.
Assistant Professor
Department of Physics
Sourashtra College
Madurai – 625 004.

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EDUCATIONAL QUALIFICATIONS

Ph.D. in Physics - May 2012 - (Highly Commended)
Manonmaniam Sundaranar University
Tirunelveli – 627 012, Tamil Nadu, India

M. Phil. in Physics – November 2009
Madurai Kamaraj University
Madurai – 625 021, Tamil Nadu, India.

M.Sc. in Physics – April 2006
N.M.S.S. Vellaichami Nadar College
Nagamalai, Madurai – 625 019, Tamil Nadu, India.

ADDITIONAL RESPONSIBILITIES

- **NSS programme officer for the Unit No. – 31 from 16.06.2016 to 17.06.2019 (Three academic years).**
- **Students Induction Programme (SIP) - Co-ordinator from 09.05.2019 to 17.07.2022 (Three academic Years).**
- **Intellectual Property rights Cell (IPRC) – Director from 05.08.2021 to 19.06.2023 (Two academic years).**
- **National Assessment and Accreditation Council (NAAC) – Criteria III – Convener from 08.03.2021 to till date.**
- **Dean of Research from 18.07.2022 to till date.**
- **Nodal Officer for All India survey on Higher Education (AISHE) and National Institutional Ranking Framework (NIRF) from 19.06.2023 to till date.**

EMPLOYMENT BACKGROUND

- ❖ **Recognized as a supervisor to guide Ph.D. registrants in Physics** under Madurai Kamaraj University from 14.06.2016 (**ID No. 1492**)
- ❖ **Assistant Professor** in Department of Physics, Sourashtra College, Madurai – 625 004, Tamil Nadu, India **from 26.06.2013 to till date.**
- ❖ **Temporary Lecturer** at Department of Physics, Manonmaniam Sundaranar University, Tirunelveli – 627 012, Tamil Nadu, India **from 31.08.2012 to 04.04.2013.**
- ❖ **P.G. Assistant** at Sri Aurobindo Mira Mat. Hr.Sec.School, #108, Nehru Nagar, By-Pass road, Madurai – 625010, Tamil Nadu, India **from 26.07.2006 to 13.04.2007.**

TRAINING PROGRAMME

- **Faculty Development Programme on “Teaching Methods and Inter-Personal Relationships”** held at Sourashtra College, Madurai on 15.03.2014.
- **“Faculty Training and Motivation Program (FTMP) – International Year of Crystallography”**, (IYCR – 2014) held at Central Electrochemical research institute (CECRI), Karaikudi during 08.09.2014 to 10.09.2014.
- **“UGC sponsored 104th Orientation program for Teachers”** held at UGC-Academic staff college, Bharathiar University, Coimbatore during 06.11.2014 to 03.12.2014.
- **“One day Orientation Programme to Teachers on Teacher Effectiveness”** held at Sourashtra College, Madurai on 07.03.2015.
- **Summer School – Refresher Course on Physics** held at UGC-Human Resource Development Centre, University of Madras, Chennai – 5 during 23.05.2017 to 12.06.2017
- **“One day faculty development programme on “Management of Self-A Holistic Approach”** held at Sourashtra College, Madurai on 29.08.2017.
- **National Service Scheme (NSS) – Orientation training programme** held at Empanelled Training Institution, Avinashilingam University, Coimbatore during 18.01.2018 to 24.01.2018.
- **Three days workshop – Training of Teachers (TOT) for Students Induction Programme (SIP)** held at IIIT, Gachibowli, Hyderabad from 16.05.2019 to 18.05.2019.
- **Online workshop entitled “Evidence based teaching and Learning Strategies in higher Education”** from 13th May 2020 to 15th May 2020 organized by CREATES, IISER Bhopal under the **PMMMNTT scheme of MHRD.**

