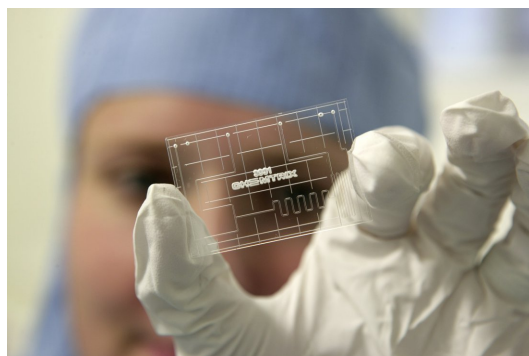


Here's Why Nobody's Talking About Nanotech Anymore

Kevin Kelleher Oct. 9, 2015



Ulrich Baumgarten—U. Baumgarten via Getty Images

A micro reactor from glass of the iX-factory GmbH for cost-efficient and danger-reduced mixing of chemicals in the chemical industry.

Of all the investment fads and manias over the past few decades, none have been as big of a fizzle as the craze for nanotech stocks. Ten years ago, venture capitalists were scrambling for investments, startups with “nano” in their names flourished and even a few nanotech funds launched hoping to track a rising industry.

And today? Nobody in the stock market gets excited about the phrase “nanotech” anymore. Which is strange, because nanotechnology itself – that is, the science and engineering conducted on a molecular scale, measuring **less than 100 nanometers** – is yielding applications and products in a number of industries, just as its more sensible supporters have long predicted.

Back in 2005, the year when nanotech mania peaked, a gold rush mentality took hold. There were **1,200 nanotech startups** worldwide, half of them in the U.S. VCs invested more than \$1 billion in nanotech in the first half of the decade... In 2000, President Bill Clinton **doubled** U.S. investment in nanotechnology, and President George W. Bush **authorized** billions more in 2003.

Speculators began flocking to **materials, chemical and pharmaceutical companies** that claimed to be doing work on the nanoscale, prompting other companies to rewrite their business descriptions to embrace nanotechnologies. Nanotech became, briefly, a magical buzzword.

Ten years on, precious few of the nanotech stocks and venture-backed startups have delivered on their investment promise... Many of the surviving companies that touted their nanotech credentials or put “nano” in their names now describe themselves as materials companies, or semiconductor companies, or biopharma companies...

Nanotechnology, as some voices [tried to explain years ago](#), wasn't an industry. It was a broad field where engineering and science on a molecular level was begging to take root. It never became an industry itself because the technology behind it enhanced and improved many different industries... And yet each year there are more interesting applications that wouldn't be possible without nanotechnology.

One better-known example is semiconductors, which began employing a 65-nanometer manufacturing process in 2007. Intel this year announced a processor with transistors [measuring 14 nanometers](#), small enough to fit 1.3 billion transistors on a chip, and is pushing for a [10-nanometer](#) process.

Meanwhile, research for new [drug therapies](#) are increasingly relying on molecular-level science, while gold nanoparticles are being [developed](#) as way to diagnose and treat cancers. Touchscreens, LEDs, displays, batteries, water desalination, energy efficiency – all are areas that are benefiting from nanoscience, with products already in the market or approaching there. IBM, for example, is looking into [carbon nanotubes](#) as a promising alternative to silicon, which isn't useful in transistors below 10 nanometers.

Nanotechnology never had its Facebook, its multibillion dollar blockbuster IPO that made clear how a new technology is changing the world. Instead, it's enabling a lot of mostly incremental change in older industries. It may not be as visible as a social network, but it's even more widespread. Most of the investments, however, have been coming not from VCs but from governments or deep-pocketed, diversified giants like IBM or GE.

And while Facebook, like the most celebrated of Silicon Valley's startups, went from idea to ubiquitous product in less than a decade, most nanotechnology applications taking much longer to find a market. That's much longer than the five-to-seven year lifespan of many venture funds, let alone the quarter-to-quarter mentality of many publicly traded companies.

But given that the field is only a couple of decades old, it's not bad. And it's in line with what nanotechnology's more sober advocates have been predicting all along.

<http://time.com/4068125/nanotech-sector/>