**SOLAR** Pro.

## High-rise residential solar energy concentration

Energy consumption in existing buildings accounts for about 40% of global energy use, which has exceeded the demand of the manufacturing and transportation sectors ...

In order to evaluate high-rise buildings in terms of solar energy use, the author analyzes the case studies from both passive solar strategies and active solar technologies" ...

Building energy and indoor environmental performances are critical in modern society as buildings are main energy consumers and people spend most of their time on ...

Buildings account for more than 40% of the global energy consumption, and the residential energy use in China ranks first in main countries of the world [1]. High-rise ...

Solar Energy, 159, 710 ... Modern large cities and metropolitan areas are characterized by high-rise dense buildings and developed transport networks and engineering ...

The intensity of the UHI effect increases in areas where hot air is entrapped in urban canyons [7] or where heavyweight building materials store a great deal of energy from ...

Living without using energy is really far beyond reality, especially in today's modern societies. Energy is significantly used nowadays and one of the concerns of ...

Solar energy utilization is a promising choice to solve it. ... the thermal efficiency grows fast firstly and then have descendent tendency as the solar radiation continue to rise. If ...

For example, for a certain randomly selected area of Xi"an from Google Earth in 2004 and 2019 (Fig. 2), a comparison shows that the majority of the developed area changed ...

Consequently, the process of urbanization puts pressure on residential cluster morphology, resulting in alterations in energy use, solar radiation potential, and microclimate. ...

This study demonstrates a parametric approach to optimize solar access for high-rise residential buildings in urban tropics. Using parametric modelling, 75 urban contexts ...

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