



SCIENCE POPULARIZATION CELL

SSJDWSSS Govt. P.G. College, Ranikhet, Almora

Nurturing Scientific Temper & Curiosity Among Rural & Himalayan Students

Role

- Promoting scientific awareness
- Encouraging interdisciplinary thinking.
- Providing interactions with eminent scientists & Nobel Laureates.
- Aligning activities with NEP-2020
- Strengthening academic & research profile.

Key Activities



Workshops & Seminars



Outreach Programs



Interactive Sessions



Nobel Laureate Lectures



Quantum Lecture Series

Committee

- Prof. Pushpesh Pande-Principal.
- Dr. Bharat Pandey-Coordinator.
- Dr. Stuti Joshi Co-Coordinator
- Dr. Nidhi Sharma Member

Objectives

- Simplify complex scientific concepts
- Motivate towards higher education & research
- Encourage sustainable practices
- Collaborate with national & international institutions



Inspiring Scientific Minds Through Education & Innovation

REPORT

SCIENCE POPULARIZATION CELL

SSJDWSSS Govt. Post Graduate College, Ranikhet (Almora), Uttarakhand

Committee

Prof. Pushpesh Pande : Principal
Dr. Bharat Pandey : Coordinator
Dr. Stuti Joshi : Co-Coordinator
Dr. Nidhi Sharma : Member

The Science Popularization Cell of Government Post Graduate College, Ranikhet was established to nurture scientific temper, rational thinking, and academic curiosity among students, particularly in rural and Himalayan regions.

The Cell functions as an academic platform to disseminate scientific knowledge beyond conventional classroom teaching and to expose learners to recent developments in science, technology, and interdisciplinary research. Special emphasis is laid on bridging the gap between global scientific advancements and students from remote areas.

Role of the Science Popularization Cell

- Promoting scientific awareness and curiosity among students
- Encouraging interdisciplinary and innovative thinking
- Providing interaction opportunities with eminent scientists and Nobel Laureates
- Supporting quality enhancement in teaching and learning
- Aligning academic activities with the objectives of NEP-2020
- Strengthening the institution's academic and research profile

Objectives:

- To popularize science through lectures, workshops, and outreach programmes
- To motivate students towards higher education and research
- To simplify complex scientific concepts for wider understanding
- To encourage sustainable and socially relevant scientific practices
- To establish collaborations with reputed national and international institutions

Activities Conducted

Activity 1: Online Workshop on Hydroponics (*Highlighted in Himalaya Harbinger, Rudrapur Bureau and “Garhwal post, 17th October, 2024” newspaper*)
<https://himalayaharbinger.com/innovative-agriculture-science-popularisation-cell-at-government-pg-college-ranikhet-hosts-transformative-workshop-on-hydroponics-and-soilless-farming/>

Title: Hydroponics / Soilless Farming for Large-Scale Crop Production
Date: 14 October 2024
Mode: Online
Speaker: Dr. Sumit Purohit, Ph.D., FSPR
Scientist & In-Charge,
Uttarakhand Council for Biotechnology, Haldi, Pantnagar,
Udham Singh Nagar, Uttarakhand

Summary:

The workshop focused on advanced agricultural techniques such as hydroponics and soilless farming. It highlighted sustainable crop production, efficient water utilization, and innovative solutions for modern agricultural challenges. The programme enhanced awareness among students regarding eco-friendly and technology-driven agricultural practices.

Activity 2: Knowledge Partnership with Bhaktivedanta Institute, Kolkata

The Science Popularization Cell established a formal Knowledge Partnership with the Bhaktivedanta Institute, Kolkata, to facilitate international-level academic interactions and Nobel Laureate lecture series for students and faculty members.

This collaboration significantly enhanced academic exposure for students of a rural government institution and strengthened the institution’s national and international academic visibility.

Activity 2.1: Nobel Laureate Lecture by Prof. David J. Wineland

<https://fekar.in/archives/1868>.

Title: My Journey of Discovery
Date: 17 November 2024
Mode: Online
Speaker: Prof. David J. Wineland
Nobel Laureate in Physics (2012)

Summary:

The lecture provided valuable insights into experimental physics, scientific perseverance, and innovation. Students were inspired by the speaker's research journey and motivated towards careers in science and research.

