

# CURRICULUM VITAE OF Dr.G.MURALIDHARAN

Mail Id : muralg@rediffmail.com



1. Present position : Professor of Physics
2. Educational qualifications : M.Sc., Ph.D
3. Teaching Experience : 21 years
4. Research Experience : 26 years
5. New Courses/ programmes evolved :
  - i) Diploma in ECE at GRI
  - ii) M.Phil programme in Physics at GRI
  - iii) B.Sc and M.Sc programmes in Physics at Mother Teresa Womens' University, Kodaikanal.
  - iv) B.Sc electronics at Mother Teresa Womens' University (MTWU), Kodaikanal.
6. Laboratories/Departments Established : Established the laboratories
  - for Research on thin films at GRI
  - for B.Sc (Electronics) at MTWU College, Kodaikanal
  - for B.Sc (Physics) at MTWU college, Kodaikanal
  - for M.Sc (Physics) at MTWU, Kodaikanal
7. Involvement in Institute Development :
  - Coordinator Electronics club
  - Helped in the organization of Gramfest
  - Helped in the organization of Science Day celebrations
  - Has acted as Chief Examiner for semester examinations
  - Has acted as Chief superintendent of Semester Examinations
  - Has acted as Deputy Chief Superintendent of semester examinations.
  - Has acted as Chief Superintendent for the Tamilnadu Professional Course Entrance Examinations
  - Has acted as Additional Chief Superintendent for the Tamilnadu Professional Course Entrance Examinations
  - Has coordinated the L-RAMP activities of the GRI nodal centre
  - Has worked as the officer incharge of the Rural Innovation cell of CRIC& AR
  - Has worked as the Director, USIC, GRI
  - Presently the Special Officer, Sponsored Projects and Action Research Cell, GRI
8. Research Guidance:
  1. Guided two candidates towards doctoral degree
  2. One candidate has submitted the thesis and is awaiting reports from examiners.
  3. Four candidates are working towards the doctoral degree.

9. Research projects undertaken:

L-RAMP sponsored student project on “Design and Fabrication of a Dip coating unit and study of Electrochromic Thin films” at a budget of Rs.10,000/=.

## 10. List of publications:

1. Thermoluminescence and optical studies on RbCl:Sr<sup>2+</sup>  
S.B.S.Sastry, S.Nagarajan and **G.Muralidharan**  
Nuclear Tracks **10**, 93 (1985)
2. Thermoluminescence and optical studies on gamma irradiated rubidium halides doped with activator impurities.  
S.B.S.Sastry, S.Nagarajan and **G.Muralidharan**  
Cryst.Latt.Defects **17**, 211 (1987)
3. Thermoluminescence and laser Raman studies on RbI:Gd<sup>2+</sup>.  
S.B.S.Sastry and **G.Muralidharan**  
Nucl.Inst.Methods **B32**, 216 (1988)
4. Thermoluminescence and fluorescence studies on RbBr:Gd<sup>2+</sup>  
S.B.S.Sastry and **G.Muralidharan**  
Phys.Stat.Solidi (b) **146**, 727 (1988)
5. Thermoluminescence and other optical studies on gamma irradiated RbCl:Gd<sup>2+</sup>.  
S.B.S.Sastry and **G.Muralidharan**  
Phys.Stat.Solidi (b) **150**, 315 (1988)
6. A simple spinner magnetometer for laboratory use  
S.Ramamurthy, M.Ponraj, **G.Muralidharan** and E.Savarimuthu  
J.Inst.Soc.India **26**, 23 (1996)
7. A simple IC 723 tester  
E.Savarimuthu, S.Ramamurthy and **G.Muralidharan**  
Bull.IAPT **13**, 75 (1996)
8. A simple temperature controller  
S.Ramamurthy, E.Savarimuthu, **G.Muralidharan** and C.Sasirekha  
J.Inst.Soc.India **27**,174 (1997)
9. A simple water level indicator  
P.Subramanian and **G.Muralidharan**  
Electronics for you Feb 1997
10. Microprocessor based stepper controlled beam and total solar radiation measuring system  
K.Marimuthu, S.Venkatraman and **G.Muralidharan**  
Bull.IAPT **18**, 211 (2001)
11. Apatites and Britholites, are they akin-as Probed by Eu<sup>3+</sup> luminescence?