- **Two weeks faculty development programme on “Managing online classes and Co-creating MOOCS:2.0”** from 18th May 2020 to 03th June 2020 organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the **PMMMNMNTT** scheme of **MHRD**.
- **One week faculty development programme on “Open Source Tools for Research”** from 8th June 2020 to 14th June 2020 organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the **PMMMNMNTT** scheme of **MHRD**.
- **Faculty development Programme on “Nanomaterials Characterization Techniques and Results Analysis Methodology: Ideas, Innovation & Initiatives (Physics)” of five days (30 contact hours) duration** from 27.07.2020 to 31.07.2020 conducted by **MHRD’s Faculty Development Centre, UGC-Human Resource Development Centre, Savitribai Phule Pune University, Pune** under the **PMMMNMNTT** scheme.
- **UGC sponsored online Refresher course in Physics** conducted by **UGC-HRDC, Gujarat University, Ahmedabad – 380009** during 07.09.2020 to 20.09.2020.
- **Faculty development Programme on “E-Content development”** conducted by **Sourashtra college, Madurai** on 10.02.2022.
- **Two days “In-Service Teacher Training” programme in Physical sciences** held at **Sri Meenakshi Governement Arts college for women (A), Madurai**. On 05.05.2022 and 06.05.2022 conducted by **Tamilnadu State Council For Higher Education (TANSCH), Chennai – 600005**.
- **UGC sponsored online Refresher course in Physics** conducted by **UGC-HRDC, Gujarat University, Ahmedabad – 380009** during 21.06.2022 to 04.07.2022.
- **Two weeks faculty development programme on “Managing online classes and Co-creating MOOCS:32.0”** from 11th November 2023 to 25th November 2023 organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the **PMMMNMNTT** scheme of **MHRD**.

MEMBER OF EDITORIAL BOARD

- Editor in the “**International Journal of Current Science Research**” (**IJCSR**)
Dr. BGR Publications, 6/111,B 63,Mahalakshmi Nagar,Mutthaiyapuram, Tuticorin-628005, Tamil Nadu, India.
ISSN: 2454-5422.
<http://www.drbrpublications.in/physics.php>

HONOURS/AWARDS

- Awarded Project Fellowship from “**Inter University Accelerator Centre, New Delhi**”, India during 16th may 2007 - 15th may 2010.
- Awarded Senior Research Fellowship from “**DAE-BRNS, New Delhi**”, India during 20th July 2010 – 30th September 2010.
- “**Materials Research Society of India Prize**” for the **Best Poster Paper** entitled “Influence of electron beam irradiation on cationic migration and structural morphology of CuCoFe₂O₄ nanoparticles” during the 20th AGM of MRSI held on 10th February 2009 at Kolkata.
- **Best paper award** for the paper “Transformation of spinel to inverse spinel copper ferrite prepared by co-precipitation technique” presented at the “National Conference on Materials: Nano to Macro dimensionality and their varied Applications held at Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli during 28-29 January 2010.
- **Best Paper award** for the paper “Structural and optical properties of CuSn, CuZr, SnZr and CuSnZr thin films” presented at the “National conference on preparation and characterization on crystalline materials” (NCPCCM 2017) held at PG& Research department of physics, Government Arts college (Grade I), Tiruvannamalai – 606 603, Tamil Nadu during 5-6 September 2017.
- “**Professor of the Year**” award received from the Sourashtra College, Madurai for securing maximum attendance in the academic year 2016-2017.
- **Best Paper award** for the paper “The effect of temperature on Magnetic behaviour of copper ferrite nanocomposites” presented at “International conference on Physics of Advanced materials and Molecules (ICPAMM – 2020)” held at Dr. Ambedkar Government Arts college, Vyasarpadi, Chennai on 30 and 31st January 2020.

PROFESSIONAL ACTIVITIES

Seminar organized

- **CONVENER** for the **ONE DAY NATIONAL SEMINAR ON “INTELLECTUAL PROPERTY RIGHTS”** held on 14th October 2022 at Silver Jubilee Hall, Sourashtra College, Madurai-625 004, Tamil Nadu.
- **ONE DAY FACULTY DEVELOPMENT PROGRAMME ON “EXPLORATION OF EFFECTIVE JOURNALS AND FUNDING AGENCIES”** held on 22.03.2022 jointly organized by Intellectual Property rights

Curriculum Vitae

Cell (IPRC) & Internal Quality Assurance Cell (IQAC), Sourashtra College, Madurai – 625004, Tamil Nadu.

