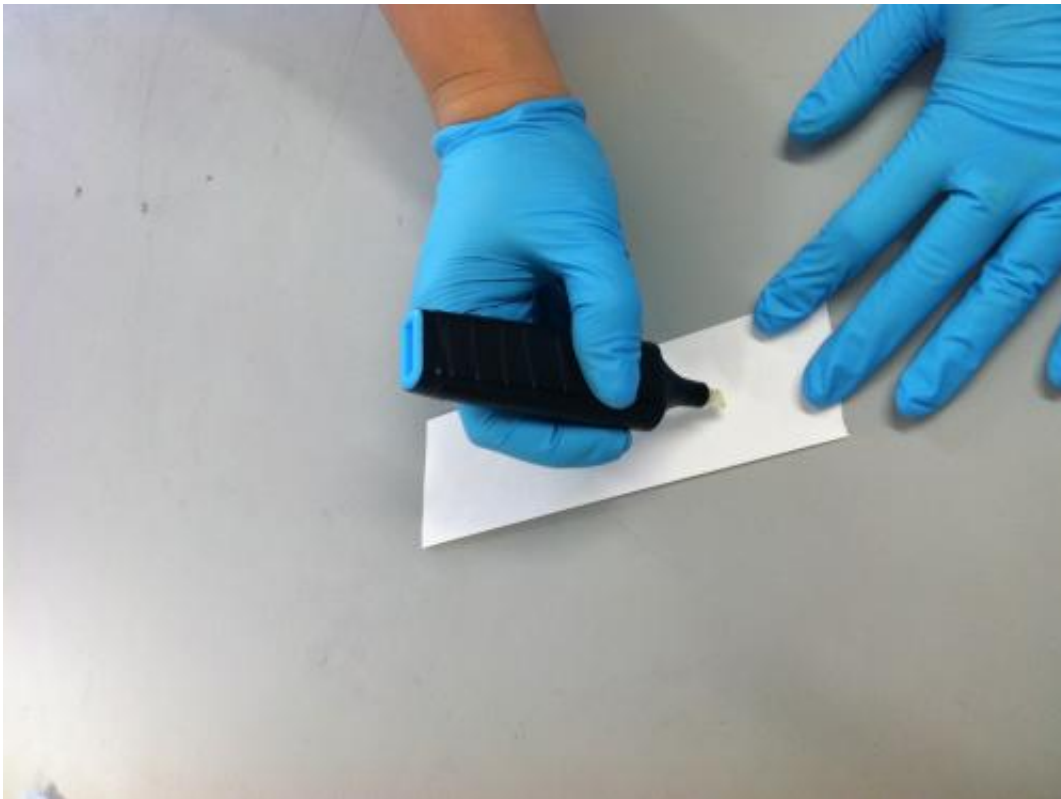


Technology can identify the hidden properties of receipts containing fingerprint deposits

October 7 2014



Images show the 'magic' marker pen in action. Credit: University of Leicester

A crime-fighting 'magic' marker pen that can identify the hidden properties of receipts containing fingerprint deposits within a matter of seconds is one of many innovative gadgets developed by scientists at the

University of Leicester that will be demonstrated at the Knowledge Transfer Network's (KTN) 'Applications of Forensic Science Research and Development Technology Showcase 2014' event on Wednesday 8 October in London.

The pen, which has been developed by Dr John Bond OBE from the University's Department of Criminology, provides forensic experts, police and criminal investigators with an easy-to-use method of determining whether a receipt, such as those from petrol stations, supermarkets and ATMs, is printed on thermal paper.

The pen works by initiating a chemical reaction on the paper that changes its colour if it is thermal.

