

Solar power generation in high-rise residential buildings

Buildings account for a significant proportion of total energy consumption. The integration of renewable energy sources is essential to reducing energy demand and achieve sustainable building design. The use of ...

A group of researchers in the Middle East has assessed how building-integrated photovoltaics (BIPV) may help reduce electricity consumption in high-rise buildings in Dubai, in ...

One of the promising applications for cooling residential buildings is the solar chimney (SC) that is particularly convenient for hot and humid climates. ... transportation in ...

In China, multi-family residential buildings can be mainly divided into low-rise (1-3 storeys), multi-storey (4-6 storeys), mid-rise (7-9 storeys) and high-rise (>10 storeys) ...

Office buildings [52] and residential apartments [53] in cities are usually high-rise buildings with high energy intensity or limited effective area for PV installation. This results in a ...

It is valuable to evaluate the solar energy potential of buildings in the design stage, because how to efficiently apply PV technology in urban buildings is being concerned ...

At present, the development of renewable energy is a common goal, and there is a global consensus among countries around the world. By 2023, the global cumulative power generation will reach 77,620 terawatt-hours ...

They focus specifically on high-rise buildings with BIPV fa#231;ades, using data-driven models incorporating qualitative and quantitative analysis. ... The authors propose a system that ...

