

Millimeter wave for lithium-ion batteries in solar container communication stations

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Here we propose a miniaturized and low-power-consumption system capable of accurate sensing and wireless transmission of internal temperature and strain signals inside LIBs, with ...

This emphasizes the importance of selecting a suitable interrogation frequency for ultrasound investigations in lithium-ion batteries. The model accurately replicates the observed ...

Based on this, the relationships between structural characteristics, dynamic coupling characteristics, state of charge and guided wave behavior in commercial lithium-ion batteries were ...

Accurately assessing the state of lithium-ion batteries (LiBs) is critical for both economic and safety considerations. Traditional methods for evaluating batte.

showing 3-dB bandwidths larger than 50 GHz in this case. Compared with discrete photonic radars, we not only reduce the size of the modulation block from 2 × 135.0 mm × 11.4 mm to 15 mm × 1.5 mm, ...

Waves for Lithium-Ion Battery Applications Advanced Energy Harvest Supplementary Information (SI) for Energy & Environmental Science. This journal is © The Royal Society of Chemistry 2025

The document details a novel approach to evaluate the electrical properties of Li-ion battery electrode films without physical contact, utilizing 60 GHz mmWave radar technology.

This work presents the analytical acoustic model to investigate the interaction mechanism between the state of charge (SOC) of lithium-ion battery and the propagation characteristics of ultrasonic guided ...

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