# Semiconducting Polymer Blends for High Temperature Organic Electronics

A new class of organic materials can withstand extensive heat, enabling reliable operation of organic electronics under high temperatures.

Electronics have a tendency to generate considerable amounts of heat.

Overheating is a known problem in most electronic devices. In inorganic devices, cooling is typically used to physically lower the total temperature.

For organic electronics, no such solution has been reported. There is need of a method for allowing organic devices to function properly under extensive heat.

Researchers at Purdue University have developed a new class of organic materials that can operate under high temperatures. This technology would be suitable for innumerable electronic devices.

# Advantages:

-High temperature threshold

Potential Applications:

-Electronic devices

**TRL:** 3

## **Intellectual Property:**

Provisional-Patent, 2018-05-29, United States | Utility Patent, 2019-05-24, United States | DIV-Patent, 2021-11-18, United States

**Keywords:** organic electronics, high temperature operation, overheating solution, electronic cooling, heat resistant organic materials, thermal management, electronic devices, high temperature threshold, materials science, organic semiconductors

## **Technology ID**

2018-MEI-68125

## Category

Materials Science &
Nanotechnology/Advanced
Functional Materials
Materials Science &
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Semiconductors/Thermal
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