

Lessons from Schon -- the worst physics fraudster?

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How did a 31-year-old physicist working at Bell Labs in New Jersey, US, get away with possibly the worst case of physics research fraud known? From claims to have made the world's first organic electrical laser to the fictional construction of the smallest ever transistor, the repercussions of Jan Hendrik Schön's fraud are still felt today, seven years after he was found guilty of scientific misconduct and fired by his employer.

Writing in the May issue of *Physics World*, Eugenie Samuel Reich chronicles how his [fraud](#) shook the scientific world, in abridged and edited extracts from her new book 'Plastic Fantastic'. Reich, a [science](#) journalist in the US, describes how Schön's research developed from colleague-pleasing fibs into world-class deception and asks why the much-celebrated self-correcting nature of [science](#) did not bring the fraud to light sooner.

In 2000 alone, Schön published eight papers in *Science* and *Nature* and became known for his ability to coax materials into superconductors, leading scientists in at least a dozen labs to chase research rainbows, wasting millions of dollars of US government research money.

It was Schön's journal paper describing the construction of molecular transistors that tripped the first domino when two fellow physicists attempted to [patent](#) research that showed that soft lithography could be used to make softer and gentler contact with organic molecules.

Julia Hsu and Lynn Loo were using Schön's paper to show how novel

their experimental progress was when they accidentally stumbled across duplicated data and raised an alarm bell that led eventually to Schön's dismissal.

As Reich writes, "Science was corrected in the Schön case, but not by itself - only because individual scientists made corrections. From would-be replicators in dozens of labs to many sceptics, only a couple of researchers were transformed into whistle-blowers by the unlikely pattern of [duplicated] evidence."

Reich continues, "Fraud was able to stifle questions about Schön's lab technique that would otherwise have been asked, and to turn review processes at journals into opportunities for additional fabrication. Other scientists' support of the fraud was unwitting, but the decision to place so much trust in a colleague was a conscious rationalisation that continues to be defended in science to this day."

Source: Institute of Physics ([news](#) : [web](#))

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