- **CONVENER** for the **ONE DAY INTERNATIONAL WEBINAR ON “RECENT TRENDS IN PHYSICS (IWRT-2020)”** held on 28th November 2020 conducted by Department of Physics, Sourashtra College, Madurai – 625004, Tamil Nadu.
- **CONVENER** for the **ONE DAY NATIONAL SEMINAR ON “RECENT TRENDS IN PHYSICS (NSRT-2019)”** held on 13th February 2019 at Silver Jubilee Hall, Sourashtra College, Madurai-625 004, Tamil Nadu.
- **CO-CONVENER** for the **STATE LEVEL SEMINAR ON “ROLES AND RESPONSIBILITIES OF NSS IN THE SOCIETY”** held on 15th September, 2018 at Silver Jubilee Hall, Sourashtra College, Madurai-625 004, Tamil Nadu.
- **CO-CONVENER** for the **ONE DAY STUDENTS SEMINAR ON “RECENT TRENDS IN PHYSICS”** held on 26th February 2015 at Silver Jubilee Hall, Sourashtra College, Madurai-625 004, Tamil Nadu.
- **ORGANIZING COMMITTEE MEMBER** for the **“NATIONAL SEMINAR ON STRUCTURAL BIOINFORMATICS - 2013”** held on 15th March 2013 at Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu.

Online E-Quiz organized:

- **CONVENER** for the **NATIONAL LEVEL ONLINE E-QUIZ ON “APPLIED PHYSICS”** conducted by Department of Physics, Sourashtra College, Madurai – 625004, Tamil Nadu **from 3rd August 2020 to 5th August 2020.**

Value added course conducted:

- **VALUE ADDED COURSE** (30 hours) conducted for third year B.Sc. Physics students entitled **“WIRING AND REPAIRING OF DOMESTIC APPLIANCES”** by the Department of Physics, Sourashtra College, Madurai – 625004, Tamil Nadu in the academic year 2021 - 2022.
- **VALUE ADDED COURSE** (30 hours) conducted for third year B.Sc. Physics students entitled **“WIRING AND REPAIRING OF DOMESTIC APPLIANCES”** by the Department of Physics, Sourashtra College, Madurai – 625004, Tamil Nadu in the academic year 2022 - 2023.

Invited Talk:

- ❖ **“Core-Shell Nanocomposites in Bio-medical applications”**, talk delivered in Physics Association organized by Department of Physics, Sri Sarada College for Women, Tirunelveli-11 on 14th September 2012.
- ❖ **“The Recent evolution of magnetic nanocomposites”** talk delivered in P.G. Department of Physics, Sourashtra College, Madurai – 625 004 on 05th October 2013.
- ❖ **“Physics in Everyday life”** talk delivered in Physics Association organized by Department of Physics, Senthamarai College of Arts and Science, Madurai -21 on 21st January 2016.
- ❖ **“Nanomagnetism”** talk delivered in Physics Association organized by Department of Physics, Senthamarai College of Arts and Science, Madurai -21 on 23rd December 2016.
- ❖ **“Magnetic Nanocomposites in Gas Sensor Application”** talk delivered in Physics Association organized by Department of Physics (SF), Nadar MahajanaSangam S. VellachamyNadar College, Madurai – 625019 on 25th November 2021.
- ❖ **“Selection of effective Journal for research publication”** talk delivered in One day faculty development programme on “Exploration of effective journal publication and funding agencies” was jointly organized by the Intellectual Property Rights Cell (IPRC) and Internal Quality Assurance cell (IQAC), Sourashtra College, Madurai on 22.03.2022.
- ❖ **“Physics in Everyday life”** talk delivered in Physics Association organized by PG & Research Department of Physics, Nadar MahajanaSangamS. VellachamyNadar College, Madurai – 625019 on 29th March 2022.
- ❖ **“Enhanced performance of Magnetic - Semiconductor nanocomposites for Gas Sensor Applications”** talk delivered in 7th International Conference on Recent Innovation in Modern Science and Technology (ICRIMST – 2024) organized by KPR Institute of Engineering and Technology, Coimbatore – 641407, Tamilnadu, India on 9 – 11 January 2024.

