

Whoa!
How does it do that all of a sudden!?

Once heated up to 600°C, wood that once had an impedance of 10^{12} ends up with $10^{-2}\Omega$ which means it becomes a trillion times more conductive to electricity!

Do you know of the unit Ω (ohm), used for measuring impedance?

Yep, learned it the other day.

Electron diffraction image of the crystal of the diamond

Nano diamond

When you look closer, the wood carbonized at 700°C contains nanodiamond inside.

Wow... I want to see too!

A trunk of wood is made up of cells, and the carbon in their cell walls rearrange at around 600°C enabling it to be conductive to electricity. Under an electronic microscope, you are actually able to observe the carbon rearrangement.

Hahaha

Well it is a diamond but the size of 10^{-6} mm. So, you cannot see with naked eyes. It might cost more to observe this tiny diamond than its worth.

Make my racket with diamond!

Please bring me some next time!

DIAMOND!

Diamonds!
Diamonds!!
Ahahahahaha

Aaahh, it burned!

Ah, our meal also turned into charcoal!

Can anybody smell something?

What's Charcoal!?

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What is Humanosphere?

Charcoal barbecued meat is tasteful and also perfect with beer...

The gas stove fire contains moisture, but charcoal does not.

For sure, the meat is cooked more tender and tasty compared to the gas stove.

Hey papa, charcoal barbecue is the best!

My tennis racket is made from carbon too!

You mean carbon which often uses in carbon heaters and handles of umbrellas, that carbon?

Have you heard of "carbon"?

No... how?

By the way do you know that there are other uses for charcoal?

That's a function utilizing the many holes on the charcoal's surface. Other than that they have the quality of conducting electricity after carbonizing it above a certain temperature.

So charcoal and carbon are family, huh? I just remembered hearing in my science class about a project to clean a river using charcoal made from wood and bamboo.

Organic compound mainly comprised of carbon elements, when heated turn into carbon.

Yep, and the charcoal that we're burning is formed from the same element carbon.

Come on♪

It suddenly begins to conduct electricity!

After burning it to around 600°C...

But Prior to burning, a wood is an electrical insulator

What? I thought wood didn't conduct electricity.