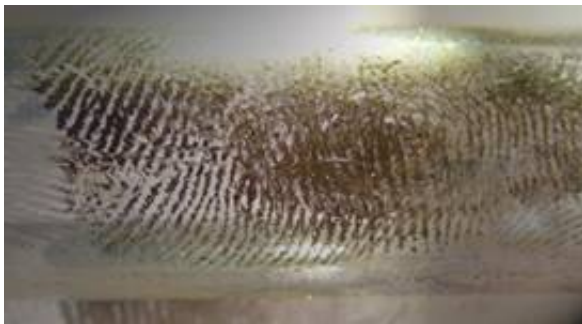


# UK fingerprint 'developer' can read a letter from its envelope

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Provided by Royal Society of Chemistry

(PhysOrg.com) -- UK scientists have discovered a fingerprint "developer" which can highlight invisible prints on almost any surface – and read the text of a letter just from the envelope it was sent in.

Paul Kelly and colleagues at Loughborough University found that a disulfur dinitride ( $S_2N_2$ ) polymer turned exposed fingerprints brown, as the polymer reaction was initiated from the near-undetectable remaining residues.

Traces of inkjet printer ink can also initiate the polymer. The detection limit is so low that details of a printed letter previously in an envelope could be read off the inside of the envelope after being exposed to  $S_2N_2$ .

"A one-covers-all versatile system like this has obvious potential," says Kelly.

"This work has demonstrated that it is possible to obtain fingerprints from surfaces that hitherto have been considered extremely difficult, if not impossible, to obtain," says Colin Lewis, scientific advisor at the UK Ministry of Defence. "The method proposed has shown that this system could well provide capabilities which could significantly enhance the tools available to forensic scientists in the future."

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