Chair person:

- Acted as a **Chair Person** in International Conference on “Recent advancement in Material Science and its Applications” – ICRAMSA '23 organized by Research centre and PG department of Physics, Mannar Thirumalai Naicker College (Autonomous), Madurai, Tamil Nadu, India. on 11 and 12th January 2023.

MEMBERSHIP OF LEARNED ACCREDITED BODY



Magnetism Society of India



Elavenil – Indian Science and Technology Association

EXTRA CURRICULARS

- **Post Graduate Diploma in Computer Application (PGDCA)**
- **C with Graphics (CWG)**
- **Certificate in Gandhian thought (CGT)**
- **National service scheme (NSS)**

RESEARCH PROJECT

1. Title : “Effect of SnO₂ addition on magnetic manganese copper ferrite nanoparticles for gas sensor application”

Source : University Grants Commission – Minor Research Project

Period : Two years (2014-2016)

Amount : Rs. 5,00,000/-

Principal Investigator: Dr. M. Balaji

PROJECT GUIDED

Number of M.Phil. candidates - **Four completed**

1. Synthesis and characterization of CaFe_xMn_{1-x}O_{3-δ} & BaFe_xMn_{1-x}O_{3-δ} Perovskite films
(Selvi. B. Lalitha Maheswari – 2015)

2. Structural and Magnetic behaviour of Mn_(1-x)Cu_(x)Fe₂O₄ Nanoparticles
(Mr. R.A. Jeyaram – 2015)

3. Synthesis and characterization of Ca_xBa_{1-x}MnO_{3-δ} Perovskite materials.
(Mr. C. Muthuselvam -2015)

4. Preparation and characterization of CuSn, CuZr, SnZr and CuSnZr thin films deposited by Successive Ionic Layer Adsorption and Reaction method.
(Selvi. S. Chitra Devi – 2017)

Number of M.Sc. Candidates - **Five completed**

RESEARCH AREAS

- 👍 Surface Sciences
- 👍 Magnetic Materials
- 👍 Perovskite Materials
- 👍 Nanomaterials, Thin films
- 👍 Conducting Polymers
- 👍 Irradiation Effect
- 👍 Antibacterial Studies

PAPERS PUBLISHED IN INTERNATIONAL JOURNALS

Research papers published in International journals - 14 nos.

1) Sensing properties of polyoxomolybdate doped polyaniline nanomaterials for oxidising and reducing volatile organic compounds.

P.Chitrlekha, **M.Balaji**, S. Subramanian and D. PathinettamPadiyan

Current Applied Physics 10 (2010) 457-467 (Impact Factor: 2.48)

2) High-energy ion induced physical and surface modifications in antimony sulphide thin films

S. Subramanian, **M. Balaji**, P. ChithraLekha, K. Asokan, D. Kanjilal, Indra Sulania, Jai Prakash, D.PathinettamPadiyan

Current Applied Physics 10 (2010) 1112-1116 (Impact Factor: 2.48)

3) Electron beam induced modifications of Bismuth sulphide (Bi_2S_3) thin films: Structural and optical properties

S.Subramanian, **M.Balaji**, P.Chithralekha, GaneshSanjeev, E.Subramanian, D.PathinettamPadiyan

Radiation Physics and Chemistry 79 (2010) 1127–1131 (Impact Factor: 2.858)

4) Electronic structure studies of nanoferrites $\text{Cu}_x\text{Co}_{1-x}\text{Fe}_2\text{O}_4$ ($0.0 \leq x \leq 1.0$) by X-ray absorption spectroscopy

