



Outreach & Dissemination Services Office CSIR – Central Building Research Institute Roorkee – 247667 (UK) Exhibition

**CSIR-CBRI Showcases Indigenous Innovative Technologies at BASIC 2026,
ICAR-IVRI, Izatnagar (Bareilly)**

June 01-02, 2026

The **Central Building Research Institute (CSIR-CBRI), Roorkee** proudly participated in Bhartiya animal science conclave & science (**BASIC 2026**), organized at the **ICAR-Indian Veterinary Research Institute (ICAR-IVRI), Izatnagar**, from 1 to 2 June 2026. by showcasing a wide range of indigenous, sustainable, and advanced building technologies developed by the institute. The exhibition served as an excellent platform for demonstrating CSIR-CBRI's research excellence and technological innovations that contribute significantly to the nation's infrastructure development, heritage conservation, disaster resilience, and sustainable construction.



The CSIR-CBRI exhibition stall attracted considerable attention from scientists, academicians, researchers, students, industry representatives, government officials, and members of the general public. Visitors appreciated the institute's efforts in developing indigenous technologies that address contemporary challenges in the construction sector while preserving India's rich cultural heritage. The exhibits highlighted CSIR-CBRI's commitment to the vision of *Atmanirbhar Bharat* by promoting self-reliant and technologically advanced construction practices.

Among the major attractions at the exhibition was the technology associated with the Shri Ram Mandir in Ayodhya. CSIR-CBRI played a significant scientific and technical role in ensuring the structural safety, durability, and long-term performance of this iconic temple. Through detailed scientific investigations, material characterization, structural assessments, and engineering expertise, the institute contributed to the successful realization of one of India's most significant cultural and architectural landmarks. Visitors showed immense interest in understanding the scientific methodologies and engineering innovations that supported the construction of this monumental project.



Another key highlight was the demonstration of the **Surya Tilak technology** developed for the Shri Ram Mandir. This unique indigenous innovation integrates principles of astronomy, optics, and precision engineering to ensure that, on the auspicious occasion of Ram Navami, a beam of sunlight naturally illuminates the forehead of the idol of Bhagwan Shri Ram at the designated time without the use of electricity or electronic devices. The exhibit explained the sophisticated optical system comprising specially designed mirrors and lenses that accurately direct sunlight into the sanctum sanctorum. This remarkable achievement reflects the harmonious integration of India's traditional knowledge systems with modern scientific research and engineering excellence.

The exhibition also featured CSIR-CBRI's 3D Printed Rural House, which attracted significant interest from visitors due to its innovative approach to affordable and sustainable housing. The technology demonstrates the use of advanced 3D concrete printing techniques to construct residential buildings rapidly with enhanced precision and reduced material wastage. The model showcased the potential of additive manufacturing in revolutionizing the construction industry by minimizing construction time, reducing labour dependency, improving quality, and lowering overall project costs. The technology is particularly promising for rural housing, disaster rehabilitation, and large-scale housing programmes where speed, affordability, and sustainability are critical.



Another prominent exhibit was the zig-zag brick kiln technology developed by CSIR-CBRI for cleaner and more energy-efficient brick production. Traditional brick manufacturing often results in high fuel consumption and significant environmental pollution. The improved kiln technologies developed by the institute focus on enhanced combustion efficiency, reduced emissions, improved product quality, and lower energy consumption. These innovations contribute to sustainable industrial practices while supporting environmental protection and reducing the carbon footprint of the brick manufacturing sector.

In addition to these flagship technologies, CSIR-CBRI showcased several sustainable and advanced building technologies aimed at promoting resilient, energy-efficient, and environmentally responsible construction. These included innovations in green building materials, disaster-resistant construction techniques, fire safety engineering, structural health monitoring, energy-efficient building systems, waste utilization in construction materials, and technologies for affordable housing. The exhibits highlighted how scientific research can effectively address the growing challenges of rapid urbanization, climate change, resource conservation, and infrastructure resilience.



The exhibition stall provided an interactive learning environment where visitors engaged with CSIR-CBRI scientists and technical experts. Researchers and students enthusiastically discussed the scientific principles behind various technologies and explored opportunities for research collaboration and technology adoption. Live demonstrations, informative displays, technical models, and multimedia presentations enabled visitors to understand the practical applications and societal benefits of the institute's innovations.

The participation of CSIR-CBRI in BASIC 2026 successfully demonstrated the institute's leadership in developing innovative solutions for the construction sector. The exhibition not only highlighted the institute's scientific achievements but also among research organizations, academia, industry, policymakers, and society. Such engagements promote knowledge dissemination, encourage technology transfer, and facilitate.

Overall, the CSIR-CBRI exhibition at BASIC 2026 received an enthusiastic and overwhelming response from visitors throughout the event. The technologies showcased reflected the institute's unwavering commitment to scientific excellence, innovation, sustainability, and nation-building. By presenting cutting-edge indigenous technologies alongside landmark national projects such as the Shri Ram Mandir and the Surya Tilak system, CSIR-CBRI reaffirmed its pivotal role in advancing India's construction technology landscape and contributing towards a sustainable, resilient, and self-reliant future.

