



**DEPARTMENT OF PG STUDIES &
RESEARCH IN PHYSICS**



THE NATIONAL COLLEGE, JAYANAGAR

In Association With

CENTRE FOR PHYSICS

(A UNIT OF FORUM FOR EXCELLENCE IN EDUCATION)

Presents

A SYMPOSIUM ON

ADVANCEMENTS IN NON-CRYSTALLINE MATERIALS
STRUCTURE AND PROPERTIES IN BORATE GLASSES

Venue

**B. V. Jagadeesh Science Centre
(The National College, Jayanagar Campus)**

Date

21/07/2023 (Friday)

Time

9.30 am to 4.00 pm.

PROGRAMME

INAUGURATION

- 9.30 am Invocation
- 9.35 am Welcome and About the Symposium by Prof. K. T. Vasudevan (Head, Department of Physics, The National College, Jayanagar)
- 9.40 am Opening Remarks by Prof. J. Ramakrishna (Director, Centre for Physics)
- 10.00 am **Vote of Thanks**

SYMPOSIUM – SESSION 1 (CHAIRMAN – PROF. P. NAGARAJU)

- 10.00 am A Special Lecture on "Recent Developments in Borate Glasses" by Prof. B. Eraiah (Bangalore University)
- 10.30 am **Tea break**
- 11.00 am Presentation by Prof. N. Sivasankara Reddy (Presidency University)
- 11.30 am A presentation on "Structural Analysis of Metal Oxides Doped Borate Glass" by Dr. Thejas R (The National College, Jayanagar)
- 12.00 pm An Invited talk on "Stained Glasses: Approaching Towards Non-Linear Optics" by Dr. J. Abhiram (Indian Academy Degree College)
- 12.30 pm "Structural Details in Glasses – Raman Studies of Borate Glasses" by Prof. Pavan Kumar (NMKRV)

Lunch Break

SYMPOSIUM – SESSION 2 (CHAIRMAN – PROF. K. T. VASUDEVAN)

- 2.00 pm Student presentation – "Investigation of Borate Glass Doped with Rare earth materials: A Review" by Pavan Kalyan (The National College, Jayanagar)
- 2.20 pm Student presentation – "A Review on Structural, Radiation Shielding Properties of Metal-Oxide doped Lead-Borate Glass" by A. Darshan and Bharath. K (The National College, Jayanagar)
- 2.40 pm Student presentation – "Optical Studies in Borate Glasses – Calcium Borate Doped With Rare Earth Ions" by Satwik Prathap (Centre for Physics)
- 3.00 pm An Invited talk on "Bioactive glasses: An overview" by Prof. Chethan (Jain University)
- 3.30 pm A Special lecture on "Structure of Boro-Vanadate and Boro-Phosphate Glasses" by Prof. C. Narayana Reddy (PES Degree College)
- 4.00 pm Valedictory programme
- 4.05 pm Concluding Remarks and About Next Month's Symposium
- 4.15 pm **Vote of Thanks and Tea break**

PROGRAMME ORGANIZING COMMITTEE

- Advisor* - *Prof. J. Ramakrishna*
(Director, Centre for Physics)
- Chairperson* - *Prof. K. T. Vasudevan*
(Coordinator, Department of PG Studies and Research in Physics, The National College, Jayanagar)
- Members* - *Prof. P. Nagaraju* (Professor, Department of PG Studies and Research in Physics The National College, Jayanagar)
Dr. Thejas R (Assistant Professor, Department of PG Studies and Research in Physics The National College, Jayanagar)
H. S Nagaraj (Centre for Physics)
- Convenor* - *Prof. Pavan Kumar* (Head, Department of Physics, NMKRV)
- Secretary* - *Satwik Prathap* (Centre for Physics)

LOCAL ORGANIZING COMMITTEE

- Chairperson* *Prof. P. Nagaraju*
- (Professor, Department of PG Studies and Research in Physics, The National College, Jayanagar)
- Members* *Dr. Thejas R* (Assistant Professor, Department of PG Studies and Research in Physics, The National College, Jayanagar)
- *Prof. Reshma K.* (Assistant Professor, Department of PG Studies and Research in Physics, The National College, Jayanagar)
H. S. Nagaraj (Centre for Physics)
- Convenor* - *Prof. Pavan Kumar* (Head, Department of Physics, NMKRV)
- Secretary* - *Satwik Prathap* (Centre for Physics)
- Student* *Pavan Kalyan, Keerthana Jayaprakash, L Yuvraj Kumar, Syed Khasif,*
- *Veeresh P S, Divya B, Mahima S, Vanitha N*

The programme is sponsored by the Management of National Education Society, Karnataka.

DEPARTMENT OF PG STUDIES & RESEARCH IN PHYSICS THE NATIONAL COLLEGE, JAYANAGAR

The Department of Physics, established in the year 1965, has been instrumental in developing pupils' mind-sets into various streams viz., science, arts, sports, and politics. The P.G. department was started on 26th September 2012. The department has been growing rapidly with the excellent reputation of National College and currently Bangalore University has conferred Research Centre for the department. Very committed students are joining the department in large numbers. The department was headed by Prof. Pundareeka Bhatta since inception and it was taken over by eminent scientist Prof. B. S. Seshadri in 2013, earlier a scientist at BARC and IGCAR, Kalpakkam and also retired as Science Dean at Kuvempu University. Currently the Department of P.G. Studies & Research in Physics is headed by Prof. K. T. Vasudevan, who previously worked in University of Western Sidney, Australia. The Department of Post Graduate Studies and Research in Physics consists of very young, talented band of teaching staff highly motivated to train the students of M.Sc. (Physics). The physics department has very well-equipped laboratories with advanced research activities in Nuclear Physics, Material Science and Non-linear Optics. A very conducive environment for physics learning is being established. A large number of seminars, special lectures by eminent scientists and participation in conferences are pursued. M.Sc. Students participating in conferences and presenting contributory research papers is a unique feature of this department. The physics department aspires to be one of the distinguished centres for excellence in physics learning and research. Department has Research Collaboration with Florida International University, Miami, USA.

CENTRE FOR PHYSICS

CENTRE FOR PHYSICS is set up as a unit of the Forum for Excellence in Education to provide a platform to bring together students, teachers, and R&D workers to strengthen **physics** in UG / PG Institutions and **promote research interest**. Also, **CENTRE FOR PHYSICS** will endeavour to help **promising** UG/PG students to reach the National Level and pursue **physics** in **Premier Institutions** as a career option.

Proposed Activities

1. Organize seminars on current research topics to introduce research topics and create interest in R&D, thus promoting research culture in UG/PG Institutions.
2. Promote a culture of organizing research groups across UG/PG Institutions (networking) and create common facilities.
 - a). Organize short term courses / workshops etc., for UG/PG students and teachers.
 - b). Set up a physics laboratory for UG/PG students and teachers as a facility.
 - c). Promote any other academic activities to help Students and Teachers.