- K.Marimuthu, L.C.Nehru, A.Mani, R.Ramesh, **G.Muralidharan** and R.Jagannathan  
J.Phys.Condensed Matter **13**, 537 (2001)
12. Microprocessor based sound pressure recorder  
K.Marimuthu, **G.Muralidharan**, P.Vickraman, K.Sasikumar and A.Edward Durai  
J.Curr.Sci **3**, 125 (2003)
13. Microprocessor based capacitance meter  
Ramyia Krishnan, K.Marimuthu, **G.Muralidharan**, E.Savarimuthu and S.Ramamurthy  
Bull.IAPT, **21**,186 (2004)
14. Thermoluminescence and other optical studies on RbBr:Tb<sup>3+</sup> crystals.  
P.K.Manimozhi, **G.Muralidharan**, S.Selvasekarapandian and J.Malathi  
Phys. Stat. Sol. (b), **244**, 726 (2007).
15. Luminescence and optical studies on X-ray irradiated RbCl:Tb<sup>3+</sup> crystals  
P.K.Manimozhi, **G.Muralidharan**, S.Selvasekarapandian and V.Brahmandhan  
Nuc. Inst. Meth. In Phys Res B, **264**, 329 (2007)
16. Luminescence studies on RbI:Tb<sup>3+</sup> crystals  
P.K.Manimozhi and **G.Muralidharan**  
Luminescence, **22**, 468 (2007)
17. Luminescence and laser Raman studies on gamma-irradiated RbI:Sm<sup>3+</sup> crystals  
P.K.Manimozhi and **G.Muralidharan**  
Phys. Stat. Sol. (b) **244**, 3730 (2007)
18. Effect of fluorine content on the Morphological, structural, optical and Electrical properties of nanostructured SnO<sub>2</sub> films  
M.Dhanasankar, K.K.Purushothaman and **G.Muralidharan**  
Surf. Rev. Lett. **14**, 1149 (2007)
19. Nanostructured NiO based all solid state electrochromic device  
K.K.Purushothaman and **G.Muralidharan**  
J Sol-Gel Sci Tech. **46**, 190 (2008)
20. Preparation and characterization of F doped SnO<sub>2</sub> films and electrochromic properties of FTO/NiO films  
K.K.Purushothaman and **G.Muralidharan**  
Current Applied Physics, **9**, 67 (2009)
21. Structural and optical studies of Eu<sup>3+</sup> ions in alkali borate glasses  
K.Marimuthu, S.Surendra Babu, **G.Muralidharan**, S.Arumugam, C.K.Jayasankar  
Phys. Status Solidi (a) **129**, 24 (2009)
22. Enhanced luminescent properties and optical absorption of g-irradiated KI:Ce<sup>3+</sup>, Tb<sup>3+</sup> crystals  
S.Bangaru, **G.Muralidharan**  
J. Lum. **129**, 24 (2009)

23. The effect of annealing temperature on the electrochromic properties of nanostructured NiO films  
K.K.Purushothaman and **G.Muralidharan**  
Sol. Energy Mater. Sol. Cells **93**, 1195 (2009).
24. Luminescence studies on gamma irradiated RbCl:Sm<sup>3+</sup> and RbBr:Sm<sup>3+</sup> crystals  
P.K.Manimozhi and **G.Muralidharan**  
Nuc. Inst. Meth. in Phys. Res. B, **267**, 807 (2009)
25. Structural and spectroscopic investigations on Eu<sup>3+</sup> doped alkali fluoroborate glasses  
K.Marimuthu, R.T.Karunakaran, S.Surendra Babu, **G.Muralidharan**, S.Arumugam,  
C.K.Jayasankar  
Solid State Sciences, 2009 (in press)
26. Nanoporous nickel oxide based Electrochromic window.  
K.K.Purushothaman and **G.Muralidharan**  
Functional Material Letters 2, 143 (2009)
27. Photoluminescence, optical absorption and XRD studies on X-ray irradiated terbium doped KBr crystal  
S.Bangaru, **G.Muralidharan**  
Journal of Luminescence (In press)
28. Optical , Structural and Electrochromic Studies of Molybdenum Oxide Thin Films with Nanorod Structure  
M.Dhanasankar, K.K.Purushothaman and **G.Muralidharan**  
Solid State Sciences (In press)
29. Thermoluminescence and Optical studies on x- irradiated Terbium doped Potassium Bromide crystals  
S.Bangaru, **G.Muralidharan** and G.M.Brahmanandhan  
Journal of Luminescence (accepted for publication)

## **11. Short term courses / symposia / Conferences attended:**

1. Thermoluminescence and optical studies on RbCl:Sr<sup>2+</sup>  
S.B.S.Sastry, S.Nagarajan and **G.Muralidharan**  
National Symposium on thermally stimulated luminescence and allied phenomenon,  
Physical Research Laboratory, Ahamadabad, Feb. 2004
2. Thermoluminescence and optical studies on gamma irradiated rubidium halides doped with activator impurities  
S.B.S.Sastry, S.Nagarajan and **G.Muralidharan**  
Fifth Europhysical topical conference – Lattice Defects in Insulators. Madrid University, Madrid,  
Spain. Sept. 1986
3. Thermoluminescence, photostimulated emission and optical studies on gamma irradiated RbCl:Gd<sup>2+</sup>  
S.B.S.Sastry and **G.Muralidharan**  
Radiation effects in insulators-4, Lyon, France, July 1987

