

# Accepted Manuscript

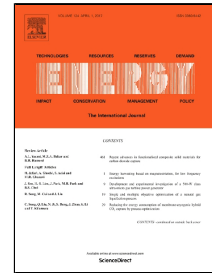
Temporal and spatial characteristics of the urban heat island in Beijing and the impact on building design and energy performance

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**Highlights**

- Temporal and spatial characteristics of urban heat island in Beijing is studied.
- Statistical analysis of the 50-year 17-station weather data is performed.
- Correlation is found between UHI and the occurrence of extreme events.
- Impacts of UHI on peak demand and energy use in buildings are evaluated using simulation.
- It is recommended to use local weather data for building design and performance simulation.

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