

Aug 9, 2024 · The energy consumption of communication base stations has been increasing, while energy conservation has become a focal point, especially for the air conditioning ...

May 4, 2024 · 5G base stations are categorized into micro base stations, macro base stations, and indoor sub-systems based on their transmit power and coverage. As 5G operates at a ...

Nov 30, 2024 · We propose a method for minimizing the energy consumption of the wireless communication network, subject to cell load constraints that prevent cells from being unable to ...

Feb 1, 2021 · This survey specifically covers a variety of energy efficiency techniques, the utilization of renewable energy sources, interaction with the smart grid (SG), and the ...

Feb 24, 2023 · With the rapid development of mobile communication, the major operators speed up the pace of network construction, the number of base stations increases significantly, the ...

Oct 21, 2022 · 5G communication technologies are expected to provide high rate and low delay services. To meet the requirements, more base stations (BS), including macrocell BS (MacBS) ...

Nov 25, 2024 · Abstract. In order to solve high energy consumption caused by massive micro base stations deployed in multi-cells, a joint beamforming and power allocation optimization ...

Mar 23, 2023 · Not only the phase and frequency of radio frequency (RF) signals are modulated, but also the amplitude is modulated [1]. Therefore, the RF signal in the modern communication ...

Mar 31, 2024 · Therefore, in response to the impact of communication load rate on the load of 5G base stations, this paper proposes a base station energy storage auxiliary power grid peak ...

Jun 9, 2024 · 1. Introduction Recently, with the rapid development of wireless communication technology, the enhancement of wireless network performance is concerned with meeting the ...

Mar 17, 2025 · Signal coverage quality and strength distribution in complex environments pose severe challenges, leading to the inadequacy of traditional two-dimensional base station ...

Feb 25, 2024 · Renewable energy base stations, generating energy from sources like sunlight and wind, are introduced. To optimize renewable energy usage, micro-stations operate in non ...

Jul 25, 2025 · Green communications (GC) is an urgent need for 5G and 6G. How to realize GC with guaranteed quality of service is still a challenging problem. This paper investigates the ...

Aug 19, 2023 · Abstract--With the support of integrated sensing and communication (ISAC) technology, mobile communication system will integrate the function of wireless sensing, ...

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