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Reconfigurable Magnetic Supercapacitors

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Status:

Seeking R&D and/or licensing partner

Patent Pending

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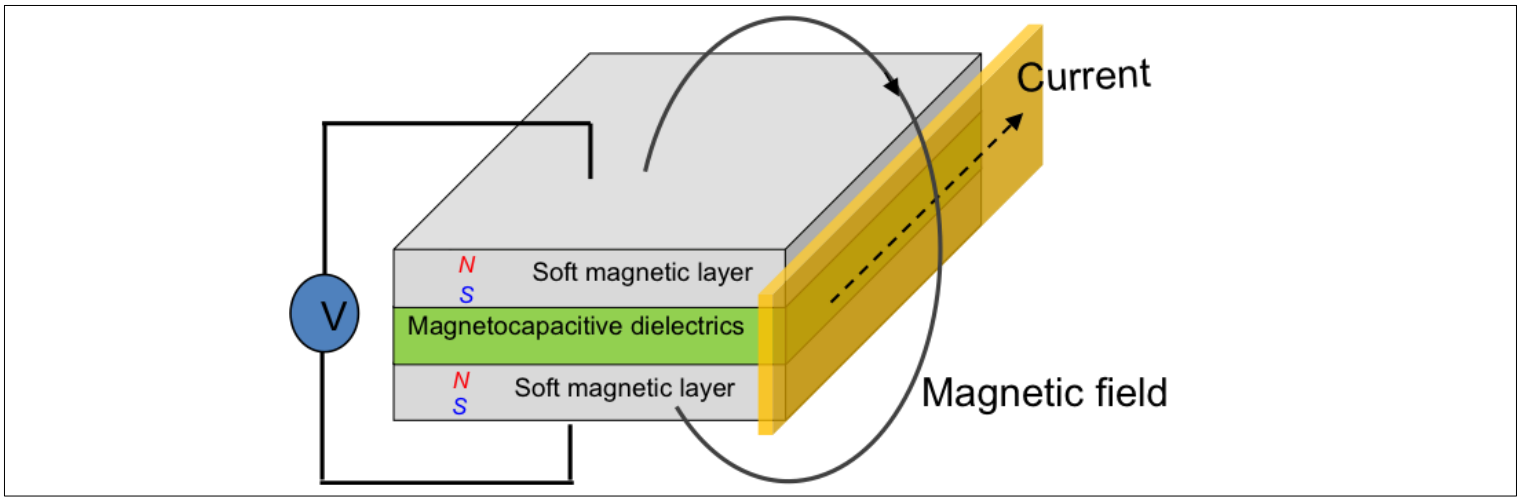

Reconfigurable Magnetic Supercapacitor RMS Design

Reconfigurable Magnetic Supercapacitor

- Supercapacitor is tunable and controlled via a magnetic capacitor consisting of magnetic layers and dielectric layer.
- Has adjustable capacitance, or storage potential for energy, by changing the magnitude of the external magnetic field surrounding it.
    - This adjustment is can be quick and accurate while still retaining a large maximum capacity.
- Adjustable capacitance would allow storage of energy with minimal leakage from high capacitance.
    - 5X peak power capacity
    - 75% reduction of power loss

Advantages of Magnetic Supercapacitor

- The reconfiguration options will help eliminate the need for several supercapacitors to use in series, which is extremely inefficient.
- This product would be beneficial in applications where the energy entering the circuit fluctuates greatly, such as braking in hybrid vehicles or wind energy.
- Currently, reconfigurable supercapacitors are mechanically tuned which can be unreliable due to accuracy and mechanical failures.
    - The magnetic supercapacitor uses neither electric nor mechanical reconfiguration and avoids typical drawbacks and failures experienced in those systems.

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