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Researchers in Japan's Kyoto University can turn a crab shell into a "transparent nanocomposite sheet" that could be the future for flat panel display, solar cell and flexible screen manufacturing.

The scientists treat the crab shell with a chemical mixture that removes all minerals, proteins, lipids, fats and pigments from the shell—leaving only translucent chitin. Don't try to say the word too fast, but chitin is that see-through shell that you might see on an beach after it has been pounded by waves, ground against rocks and bleached in the sun.)

The chitin is immersed in an acrylic resin monomer to create a completely see-through version of what once was a living crab's home-sweet-home.

You can create an optically transparent sheet using the same process: you crush the crab shell chitin and spread it into a paper-thin sheet before applying a monomer treatment. The resulting panel is **10x more resistant to heat** than traditional glass-fibre epoxies and offers high light transmittance-- ideal for flexible displays (and even solar cells) in the future.

Chitin is abundant on land as well as the sea: you can find it in insects, spiders and some fungi. And imagine the landfill of valuable display-material that's left discarded after seafood restaurants serve their meals with shellfish.

OK, let me be the first to propose a new acronym: Liquidified Crustacean Display, more commonly known as…

Go How to Make a Crab Shell See Through (The Royal Society of Chemistry)