4. Laser Raman and Thermoluminescence studies on RbI:Gd<sup>2+</sup>  
S.B.S.Sastry and **G.Muralidharan**  
Radiation effects in insulators-4, Lyon, France, July 1987
5. Thermoluminescence and optical studies on OH<sup>-</sup> containing RbBr:Yb<sup>2+</sup>  
S.B.S.Sastry and **G.Muralidharan**  
Radiation effects in insulators-4, Lyon, France, July 1987
6. Thermoluminescence in Cobalt doped KCl  
S.B.S.Sastry and **G.Muralidharan**  
Second National Seminar on Defects in Insulating Solids, Indian Institute of Technology, Madras, Feb. 1988
7. Role of hydroxyl ions in the thermoluminescence of RbBr:Yb<sup>2+</sup>  
S.B.S.Sastry and **G.Muralidharan**  
Second National Seminar on Defects in Insulating Solids, Indian Institute of Technology, Madras, Feb. 1988
8. A low cost I-V display  
S.Ramamurthy, **G.Muralidharan**, T.Venkatachalam and S.Kavitha  
National symposium on Instrumentation, Madras, Jan 1991
9. A simple stroboscope  
**G.Muralidharan** and T.Jeeva  
Twentieth National symposium on instrumentation, Osmania University, Hyderabad, 25-28 Sept. 1995
10. A simple 723 IC tester  
S.Ramamurthy, **G.Muralidharan**, E.Savarimuthu and C.Sasirekha  
Twentieth National symposium on instrumentation, Osmania University, Hyderabad, 25-28 Sept. 1995
11. A low cost temperature controller  
E.Savarimuthu, S.Ramamurthy and **G.Muralidharan**  
Twentieth National symposium on instrumentation, Osmania University, Hyderabad, 25-28 Sept. 1995
12. A simple low cost Suryamapi  
S.Ramamurthy, **G.Muralidharan**, E.Savarimuthu and N.Suriyaprabha  
Twenty second national symposium on instrumentation, National Physical Research Laboratory, New Delhi, Oct. 1997
13. A versatile thermometer cum temperature controller  
**G.Muralidharan** and K.Marimuthu  
Twenty second national symposium on instrumentation, National Physical Research Laboratory, New Delhi, Oct. 1997
14. A PC based flow meter  
**G.Muralidharan**, K.Somasundaram and Balakrishnan  
Twenty third national symposium on instrumentation, Birla Institute of Technology, Mesra, Ranchi, Oct. 1998

15. Microprocessor based stepper controlled Beam and Total Solar Radiation measuring system  
K.Marimuthu, S.Venkatraman and **G.Muralidharan**  
Renewable Energies and Energy Efficiency for Sustainable Development, Devi Ahilya Vishwavidyalaya, Indore, Dec. 1999
16. A PC based thermostat for solution growth of crystals  
P.K.Manimozhi and **G.Muralidharan**  
National Symposium on Instrumentation, Bharathiar University, Coimbatore, Nov. 2002
17. Laser Beam Profile Display.  
**G.Muralidharan**, S.Ganesh and J.Princila Ravi  
National Symposium on Instrumentation, G.B.Pant Univeristy of Agriculture and Technology, Pantnagar, Nov. 2003
18. Photoluminescence of cerium doped KBr  
S.Bangaru and **G.Muralidharan**  
National seminar on Novel Trends in Synthesis, Structure, Reaction Dynamics and Biological Studies of Coordination Compounds, Gandhigram, March 2005
19. Luminescence studies on  $\gamma$ -irradiated RbI:Tb<sup>3+</sup> crystals.  
P.K.Manimozhi and **G.Muralidharan**  
National conference on Luminescence and its applications, Bharathiar University, Coimbatore, Jan. 2007
20. Thermoluminescence and optical studies on x-irradiated KBr:Tb<sup>3+</sup> crystals  
**G.Muralidharan**, V.Lakshmipriya and P.K.Manimozhi  
National conference on Luminescence and its applications, Bharathiarakshmi University, Coimbatore, Jan. 2007
21. Effect of Fluorine content on the structural, optical and electrical properties of SnO<sub>2</sub> films prepared at high temperature by spray pyrolysis method  
K.K.Purushothaman, M.Dhanasankar and **G.Muralidharan**  
International conference on Nanomaterials and its Applications, National Institute of Technology, Trichy, Feb. 2007
22. Photoluminescence of Sm<sup>3+</sup> ions in sodium fluoroborate glasses  
K.Marimuthu, S.Surendra Babu, **G.Muralidharan** and C.K.Jayasankar  
National Conference on Advanced Materials Device and Technologies, Sri Venkateswara University, Tirupati, Feb. 2008
23. Spectroscopic investigations on Eu<sup>3+</sup> doped alkali fluoroborate glasses.  
K.Marimuthu, S.Surendra Babu, **G.Muralidharan**, S.Arumugam and C.K.Jayasankar  
DAE Solid State Physics Symposium, BARC, Mumbai, Dec. 2008
24. Optical, structural and electrochromic properties of Cobalt oxide films prepared via sol-gel route  
K.K.Purushothaman, M.P.Anupama, M.Dhanasankar and **G.Muralidharan**  
International conference on Smart Materials, Thiagarajar College of Engineering, Madurai, Jan. 2009
25. Preparation and characterization of Cobalt oxide films prepared via sol-gel route.  
K.K.Purushothaman, M.P.Anupama and **G.Muralidharan**  
National conference on Emerging Areas In Thin Film Science And Technology, Coimbatore, Feb 2009