Sanjeev Gautam, S. Muthurani, **M.Balaji**, K.H. Chae, D.PathinettamPadiyan, S.S. Kim, K. Asokan

Journal of Nanoscience and Nanotechnology 11 (2011) 386–390. (Impact Factor: 1.354)

5) Effect of swift heavy ion irradiation on the structural and morphological aspects of copper ferrite nanoparticles

M. Balaji, D. PathinettamPadiyan, M. Manivel Raja, K. Asokan, D. Kanjilal

International Journal of Nanoscience 10(1) (2011) 1 – 5. (Impact Factor: 0.68)

6) Effect of thermal spike energy created in CuFe_2O_4 by 150 MeV Ni^{11+} swift heavy ion irradiation

M. Balaji, M. Manivel Raja, K. Asokan, D. Kanjilal, T. R. Rajasekaran and D. Pathinettam Padiyan

Nuclear Instruments and Methods in Physics Research B269 (2011) 1088–1093.
(Impact Factor: 1.377)

7) Magnetic and Humidity-Sensing Properties of Nanostructured $\text{Cu}_x\text{Co}_{1-x}\text{Fe}_2\text{O}_4$ Synthesized via Autocombustion

S. Muthurani, **M. Balaji**, S. Gautam, K. H. Chae, J.-H. Song, D. P. Padiyan, K. Asokan

Journal of Nanoscience and Nanotechnology 11 (2011) 5850-5855. (Impact Factor: 1.354)

8) Influence of 150 MeV Ni^{11+} swift heavy ion irradiation on CuFe_2O_4 thin films prepared by radio frequency magnetron sputtering: Modification on structure and surface morphology

M. Balaji, K. Asokan, D. Kanjilal, C. Sanjeeviraja, T.R. Rajasekaran, D. Pathinettam - Padiyan

Thin Solid Films 520 (2011) 204–211 (Impact factor: 2.183)

9) Core-shell structure in copper ferrite-polyaniline nanocomposite: Confirmation by laser Raman spectra.

M. Balaji, P. Chithra Lekha, D. Pathinettam Padiyan

Vibrational Spectroscopy 62 (2012) 92–97 (Impact factor: 2.507)

10) Effect of exposure to electron beam irradiation in biopolymer papain and their electrical behaviour

S. Muthulakshmi, P. Chithra Lekha, **M. Balaji**, Ganesh Sanjeev, D. Pathinettam Padiyan

Indian Journal of Pure and Applied Physics 51 (2013) 33-38 (Impact factor: 0.923)

11) Effect of Mn^{2+} substitution on the structural, morphological and magnetic properties of copper ferrite nanoparticles

M. Balaji, R. A. Jeyaram, S. Chandrasekaran, B. Lalitha Maheswari

Materials Technology : Advanced Performance Materials 32(6) 2017 378-384
(Impact factor: 3.35)

12) Enhanced performance of $\text{SnO}_2\text{-Mn}_{(1-x)}\text{Cu}_{(x)}\text{Fe}_2\text{O}_4$ gas sensors towards carbon dioxide and oxygen

M. Balaji, R.A. Jeyaram, P. Matheswaran

Journal of Alloys and Compounds 696 (2017) 435 – 442 (Impact factor: 5.316)

13) Structural and antibacterial effect of $\text{CaFe}_x\text{Mn}_{1-x}\text{O}_{3-\delta}$ & $\text{BaFe}_x\text{Mn}_{1-x}\text{O}_{3-\delta}$ Perovskite films

M. Balaji, B. Lalitha Maheswari and R.A. Jeyaram

International Journal of MediPharm Research 03(1) (2017) 178-186.
(Impact factor: 3.158)

14. Preparation and characterization of CuSn, CuZr, SnZr and CuSnZr thin films deposited by sputter method

M. Balaji, S. Chithra Devi, A.K. Balasubramanian and N.R. Senthil Kumar
Vacuum, 161 (2019) 338-346 (Impact factor: 3.627)

