

NAGAVARAPU NARASIMHA RAO

Department of Physics

Krishna University – Dr. MRAR College of Post Graduation
Studies,

Nuzvid –521 201, A.P., India.

Mobile: +91-9908454641

E-mail: nnrphy@gmail.com**PERSONAL PROFILE**

- Name : NAGAVARAPU NARASIMHA RAO
- Father's Name : PEETHAMBARA RAO
- Phone No : 9908454641
- Date of Birth : April 04, 1984
- Marital Status : Married
- Languages known : English, Telugu
- Nationality : Indian

COURSE	YEAR	UNIVERSITY/ BOARD	COLLEGE/ INSTITUTION	PERCENTAGE
Ph.D	2012	Nagarjuna University Guntur	A.N.U .P.G Center Nuzvid	Awarded
M.Phil	2010	Nagarjuna University Guntur	A.N.U .P.G Center Nuzvid	'A' Grade
M.Sc	2007	Nagarjuna University Guntur	A.N.U .P.G Center Nuzvid	75.75
B.Sc (computers)	2004	Nagarjuna University Guntur	Immaculate Degree college Kanchikacherla	70.77

Area of Research: Physics/Materials Science/ Glasses and Ceramics

Synthesis of glasses / glass ceramics by melt-quenching technique and characterizing them by DSC, XRD and SEM followed by Dielectric measurements (viz., constant, loss and ac conductivity as a function of temperature and frequency) along with a few Spectroscopic properties such as Optical absorption, ESR, FTIR, Raman, Fluorescence spectra and Nonlinear optical properties of glasses etc.,

Research experience: 12 years

- **Research activities:** Worked as a Research Fellow in a Major Research Project Sponsored by University Grants Commission (UGC), Govt. of India, From 2010.
- Number of papers published : 20
- Conferences attended :58

Research activities/Abilities of Applicant:

- The applicant is well versed in developing, characterization and the studies on different physical properties of a variety of glasses and glass ceramics.
- Ph. D on TeO_2 based glasses ceramics. As it is evident from the Publications, M.Phil on P_2O_5 based glasses.
- Capable of handling various sophisticated equipment LCR meters for measuring dielectric properties, optical absorption, and luminescence and IR spectrophotometers.

Teaching Experience:

- Worked as Lecturer in Physics at Immaculate Jr. & Degree College, Kanchikacherla for a period of 2007 to 2008.
- Worked as Guest Faculty in the Department of Physics, A.N.U Nuzvid Campus, for a period of 2009 to 2010.
- Worked as Guest Faculty in the Department of Physics, K.R.U.Dr. M.R.A.R. PG Centre, Nuzvid, for a period of 2012to 2018.
- Currently working as Assistant Professor (ad-hoc) in the Department of Physics, KRU Dr. MRAR College of Post Graduation Studies Nuzvid (Since 2018-19).

Awards Received: Associate Fellow of Andhra Pradesh Akademi of Sciences

Publications:

1. DC field induced optical effects in $\text{ZnF}_2\text{--PbO--TeO}_2\text{:TiO}_2$ glass ceramics.
N. Narasimha Rao, I. V. Kityk, V. Ravi Kumar, Ch. Srinivasa Rao, M. Piasecki, P. Bragiel and N. Veeraiah, (<https://doi.org/10.1016/j.ceramint.2011.11.026>)
Ceramics International 38 (2012) 2551-2562
2. Piezoelectric and elastic properties of $\text{ZnF}_2\text{--PbO--TeO}_2\text{:TiO}_2$ glass ceramics.
N. Narasimha Rao, I. V. Kityk, V. Ravi Kumar, P. Raghava Rao, B.V. Raghavaiah, P. Czaja, P. Rakus and N. Veeraiah (<https://doi.org/10.1016/j.jnoncrysol.2011.11.019>)
Journal of Non-Crystalline Solids, 358 (2012) 702–710.
3. Physical properties of $\text{ZnF}_2\text{--PbO--TeO}_2\text{:TiO}_2$ glass ceramics–Part III Dielectric dispersion and ac conduction phenomena
N. Narasimha Rao, L. Pavić, A. Moguš-Milanković, V. Ravi Kumar, I.V. Kityk and N. Veeraiah. (<https://doi.org/10.1016/j.ceramint.2013.11.047>)
Ceramics International 40 (2014)5989-5996.
4. Influence of silver ions on some physical properties of $\text{CaF}_2\text{--MoO}_3\text{--P}_2\text{O}_5$ glasses.
N. Narasimha Rao and V. Ravi Kumar
ANU. J. Phy.sci 1 (2009) 52
5. Low temperature dielectric dispersion and electrical conductivity studies on Fe_2O_3 mixed lithium yttrium silicate glasses
 N. Ch. Ramesh Babu, M. A. Valente, **N. Narasimha Rao**, M.P.F. Graça, G. Naga Raju, M. Piasecki, I. V. Kityk and N. Veeraiah
 (<https://doi.org/10.1016/j.jnoncrysol.2012.09.011>)
Journal of Non-Crystalline Solids, 358 (2012) 3175.
6. Influence of valence and coordination of manganese ions on spectral and dielectric features of $\text{Na}_2\text{SO}_4\text{--B}_2\text{O}_3\text{--P}_2\text{O}_5$ glasses
 A.V. Ravi Kumar, Ch. Srinivasa Rao, **N. Narasimha Rao**, V. Ravi Kumar, I.V. Kityk and **N. Veeraiah**, . (<https://doi.org/10.1016/j.jnoncrysol.2012.02.032>)
Journal of Non-Crystalline Solids, 358 (2012)1278.
7. The structural influence of aluminium ions on emission characteristics of Sm^{3+} ions in lead aluminium silicate glass system.
 K. Bhargavi, M. Srinivasa Reddy, P. Raghava Rao, **N. Narasimha Rao**, M. Sundara Rao, V. Ravi Kumar and N. Veeraiah,
 (<https://doi.org/10.1016/j.materresbull.2011.11.031>)
Materials Research Bulletin, 47 (2012) 267-273.
8. The influence of nickel ions on spectroscopic and magnetic properties Of $\text{PbO--Bi}_2\text{O}_3\text{--B}_2\text{O}_3$ glass system.,
 T. Satyanarayana, P. Venkateswara Rao, **N. Narasimha Rao**, M. Rambabu and V. Ravi Kumar, (<https://doi.org/10.1088/1757-899X/2/1/012033>)
IOP Conf. Series: Materials Science and Engineering. 2 (2009) 012033.
9. On some physical properties of TiO_2 mixed lead tellurite glass ceramics
 V. Ravi Kumar, **N. Narasimha Rao** and P. Raghava Rao
International Journal of Luminescence and its Applications 32 (2013) ISSN No. 2277 – 6362

10. Effect of Doping Ti^{3+} Ions on Spectroscopic Behaviour of Lead Bismuth Phosphate Glasses
V. Ravi Kumar, G. Naga Raju, S.V.G.V.A.Prasad, P.Raghava Rao, **N. Narasimha Rao**
International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Paper ID: ATOM-201405 Corpus ID: 6586052
11. Influence of Mo^{5+} ions on spectroscopic properties of $PbO-ZnF_2-P_2O_5$ glass system
P. Venkateswara Rao, G. Naga Raju, P. Raghava Rao, **N. Narasimha Rao**, P. SyamPrasad
(<https://doi.org/10.1016/j.kijoms.2015.09.003>)
Karbala International Journal of Modern Science 1 (2015) 101-109
12. Structural studies of mixed glass former $ZnO-B_2O_3-P_2O_5:TiO_2$ glasses
G. Naga Raju, V. Ravi Kumar, **N. Narasimha Rao**, P. Raghava Rao, P. Sinrivasa Rao and P. Venkateswara Rao
International Conference on Science and Engineering of Materials for Future Needs (ICSEMF - 2015), ISBN 978-1-329-77555-8.
13. Spectroscopic and physical properties of erbium doped $Li_2O-BaO-P_2O_5$ glasses
N.Ch. Ramesh Babu, P. Raghava Rao, **N. Narasimha Rao**, B.J.R.S.N. Swami,
M.VasuBabu, G. Naga Raju, N. Veeraiah(<https://doi.org/10.1016/j.matpr.2018.08.082>)
Materials Today: Proceedings 5 (2018) 26314–26321
14. Renewable energy sources – Natural resource management
P. Raghava Rao, **N. Narasimha Rao**, B.J.R.S.N. Swami, A. Chittibabu,
K. Kumara raja ([DOI: 10.31305/rrijm](https://doi.org/10.31305/rrijm))
Research review international journal of multidisciplinary, ISSN: 2455 -3085, Dt: Jan 2019
15. Influence of silver ions on dielectric properties of $CaF_2-MoO_3-P_2O_5$ glasses.
N. Narasimha Rao, P. Raghava Rao, B.J.R.S.N.Swamy and V. Ravi Kumar
Recent advances in Material science (conference proceedings) ISBN: 9789387769519, Dt: 14-02-2019
16. Dielectric properties of $PbO-B_2O_3-Bi_2O_3$ glasses doped with V_2O_5
P. Raghava Rao, **N. Narasimha Rao**, B.J.R.S.N.Swamy, N.Ch. Ramesh Babu and N. Veeraiah
Recent advances in Material science (conference proceedings) ISBN: 9789387769519, Dt: 14-02-2019
17. Optical properties of Tm^{3+} ions in MO ($M=Li, Na$ and K) – $A_2O_3 - P_2O_5$ glass systems
P. Raghava Rao, **N. Narasimha Rao**, B.J.R.S.N.Swamy, N.Ch. Ramesh Babu, A. Chittibabu, T. Raghavendra Rao, T. Sambasiva Rao
Journal of Advanced Research in Polymer and Textile Engineering 1 (2020)21-29
18. The Influence of Vanadium Ions in Spectral Properties of $ZnO-Sb_2O_3-B_2O_3$ glasses
N. Narasimha Rao, P. Raghava Rao, B. J.R.S.N. Swamy, A. ChittiBabu, T.Sambasivarao,

