Rapid Conversion of Polyethylene into Carbon via Hydrothermal Processing

A rapid, low-cost hydrothermal process converts inexpensive polyethylene plastic into carbon sheets for components like battery electrodes, outperforming current production methods.

Researchers at Purdue University have developed a new method for synthesizing carbon sheets. A hydrothermal process was designed for rapid conversion of polyethylene, a commodity plastic, into carbon sheets. Polyethylene is significantly cheaper than polyacrylonitrile and the conversion process takes less overall time and temperature making it a superior method of producing carbon sheets.

Advantages:

-Low cost

-Quicker than current methods

Potential Applications:

-Carbon sheet Parts

-Battery Electrodes

TRL: 4

Intellectual Property:

Provisional-Patent, 2019-01-29, United States | Utility Patent, 2020-01-27, United States | CIP-Patent, 2021-09-28, United States

Keywords: carbon sheets, hydrothermal process, polyethylene conversion, commodity plastic, low cost carbon, quicker synthesis, polyacrylonitrile alternative, carbon sheet parts, battery electrodes, carbon materials

Technology ID
2017-POL-67808

Category
Energy & Power Systems/Energy Storage
Materials Science & Nanotechnology/Advanced Functional Materials

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