Activity 2.2: Nobel Laureate Lecture by Prof. Morten P. Meldal

<https://dainikshubharambnews.com/nobel-laureate-prof-morten-medals-special-online-lecture-on-9-april/>

https://youtu.be/q_5TIACXIrQ?si=GrE7rtCc_G_dvRQD

Title: Chemistry is Everything, as Seen Through the Nobel Molecular Adventure of Click Chemistry
Date: 09 April 2025
Mode: Online
Speaker: Prof. Morten Peter Meldal
Nobel Laureate in Chemistry (2022)

Summary:

The lecture introduced students to the concept of Click Chemistry and its applications in medicinal chemistry and materials science, thereby strengthening interdisciplinary understanding and research interest.

Activity 2.3: Quantum Foundations Special Lecture Series – 2025

<https://nainitalnews24.com/news/gauravamayi-participation-in-ranikhet-college-nobel-lecture-series-on-global-forum/>

Quantum Foundations Special Lecture Series: Celebrating 100 Years of Quantum Mechanics

Date: 02 June 2025 – 07 June 2025

Mode: Online

Speaker (1): Prof. Anthony J. Leggett

Nobel Laureate in Physics (2003)

University of Illinois at Urbana–Champaign (UIUC), USA

Title: History and evolution of quantum mechanics

Speaker (2): Prof. Markus Paul Müller

Institute for Quantum Optics and Quantum Information (IQOQI),
Vienna, Austria

Title: Implications and Future Visions of the Foundations of Quantum Mechanics

Speaker (3): Dr. Tim Eastman

Geophysical Institute, University of Alaska, USA

Title: Quantum Interpretations: Introduction and Reflections on Various Old /New Interpretations

Speaker (4): Mr. Robert J. Sunderland

Niels Bohr Archive, Copenhagen, Denmark

Title: Bell's theorem: past, present, and future

Speaker (5): Prof. Alfred Driessen

University of Twente, Netherlands

Title: Quantum entanglement and non-locality

Speaker (6): Prof. Antoine Suarez

Center for Quantum Philosophy, ETH Zurich, Switzerland

Title: Quantum measurement problem

Speaker (7): Prof. Christopher Fuchs

University of Massachusetts, Boston, USA

Title: Meaning and collapse of the wave function and Role of the observer in quantum mechanics

Speaker (8): Prof. David Wallace

University of Pittsburgh, Pittsburgh, PA, USA

Title: Implications and Future Visions of the Foundations of Quantum Mechanics

Summary:

The lecture series provided students and faculty with direct exposure to Nobel-level scientific discourse and contemporary debates in quantum physics. Participation as a Knowledge Partner marked a significant academic achievement for a rural Himalayan institution, strengthening research orientation, critical thinking, and global academic connectivity.

12 Garhwal Post www.garhwalpost.in Dehradun, 17 Oct, 2024 **Dehradun**

Govt PG College Ranikhet hosts Online Workshop on Hydroponics & Soilless Farming



By Dr BHARAT PANDEY

RANIKHET, 16 Oct: As part of a drive to advance sustainable agriculture and resource-efficient farming practices, the Science Popularisation Cell at Government PG College Ranikhet recently organised a groundbreaking workshop on 'Hydroponics and Soilless Farming for large-scale crop production'. This transformative event welcomed Dr Sumit Purohit, PhD, FSPR, Scientist and Incharge at the Regional Centre Patwadangar, Nainital, under the Uttarakhand Council for Biotechnology, who brought a wealth of expertise to the topic.

Dr Bharat Pandey, Assistant Professor of Chemistry and Convener of the Science Popularisation Cell, along with Dr Hem Lata,

Co-Convener of the Science Popularisation Cell, inaugurated the session by welcoming Dr Purohit. They highlighted the increasing importance of modern farming techniques. In his introductory remarks, Dr Pandey emphasised the workshop's potential to empower local farmers and students, saying, "This workshop is a significant step towards equipping our community with knowledge about sustainable farming practices that can transform agriculture in Uttarakhand. With hydroponics and soilless farming, we are exploring innovative solutions to address challenges like limited arable land and water scarcity."

He also expressed gratitude to Dr Purohit for "a wonderfully insightful presentation on Hydroponics and Soilless Farming."