BOOK CHAPTER PUBLICATION

1) ENVIRONMENTAL STUDIES (ISBN No. – 978-81-929458-1-1)

K.M. Poornima, K.P. Gnanesh, G.R. Shyamala, **M. Balaji**, M. Rajasekaran and M. Venkatesan
Shanlax press, Madurai – 625003. (Page No.1-22) (2015)

RESEARCH PAPER PUBLISHED IN EDITED VOLUME

1) The 10th Tamil Science Association seminar proceedings (ISBN No. – 938062717-3) - 2010

Characterization of copper ferrite thin films prepared using rf magnetron sputtering
M. Balaji and D. Pathinettam Padiyan

2) Proceedings on International Conference on Physics of Advanced Materials and Molecules (ISBN No. – 9789389336788) - 2017

The effect of temperature on Magnetic behavior of copper ferrite nanocomposites
M. Balaji, R. A. Jeyaram, P. Madheswaran and A. K. Balasubramanian

3) Proceedings on National conference on preparation and characterization on crystalline materials (ISBN No. – 9781641366182)- 2017

Structural and optical properties of CuSn, CuZr, SnZr AND CuSnZr thin films
M. Balaji, S. Chithra Devi, A.K. Balasubramanian and N.R. Senthil Kumar

4) Proceedings on International conference on Physics of Advanced materials and molecules (ISBN No. – 9789389336788) - 2020

The effect of temperature on Magnetic behavior of copper ferrite nanocomposites
M. Balaji

5) Proceedings of International conference on Smart Materials and Biomolecules (ISBN No. - 9789392 995378) – 2023.

(i) Synergetic Effect of γ - Glycine – Copper Sulphate Crystal for Enhanced Antibacterial Activity

M. Balaji, T.R.K. Priyadarzini, R. Daphine, B. Sona and D. Keerthana

(ii) Correlation between Magnetization and Cell Volume in Mn^{2+} Substituted Copper Ferrite Nanocomposites

M. Balaji

PAPERS PRESENTED IN CONFERENCE/ SEMINARS/SYMPOSIA

Research Papers presented in Conference / Seminars / Symposia : 28

1. B.Sc project “**Simple Transistor Tester**” was displayed and presented in the seminar “At the Interface cutting edge the research” held at Subbalakshmi Lakshmipathy College of science, Madurai, Tamil Nadu, India at 8th March 2004.

2. **Influence of electron beam irradiation on cationic migration and structural morphology of CuCoFe₂O₄ nanoparticles**

M. Balaji, D. PathinettamPadiyan

Materials Research Society of India 20th AGM held at Saha Institute of Nuclear Physics, Kolkata, West Bengal, India during 10-12, February 2009.

3. **CuCoFe₂O₄ ferrite: Morphological aspects and Magnetic properties**

M. Balaji, D. PathinettamPadiyan

National Seminar on Advances in Materials Science, held at Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India during 16-17, March 2009.

4. **Effect of swift heavy ion irradiation on the structural and magnetic properties of CuFe₂O₄ nanoparticles**

M. Balaji, M. Manival Raja, K. Asokan, D. Kanjilal, D. PathinettamPadiyan

International Conference on Advanced Nanomaterials and Nanotechnology, held at IIT, Guwahati, Assam, India during 9-11, December 2009.

5. **Influence of 150 MeV Ni¹¹⁺ swift heavy ion irradiation on the structure and Surface topography of CuFe₂O₄ thin films**

M. Balaji, K. Asokan, D. Kanjilal, C. Sanjeeviraja, T.R. Rajasekaran, D. Pathinettam Padiyan,

54th DAE Solid State Physics Symposium, held at Maharaja Sayajirao University of Baroda, Vadodara, India during 14-18, December 2009.

6. **Transformation of spinel to inverse spinel copper ferrite prepared by co-Precipitation technique**

M. Balaji, C. Sanjeeviraja, D. PathinettamPadiyan

National Conference on Materials: Nano to Macro dimensionality and their varied Applications, held at Department of chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India during 28-29, January 2010.

