Chinese Scientists Turn Copper into 'Almost Gold' That Can Replace Precious Metals in Electronic Devices

A new study published in the peer-reviewed journal *Science Advances* claims that Chinese researchers transformed copper into a new material "almost identical" to gold that can replace gold and silver in the manufacturing process of electronic devices. The new material would revolutionize industries with readily available and inexpensive copper — although the report does not say how much it costs to create the conversion. -GEG

A team of Chinese researchers from the Dalian Institute of Chemical Physics, at the Chinese Academy of Sciences in Liaoning, has transformed copper into a new material "almost identical" to gold, according to a new study published in the peer-reviewed journal *Science Advances,* and first reported by the South China Morning Post on Saturday.

Professor Sun Jian and his team of scientist blasted a copper target with a stream of hot, electrically charged argon gas. The fast-moving ionized particles smashed the copper atoms. The atoms cooled and condensed on the surface of a collecting device, producing a thin layer of sand.

South China Morning Post said each grain of sand measured a few nanometers, or a thousandth of the size of a bacterium.

The researchers placed the material in a reaction chamber and used it as a catalyst to turn coal to alcohol, a complex and intricate chemical process that only precious metals can handle efficiently.

"The copper nanoparticles achieved catalytic performance extremely similar to that of gold or silver," Sun said in a statement on Saturday.

"The results … proved that after processing, metal copper can transform from 'chicken' to 'phoenix'," claimed Sun, who was not available for comment.

Copper has a similar weight and looks to gold.

The research paper notes that the new material based on copper can replace gold and silver in the manufacturing process of electronic devices, which requires significant amounts of precious metals.

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