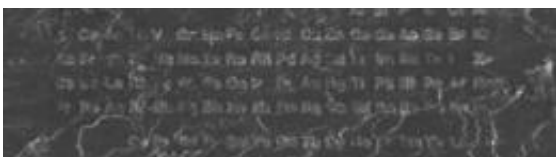


Smallest periodic table fits on the side of human hair (w/ Video)

December 21 2010



Scientists at The University of Nottingham have written what they believe is the world's smallest periodic table -- on the side of a human hair. The table is so small that a million of them could be replicated on a typical post-it note.

Experts from the University's Nottingham [Nanotechnology](#) and Nanoscience Centre used a sophisticated combination of ion beam writer and electron microscope to carve the symbol of all 118 elements into the strand of hair taken from the head of Professor Martyn Poliakoff, an expert in Green Chemistry. You can see how it was done:

Professor Poliakoff said: "Although the application was lighthearted I felt that it enabled us to show people how such nano writing is done. Our microscopist, Dr Mike Fay, made the whole operation seem so simple and really demystified it in a most appealing way."

Professor Poliakoff has become one of the stars of the [Periodic Table of](#)

[Videos](#). What is thought to be the world's tiniest [Periodic Table](#) was presented to him as a birthday present.

To demonstrate just what the very latest technology is capable of nano technologists Dr Fay and Dr Chris Parmenter took advantage of the freezing weather to engrave the words Merry Christmas into a snowflake. You can see them in action:

The video showing the Christmas message being carved onto a shard of snow was made for the physics and astronomy project [Sixty Symbols](#).

Philip Moriarty, Professor of Physics, said: “Although writing on a snowflake is on one hand a bit of seasonal fun, it’s also a neat demonstration of the powerful capabilities of the tools that scientists use in the lab on a day-to-day basis. It’s great that, via Sixty Symbols, we have the opportunity to show a wide audience just how exciting academic research can be.”

Working at the most unimaginable scale, the team feature in the latest videos made by the University’s film maker in residence Brady Haran. Presented by experts from the University his short films take a behind the scenes look at science with the aim of making science fun and unravelling some of the mysteries surrounding the technology and symbols used by scientists.

Brady said: “Making videos like this shows that scientists are like everyone else — they do things for fun at Christmas. But light-hearted videos like these have real educational value. They've already been watched tens of thousands of times and a wide audience has gained a better understanding of how electron microscopes work and what they can do. It is just another example of how learning can be quite good fun.”

The University of Nottingham has a broad research portfolio but has also identified and badged 13 research priority groups, in which a concentration of expertise, collaboration and resources create significant critical mass. Key research areas at Nottingham include energy, drug discovery, global food security, biomedical imaging, advanced manufacturing, integrating global society, operations in a digital world, and science, technology & society.

Through these groups, Nottingham researchers will continue to make a major impact on global challenges.

Provided by University of Nottingham

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