Dr Purohit captivated the audience with a detailed and forward-thinking presentation on hydroponics, outlining the potential of this soil-free method to revolutionise agriculture. He began by explaining that hydroponics uses nutrient-rich water instead of soil, allowing crops to grow in a controlled environment. This method reduces dependency on natural soil quality and is well-suited for mountainous regions like Uttarakhand.

Dr Purohit elaborated on how hydroponics can reduce water usage by up to 90% compared to conventional farming. "The controlled environment of hydroponics not only reduces water usage but also minimises the risk of pests and diseases, which translates into less need for pesticides. This is crucial for producing healthier and safer crops," he explained. He further highlighted the benefits of year-

round crop cultivation, as hydroponic systems can be adapted to indoor settings, making them ideal for off-season production.

Moreover, Dr Purohit described a variety of hydroponic systems, such as Nutrient Film Technique (NFT) and Deep Water Culture (DWC), explaining their respective advantages. He pointed out that these systems are highly scalable and can range from small, personal gardens to large commercial operations, making them accessible to both hobbyists and large-scale farmers.

During the interactive Q&A session, Dr Pandey raised key questions on behalf of the participants:

1. Dr Bharat Pandey: "What is the cost involved in setting up a Polyhouse in Ranikhet?"
2. Dr Bharat Pandey: "How can hydroponic systems be managed here with limited water resources?"
3. Dr Bharat Pandey: "Are there special nutrients required for hydroponics?"

Dr Sumit Purohit: "Yes, hydroponics requires a nutrient solution with essential minerals, including nitrogen, phosphorus, potassium, and trace elements. These nutrients are available in liquid form, and adjusting the pH ensures optimal absorption by plants. The beauty of hydroponics is that nutrients can be tailored to specific crop needs, maximising growth efficiency."

The workshop concluded with an emphasis on how the hydroponic method aligns with sustainable agriculture and can be a game-changer for the local community, especially in areas with limited arable land and water resources. Dr Pandey commended the faculty members Dr Prachi Joshi, Dr Prasoon Joshi, Dr Tanuja Tiwari, Dr Niharika, Dr Prateek Sharma, Dr CS Pant, and others for their enthusiastic engagement, underscoring that the workshop successfully addressed critical questions and opened new avenues for resource-efficient crop production.

Organised under the guidance of Dr Bharat Pandey, Convener of the Science Popularisation Cell, and Dr Hem Lata, Co-Convener, the event marked another milestone for the Cell in advancing agricultural innovation at Government PG College Ranikhet. With actionable insights and practical knowledge shared, the workshop encouraged attendees to consider hydroponics as a viable solution for modern agricultural challenges. This success further reinforced the college's commitment to fostering sustainable agriculture through scientific knowledge and community empowerment.

((Highlighted in "Garhwal post, 17th October, 2024" newspaper))

Innovative Agriculture: Science Popularisation Cell at Government PG College Ranikhet Hosts Transformative Workshop on Hydroponics and Soilless Farming*

Himalaya Harbinger 1 Year Ago 0 8 Mins



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Himalaya Harbinger, Rudrapur Bureau

Ranikhet, October 15, 2024 – As part of a drive to advance sustainable agriculture and resource-efficient farming practices, the Science Popularisation Cell at Government PG College Ranikhet recently organized a groundbreaking workshop on Hydroponics and Soilless Farming for large-scale crop production. This transformative event welcomed Dr. Sumit Purohit, PhD, FSPR, Scientist and Incharge at the Regional Centre Patwadangar, Nainital, under the Uttarakhand Council for Biotechnology, who brought a wealth of expertise to the topic.

Dr. Bharat Pandey, Assistant Professor of Chemistry and Convenor of the Science Popularisation Cell, along with Dr. Hem Lata, Co-Convenor of the Science Popularisation Cell, inaugurated the session by welcoming Dr. Purohit. They highlighted the increasing importance of modern farming techniques. In his introductory remarks, Dr. Pandey emphasized the workshop's potential to empower local farmers and students, saying, "This workshop is a significant step towards equipping our community with knowledge about sustainable farming practices that can transform agriculture in Uttarakhand. With hydroponics and soilless farming, we are exploring innovative solutions to address challenges like limited arable land and water scarcity."

He also expressed gratitude to Dr. Purohit, adding, "Thank you, Dr. Sumit Purohit, for a wonderfully insightful presentation on Hydroponics and Soilless Farming. Your expertise has truly enlightened us."

