

The ODS Office organized an international lecture on January 30th, 2025, featuring Dr. Erdem Cuce, Associate Professor from Recep Tayyip Erdogan University, Turkey delivered an insightful lecture on the topic "*Novel glazing technologies Toward low/zero energy buildings*".



सीएसआईआर-केंद्रीय भवन अनुसंधान संस्थान, रूड़की
CSIR-Central Building Research Institute, Roorkee
Ministry of Science and Technology, Govt of India



CSIR-CBRI International Experts Lecture Series

January 30th, 2025, Thursday, 4:00 pm (IST) onwards

Novel glazing technologies Toward low/zero energy buildings

Buildings play a pivotal role in greenhouse gas emissions, accounting for a substantial portion of global energy demand. This scenario is often a consequence of the poor thermal insulation characteristics of building envelopes. Among the components of a typical building envelope, windows are the largest contributors to energy loss due to their notably high overall heat transfer coefficients. Approximately 60% of heat loss through the fabric of residential buildings can be attributed to the glazed areas. Windows serve as multifunctional devices for buildings, providing passive solar gain, air ventilation, and the ability to view the outside. However, they are significant contributors to the heating and cooling demands of buildings in winter and summer, respectively. Conventional window technologies tend to have suboptimal U-values, resulting in substantial heat losses during the winter season and undesired heat gains in the summer. Innovative glazing technologies are therefore essential to enhance the visual and thermal comfort of occupants while mitigating the energy consumption of buildings. This work presents a comprehensive review of the latest advancements in glazing technologies, analyzing the currently available high-performance glazing products and technologies with application examples.



Dr. Erdem Cuce
Associate Professor, Recep Tayyip
Erdogan University, Turkey

Dr. Erdem Cuce is an Associate Professor at Recep Tayyip Erdogan University, specializing in sustainable energy and building technologies. He completed his Ph.D. at the University of Nottingham in 2015 and has since published over 200 papers in high-impact journals. His research focuses on energy storage, innovative building materials, and HVAC/R systems. Dr. Cuce leads the Low/Zero Carbon Energy Technologies Lab and consults on energy optimization and management strategies. He has received prestigious awards, including "Young Scientist of Turkey" (2018) and "Outstanding Young Scientist" by the Turkish Academy of Sciences (2021). He serves on editorial boards for journals like Applied Energy and Energy and Buildings, and is Editor-in-Chief of Sustainable and Clean Buildings and Energy Research Journal. Recognized by Stanford University as one of the world's top 2% scientists (2020–2024), he ranks among the top 0.05% globally in energy research according to Scholar GPS.



There is no registration fee for this lecture.
The participation link will be sent to your email.

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