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NTU Scientists Find Safe Method to Recycle E-Waste Plastic



- The scientists at NTU University developed ways to recycle e-waste plastic and reuse it again without compromising the quality.
- This method helps in the recovery of clean plastic and increases the recycling of e-waste plastic.

A group of scientists from Nanyang Technological University (NTU), School of Chemistry, Chemical Engineering and Biotechnology, has discovered a safe method to recycle e-waste plastic.

Electronic waste (e-waste) is one of the primary sources of plastic waste, and such plastic can be highly toxic if not properly disposed of. Brominated flame retardants (BFRs) are contaminants added to plastic to make it fire-resistant. When e-waste plastics are thrown away or recycled, these chemicals can leak into the environment, causing pollution.

To tackle this problem, the team of NTU scientists, led by Assoc. Prof. Lee Jong-Min, has developed a new method to make recycling e-waste plastics safer. They focused on a common plastic used in electronic items, such as keyboards and laptop casings, called acrylonitrile butadiene styrene (ABS).

Their method consists of two solvents: 1-propanol and heptane. These solvents help dissolve and remove the harmful BFRs carefully and selectively from the plastic without affecting itself. Once the toxic chemicals are removed, this plastic can be reused in its original form.

According to the scientists, their method can recover over 80% of the plastic and reuse it. The quality of it remains the same, meaning it can still be used in new products. This is one of the efficient ways to recycle e-waste plastic without harming the environment.

<https://www.knowesg.com/tech/ntu-scientists-find-safe-method-to-recycle-e-waste-plastic-23122024>