<https://himalayaharbinger.com/innovative-agriculture-science-popularisation-cell-at-government-pg-college-ranikhet-hosts-transformative-workshop-on-hydroponics-and-soilless-farming/>

मेरा खोज यात्रा शीर्षक से ऑनलाइन व्याख्यान करने की साझेदारी की

न्यूज प्रिन्ट संवाददाता नैनीताल। विज्ञान और आध्यात्मिकता के बीच सेतु निर्माण के लिए प्रसिद्ध भक्तिवेदांत इंस्टीट्यूट कोलकाता ने राजकीय स्नातकोत्तर महाविद्यालय रानीखेत के विज्ञान लोकप्रियकरण समिति के समन्वयक डॉ. भारत पांडे के नेतृत्व में नोबेल पुरस्कार विजेता भौतिकविद् प्रो. डेविड जे वीनलैंड का प्रेरणादायक व्याख्यान आयोजित करने के लिए साझेदारी की है। मेरा खोज यात्रा शीर्षक से यह ऑनलाइन कार्यक्रम 17 नवंबर (रविवार) को सुबह 9 बजे आईएसटी पर निर्धारित है। बता दें कि प्रो. वीनलैंड जिन्हें 2012 में क्रांटम कंप्यूटेशन और आयन ट्रैपिंग में अपने अग्रणी कार्य के लिए

भौतिकी में नोबेल पुरस्कार से सम्मानित किया गया था, क्रांटम विज्ञान में अपनी अनोखी यात्रा साझा करेंगे। यह व्याख्यान छात्रों, संकाय सदस्यों और शोधकर्ताओं को प्रो. वीनलैंड की खोजों और क्रांटम जगत के प्रति उनके दृष्टिकोण से प्रेरित करेगा।

राजकीय स्नातकोत्तर महाविद्यालय रानीखेत के प्राचार्य प्रो. पुष्पेश पांडे ने इस साझेदारी पर अपनी प्रसन्नता व्यक्त करते हुए कहा कि भक्तिवेदांत इंस्टीट्यूट कोलकाता के साथ साझेदारी कर प्रो. वीनलैंड जैसे नोबेल पुरस्कार विजेता को आमंत्रित करना हमारे छात्रों के लिए विश्व स्तरीय वैज्ञानिक शिक्षा के अवसर उपलब्ध कराने की हमारी प्रतिबद्धता को दर्शाता है।

राजकीय स्नातकोत्तर महाविद्यालय, रानीखेत: उत्तराखंड का पहला सरकारी कॉलेज जिसने आयोजित किया नोबेल पुरस्कार विजेता का व्याख्यान।

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राजकीय स्नातकोत्तर महाविद्यालय, रानीखेत: उत्तराखंड का पहला सरकारी कॉलेज जिसने आयोजित किया नोबेल पुरस्कार विजेता का व्याख्यान

<https://fikar.in/archives/1868>

Govt PG College Ranikhet, to host nobel laureate Prof. David Wineland's lecture
<https://himalayaharbinger.com/govt-pg-college-ranikhet-to-host-nobel-laureate-prof-david-winelands-lecture/>



ASIA

Nobel Laureate Prof. Morten P. Meldal to Deliver Lecture at Government P.G. College, Ranikhet

April 7, 2025 / Voice Asia News

Ranikhet, India – Government P.G. College, Ranikhet, Almora, Uttarakhand, is set to host an inspiring scientific event as Nobel Laureate Prof. Morten Peter Meldal prepares to deliver an online lecture on April 9, 2025. Titled "Chemistry is Everything, as Seen Through the Nobel Molecular Adventure of Click Chemistry," the lecture will commence at 6:30 PM IST and promises to be a unique opportunity for students, researchers, and academicians to engage directly with one of the pioneers of Click Chemistry—a groundbreaking advancement in molecular synthesis and pharmaceutical sciences.

The event, organized in collaboration with the Bhakivedanta Institute, Kolkata, marks yet another milestone in the college's commitment to fostering global scientific dialogue. It follows the successful lecture by Nobel Physics Laureate Prof. David J. Wineland, further elevating the institution's reputation as a hub for academic excellence and international engagement.

Sheerheading this initiative is Dr. Bharat Pandey, Assistant Professor in the Department of Chemistry and Coordinator of the Science Popularisation Cell. Renowned for his dedication to bridging local academia with global scientific thought leaders, Dr. Pandey continues to drive innovative educational experiences for students.

