Successfully created new 18K ultra-light gold from ordinary plastic

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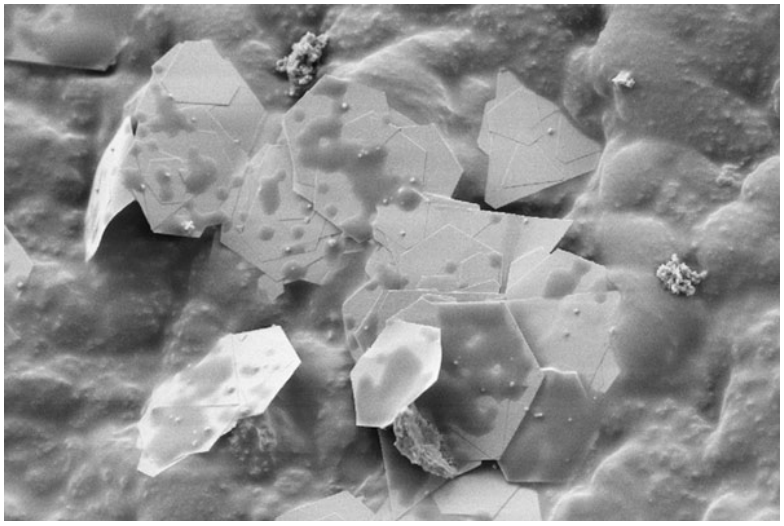
Normal 18K gold has a ratio of 75% gold and 25% copper. But for this new gold, gold will be mixed with a polymer resin and protein fibers instead of metal.

The new gold is lighter than regular gold because it contains invisible invisible air bubbles created by dipping thin gold nanocrystals into the resin matrix.

A new piece of ultra-light plastic gold.

The specific gravity of the new gold is only 1/10 compared to ordinary 18K gold because the gold density is only 1.7g / cm3 instead of 15g / cm3 as before.

According to the researchers' announcement, the new ultra-light gold retains the metallic bright surface of gold, can be polished like regular gold, has the ability to be made into jewelry and has additional characteristics. Physical like plastic.



Nanoscale gold dust is embedded in a polymer resin.

To create the new ultra-light gold, the researchers created a gel mixture by mixing tiny gold dust with a mixture of polymer resins, protein fibers, water and salt. They then use alcohol instead of water. Finally the mixture is placed in a pressure chamber filled with CO2. The yellow plastic will turn into a lightweight, gelable foam that can be melted to create the desired shape.

Compared with conventional gold, the new plastic gold has many outstanding advantages such as being able to change the hardness by changing the original mixture composition, changing color by swapping shaped nanoparticles. different form.

The new type of gold has a melting point of only 105 ° C, much lower than the 1,064 ° C of conventional gold.

New ultra-light gold under a microscope.

Although there are many advantages to making jewelry, researchers are concerned that people will not accept this type of gold. Earlier, artificial diamonds also encountered this difficulty.

However, this new type of plastic gold also has many useful applications in many other fields such as electronics manufacturing, radioactive shields, and chemical catalysts.

1. Turn copper into a material almost identical to gold
2. Plastic surface self-cleaning, even antibiotic resistant bacteria can not cling to