

Fingerprint analysis technique could be used to identify bombmakers

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University of Leicester experts have held discussions with military personnel in Afghanistan following the discovery of new technology to identify fingerprints on metal.

Dr John Bond, a forensic research scientist at the University of Leicester and scientific support manager at Northamptonshire Police, has worked with a team from the University Department of Chemistry to develop the novel technique.

The state-of-the-art forensic method that can identify fingerprints on bullets could now be used on bombs. The new techniques can pick up fingerprints on metal even after they have been wiped off.

After the research was published earlier this year, Dr Bond has been approached by military personnel in Afghanistan to discuss potential use of the technique.

Dr Bond is investigating whether the technique can be used to find prints on roadside bombs. It would mean recovered fragments of bombs could be tested for prints put on it while it was manufactured.

Dr Bond said " We have developed a method that enables us to 'visualise fingerprints' even after the print itself has been removed. We conducted a study into the way fingerprints can corrode metal surfaces. The technique can enhance – after firing– a fingerprint that has been deposited on a small calibre metal cartridge case before it is fired.

"For the first time we can get prints from people who handled a cartridge before it was fired. Wiping it down, washing it in hot soapy water makes no difference - and the heat of the shot helps the process we use.

"The procedure works by applying an electric charge to a metal - say a gun or bullet - which has been coated in a fine conducting powder, similar to that used in photocopiers.

"Even if the fingerprint has been washed off, it leaves a slight corrosion on the metal and this attracts the powder when the charge is applied, so showing up a residual fingerprint.

"The technique works on everything from bullet casings to machine guns. Even if heat vaporises normal clues, police will be able to prove who handled a particular gun."

Dr Bond said they had found the method worked well on certain metals including brass which is often used for bullet casing.

Source: University of Leicester

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