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

- 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.


Interface states and electrical properties of Cu/Ni Schottky contacts on n-InP substrate.


Role of Internal Quality Assurance Cell (IQAC) for Quality Management in Higher Educational Institution.


Effect of Temperature on C-V Characteristics of Ru/Ti/n-InP Schottky Diode.


Effect of Precursor Concentration on Structural and Morphological Properties of Iron Pyrite Thin Films.


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


Analysis of Electrical Properties and Carrier Transport Mechanisms of Ru/Ti/n-InP Schottky Diodes at Room Temperature


Polycrystalline and single phase FeS2 films grown by chemical bath deposition


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 Analoges 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
Effect of Ammonia Concentration on Electrical Properties of Chemical Bath Deposited (CBD) CdS Thin films

Structural and Optical Characterization of Chemical Bath Deposited FeS$_2$ Thin Films at Different Temperatures

Annealing effects on electrical properties and interfacial reactions of Ni/Cu Schottky rectifiers on n-type InP.

Effect of Temperature on Structural and Optical Properties of FeS$_2$ Thin Film Prepared By Chemical Bath Deposition (CBD)

Determination of linear absorption coefficient and half-value thickness of aluminum, lead, and copper for gamma radiation

Preparation and Characterization of FeS$_2$ thin Films by Chemical Bath Deposition Method

Conformation-Dependent: $^1$H (Proton) NMR Chemical Shifts of Chemotactic Peptide, (N-For-Tyr-Gly-Leu-Ome)$_N$

Barrier Characteristics of Ni/n-InP (100) Schottky Contacts Based on Temperature Dependent I-V Measurements

Experiments with a Geiger-Muller (G M) Counter

Masking and Shifting Software for Measuring Temperature by Interfacing LM35 to P89V51 Microcontroller

Temperature and Solvent Dependence of NH Chemical Shifts in Chemotactic Peptides using H-1 NMR Studies

Minimize the Error of a Band gap Semiconductor Temperature Sensor

Conformation – dependent C – 13 NMR Chemical Shift of (bromo-phe), (floro-Tyr) and (bromo-Tyr) in the Solid state dependent by CP/ MAS method

Solid State Proton Relaxation and Molecular motion in amino acids

Solid State H$^1$ magnetic Relaxation and Molecular motion in aromatic amino acids

Suppression of spinning side bands using Solid State CP/ NMR method
PAPERS PRESENTED IN SEMINARS/CONFERENCES

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
7. Quality management in HEIs through internal Quality Assurance Cell (IQAC), NCICT-2016, SSBN Degree College, Anantapur, 16-17, Dec. 2016, p18
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 Analoges, 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
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 FeS$_2$ films grown by chemical bath deposition, NSNMGP 2015, Govt. Clg(M), ATP, 30-31, Jan.2015, pp 175
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, pp 43
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
27. Y Munikrishna Reddy and M. Nagendra Vara Prasad
28. Y. M. K. Reddy and A. Vedavathi
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
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
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
35. Y. M. K. Reddy and A. Vedavathi
Current-Voltage-Temperature (I-V-T) Measurements of Nickel/N-Inp Schottky Barrier Diodes
37. Y. Munikrishna Reddy and G. Parameshwara Reddy
   Gram Scale Synthesis of Zno Nanoparticles

38. Y. Munikrishna Reddy, M K Nagaraju & T Lakshmi Nrasappa
   Temperature- Resistivity Dependence of N-Type Inp/Ni Schottky

39. Munikrishna Reddy Y and Nagendra Vara Prasad M
   Versatile Humidity and Temperature Detection by Interfacing AT89S51 and SHT10 Digital IC Sensor

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

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

   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
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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Date</th>
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<tbody>
<tr>
<td>Orientation Course at APSC Higher Edn.S P M U, Tirupati</td>
<td>24-5-1993 to 2-6-1993</td>
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<tr>
<td>Orientation Course at ASC, SVU,Tirupati</td>
<td>18-4-1994 to 14-5-1994</td>
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<td>Refresher course at ASC, OU, Hyderabad</td>
<td>8-5-1996 to 1-6-1996</td>
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<tr>
<td>Refresher course at ASC SVU, Tirupati</td>
<td>24-5-1999 to 12-6-1999</td>
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<tr>
<td>Refresher course at Dep. of Physics SKU, Anantapur</td>
<td>10-3-2000 to 30-3-2000</td>
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SEMINARS ORGANIZED:

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 Lakhs

: Guided and completed/ongoing

GUIDANCE

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.
- 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
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