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# GREEN AND LOW-CARBON MEMBRANE BUILDINGS

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## ABSTRACT

Green and low-carbon membrane buildings are increasingly used in applications such as sports arenas, greenhouses, and exhibition halls, where large spans and energy-efficient designs are advantageous. Enhancing thermal insulation, harnessing solar energy, and reducing energy consumption are among the primary strategies for achieving greener and more sustainable membrane buildings. However, the integration of indoor and outdoor environments and its impact on carbon emissions presents a complex challenge that requires more in-depth exploration by the research and engineering communities. A comprehensive understanding of these interdependent factors is crucial to optimize membrane building performance, which necessitates novel ideas, new materials, and structural design methodologies.

This session aims to explore both the opportunities and barriers related to implementing green technologies and reducing carbon emissions for membrane buildings. Such a discussion is pivotal for bridging the gap between research outcomes and practical applications, thereby contributing to clearer research directions for future studies.

## REFERENCES

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