



Profile of Dr. Y. Munikrishna Reddy, Associate Professor of Physics, SSBN Degree College, Ananthapuramu

Dr. Y M K Reddy came into the Teaching profession when he joined as a Lecturer in Physics in May 1991 at Sri Sai Baba National Degree College, Ananthapuramu recruited by A. P State College Service Commission, Hyderabad. He is the man behind the establishment of M. Sc., Physics in the College. He contributed immensely to the modernisation of the Department Laboratories. It is under his able Headship that the P G Labs have acquired state of the art status in Rayalaseema region. He is the person responsible in updating and revising syllabi in physics when the college got autonomous status. He is also an Editorial Board member for various autonomous colleges in A. P State.

He has guided 23 research students for M. Phil degrees and now 5 scholars for Ph. D programme under his supervision. He has organized 4 National seminars in his College funded by UGC, CSIR and NAAC. He has carried out 2 Research project worth Rs. 4 lakh funded by UGC. His main research interest areas are in NMR spectroscopy, solid state micro-electronics and Thin Films Division. He visited top Indian Research Centres like Indian Institute of Science and ISRO Bangalore, N P L New Delhi, T I F R C and B A R C Mumbai, Solid State Structural Physics (SSSP) Kolkata etc..

He published 41 Research papers in International Journals. He has also presented 11 papers in international conferences and 56 papers in National Seminars and Conferences. Some of his Research papers were published in *Elsevier*, *Springer journal* with top impact rate.

In recognition of his all round teaching abilities, Govt. Of Andhra Pradesh honoured Dr. Reddy with State Best Teacher Award in year September-2013.

List of Publications

- ❖ Effect of Deposition Temperature on the Physical Properties of Ag-Cu₂O Thin Films by D C Magnetron Sputtering.
Int. Journal of Engineering Research and Application, Vol. 7, Issue 10 (9), p 11-14, 2017.
- ❖ DC Magnetron Sputtering: Impact of Partial O₂ Pressure on the Characteristics of Ag₂O Films.
Advanced Materials Proceedings, (SCOPUS) Vol. 2(9), p 593-595, 2017.

- ❖ Electrical and Structural Transport characteristics of Ni/Ti Schottky contacts to n-type Indium Phosphide (InP).
International Journal of Engineering Trends and Technology (IJETT), Volume 47 Number 3, 2017
- ❖ Analysis of series resistance and interface state densities of Ru/Ti/n-InP Schottky diode.
International J. of Advanced Research (2016), Vol. 4, Issue 6, 747-752, 2016.
- ❖ Interface states and electrical properties of Cu/Ni Schottky contacts on n-InP substrate.
Int. J. of Advanced Scientific Technologies in Engineering and Management Sciences Volume.2, Issue.7, 6-8, July.2016.
- ❖ Role of Internal Quality Assurance Cell (IQAC) for Quality Management in Higher Educational Institution.
Int. J. of Advanced Scientific Technologies in Engineering and Management Sciences Vol.2, Special Issue.1, P58-60, Dec.2016.
- ❖ Effect of Temperature on C-V Characteristics of Ru/Ti/n-InP Schottky Diode.
Int. Journal of Research in Engineering and Applied Sciences, Volume 6, Issue 5, P147-152, 2016.
- ❖ Effect of Precursor Concentration on Structural and Morphological Properties of Iron Pyrite Thin Films.
Procedia Materials Science (Elsevier), Vol. 10, P 279 – 284, 2015
- ❖ Temperature-dependent electrical parameters and current transport mechanisms of Ru/Ti/n-InP Schottky diodes.
Indian J. of Physics (Springer), V89 (11) P 1161-1168, 2015
- ❖ Ru/Ti schottky contacts on n-type In-P (100): Temperature Dependence of Current-Voltage (I-V) characteristics
Procedia Materials Science (Elsevier), Vol. 10, P 666 – 672
- ❖ Effect of annealing temperature on the electrical, structural and surface morphological properties of Ru/Ti Schottky contacts on n-type InP
Superlattices and Microstructures (Elsevier), Vol. 86, P 280–291, 2015
- ❖ Analysis of Electrical Properties and Carrier Transport Mechanisms of Ru/Ti/n-InP Schottky Diodes at Room Temperature
International Journal of New Technologies in Science and Engineering Vol. 2, Issue 2 P 219-228, 2015
- ❖ Polycrystalline and single phase FeS₂ films grown by chemical bath deposition
Nanotechnol, Rev, (SCOPUS) Vol. 4(5), P 469–472, 2015
- ❖ Role of Ammonia on Structural, Electrical, FTIR and Optical Studies of FeS₂ Films Formed by CBD
IOSRJEN, Vol. 05, Issue 02 P 65-70, 2015
- ❖ Solvent Effect on Biologically Peptide Analogues by using 2D-NMR Spectroscopy
IOSR-JAP, Volume 6, Issue 6, PP 01-05, 2014
- ❖ Properties of CdS Chemically Deposited Thin films on the Effect of Ammonia Concentration
IOSR J. Applied Physics, Vol 4 (No 3) 31-40 2013
- ❖ Temperature-dependent Current-Voltage (I-V) and Capacitance-Voltage (C-V) Characteristics of Ni/Cu/n-InP/In Schottky Barrier Diodes
Braz J Phys Vol. 43, 13-21, 2013
- ❖ Effect of Ammonia Concentration on Characterization of Chemical Bath Deposited (CBD) CdS Thin Films,
Asian J. Expt. Science, Vol. 27, 36, 2013
PSpice Simulation: Construction and Study the Characteristics of Transistor Amplifier

