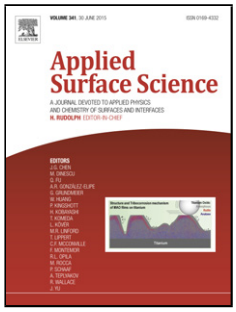

Title: PERSPECTIVE ON ELECTROCHEMICAL CAPACITOR ENERGY STORAGE

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PII: S0169-4332(17)32941-0
DOI: https://doi.org/10.1016/j.apsusc.2017.10.018
Reference: APSUSC 37361

To appear in: *APSUSC*

Received date: 10-8-2017
Accepted date: 3-10-2017

Please cite this article as: John R.Miller, PERSPECTIVE ON ELECTROCHEMICAL CAPACITOR ENERGY STORAGE, Applied Surface Science https://doi.org/10.1016/j.apsusc.2017.10.018

PERSPECTIVE ON ELECTROCHEMICAL CAPACITOR ENERGY STORAGE

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ABSTRACT

Electrochemical capacitors, a type of capacitor also known by the product names Supercapacitor or Ultracapacitor, can provide short-term energy storage in a wide range of applications. These capacitors are powerful, have extremely high cycle life, store energy efficiently, and operate with unexcelled reliability. This article discusses highly-reversible energy storage, presents electrochemical capacitor basics, and identifies several resources that may be useful to a researcher who wishes to participate in this technology arena. A perspective on the future of electrochemical capacitor technology is offered.

Keywords: electrochemical capacitor, electric double layer capacitor, EDLC, pseudocapacitor, energy storage, carbon

HIGHLIGHTS

1. Electrochemical capacitors provide highly-reversible energy storage.

2. Specialized meetings held to advance electrochemical capacitor technology.

3. Perspective view presented on electrochemical capacitor technology.

INTRODUCTION

Energy storage systems are used to power an application. An example application is the cell phone, where its battery powers the phone and is