26. Photoluminescence and FTIR of Dy<sup>3+</sup> in Sodium Lithium Fluoroborate Glass  
 R.T.Karunakaran, K.Marimuthu, S.Surendra Babu, S.Arumugam, **G.Muralidharan** and  
 C.K.Jayasankar.  
 National conference on Luminescence and its applications, Central Glass and Ceramic Research  
 Institute, Kolkata, Feb. 2009

12. Short term courses / symposia / Conferences organized:

S.No.	Title	Grant	Duration	No. of participants	Year
01.	State Level Workshop on Optical Communication	UGC-Rs.20,000	2 days	25	2008
02.	Refresher Course for University and college teachers	UGC	27/11/2003 to 17/12/2003	14	2003
03.	Refresher Course for University and college teachers	UGC	02/05/2002 to 22/05/2002	39	2002
04	Refresher Course for University and college teachers	UGC	03/02/2001 to 23/02/2001	35	2001

13. Membership in Scientific bodies/ Association:

1. Life member of Indian Association of Physics Teachers
2. Life member Instrument Society of India
3. Life member Luminescence Society of India

14. Resource person: (Inaugural address / Guest Lecture / Chairman)

**Invited talks:**

Sl. No.	Name of Programme	Place	Date	Name of the Organizer	Title of the Paper
1.	National Conference on Materials Characteristics and Properties	Madurai	Sept. 2005	Fatima College	Preparation and characterization of Luminescent Materials
2.	National Symposium on Recent Trends in Material Science	Vijayawada	Feb. 2006	Andhra Loyola College	Materials for phosphor applications
3.	National Conference on Advanced Materials	Thanjavur	Feb. 2008	PRIST University	Recent trends in Luminescence Materials
4.	International Conference on Photonics, Nanotechnology and computer Applications	Thanjavur	Feb 2009	PRIST University	Preparation and Characterization of Thin films for Electrochromic Window Applications

5.	National Symposium on Molecular Engineering of New Materials	Vijayawada	Feb 2009	Andhra Loyola College	Preparation and Characterization of Materials for Electrochromic Applications
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**Inaugural address:**

National Symposium on Molecular Engineering of New Materials, Andhra Loyola College, Vijayawada, Feb. 2009

15. Reviewer for Journals:

1. Nuclear Instruments and methods of Reserch B
2. Ionics
3. Luminescence

16. Committee member:

Member of Board of Examiners for

- Madras University, Chennai
- Madurai Kamaraj University, Madurai
- Mother Teresa Womens' University, Kodaikanal
- Alagappa University, Karaikudi
- M.S.University, Tirunelveli
- Bharathidasan University, Trichy
- Annamalai University, Chidambaram
- Acharya Nagarjuna University, Guntur
- American College, Madurai
- Lady Doak College, Madurai
- St. Xaviers College, Palayamkottai
- Thyagaraja collge of Engineering, Madurai
- ANJA College, Sivakasi

Member Board of Studies

- Alagappa University, Karaikudi
- Mother Teresa Womens' University, Kodaikanal
- American College, Madurai
- Lady Doak College, Madurai
- Vivekananda College, Tiruvedagam
- Fatima College, Madurai

17. Fellowships received:

1. JRF of CSIR, NewDelhi
2. SRF of CSIR, NewDelhi

18. Foreign Countries visited:

1. Spain (to attend an international conference)
2. Sri Lanka (to deliver lectures as a resource person and as a leader of a team to organize Inservice Training Programme for the Teachers of the Plantation Workers Schools in the Central Province of Sri Lanka)

19. Administrative Experience:

1. Has coordinated the L-RAMP activities of the GRI nodal centre
2. Has worked as the officer incharge of the Rural Innovation cell of CRIC& AR
3. Has worked as the Director, USIC, GRI
4. Presently the Special Officer, Sponsored Projects and Action Research Cell, GRI
5. Presently Head, Department of Physics, GRI