

Report on Knowledge Manthan, 2022 Held on 19th Feb 2022

Date of Event	19th Feb 2022
Name and Type of Event	Dr. Binod Kumar Choudhary on the topic "Application of Hollow-Core Photonic Crystal Fibers in Gas Raman Lasers Operating at 1.7 μm "
Conducted by	Dr. Anupam Kumari
Number of Participants	28

The Resource person Dr. Binod Kumar Choudhary is Assistant Professor of the School of Engineering and IT, ARKA JAIN University, Jamshedpur.

The speaker gave informative and illuminating lecture with valuable content. The session was very valuable for Faculties, Researcher and Students. Application of Hollow-Core Photonic Crystal Fibers in Gas Raman Lasers Operating at 1.7 μm is based on hydrogen-filled hollow-core photonic crystal fibers by rotational stimulated Raman scattering. The maximum average Stokes power of 1.61 W is obtained with optic-to-optic conversion efficiency of about 23%. Fiber lasers that operate at 1.7 μm have important applications in many fields, such as biological imaging, medical treatment, etc. Fiber gas Raman lasers (FGRLs) based on gas stimulated Raman scattering (SRS) in hollow-core photonic crystal fibers (HC-PCFs) provide an elegant way to realize efficient 1.7 μm fiber laser output. Here, we report the first all-fiber structure tunable pulsed 1.7 μm FGRLs by fusion splicing a hydrogen-filled HC-PCF with solid-core fibers. Pumping with a homemade tunable pulsed 1.5 μm fiber amplifier, efficient 1693~1705 nm Stokes waves are obtained by hydrogen molecules via SRS. The maximum average output Stokes power is 1.63 W with an inside optical-optical conversion efficiency of 58%. This work improves the compactness and stability of 1.7 μm FGRLs, which is of great significance to their applications

About the Speaker:- Dr. Binod Kumar Choudhary is Assistant Professor of the Dept of Engg, School of Engineering and IT, ARKA JAIN University, Jamshedpur.

Venue and Participants:-

Knowledge Manthan was conducted online on Google Meet Platform. Total participants attended were 28.

Event Poster



JGi | **ARKA JAIN University**
Jharkhand (Jamshedpur)

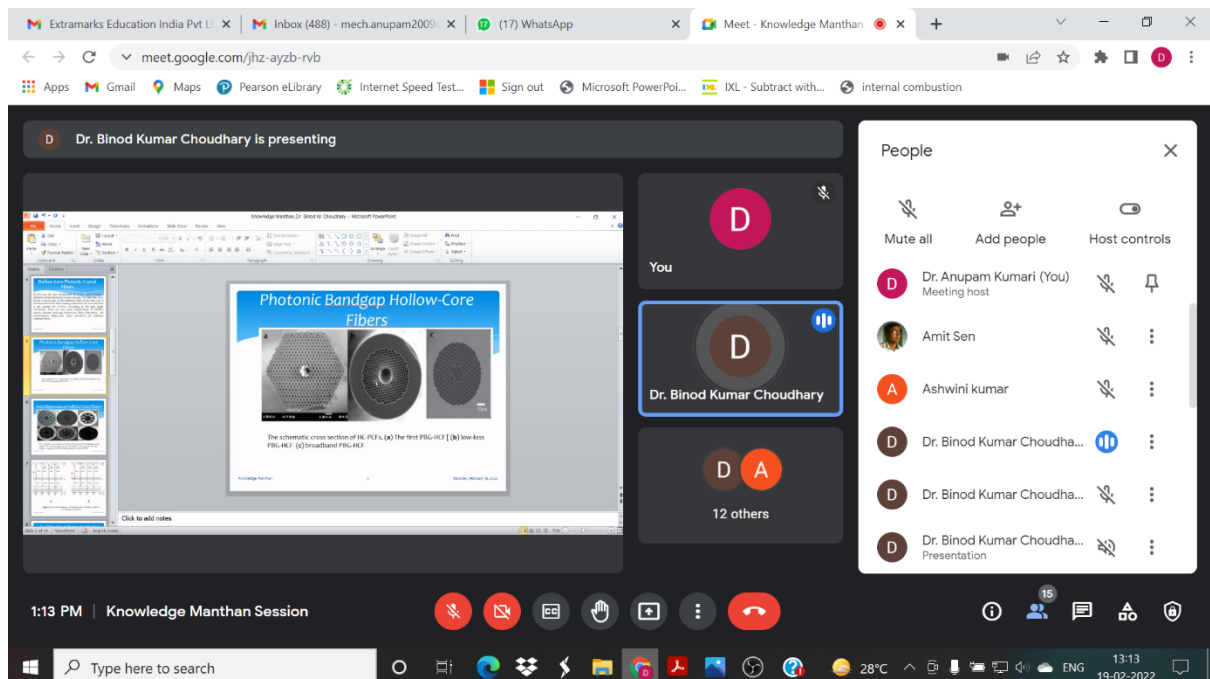
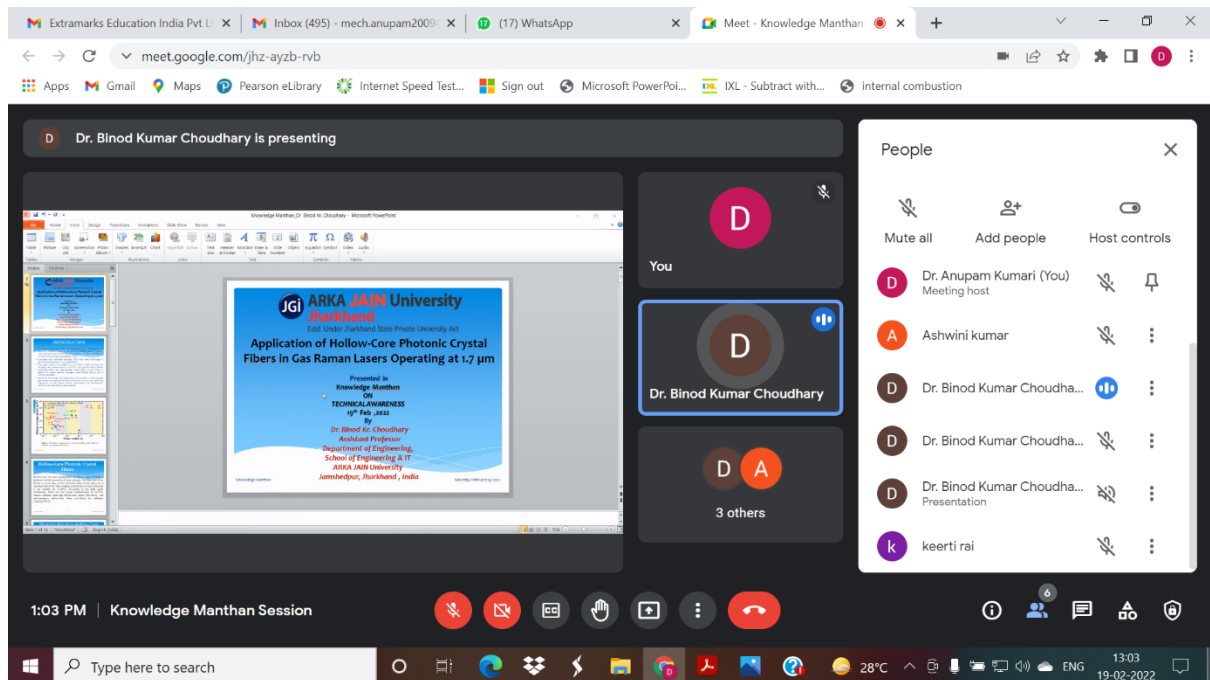
Department of Engineering
Presents —————
**KNOWLEDGE
MANTHAN**
—————