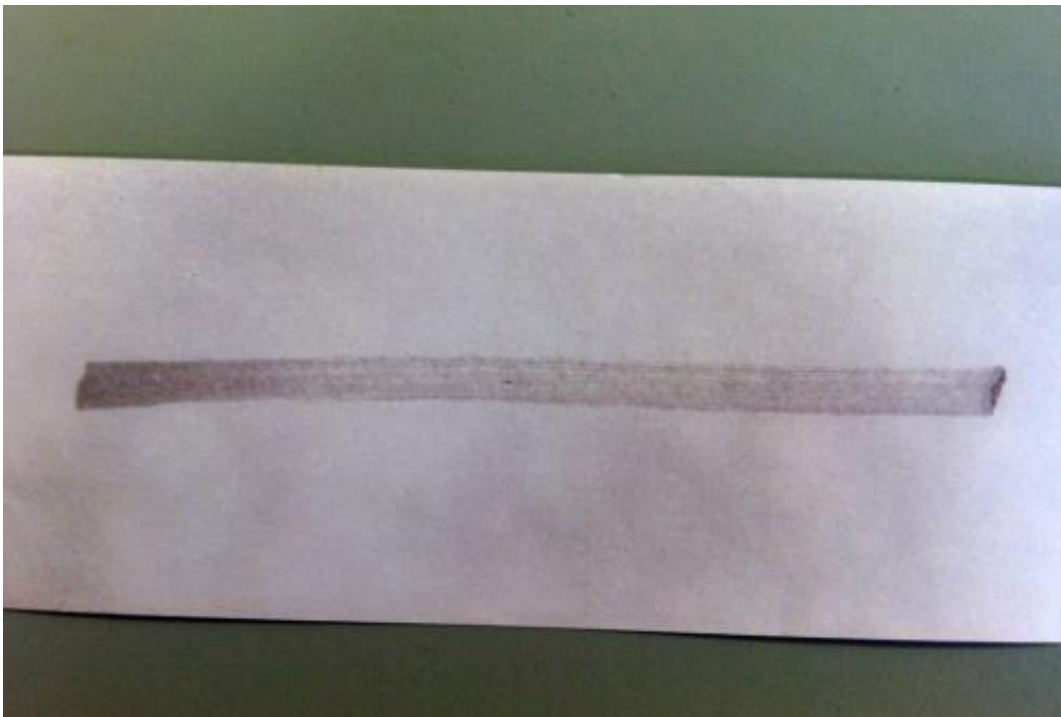
Once identified as thermal paper, another gadget Bond will be showing at the event comes into play - a specially designed light source for identifying fingerprints on thermal paper that can be used to catch criminals by the paperwork they have been touching.

Dr Bond explained: "The 'magic' marker pen works by impregnating the paper with a small amount of a chemical that I discovered will react with the dye, changing its colour. This chemical is mixed with others in the marker to provide a viscous liquid, ideally suited for application with a marker-type pen.

"The idea is that a small corner of the receipt could be marked with the pen and if it changes colour it is thermal paper. Touching a small corner of the receipt will minimise the potential destruction of any fingerprints on the paper, helping to retain forensic evidence. The pen-like shape of the device will be handy to have in the pocket for technicians to apply as and when it is needed."

The conventional method of treating non-thermal paper turns [thermal](#)

[paper](#) black, obliterating any fingerprints in the process, which cannot be undone. The pen allows for paper to be quickly identified, which will be useful in criminal investigations when extracting fingerprints from a variety of paper documents is necessary.



Images show the ‘magic’ marker pen in action. Credit: University of Leicester

Both technologies will be demonstrated at the prestigious KTN event, supported by the Home Office Centre for Applied Science and Technology (CAST) and Innovate UK, which strives to take new ideas and concepts to market.

Dr Julie Pratt from the University's Enterprise and Business Development Office said: "Dr Bond has the knack of identifying problems that have impeded the efficient identification and visualisation

of latent fingerprints and then develops simple, low cost, rapid and robust solutions, ideal for implementation by forensic technicians. These solutions are ready to go and Leicester is looking for a licensing partner to manufacture and sell the products."

Dr Bond added: "It is very prestigious for the University of Leicester to be represented at events like this that showcase innovation and, in this instance, forensic innovation.

"Enabling the police service to make use of advances in technology is very important in helping to solve and reduce crime and I'm proud that our work is recognised in this way by the Forensic Science Special Interest Group at Innovate UK."

Provided by University of Leicester

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