- J. Lab. Exp. Vol.13, No. 4, PP 285-294, 2013**
- ❖ Effect of Ammonia Concentration on Electrical Properties of Chemical Bath Deposited (CBD) CdS Thin films
J. L E Vol-13, PP 85-89, 2013
 - ❖ Structural and Optical Characterization of Chemical Bath Deposited FeS₂ Thin Films at Different Temperatures
J. Applied Science Vol 12(16), 1772-1774. 2012
 - ❖ Annealing effects on electrical properties and interfacial reactions of Ni/Cu Schottky rectifiers on n-type InP,
Int. J Modern Physics, Vol 3
 - ❖ Effect of Temperature on Structural and Optical Properties of FeS₂ Thin Film Prepared By Chemical Bath Deposition (CBD)
ICFTA-2012 Journal of Applied Physics
 - ❖ Determination of linear absorption coefficient and half-value thickness of aluminum, lead, and copper for gamma radiation
J. L E Vol-12, PP 50-54 2012
 - ❖ Preparation and Characterization of FeS₂ thin Films by Chemical Bath Deposition Method
Int. J. of Materials Physics. Volume 2, Number 1 (2011), pp. 41—46
 - ❖ Ferromagnetism in Mn_x-doped Zn_{1-x}O Polycrystals Synthesized by co-Precipitation Technique
Int. Review of Applied Engineering Research, Volume 1 No. 2 (2011), pp. 123-128
 - ❖ Electrical properties (Conductivity/Resistivity, Carrier Mobility and Concentration) of Chemically Deposited Thin Films of Iron Sulfide (FeS₂)
J. L E Vol-11, PP-140-145 2011
 - ❖ Conformation-Dependent: ¹H (Proton) NMR Chemical Shifts of Chemotactic Peptide, (N-For-Tyr-Gly-Leu-Ome)_N
Bulletin of Pure and Applied Sciences V 29D (No.2), P 141-151, 2010
 - ❖ Barrier Characteristics of Ni/n-InP (100) Schottky Contacts Based on Temperature Dependent I-V Measurements
Int. J. of Materials Physics. Volume 1, Number 1 (2010), pp. 79--85
 - ❖ Experiments with a Geiger-Muller (G M) Counter
J. LE Vol-10, PP-102-110
 - ❖ Masking and Shifting Software for Measuring Temperature by Interfacing LM35 to P89V51 Microcontroller
J. LE Vol-10, PP-305-315 2010
 - ❖ Temperature and Solvent Dependence of NH Chemical Shifts in Chemotactic Peptides using H-1 NMR Studies
J of Pure and Applied Physics V22 (No 2), P 2010
 - ❖ Minimize the Error of a Band gap Semiconductor Temperature Sensor
J of Pure and Applied Physics V22 (No 2), P 2010
 - ❖ Conformation – dependent C – 13 NMR Chemical Shift of (bromo-phe), (floro-Tyr) and (bromo-Tyr) in the Solid state dependent by CP/ MAS method
Bulletin of Pure and Applied science 14D (1995) P 17-22
 - ❖ Solid State Proton Relaxation and Molecular motion in amino acids
Indian Jol. of Pure and Applied Physics 33 (1995) pp 357-361.
 - ❖ Solid State H¹ magnetic Relaxation and Molecular motion in aromatic amino acids
Indian Jol. of Pure and Applied Physics 35 (1995) pp 653-656.
 - ❖ Suppression of spinning side bands using Solid State CP/ NMR method