SPEAKER
Dr. Binod Kumar Choudhary
TOPIC
Application of Hollow-Core Photonic Crystal Fibers
in Gas Raman Lasers Operating at 1.7 μm

 **Saturday,**
19.02.2022 |  **1:00 PM**
Your Local Time

CONVENER: ASHWINI KUMAR | CO-ORDINATOR: DR. ANUPAM KUMARI

Event Pics

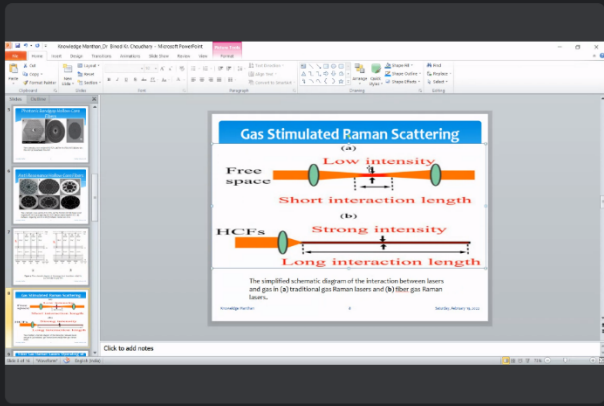


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Dr. Binod Kumar Choudhary is presenting



1:20 PM | Knowledge Manthan Session

People

- Mute all
- Add people
- Host controls
- Dr. Anupam Kumari (You) Meeting host
- Amit Sen
- Ashwini kumar
- Dr. Anup Kumar
- Dr. Binod Kumar Choudha...
- Dr. Binod Kumar Choudha...

14 others

Type here to search

28°C

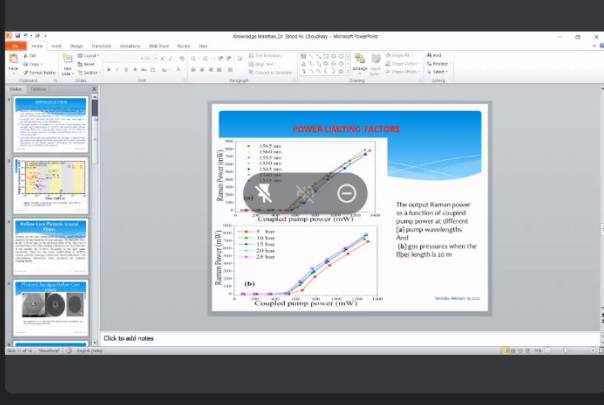
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