

Gum arabic under an electron microscope (w/ Video)

July 1 2014

This alien glob in the video below is a piece of gum arabic from the hardened sap of the Acacia tree, most likely collected from a tree in Sudan. Rox Middleton explains how the electron microscope has changed the way we are able to interact with objects at the nanoscale, allowing us to enjoy a glimpse of the exquisite abstract forms around us.

"This lustrous picture was taken on an [electron microscope](#), allowing us to see below the wavelength of light. It's actually a very boring scrap of gum arabic powder, which is made from the hardened sap of the Acacia tree, probably collected in Sudan.

Gum arabic is a common additive in food, glue and polish where it works as a thickener and emulsifier.

By covering it in a nanoscale layer of gold, and bombarding it with electrons in a vacuum, we reveal its smooth and alien texture, and the beauty hidden in this plain speck of dust.

We can learn a lot from looking at structures in [natural materials](#) at this very small scale. They tells us how we can adapt them to build our own new materials with new characteristics and uses."

Provided by University of Cambridge

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