Phy. Status. Solodi. 189 (1996) 126

- ❖ High resolution NMR studies in some halogen substituted amino acids
10th International Biophysics Congress Vancour CANADA 1990

PAPERS PRESENTED IN SEMINARS/CONFERENCES

1. Fabrication and electrical transport mechanism of Titanium Diboride thin films by Dc Magnetron Sputtering, RAMP-2018, S K University, Anantapur, 24-25 Feb. 2018, p51.
2. Influence on Surface Morphology of Cu₂O Thin Films by Oxygen Partial Pressure in DC Magnetron Method, RAMP-2018, S K University, Anantapur, 24-25 Feb. 2018 p13-14.
3. Transition from Traditional to Outcome Based Education- A Case Study, NCAD2017, SSBN Degree College, Anantapur, 15-16 Dec 2017, p13.
4. Preparation and properties of iron pyrite films by chemical bath deposition for photovoltaic applications, National seminar on advanced trends in material science, Govt. Degree College, YSR kadapa, 10 March 2017
5. Optical transport mechanism of Ni/Ti doped n-InP schottky rectifiers, National workshop on Engineering Trends in academics and research, Y. V. University, YSR Kadapa, Feb 28 and march 1 2017, p127
6. Interfacial reactions and electrical properties of Ni/Co Schottky Rectifiers on N-Type Indium Phosphide, Indian science Congress, S. V. University, Tirupati, 3-7 Jan. 2017, p84.
7. Quality management in HEIs through internal Quality Assurance Cell (IQAC), NCICT-2016, SSBN Degree College, Anantapur, 16-17, Dec. 2016, p18
8. Use of ICT in Teaching and Learning processes for enhancing quality, NCICT-2016, SSBN Degree College, Anantapur, 16-17, Dec. 2016, p35
9. Electronic and Communication Technology (ECT) in agriculture, NCICT-2016, SSBN Degree College, Anantapur, 16-17, Dec. 2016, NCICT-2016, SSBN Degree College, Anantapur, 16-17, Dec. 2016, p44
10. Optical absorption studies on lead doped oxyfluorideborate glass, NCMMW-2016, Eswari Eng. College, Chennai, 15-16, Sep 2016, p188
11. Optical properties of nanostructure CdO thin films by DC magnetron sputtering, NCMMW-2016, Eswari Eng. College, Chennai, 15-16, Sep 2016, p201
12. EDTA effect on single phase iron pyrite films formed by chemical bath deposition, NCAFM-2016, S. V. University, Tirupati, 23-24, Mar.2016, p34
13. 2D NMR Conformational properties of tripeptide analogues, NCAFM-2016, S. V. University, Tirupati, 23-24, Mar.2016, p58
14. H-1 NMR chemical shifts of N-Formyl-Tripeptide Analogues, NCMS-2015, S. K. University, ATP, Nov.2015, p63
15. H-1 NMR conformational studies on BOC-Val-Tyr-Ala-OMe bio-molecular peptides, AMNT-2015, SBVR Degree College, Badvel, 5th Apr.2015, p88
16. NMR Detection of Rotational isomers in N-Formyl-Peptides, NSRDP-2015, S. K. Univ., ATP, 26-27, Mar.2015, p28
17. Annealing Effect on Capacitive-Voltage (C-V) Characteristics of Ru/Ti/n-type InP Schottky Diode, RTMS – 2015, S V Degree College, Kadapa, 01-02, March 2015, p143
18. Optical properties of silver nano particles by reactive DC magnetron sputtering, NSNMGP 2015, Govt. Clg(M), ATP, 30-31, Jan.2015, pp 65-66
19. Investigation on single phase FeS₂ films grown by chemical bath deposition, NSNMGP 2015, Govt. Clg(M), ATP, 30-31, Jan.2015, pp 175
20. Temperature studies on formyl-peptide (N-for-Leu-Tyr-Gly-OMe) using 2D-NMR Spectroscopy, NSRTS 2014, Dantuluri Narayana Raju Clg.(A), Bhimavaram, 11th Dec.2014, pp 69

