

THE SHELLWORKS TURNS SEAFOOD WASTE INTO BIOPLASTIC

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The Shellworks, UK



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London – Four designers have developed new manufacturing processes to transform seafood waste into biodegradable and recyclable bioplastic.

For their project, **The Shellworks**, Ed Jones, Amir Afshar, Insiya Jafferjee and Andrew Edwards have built a series of machines that extract, form and recycle chitin, a natural biopolymer found in the shells of crustaceans, which they believe could be used as an alternative to various single-use plastics. Conventional methods for extracting the key component, chitosan, are expensive and time-consuming, but The Shellworks aims to lower the barriers to entry and allow for greater experimentation with the bioplastic.

From anti-bacterial blister packaging and food-safe carrier bags to self-fertilising plant pots, the project uses three customised techniques to prototype potential applications of the material. ‘By designing scalable manufacturing processes, applications tailored to the material and eco-positive waste streams, we believe we can demonstrate how chitosan bioplastic could become a viable alternative for many of the plastic products we use today,’ explain the designers.

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