N.Ch.Ramesh Babu. (<https://doi.org/10.46501/IJMTST060930>)

International Journal for Modern Trends in Science and Technology, 6 (2020) 201-207

19. Optical studies of chromium doped zinc oxy fluoro borate glasses – A
Possible disordered material for tunable LASERS
P. Naresh, S.K. Fakruddin Babavali, A. Chitti Babu, P. Raghava Rao, **N. Narasimha Rao**
(<https://doi.org/10.1016/j.matpr.2020.12.769>)
Materials Today Proceedings 46(2021)806-810.
20. Influence of Ti^{3+} ions on Spectroscopic Properties of $PbO-Al_2O_3-B_2O_3$ Glasses Systems
N. Narasimha Rao, P. Raghava Rao, B. J.R.S.N. Swamy, P.
Naresh, A. Chitti Babu, N. Ch. Ramesh Babu
American Institute of Physics Conference Proceedings 2369 (2021) 020049
<https://doi.org/10.1063/5.0061412>

Patents: Filed

1. Apparatus for sanitizing articles with rotatable inner chamber to evenly distribute UV radiation
P. V. Nanda Kishore, A. Chitti Babu, J. Ashok, P. Raghava Rao, **N. Narasimha Rao**, B. J.R.S.N.
Swamy, N. Rajeswara Rao, P. Naresh & S. N.S. Manasa
Application No: 202141022452 A.
2. A study of magnetic properties of Dy doped $YFeO_3$ multiferroics
G. Padmasree, D. Lakshmi, M. Sumalatha, A. Chitti Babu, P. Raghava Rao, **N. Narasimha Rao**,
B. J.R.S.N. Swamy, N. Ch. Ramesh Babu
Application No: 202241003612 A.

Conferences/Seminars/Workshops attended & Presented papers

List of International conferences : 05

1. International Seminar on Science and Technology of Glass Materials (ISSTGM-2009),
March 16-19th, 2009, Department of Physics, Acharya Nagarjuna University Campus,
Guntur.
*The influence of nickel ions on spectroscopic and magnetic properties of $PbO-Bi_2O_3-B_2O_3$ glass
System*
T.Satyanarayana, P. Venkateswara Rao, **N. Narasimha Rao**, M. Rambabu and V. Ravi Kumar
2. International Conference on Multi Functional Materials (ICMM-2010), December 07-
09th, 2010, Department of Physics, Banaras Hindu University, Varanasi.
*Influence of modifier ions on emission characteristics of Tm^{3+} ions in aluminium
Phosphate glasses*
V. Ravi Kumar, **N. Narasimha Rao** and O. Nagabushanam

3. International Conference on specialty Glass and Optical fiber: Materials, Technology & Devices (ICGF-2011), August 4-6th, 2011, CGCRI, Kolkata
Influence of silver ions on some physical properties of $\text{CaF}_2\text{-MoO}_3\text{-P}_2\text{O}_5$ glass System.
N. Narasimha Rao, N. Krishna Mohan and V. Ravi Kumar
4. International seminar on glass and other functional materials (ISGFM-14). December 11-13th, 2014, Department of physics Acharya Nagarjuna University, Guntur.
5. International seminar on materials for societal advancement with emphasis on health and energy, 22 – 23 rd February 2017, PB Siddhartha College Vijayawada.

