

Chemical Energy Storage

The most obvious example of chemical energy storage is gasoline, which is basically stored sunlight from millions of years ago. Where electrochemical storage actually holds an electrical current, chemical energy storage uses energy to create a chemical that, under certain conditions will release that energy, usually through combustion. Using energy to turn plant matter into chemicals like gasoline is one common way to do this. Another is using electricity to split water into hydrogen and oxygen. The hydrogen can then either be burned, or used in hydrogen fuel cells. Chemical energy storage is useful because it is one of the best ways to transport stored energy - it tends to give the most energy by weight out of the various storage methods.

Splitting water to store energy

Catalyst used to lower the energy required to [split water](#), increasing its usefulness as a way to store energy (as hydrogen gas).

Plant-based supercapacitor technology

Battery capacity and speed of charging are big limitations for electricity storage. Supercapacitors enable rapid charging, but are expensive to produce. This research team at Oregon State University is developing a way to make cheap [supercapacitors out of plant cellulose](#).

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