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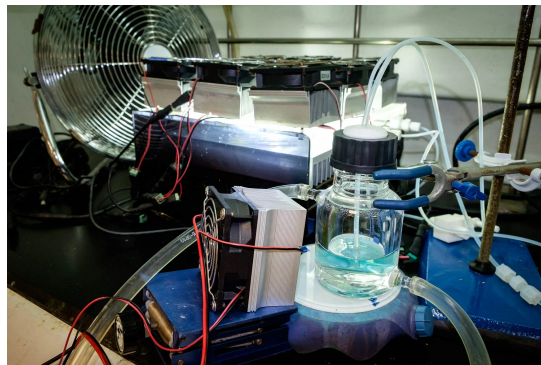
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Bright Method Turns Plastics into Energy-Storage Liquids

Scientists from NTU Singapore have created a process that can upcycle most plastics into chemicals useful for energy storage, using light-emitting diodes (LEDs) and a commercially available catalyst, all at room temperature.

The new process is very energy-efficient and can be easily powered by renewable energy in the future, unlike other heat-driven recycling processes like pyrolysis.

Currently, only nine per cent of plastics globally are recycled and the rest are



typically discarded in landfills or incinerated. This is because many types of plastics have a strong carbon-carbon bond that is difficult to break, making them resistant to many chemicals and have high melting points.

In comparison, NTU's new method can easily dissolve such plastics, breaking them down into chemical compounds useful for making fuel cells to generate electricity, or as liquid hydrogen carriers to support Singapore's drive towards a hydrogen economy.

This innovation not only tackles the growing plastic waste problem but also reuses the carbon trapped in these plastics instead of releasing it into the atmosphere as greenhouse gases through incineration.

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