

Recent advancements in renewable energy technologies have significantly lowered the cost of solar and wind power generation. Despite these improvements, energy storage remains a crucial barrier to large-scale adoption. Lithium-ion batteries, though effective, face limitations in terms of cost, scalability, and environmental impact. Future research should focus on developing alternative storage solutions, such as solid-state batteries or hydrogen storage systems, which offer higher energy densities and improved safety. These innovations will be essential for achieving a sustainable energy future.