

SANTÉ

## "I was sure that the electronic cigarette would be welcomed with open arms"

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Hon Lik is the Chinese pharmacist who invented the electronic cigarette. For Sciences et Avenir, he reacts to the success of his water vapor "smoke" machine.



Hon Lik, inventor of the electronic cigarette. He smokes an e-pipe from his own brand, Ruyan.

PHOTO BY NICOLAS SRIDI FOR SCIENCES ET AVENIR.

COMMENTER

The translation of the article [can be find here](#).

**Hon Lik :** My basic specialty is finding how to introduce our traditional pharmacopeia's active substances into the human body. I used to be a big smoker myself and knowing the harmful effects associated with it very well, I told myself I couldn't go on like that.

I tried nicotine patches but I didn't care for the idea of slow diffusion of the drug into the organism. I missed the effect of the sudden impact, the act of smoking, the sensation of smoking.

In 2001 I devised a system on a large console, using food additives as solvents. At the time I was working on vaporization by ultrasound but the droplets formed were too big to resemble tobacco smoke. This technology is used for example in some household humidifiers; it consists of making a metallic diaphragm vibrate at an ultrasonic frequency in a liquid to create micro-droplets which then, upon contact with room-temperature air, form a sort of cold vapor.

"I was sure that the electronic cigarette would be welcomed with open arms and that in three years we would be able to put together the right manufacturing and distribution networks, I was naïve..." Hon Lik, inventor of the electronic cigarette

I finally decided to use resistance heating which got better results. The challenge was managing to scale the mechanism down to a miniature size right for a cigarette and getting the right dose of nicotine, while also getting the right odors from harmless additives. This is how I came to file the first patent in 2003 in China.



Hon Lik, inventor of the electronic cigarette. Photo by Nicolas Sridi for Sciences et Avenir.

I find it astonishing and it wasn't at all what I expected. I was sure that the electronic cigarette would be welcomed with open arms and that in three years we would be able to put together the right manufacturing and distribution networks, I was naïve...

The tobacco industry saw me as a competitor to block, the health authorities were very suspicious and pharmaceutical groups were not interested. Everything is very different today.

"I hope that authorities like the FDA in the United States will continue to impose stricter and stricter standards so that the product will be as safe as possible" – Hon Lik

Today, the majority of manufacturers are not health professionals or large international groups able to comply with strict quality standards. They are small structures which previously manufactured all sorts of gadgets and find themselves today in a booming niche. That's why test results aren't good; in principle, everything can be controlled in my invention – the components, the additives used, the vaporization temperature, etc.

I really hope that the large international pharmaceutical groups get into manufacturing electronic cigarettes and that authorities like the FDA in the United States will continue to impose stricter and stricter standards so that the product will be as safe as possible.

Below, the Sciences et Avenir animated video illustrates how electronic cigarettes work.

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How the electronic cigarette works ?

## How the electronic cigarette works ?

COMMENTER

CIGARETTE ÉLECTRONIQUE

SUR LE MÊME SUJET

**Hon Lik raconte comment il a inventé la cigarette électronique**

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