7. **Effect of 150 MeV Ni¹¹⁺ Swift Heavy Ion irradiation in CuFe₂O₄ thin films Prepared by rf magnetron sputtering**

M. Balaji, K. Asokan, D. Kanjilal, C. Sanjeeviraja and D. PathinettamPadiyan

National conference on Magnetic Materials and Applications (MAGMA - 2012), held at Thigarajar Engineering College, Madurai, Tamil Nadu, India during 20-21, January 2010.

8. Understanding electronic structure of (Co, Cu) ferrite by x-ray absorption fine Structure

Sanjeev Gautam, S Muthurani, **M. Balaji**, D. PathinettamPadiyan, K.H. Chae, S.S. Kim, K. Asokan

The 7th International Nanotech Symposium (Nano Korea 2009), held at Seoul, South Korea during 26-28, August 2009.

9. Characterization of copper ferrite thin films prepared using rf magnetron sputtering

M. Balaji, D. Pathinettampadiyan

The 10th Tamil Science Association seminar, held at Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India during 21-23, May 2010.

10. Analysis of core - shell structured copper ferrite – polyaniline nanoparticles using Raman studies

M. Balaji, D. PathinettamPadiyan

XXXIX National Seminar on Crystallography (NSC - 2010), held at University of Jammu, JammuTawi, India during 25-27, October 2010.

11. Synthesis of core-shell structured copper ferrite – polyaniline nanocomposites and its characteristics

M. Balaji, D. PathinettamPadiyan

National Seminar on Advances in Physics (NSAP-2011), held at Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India during 10-11, March 2011.

12. Synthesis and magnetic properties of copper ferrite-polyaniline nanocomposites

M. Balaji, P. Chithra Lekha, D. Pathinettam Padiyan

National conference on Magnetic Materials and Applications (MAGMA - 2012), held at IIT Madras, Chennai, Tamil Nadu, India during 12-13, March 2012.

13. Synthesis and characterization of copper ferrite-polyaniline nanocomposites: Dielectric and Thermal properties

M. Balaji, D. PathinettamPadiyan

International Conference on Materials and Characterization Techniques (ICMCT-2014), held at VIT University, Vellore, India during 10-12, March 2014.

14. Spider net like structure of MnO decorated MWCNT by facile synthesis

R. Ramesh Kannan, Sundaram Chandrasekaran, **M. Balaji**, M. Sivabharathy

Nano India (NANO 2015), held at Sastra University, Thanjavur, Tamil Nadu, india during 29-30, January 2015.

15. Synthesis and structural behavior of $Mn_{(1-x)}Cu_{(x)}Fe_2O_4$ Nanopartciles

M. Balaji, R.A. Jeyaram, B. Lalitha Maheswari, C. Muthu Selvam

National Conference of Recent Trends and advances in Physics (NCRTAP-2015) held at The M.D.T. Hindu College, Tirunelveli – 10, Tamil Nadu, India during 19-20, February 2015.

16. Effect of Mn^{2+} substitution on the structural, morphological and magnetic properties of copper ferrite nanoparticles

M. Balaji, R.A. Jeyaram, B. Lalitha Maheswari, C. Muthu Selvam

International Conference on Nanomaterials for Frontier Applications” (ICNFA 2015) held at Department of Physics, Coimbatore Institute of Technology, Coimbatore, Tamil Nadu, India during 2-4, December 2015.

17. Structural and Antibacterial effect of $CaFe_xMn_{1-x}O_{3-\delta}$ and $BaFe_xMn_{1-x}O_{3-\delta}$ Perovskite films

M. Balaji, B. Lalitha Maheswari, R.A. Jeyaram, C. Muthu Selvam

International Conference on Nanomaterials for Frontier Applications” (ICNFA 2015) held at Department of Physics, Coimbatore Institute of Technology, Coimbatore, Tamil Nadu, India during 2-4, December 2015.