List of National Conferences

: 23

1. National Symposium on Science and Technology of Glass and Glass-Ceramics (NSGC-2008), October 13-17th, 2008, BARC, Mumbai. *Nickel ion as a structural probe in $\text{PbO} - \text{Al}_2\text{O}_3\text{-B}_2\text{O}_3$ glass system by means of spectroscopic and dielectric studies* V. Ravi Kumar and **N. Narasimha Rao**
2. National Seminar on Physics and Chemistry of Materials (NSPCM-2009), July 30-31st, 2009, Department of Physics and Chemistry, S.V.R.M. College, Nagaram. *Influence of Copper ions on some physical properties of lead bismuth arsenate glasses*
T. Satyanarayana, V. Ravi Kumar, **N. Narasimha Rao**, P. Raghava Rao, M. Nagarjuna, N. Srinivasa Rao M.V. Ramachandra Rao and N. Veeraiah.
3. National Seminar on Nano Materials & Their Applications (NSNMA-2009), December 10-11th, 2009, Department of Physics, Dharma Apparao College, Nuzvid.
Titanium oxide as a crystallizing agent in lead arsenate glasses
G. Nagarjuna, T. Satyanarayana, V. Ravi Kumar, **N. Narasimha Rao**, P.V.V. Satyanarayana
4. National Seminar on Advanced materials for Display and other application, May 31- June 1st, 2010. Department of Physics V.S.R. & N.V.R. College, Tenali, India,
5. UGC sponsored national seminar on novel materials for display applications, October 28&29th, 2010, Department of Physics, S.V.R.M. College, Nagaram,
6. National Conference on Luminescence and its Applications (NCLA-2011), February 7-9th, 2011, Department of Physics, Pt. Ravishankar Shukla University, Raipur. *Fluorescence features of Sm^{3+} ions in $\text{Na}_2\text{SO}_4\text{-MO-P}_2\text{O}_5$ glass system – influence of modifier oxide*
M. Nagarjuna, P. Raghava Rao and **N. Narasimha Rao**
7. Theme Meeting on Laser Glass Science & Technology, March 1st&2nd, 2011, Srivenkateswara University, Tirupati.
8. Two day National seminar on recent trends in advanced materials, January 27 – 28th, 2012, Department of Physics, Sir. CRR College, Eluru.
9. Intellectual Property and Innovation Management in Knowledge Era (NRDC, New Delhi), February 5th, 2013, Krishna University Nuzvid.
National seminar on chemistry our life, our future (CLF-2011), December 29th, 2011, KRU PG Centre Nuzvid.
10. National seminar on Multifunctional Materials (NSMFM), March 6-7th, 2013,

Department of Physics, Andhra Loyola College, Vijayawada.

Recent trends in surface science and technology (RTSSN-2013), November 30-31st 2013. Vijayawada.

11. Recent trends in material science, February 22nd 2014 Department of Physics Kakinada
12. NUGC Sponsored national seminar on development of advanced materials in physics & Electronics and their applications. October 15-16th, 2014
13. National conference on advanced technology oriented materials (ATOM-2014). December 8-9th, 2014.
14. UGC Sponsored two day national conference on Emerging frontiers of material science, February 12- 13th, 2015.
15. Emerging technologies in physics teaching and training (ETPTT-2015). August 7- 8th 2015. Department of Physics and Chemistry, S.V.R.M. College, Nagaram
16. National seminar on recent trends in applied physics, December 16- 17th, 2015
17. Recent trends in Material science, Nano science and Nanotechnology, 3-4th January Siddhartha degree College, Vuyyuru,
18. UGC sponsored national seminar on recent advances in material science 14th February 2019, JKC College Guntur.
Influence of silver ions on dielectric properties of $\text{CaF}_2\text{-MoO}_3\text{-P}_2\text{O}_5$ glasses.
19. National seminar physics and Chemistry of Nano crystalline materials 1- 2nd December 2017, KVR College Nandigama
Spectroscopic and physical properties of erbium doped $\text{Li}_2\text{O-BaO-P}_2\text{O}_5$ glasses.
20. National Conference on Luminescence and applications (NCLA 14-16th February 2018), Thiruvananthapuram.
Optical absorption and Luminescence properties of $\text{Li}_2\text{O-BaO-P}_2\text{O}_5$ glasses doped with Ho^{3+} ions
21. Integrating Science and technology for global sustainability 9-11th November 2018
22. UGC sponsored national seminar on optical characterization Techniques (NSOCT 19) 28th march 2019, Andhra Loyola College Vijayawada.
23. One day faculty development program organized by (NAIPUNYA) 15TH November 2019, Ramachandra College of engineering Eluru.