21. Temperature dependence I-V Characteristics of Ru/Ti/n-type InP Schottky diode in the wide temperature range, NCRAM-2014, Loyola Deg. clg, Pulivendula, 1-2, Nov.2014, pp 44
22. Optical Transmittance of CuO thin films prepared by DC Magnetron Sputtering, NCRAM-2014, Loyola Deg. clg, Pulivendula, 1-2, Nov.2014, pp 52
23. Effect of temperature on electrical characteristics of Ni Schottky contact on n-type InP (100), NCRAM-2014, Loyola Deg. clg, Pulivendula, 1-2, Nov.2014, pp43
24. Solvent dependent conformation analysis of formyl-peptides using 2D-NMR Spectroscopy, AMS2014, CIT, Coimbatore, 26-27, Sep.2014, p14
25. Effect of oxygen on optical and structural properties of copper oxide thin films prepared by DC Magnetron sputtering, NCETSTM 2K14, Mallareddy Eng. Clg, S'bad, Aug.2014, pp 75-76
26. Effect of Ammonia Concentration on characterization of Chemical Bath Deposited CdS Thin Films, NSNSA-2013, Govt. Autonomous PG College Chhindwara (M P), 4-6 March 2013.
27. **Y. Munikrishna Reddy** and M. Nagendra Vara Prasad
Effect of Ammonia Concentration on Optical properties of CdS Thin Films by Chemical Bath Deposition Method, **ETSM-2012, S. K. Univ., Atp, (Nov. 2012) 23**
28. **Y. M. K. Reddy** and A. Vedavathi
Optical properties of Iron Sulphide Thin Films by Chemical Bath Deposition Method, **ETSM-2012, S. K. Univ., Atp, (Nov. 2012) 24**
29. **Y. M. K. Reddy** and A. Vedavathi
Effect of Temperature on Structural and Optical Properties of FeS₂ Thin film by C B D
Int. Conf. on thin film & Application, March 2012, Sastra Univ. Tanjuver p23 2012
30. **Y. M. K. Reddy** and A. Vedavathi
Electrical Properties of FeS₂ Thin Films by Chemical Bath Deposition method
Proceedings of NCNST-2011pp. 47-49, 2011
31. **Y. M. K. Reddy**, M N V Prasad, G. Parameswara Reddy and A. Vedavathi
Microstructural Development of Mn-doped Zn_{1-x} Polycrystals Synthesized by Co-Precipitation Technique
Proceedings of NCNST-2011pp. 147-148, 2011
32. **Y. M. K. Reddy**, M. K. Nagaraj, T. Lakshmi Narasappa, et al
Analysis of Temperature-Dependent Electrical properties of the Nickel Schottky Contacts to N-type Indium phosphide (InP)
Proceedings of II National Conference on Advanced Materials V 2 P 14-21, 2010
33. G. Parameswara Reddy, T. Lakshmi Naraappa, A. Vedavathi and **Y. M. K. Reddy**
Structural and Optical Properties of doped ZnO Nano particles Synthesized by Co-precipitation Technique
ETMSR-2010, B H Univ., Dec 2010, P77, 2010
34. **Y. Munikrishna Reddy**
H-1 NMR Studies on Biological Peptide Analogues – A Brief Review
National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 24, Oct. 2010
35. **Y. M. K. Reddy** and A. Vedavathi
¹H (PROTON) NMR Chemical Shifts of (N-FOR-TYR-GLY-LEU-OME)_N Chemotactic Peptide: Conformational Study
National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 28, Oct. 2010
36. **Y M K Reddy**, MK Naga Raj, S. Shankar Naik and V. Rajagopal Reddy
Current-Voltage-Temperature (I-V-T) Measurements of Nickel/N-Inp Schottky Barrier Diodes