18. Synthesis and Antibacterial effect of $Ca_xBa_{1-x}MnO_{3-\delta}$ Perovskite materials

M. Balaji, R. A. Jeyaram and C. Muthuselvam

International conference on Advances in Functional Materials (ICAFM-2017) held at Anna University, Chennai – 600025, Tamil Nadu, India during 6-8 January 2017.

19. Gas sensing properties of SnO_2 combined Cu-Mn ferrite nanocomposites

M. Balaji, R. A. Jeyaram, P. Madheswaran and A. K. Balasubramanian

International workshop on Advanced Functional Materials And Devices (IWAFFMD-2017) held at Manonmaniam Sundaranar University, Tirunelveli-627 012, Tamil Nadu, India during 8-12, January 2017.

20. Synthesis and characterization of CuO And Al Doped CuO films Prepared By Sol – Gel Spin coating technique

M. Balaji, A.K. Balasubramanian and S. Chithra Devi

National Conference on Emerging trends in Materials 2017 held at Mary Matha College of Arts and Science, Periyakulam East – 625604, Tamil Nadu, India on 6th March 2017.

21. Effect of Al^{3+} Ions on SnO_2 Materials

M. Balaji, A. K. Balasubramanian and V. Anjali Devi

National Conference on Emerging trends in Materials 2017 held at Mary Matha College of Arts and Science, Periyakulam East – 625604, Tamil Nadu, India on 6th March 2017.

22. Structural and optical properties of CuSn, CuZr, SnZr AND CuSnZr thin films

M. Balaji, S. Chithra Devi, A.K. Balasubramanian and N.R. Senthil kumar

National conference on preparation and characterization on crystalline materials (NCPCCM 2017) held at PG & Research department of physics, Government Arts college (Grade I), Tiruvannamalai – 606 603, Tamil Nadu during 5-6 September 2017.

23. Correlation between magnetization and cell volume in Mn^{2+} substituted copper Ferritenanocomposites

M. Balaji

International Symposium on Modeling of Crystal Growth Processes and Devices (MCGPD – 2019) held at SSN Research Centre, SSN College of Engineering, SSN Institutions, Kalavakkam, Chennai –603110, Tamil Nadu, India during 26 -28 February 2019.

24. Synthesis of Perfect $CuSnZr$ cubic thin film by simple successive ionic layer adsorption and reaction method

M. Balaji, T.R.K. Priyadarzini, R. Daphine

International Symposium on Modeling of Crystal Growth Processes and Devices (MCGPD – 2019) held at SSN Research Centre, SSN College of Engineering, SSN Institutions, Kalavakkam, Chennai –603110, Tamil Nadu, India during 26 -28 February 2019.

25. Enhanced sensitivity of $Cu-Mn$ ferrite gas sensor by incorporating SnO_2 nanocomposites towards carbon dioxide and oxygen

M. Balaji, R. Daphine, T.R.K. Priyadarzini

International Symposium on Modeling of Crystal Growth Processes and Devices (MCGPD – 2019) held at SSN Research Centre, SSN College of Engineering, SSN Institutions, Kalavakkam, Chennai –603110, Tamil Nadu, India during 26 -28 February 2019.

26. The effect of temperature on Magnetic behavior of copper ferrite nanocomposites

M. Balaji

International conference on Physics of Advanced materials and Molecules (ICPAMM – 2020) held at Dr. Ambedkar Government Arts college, Vyasarpadi, Chennai, Tamil Nadu, India during 30-31 January 2020.

27. Synergetic Effect of γ - Glycine – Copper Sulphate Crystal for Enhanced Antibacterial Activity

M. Balaji, T.R.K. Priyadarzini, R. Daphine, B. Sona and D. Keerthana

International Conference on Smart Materials and Biomolecules (ICSMB '23) held at The American College, Madurai, Tamil Nadu, India during 9 – 10 January 2023.

28. Correlation between Magnetization and Cell Volume in Mn^{2+} Substituted Copper Ferrite Nanocomposites

M. Balaji

International Conference on Smart Materials and Biomolecules (ICSMB '23) held at The American College, Madurai, Tamil Nadu, India during 9 – 10 January 2023.