During his tenure at S.B.S. Government P.G. College, Rudrapur, Dr. Pandey pioneered Uttarakhand's first Virtual Chemistry Lab in collaboration with IIT Delhi during the COVID-19 pandemic. This digital platform ensured students could continue practical learning seamlessly, featuring interactive experiments and demonstrations. His efforts earned widespread recognition, including a nomination for the Chief Minister's Excellence Award.

Now at Government P.G. College, Ranikhet, Dr. Pandey has further enriched the academic environment through exposure visits, research-focused training programs, and initiatives that combine practical experimentation with entrepreneurial skill-building. Under his leadership, students have gained direct insights into scientific research processes, from experimental design to publication and innovation.

The upcoming lecture by Prof. Meldal is expected to inspire the next generation of scientists and deepen the institution's engagement with the global scientific community.

<https://voic asianews.com/nobel-laureate-prof-morten-p-meldal-to-deliver-lecture-at-government-p-g-college-ranikhet/>

रानीखेत पीजी कॉलेज में 9 अप्रैल को नोबेल विजेता प्रो. मोर्टन मेडाल का विशेष ऑनलाइन व्याख्यान।

<https://dainikshubharambhnews.com/2025/04/nobel-laureate-prof-morton-medals-special-online-lecture-on-9-april/>

UTTARAKHAND

Bringing Quantum to the Classroom: Nobel Laureate to Headline Global Online Lecture Series

By Garhwal Post - May 20, 2025 464 0

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By OUR STAFF REPORTER

Ranikhet, 19 May: In an example of visionary academic collaboration, Government PG College, Ranikhet, through its Science Popularisation Cell, will serve as a Knowledge Partner for an upcoming international online lecture series titled "Quantum Foundations – Special Lectures", jointly organised with the prestigious Bhaktivedanta Institute, Kolkata, from 2 to 7 June.

This initiative marks a significant milestone in the centennial celebration of 100 years of Quantum Mechanics—commemorating a century of groundbreaking scientific revolutions that changed the face of modern physics. The event is poised to transform virtual spaces into vibrant global classrooms.

Carrying forward the momentum of excellence, this is not the first time the college has stepped into the global limelight. Dr Bharat Pandey, Coordinator of the Science Popularisation Cell, has previously hosted two distinguished Nobel Laureate Lecture Series in Physics and Chemistry in collaboration with the Bhaktivedanta Institute. His tireless efforts have consistently created bridges between remote academic institutions and internationally acclaimed scientists, proving that passion and perseverance can erase the boundaries between local and global.

The keynote lecture will be delivered by none other than Nobel Laureate Prof Anthony Leggett from the University of Illinois Urbana-Champaign (UIUC), USA—a legendary figure in the realm of quantum mechanics renowned for his pioneering work on superfluidity and macroscopic quantum phenomena.

Joining him will be an elite lineup of speakers from prestigious institutions across the world, including Prof Markus Paul Müller (IQOQI Vienna, Austria), Dr Tim Eastman (formerly at Geophysical Institute, University of Alaska, USA), Robert J Sunderland (Niels Bohr Archive, Copenhagen, Denmark), Prof Alfred Driessen (University of Twente, Netherlands), Prof Antoine Suarez (ETH-Zürich, Centre for Quantum Philosophy), among others.

The lecture series will unravel profound quantum themes such as the history of quantum mechanics, Bell's theorem, quantum entanglement, the measurement problem, and the clash between classical and modern interpretations of reality. These sessions promise to ignite curiosity and challenge age-old paradigms in science and philosophy, offering a rare academic treat for students, researchers, and faculty across disciplines.

Prof Pushpesh Pandey, Principal of Government PG College, Ranikhet, remarked, "We are honoured to be a Knowledge Partner in this international initiative. It is a proud moment for the college, and the credit goes to Dr Bharat Pandey, whose tireless passion has brought Nobel-level science directly to our students. This collaboration proves that with commitment and vision, even institutions in the hills can echo on global academic platforms."

The event, which is free and open to all, invites participation through its registration

link: <https://forms.gle/ydgrSpEv1a7baaXEB>.

<https://garhwalpost.in/bringing-quantum-to-the-classroom-nobel-laureate-to-headline-global-online-lecture-series/>