List of Workshops attended : 04

1. Two day National workshop on fundamentals and applications of Nano Materials, March 30-31st, 2012, Acharya Nagarjuna University, Guntur.
2. Work shop on condensed matter physics & Embedded systems, Deember 17th, 2013,

Vijayawada.

3. UGC Sponsored national workshop on green chemistry its need and role in our society, February 10-11, 2014, Department of Physics, Dharma Apparao College, Nuzvid.
4. Two day workshop on advances in material processing, March 28-29th 2014, Acharya Nagarjuna University, Guntur

ONLINE: Conferences/Course/FDP/Workshops attended

FDP:

1. “National level FDP program on tools for online classroom post covid-19” 18th -20th may 2020, PB Siddhartha College Vijayawada
2. Five days Online FDP program on “introduction to data science” 18th – 22nd may 2020 Guntur Engineering College Guntur.
3. One-week online FDP program on “the use of virtual physics labs creating next generation teachers” 20th -24th may 2020, Geethanjali College of Engineering & Technology, Cheeryal Telangana.
4. Three days Online FDP programs on “Physics of Materials” department of physics JAIN (Deemed to be university) 28th – 30th may 2020.
5. One-week Online FDP program on “Materials recent trends & Engineering applications” GRIET Hyderabad 2nd- 7th June 2020.
6. FDP program on “emerging technology and changing scenario on material research “ Department of basic science, 27th – 1st august 2020, Santharam Engineering college Nandyala
7. One-week Online FDP program on “Emerging Physics and Material science” 03rd -07th august 2020, Department of physics Chaitanya Bharathi Institute of Technology Hyderabad.
8. Online FDP program on “Recent trends in physics”, 31st august – 02nd September 2020 St Joseph College of engineering Chennai.
9. Five day FDP on “synthesis of Advanced Materials And its applications” Usharama College of Engineering and technology 15th -19th October 2020
10. FDP on “ Advances in Nano Materials & Single Crystals on Practical device applications” AdikaviNannaya University, Rajamahendravaram 3rd February 2021

International:

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1. International webinar on “how to write a research paper” 14th may, 2020 KLE Society’s Science & Commerce college Navi Mumbai.

2. International Webinar on “Recent advances in Science IWCAS2020” 30th -31st July 2020 Donbosco college Tura.
3. Three day International webinar on “synthesis and characterization of Nano materials and their applications” department of Physics 17th -19th 2020, RGUKT AP.
4. Two day International Webinar on” Recent Advances in Material Science & Engineering “ 23rd -24th September 2020. SVCR degree college Palmaner.
5. Three day international webinar on “IMPACT OF PHYSICS IN HEALTHCARE” Dept of Physics Maris Stella College Vijayawada 14th -16th 2020
6. One Day International webinar on “advances in material Physics” Rayan Publishers 23rd January 2021.
7. Three day international webinar on “Functional Materials and their Applications (FMA-2021)” Andhra Loyola Institute of Engineering & Technology, Vijayawada 25th -27th March 2021.

National:

1. Webinar on “ICT – AN efficient tool for effective teaching “16th May 2020, Bhavans Vivekananda College Secunderabad.
2. National webinar on “NACC assessment and accreditation process “04-08-2020, Krishna University Machilipatnam.
3. National Seminar on Characterization Techniques of Materials (NSCTM -2021), being organized by Department of Physics, Acharya Nagarjuna University, Guntur, A.P, India. During March 26th -27th, 2021.

Workshops:

1. Two-day national workshop on “Modern methods for teaching – learning practices” 12th - 13th May 2020, Krishna University Machilipatnam.
2. Webinar on “e - workshop on virtual labs” 14th May 2020, Bhavans Vivekananda College Secunderabad.
3. Two day national level workshop on “Google tools to online teaching” by Krishna University Machilipatnam. 26th -27th August 2020.
4. National level two day online workshop on “Applications of Mathematical science “ 10th - 11th September 2020 by Department of Mathematics KRU Dr.MRAR PG center Nuzvid
5. Three day virtual national workshop on “ Advanced Materials for Energy and Environment applications” Yogi Vemana University, Kadapa 21st -23rd December 2020
6. Online workshop on “Virtual labs: Simulation of Digital Electronics Expt” Dept of Physics SICE Society & an Initiative of Ministry of Education, Govt. of India –IITB 25th February 2021.

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DECLARATION

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I hereby declare that the information furnished above is true to the best of my knowledge.

Place: Nuzvid

(N. Narasimha Rao)

Date: