

Scientists have found a way to give you more pasta for less money

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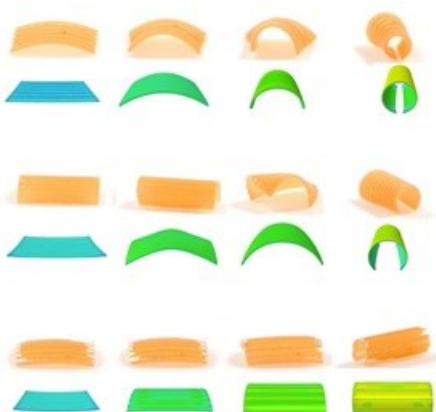
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Easy to dismantle and transport, highly customisable, and far more affordable than traditional homeware, the advent of flat-pack furniture has come with a host of benefits for consumers. A team of researchers at the Massachusetts Institute of Technology (MIT) considered that this kind of thinking had to be applicable in other fields, particularly food. Their experimentation has led to a range of 'programmable pasta' that stores away flat and expands when exposed to water.



"We did some simple calculations, such as for macaroni pasta, and even if you pack it perfectly, you still will end up with 67% of the volume as air," Wen Wang, a member of the research team, told [MIT News](#). "We thought maybe in the future our shape-changing food could be packed flat and save space."

Touted as a practical way to reduce food-shipping costs, the project is titled Transformative Appetite and its main point of difference comes from the gelatine that is mixed in with the starch. A substance that can expand to varying degrees depending on its density, the gelatin naturally expands upon absorbing water, providing the researchers with an ideal way to manipulate the foodstuff.



From here, Wang and fellow researchers Lining Yao, Chin-Yi Cheng, Daniel Levine, Teng Zhang and Hiroshi Ishii used a 3D printer to print strips of edible cellulose over the top gelatin layer – a feature that allows them control of the structure's response to water and the shapes that it ultimately takes. A number of different shapes were developed – from ones resembling flowers and horse saddles, to macaroni- and rigatoni-like configurations – and according to the team, they taste pretty good too.

Watching the paper-thin rectangle films of pasta come alive when submerged in water is pretty mesmerising. Watch the programmable pasta do its thing in the video below:

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