

Inventors' hall of fame

Tang Ching-Wan,
at the National
Inventors Hall of
Fame event.



Out of the Box

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tacular venues in DC and one of my favorites. In fact, it was the venue for the annual gala reception held by Hong Kong's Economic and Trade Office.

There were a total of 562 inductees this year. Some of the awards were historical – that is, given to inventors who made great inventions in earlier eras.

One of this year's five historical award winners was Joseph Shivers, who invented lycra fiber (or spandex), which most of us have in the clothes in our closets. The famous inventor Thomas Edison was a 1973 award winner for inventing the electric lamp.

Other award winners have, in fact, been Nobel laureates – for example, the inventors of magnetic resonance imaging (2003 Nobel). Alfred Nobel himself was a historical awardee in 1998 for his invention of dynamite (the commercial success of which enabled him to fund the Nobel prizes). The award medals bear the images of Abraham Lincoln (who had a patent on lifting boats over shoals – the only US president with a patent) and Thomas Edison.

To be eligible for the NIHF, one needs to have a demonstrable impact based on a US patent behind the invention. In the citations, the exact patent numbers for which the awards were based on are listed.

Tang's patent was No 4,356,429, dated 1990 for work he did at Kodak with co-awardee Steven Van Slyke on OLED displays. The tag line for their award is very apt: "Display endless potential."

Curiously, I looked through the list of all 562 awardees and made several observations.

One is that some received an award not for what they are famous for, but for inventions that they made.

For example, Steve Jobs won for the iPod user interface, not for founding Apple. Walt Disney won the multiplane camera, not for Disneyland.

Another observation is that a number of awardees invented something which became the basis for a

very successful business, which today still bears their name – for example, Laszlo Biro (ballpoint pen), Willis Carrier (air conditioning), John Dunlop and Harvey Firestone (pneumatic tires), Henry Ford (transmission mechanism), Robert Gore (GoreTex), William Hewlett (but not Packard; for audio oscillator), Elisha Otis (elevator brake), Igor Sikorsky (helicopters), and Louis Tiffany (glass tiles, mosaic).

Others are legends: the Wright Brothers (airplane), Nikola Tesla (electro-magnetic motor), William Shockley (transistor), and Rudolf Diesel (internal combustion engine).

Tang is only the third ethnic Chinese awardee (the others are An Wang, who founded Wang Computers, and Alfred Cho, who invented molecular beam epitaxy, used to make the chips in our smartphones), and he is the first to have won it while working in Hong Kong. In contrast, there were many Indian awardees.

I am reminded of a mural at HKUST's entrance piazza, pictorially listing all the science and technology inventions in ancient China (gun powder, compass, paper printing, etc), but the list stopped at about the 13th century.

Have we Chinese stopped inventing since then?

THENOBEL PRIZES are the hall of fame for scientists. The laureates' discoveries have not only enabled a better understanding of nature, but have in turn led to technological innovations that have enriched our lives.

But the prizes are primarily for fundamental discoveries. However, many innovations do not necessarily derive from basic scientific discoveries and innovation is not limited to only technological advances. Who invented the ubiquitous Post-it notes? The computer mouse? The oversized tennis racket? These are innovations that will not win the Nobel prize. But all three are in the National Inventors Hall of Fame in the United States, which has been making the annual awards since 1972.

This year, one of the 12 awards was given to Hong Kong University of Science and Technology professor Tang Ching-wan for his invention of organic light-emitting diode.

Even tech neophytes have heard of OLED when they shop for a TV or a smartphone, and Tang is recognized as the "father of OLED." I was invited by him to attend the award ceremony in Washington, DC.

The ceremony, a black-tie event, was held in the National Buildings Museum, one of the most spec-