

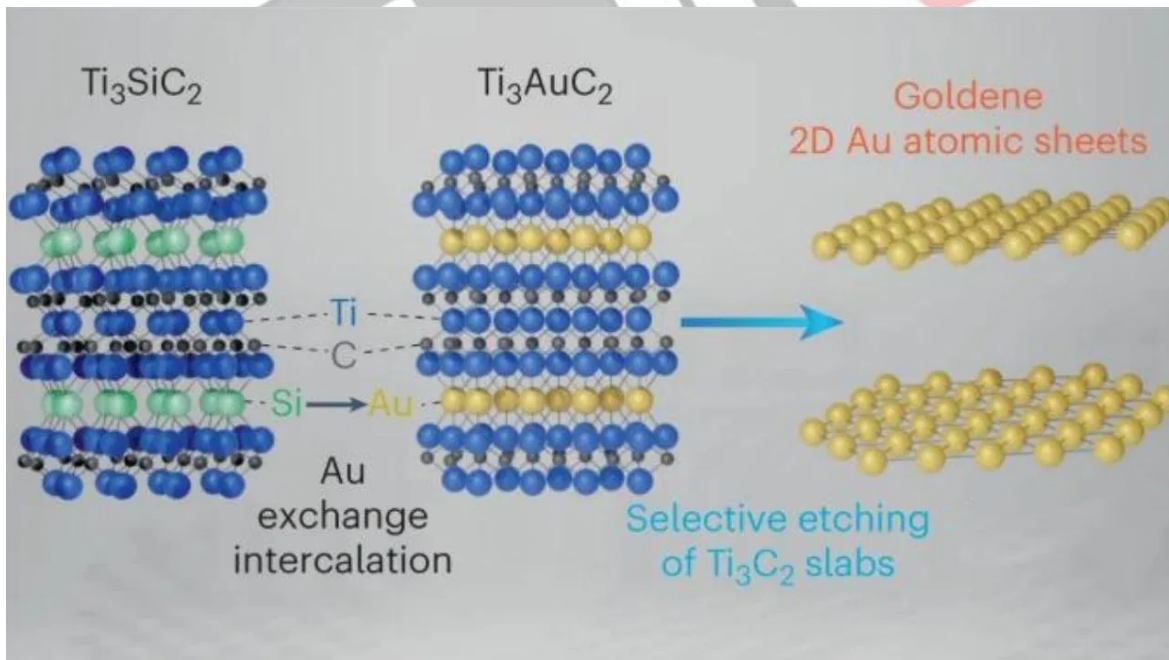


## Goldene

[Source: LM](#)

Recently, researchers in Sweden have created '**Goldene**' - a [single-atom layer of gold](#) that can be used in a variety of applications like **hydrogen production, and water purification, production of value-added chemicals**, communication, and much more.

- They used a modified version of **Murakami's reagent**, inspired by an **ancient Japanese smithing** (forging art) **technique**, to selectively remove carbon in darkness and prevent cyanide formation, which dissolves gold.
- The researchers used a **three-dimensional base** material where gold is embedded between layers of **titanium and carbon to create Goldene**.
  - The manipulation of matter on atomic, molecular, and supramolecular scales, (about 1 to 100 nanometers) is termed as **Nanotechnology. One nanometer (nm) is one-billionth or ( $10^{-9}$ ) of a meter.**
- This new form of gold has **different properties** than regular gold similar to the case of [graphene](#).
  - For example: **Gold is usually a metal, but if a single atom layer thick gold can become a semiconductor instead.**



Read More: [Nanotechnology](#)

