
What models are used in the theoretical study of supercapacitors?
The paper reviews the modelling techniques like Empirical modelling, Dissipation transmission line models, Continuum models, Atomistic models, Quantum models, Simplified analytical models etc. proposed for the theoretical study of Supercapacitors and discusses their limitations in studying all the aspects of Supercapacitors.

What does a supercapacitor do?
The supercapacitor supplies or absorbs the large current pulses that occur during engine starting or regenerative braking, improving the transient response and efficiency of the battery supply. In this report, two supercapacitor models are pre- sented.

How to study a supercapacitor system?
Whenever a new system like supercapacitor is designed,it becomes vital to create a model of that system using computer simulations to check the feasibility of the system. In order to study the supercapacitor system theoretically,researchers have tried to create models. Complex models resembling the actual SCs have also been designed .

How can a supercapacitor be regarded as a black box?
4.3. Intelligent ModelsThis kind of model can be regarded as a black box. Without considering the internal mechanism of the supercapacitor,the relationship between input and output can be obtained by training a large amount of charging and discharging historical data.

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