

# 2D clay sheets could make easy-to-recycle crisp packets



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Inorganic nanosheets could be a recyclable alternative to the metal coatings found on food packaging like crisp packets. They are more environmentally friendly, but still cheap and effective at keeping food fresh.

The nanosheets are 2D sheets of synthetic clays known as layered double hydroxides and are largely impermeable to oxygen and water. A new method allows them to be made using lower temperatures, with less waste produced. The new method makes a film that is easier to recycle, completely non-toxic and mechanically stronger than metallised film.

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1. What is a carbon footprint?
2. Suggest why crisp packets with metal coatings are difficult to recycle.
3. Suggest why the inorganic nanosheet film can keep food fresh.
4. Explain why this new inorganic material could be described as environmentally friendly.