

عنوان مقاله:

Opportunities and challenges of facade architecture using green elements

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خلاصه مقاله:

As the demand for sustainable and environmentally conscious buildings grows, integrating living walls, green roofs, and vertical gardens into facades presents exciting prospects. This review article explores the opportunities and challenges associated with incorporating green elements into facade architecture. The opportunities offered by facade architecture with green elements include enhanced energy efficiency, improved air quality, aesthetically pleasing designs, and the promotion of biodiversity and urban habitats. However, several challenges must be considered, including structural considerations, maintenance and upkeep requirements, and cost implications. This article examines these opportunities and challenges in detail, drawing on case studies to showcase successful implementations. This review highlights the potential for creating sustainable and visually appealing structures that benefit both occupants and the environment. The findings of this review article show that integration of external green elements into facade architecture offers significant environmental advantages. Building upon the findings of recent research studies, architects and designers can leverage these elements to create sustainable and visually appealing buildings. However, careful planning, implementation, and ongoing maintenance are crucial for realizing the full potential of external green elements in facades.

کلمات کلیدی:

Air quality improvement, energy efficiency, environmental function, external green walls, living walls, sustainable building practices

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