

# National Level Seminar

Date: 4th June 2021

## Seminar on Topic: "BAND THEORY OF SOLIDS"

Department of Physics organized an online National seminar on "Band theory of solids" which is related to subject of solid state physics.

- The event started with welcome address by DIRECTOR OF KMICS Dr. Nageshwarrao garu and B.Veda Assitant Professor & Head/Physics.
- Guest Introduction given by N.Mounika Department of physics and thank you note given by B.Sammaiah. Department of physics
- The speaker and guest of program DR.C.P.Vardhini Professor, Department Of Physics & Electronics, OSMANIA UNIVERSITY
- The webinar was attended by 207 participants plus 05 hosts/presenters. The Number of Participants report provides an overview of organizational and the expectations of the participants.



**25**  
KESHAV MEMORIAL INSTITUTE OF COMMERCE AND SCIENCES  
(AFFILIATED TO OSMANIA UNIVERSITY) NARAYANAGUDA, HYDERABAD-500029

Department of physics is organising a  
Webinar on  
"BAND THEORY OF SOLIDS"

Date: 4-06-2021 Time: 3:00pm to 4:00pm

Resources person:

**DR . C . P . VARDHANI**  
PROFESSOR, DEPARTMENT OF PHYSICS  
UNIVERSITY COLLEGE OF SCIENCE, OSMANIA UNIVERSITY, HYDERABAD

TO register ↓  
[CLICK HERE](#)

Webinar link  
<https://meet.google.com/vzn-ohcw-qid>

**Prof.K. Someshwar Rao**  
Principal

**B. Veda**  
Convenor  
Head department of physics.  
Program co-ordinators:  
**B.Sammaiah**  
**N.Mounika**

E-Certificate will be provided for the participants



vardhani chunduru is presenting

Deepak Jadhav and 45 more

3:49 PM

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Slides Outline

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The diagram illustrates the formation of a p-n junction. It shows a p-region (left) and an n-region (right) separated by a junction. Arrows indicate the diffusion of electrons from the n-region to the p-region and holes from the p-region to the n-region. Below the junction, three graphs are plotted against distance: Charge Density (showing a step change at the junction), Electric Field (showing a peak at the junction), and Potential (showing a step change at the junction).

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Slides Outline

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Semiconductor energy bands at room temperature

- When enough energy is supplied to the  $e^-$  sitting at the top of the valence band,  $e^-$  can make a transition to the bottom of the conduction band.
- When electron makes such a transition it leaves behind a missing electron state.
- This missing electron state is called as a hole.
- Hole behaves as a positive charge carrier.
- Magnitude of its charge is the same with that of the electron but with an opposite sign.

The energy band diagram shows the conduction band (empty) and the valence band (full). The energy gap between them is labeled as the forbidden energy gap ( $E_g$ ). An electron ( $e^-$ ) is shown transitioning from the top of the valence band to the bottom of the conduction band, leaving a hole ( $h^+$ ) behind.

You

Nageswara Rao Jal...

vardhani chunduru

Mounika nithepudi

sammalah beemari

Raju Mohan

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Participation of students in Quiz, JAM , group discussion, poster presentation ,Exhibitions of any, activities in other colleges.

### 1.POSTER MAKING COMPETITION-27th Feb 2021

A Poster making competition was planned for the BSc for Graduate students to enhance their practical knowledge through model making. Such programs contribute in building scientific temperament amongst students.

