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Nearly 1.3 billion tons of food — almost one-third of the world’s food supply — goes to waste each year. Producing and disposing of this much wasted food consumes 17.6 billion m<sup>3</sup> of water and generates 193 million m.t. of greenhouse gases, according to the United Nations (UN) Food and Agriculture Organization (FAO) and the UN Environment Program. Novel food preservation technology could help feed every undernourished person on the planet and reduce the environmental impact of such waste.

Food waste is a particularly challenging problem for highly perishable items such as fruits and vegetables, of which the FAO estimates half are wasted. Studies show that about 50% of this food waste can be prevented by extending the shelf life. Shelf life is reduced by several factors including moisture loss, which leads to changes

gas exchange, which results in enzymatic oxidation and decay.-

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