- National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 39, Oct. 2010**
37. **Y. Munikrishna Reddy** and G. Parameshwara Reddy
Gram Scale Synthesis of ZnO Nanoparticles
National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 50, Oct. 2010
 38. **Y. Munikrishna Reddy**, M K Nagaraju & T Lakshmi Nrasappa
Temperature- Resistivity Dependence of N-Type Inp/Ni Schottky
National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 50, Oct. 2010
 39. **Munikrishna Reddy Y** and Nagendra Vara Prasad M
Versatile Humidity and Temperature Detection by Interfacing AT89S51 and SHT10 Digital IC Sensor
National Seminar on Emerging Materials & Technologies (EMT2010), SSBN College, Atp, p 50, Oct. 2010
 40. **Y M K Reddy**, A Vedavathi, T Lakshminarasappa and M K Nagaraju
Temperature Dependence of Side Chain Couplings and Rotational Isomerism in Halo-Peptides by Using High Resolution in H-1 NMR
N C M E S – 2010, S. V. University, Tirupati, p 66, 2010
 41. **Y M K Reddy**, A Vedavathi, T Lakshminarasappa and M K Nagaraj
Structural and Optical Studies of SnO₂: Sb Semiconductor
N C M E S – 2010, S. V. University, Tirupati, p 42, 2010
 42. **Y M K Reddy**, M K Nagaraju, T Lakshminarasappa and G Parameswara Reddy
Curve Fitting the Error of a Bandgap Semiconductor temperature sensor
8th National Conference on Solid State Ionics, Central university, Sagar 2009
 43. **Y M K Reddy**, A Vedavathi, T Lakshminarasappa and G Parameswara Reddy
Microcontroller Based Resistance Temperature Detection (RTD) Toxi Sensors
A P Science Congress, S V University Tirupati, 2009
 44. **Y M K Reddy**, A Vedavathi, T Lakshminarasappa, K Nagaraju and G Parameswara Reddy
Temperature and Solvent Dependence of NH Chemical Shifts in Chemotatic Peptides Using H-1 NMR Studies
A P Science Congress, S V University Tirupati, 2009
 45. **Y M K Reddy**, K Siva Kumar and G Parameswara Reddy
Synthesis and Characterization of Co: ZnO nanoparticles
5th National Conference on Thermo physical Properties 2009, Vadodara, India
 46. **Y M K Reddy**, M N V Prasad, T Lakshminarasappa and A Vedavathi
Aromatic Amino Acid Side Chain Conformational Studies in Chemotatic Peptide Analogues Using High Resolution H-1 NMR
National Conference on EMDT, Feb. 2009, S V Uni. TPT, p66
 47. **Y M K Reddy** and MN Reddy
Solid State CP/MAS C-13 NMR: Conformation-dependent Chemical Shifts in Metal Peptides
Annual Convention and National Symposium on Science in the 21st Century, Feb 5, 2008 pp40
 48. **Y M K Reddy** and M N Reddy
High Resolution NMR Studies on Biological Metal Peptide Complexes
N C C A M 06 SKU PG Center Kurnool (2006)
 49. **Y M K Reddy** and B P N Reddy
Relaxation Times in Halo-peptides Using H-1 Solid State NMR

National Conference on Developments in Electronic Materials and Their Applications, Shivaji University, Kolhapur (1995)

