The new plastic is broken down by sunlight and air | Photo source Robert Garcia on Unsplash

PLASTIC THAT DEGRADES FROM SUNLIGHT COULD MAKE ELECTRONICS MORE SUSTAINABLE

COMPUTING & TECH

Researchers have developed a new plastic that is biodegradable in the simplest way possible, using only sunlight and air

Spotted: Research co-author Liang Luo, at the Huazhong University of Science and Technology in Wuhan, China, discovered the new plastic while running an experiment as part of his development of a chemical sensor. The film he was working on broke apart after sitting in the sun for several days. Not only is the new plastic biodegradable in the simplest way possible, using only sunlight and air, it also produces no microplastic waste. What is left behind after the degradation process completes is a naturally occurring acid usable in other products.

In contemplating future uses for the plastic, scientists point to the stable environment of smartphone and other device interiors. Since it biodegrades in sunlight and when exposed to air, being used in a range of products that are rarely, if ever, opened, could be an ideal application of the material. Plus, the components currently in use in many of the world's most popular electronic devices are notoriously difficult to reuse and upcycle.

Discovering an environmentally friendly replacement for those parts could transform global waste management processes. As exciting as the finding is, though, Luo believes that commercial availability is likely five to ten years away.

The race to create bioplastics that are usable on a commercial scale is ongoing, and Springwise has spotted new versions made from lumber waste and one with built-in enzymes for home composting.

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Takeaway:

The use of biodegradable plastics needs to speed up considerably for the world to meet the necessary climate change mitigation goals. While product packaging is an obvious application, use in healthcare and agriculture could contribute to significant reductions in consumer demand for single use, throw-away versions. Accessibility advocates have pointed out how crucial many healthcare plastics are to people living with and managing a huge range of conditions, so inclusive design must be a priority as industries attempt to transition to new materials.