Review of: "Toward the Realization of Nanogate Capacitors: In Search of Practical Advice"

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Potential competing interests: No potential competing interests to declare.

The author has made a comprehensive coverage of various applications for the proposed nanogate capacitor system, including frequency stabilization in power grids, wind power generation, and rapid charging for electric vehicles. The potential use of nanogate capacitors in the SUDA Energy Aut´arkeia System (SEAS) is also explored, showcasing the versatility of this technology. The discussion of ECaSS(R) is insightful, offering a detailed explanation of the electric double layer (EDL) and its role in capacitor technology. The breakdown voltage and the use of current sources in charging are discussed, providing a theoretical foundation for the proposed nanogate capacitor system.

The author briefly mentions the unfortunate demise of M. Okamura, leading to the abandonment of the nanogate capacitor plan. However, there is limited discussion on the current challenges and potential hurdles in realizing nanogate capacitors, which could be crucial for a comprehensive understanding.

While the advantages of nanogate capacitors over traditional EDLCs are emphasized, there is a lack of comparative analysis with other emerging energy storage technologies. A broader comparison could provide a more nuanced perspective.

The author introduces the concept of nanogate capacitors and provides theoretical and manufacturing details. However, it falls short in presenting a comprehensive practical implementation or experimental results to validate the proposed system's feasibility.

The author refers to works by M. Okamura from 1999 and earlier, and it would benefit from incorporating more recent research to demonstrate the current state of nanogate capacitor development and related advancements.

While the potential benefits are well-discussed, the author does not adequately acknowledge potential challenges or criticisms that might be associated with the proposed nanogate capacitor system, providing a somewhat one-sided view.

Provide some background information on what nanogate capacitors are and how they differ from EDLC and li-ion batteries.

Abbreviations can be defined when they are first used in the document, such as “MS (manuscript)”, “ECaSS (energy capacitor storage system)”,

Check the document for grammar and punctuation errors.

Use clear and concise language and avoid jargon and technical terms .

In summary, the work presents an intriguing concept with notable strengths in theoretical explanation and practical applications. However, addressing the highlighted limitations would enhance the overall robustness of the manuscript.