

This paper presents an exhaustive review of power-saving research conducted for 5G and beyond 5G networks in recent years, elucidating the advantages, disadvantages, and key ...

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates communication caching and ...

Due to infrastructural limitations, non-standalone mode deployment of 5G is preferred as compared to standalone mode. To achieve low latency, higher throughput, larger capacity, higher reliability, and ...

Simulations conducted on a realistic multi-technology 5G New Radio (NR) RAN in an urban environment validate the efficacy of the proposed strategy, achieving up to 73% of energy saving.

The increasing operation expenses (OPEX) of 5G base stations (BS) necessitates the efficient operational management schemes, among which one main approach is to

Innovations in 5G base station design focus on improving power amplifier efficiency and implementing advanced cooling systems. Renewable energy sources such as solar and wind play a ...

Hence, this paper discusses the energy management in wireless cellular networks using wide range of control for twice the reduction in energy conservation in non-standalone deployment of 5G network.

Aiming at the problem of mobile data traffic surge in 5G networks, this paper proposes an effective solution combining massive multiple-input multiple-output techniques with Ultra-Dense ...

In today's 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for both ...

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