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WO2016042337

New high performance finger print powders

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Capturing the Value of Intangible Assets

New high performance fingerprint powders

Details

Title of the patent: Fingerprint powder composition

Legal Status:

UK-	Granted
USA-	Granted

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Introduction

UCLan patented research has developed a powder composition, in particular a fingerprint powder composition for the visualisation of latent fingerprints. It comprises of carbogenic nanoparticles which, when mixed with a suitable diluent (including any existing or future fingerprint powders), exhibits excitation- dependent emission properties which enable the fingerprint powder compositions and imagable fingerprint impression patterns formed thereform to be imaged in a variety of different colours by simply varying the wavelength(s) of any excitation radiation.

As certain backgrounds can render visualisation of fingerprint impression patterns very difficult, having the flexibility to judiciously tune the foreground colour of the fingerprint impression patterns is a significant advantage since it permits instantaneous improvements in visualisation without needing to resort to using a different fingerprint powder. The invention also relates interalia to corresponding methods and specialised apparatus for fingerprinting

Description

UCLan research have produced a fingerprint powder composition (FPC) comprising carbogenic nanoparticles (CNPs) and a diluent. The invention also provides a kits of parts comprising a fingerprint powder (FP) and carbogenic nanoparticles. Additionally, we have produced a method of preparing a fingerprint powder composition, including providing carbogenic nanoparticles (e.g. as pre-formed carbongenic nanoparticles) and blending the carbogenic nanoparticles with a diluent.

The method of fingerprinting includes; coating a surface, comprising or suspected of comprising a latent fingerprint, with a fingerprint powder composition; developing an imagable impression pattern of the latent fingerprint within or from the coating of fingerprint powder composition optionally tape-lifting the imagable impression pattern of the latent fingerprint from the surface; optionally imaging (e.g. photographing) the imagable impression pattern of the latent fingerprint

Core Advantages

The present invention provides a single fingerprint powder which may be appropriate for use on different background surfaces, rather present practice where different fingerprint powders must be used for different background surfaces in order to achieve optimal contrast between the fingerprint pattern and the background.

The fingerprint powder compositions of the invention allow the forensic investigator to "dust for fingerprints" on radically different backgrounds with just a single fingerprint powder, thereby avoiding the inconvenience of carrying multiple types of fingerprint powders or poor results if a single traditional fingerprint powder is used.

Above-mentioned benefits can be achieved without imparting toxic properties to a fingerprint powder (as may otherwise be the case if heavy metal-based quantum dots were used instead).

Overall, the invention provides a simple, convenient, inexpensive, and versatile solution to the problems inherent with the prior art, and f facilitates the use of automated equipment which makes the forensic investigator's job much easier.

Application

The benefits of the invention may be realised in fields beyond forensics and, as such, the invention also provides a powder composition (not necessarily limited to the field of fingerprinting) comprising carbogenic nanoparticles (CNPs) and a diluents, where all features relating to the fingerprint powder compositions defined herein may be equally applied to said general powder compositions.

Likewise, all kits, methods, uses, imageable impression patterns, imaging apparatuses, computer software, etc. defined herein in relation to fingerprint powder compositions may be equally applicable or adapted to be applicable to general powder compositions. In certain embodiments, said powder compositions may be used in articles intended to exhibit different output emissions in response to different input radiation

The full patent submission can be seen at:

https://worldwide.espacenet.com/publicationDetails/biblio?CC=WO&NR=2016042337A1&KC=A1&FT=D

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For more details about a specific UCLan technology and answers to general questions about thispatent or collaborating with us or licensing our Intellectual Property, please contact

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