Scientists accidentally create mutated plastic-eating enzyme

Scientists accidentally created an enzyme that degrades plastic which is used to make water bottles usually. This plastic can otherwise take hundreds of years to degrade.

Researchers examined at the crystal structure of a recently identified enzyme called PETase, that evolved naturally and was already known to digest plastic made of polyethylene terephthalate (PET). However, their research had a serendipitous result when they introduced a mutation to PETase. The result was a new type of enzyme that degrades plastic more efficiently than the original. PETase was initially found in the bacterium Ideonella sakaiensis, which was used to degrade plastic in PET bottle-recycling facility in Japan. The enzyme's function was to break down a waxy coating on plants and the researchers made modifications to the enzyme such that it digests plastic.

Humans have loaded down the planet with an estimated 9 billion tons (8.3 billion metric tons) of plastic, half of which has been produced since 2004. The new discovery suggest that it may be possible to solve the global problem of plastic pollution by introducing human-engineered improvements to an enzyme.