50. **Reddy Y M** and B P N Reddy
Conformational Effects on Peptides Aggregation in Organic solvents: spectroscopic Studies of Chemotatic Peptide Analogs
National Symposium on Biophysics, Madras (India) 1991 p4
51. **Y MuniKrishna Reddy**
Conformational Analysis of Some Biological Compounds Using Hi- Res. NMR
Solid State Physics (India) 1991 T15.
52. **Y M Reddy** and B P N Reddy
Proton Relaxation times in Halo-Amino Acids Using Solid State NMR
Solid State Physics (India) 34C 1991 415
53. **Y M Reddy** and B P N Reddy
Conformational Dependent C-13 Chemical Shifts by Solid State NMR
Solid State Physics (India) 34C 1991 415
54. **Y M Reddy** and B P N Reddy
Suppression of spinning side bands using Solid State CP/ NMR method
Solid State Physics (India), 33C, 1990, 348
55. **Y M Reddy** and B P N Reddy
Conformational Studies of Metal Peptides Complexes
76th Indian Science Congress, INDORE, India, 1990
56. **Y M Reddy** and B P N Reddy
Proton NMR studies on amino acids
National seminar on Physical methods in Chemistry, Annamalai Uni., Annamalai Nagar, India, 1989

Refresher courses/Workshops and Seminars Attended :

Course	Date
Orientation Course at APSC Higher Edn.S P M U, Tirupati	24-5-1993 to 2-6-1993
Orientation Course at ASC, SVU,Tirupati	18-4-1994 to 14-5-1994
Refresher course at ASC, OU, Hyderabad	8-5-1996 to 1-6-1996
Refresher course at ASC SVU, Tirupati	24-5-1999 to 12-6-1999
Refresher course at Dep. of Physics SKU, Anantapur	10-3-2000 to 30-3-2000

- SEMINARS ORGANIZED :**
1. National Seminar on Emerging Materials & Technologies (EMT-2010) Sponsored by UGC 10-11 October 2010 as a Org. Secretary
 2. NAAC Sponsored National Conference ICT based Teaching, Learning and Evaluations; 16-17 December 2016 (Convener)
 3. UGC Sponsored National Conference on Academia Digital transformation; 15-16 December 2017 (Convener).

PROJECTS COMPLETED (MRP)

1. Study of Current –Voltage-Temperature (I-V-T) and Capacitance-Voltage-Temperature (C-V-T) Characteristics of Schottky Contacts on n-type InP: UGC-SERO, Hyd, 2010-12 ; 80,000/-
2. Conformational Analysis and 2D-NMR Studies on N-For-Peptides, UGC-SERO, Hyd, 2014-16 ; 2.95 Lakh

GUIDANCE

- : Guided and completed/ongoing
Ph.D: Completed 05, Ongoing 02
: **M. Phil: Completed 22.**

Any Other Information

- :
- *Best Teacher award by Government of Andhra Pradesh in the year 2013.*
 - *Chairman-Board of studies in Physics (UG Courses), SSBN Degree College, Anantapur*
 - *Member in Academic senate, SSBN Degree College, Anantapur.*
 - Subject expert, BOS, Govt. Degree College, Ananthapuramu.
 - Acted as resource person for Orientation classes for School Science teachers at Anantapur conducted by DEO, Anantapur.
 - Acted as resource person for Orientation classes for Jr. Lecturers at Anantapur conducted by RIO, Anantapur.
 - Acted as paper setter for UG Exams for Universities
 - Acted as resource person for Orientation classes for School Science teachers at Anantapur conducted by DEO, Anantapur.
 - Acted as Academic coordinator, M.Sc. Physics, CDE Study center, ANU (2004-2006)
 - Acting as Convener, Red Ribbon-Club, S.S.B.N.Degree College, Anantapur.

Member ships

1. Life member of Indian Science Congress
2. Life member of Indian Magnetic Resonance (IISc Bangalore)
3. Life member of Indian Teachers Association

Photo gallery



State Best Teacher Award Sep-2013



Two day National Seminar on Emerging Materials and Technologies (EMT2010) on 9-10 October, 2010



One Day Conference on Recent Advances in Electronics on 12th February 2013



National Conference on ICT-Empowered Teaching Learning and Evolution during 16-17 December 2016