

BREVET DE TECHNICIEN SUPÉRIEUR

PRODUCTIQUE TEXTILE

Option FILATURE
Option BONNETERIE
Option TISSAGE
Option ENNOBLISSEMENT

ANGLAIS

Durée : 3 heures Coefficient : 2
L'usage du dictionnaire bilingue est autorisé.

CALCULATRICES ET TRADUCTEURS ÉLECTRONIQUES INTERDITS

*Dès que le sujet vous est remis, assurez-vous qu'il est complet.
Ce sujet comporte 3 pages numérotées de 1/3 à 2/3.*

DOCUMENT 1



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Washing no longer dirty work

HONG KONG (CNN) – Two Chinese scientists have come up with the perfect solution to every laundrophobe's biggest problem – by developing clothes that never get dirty.

Reminiscent of scenes from the 1951 film "The Man in the White Suit," in which Sir Alec Guinness plays a scientist who invents a fabric that never needs cleaning, the scientists have developed a textile that cleans itself.

Materials scientist Dr. Walid Daoud and textile scientist Dr. John Xin, both from The Hong Kong Polytechnic University (PolyU), used nanotechnology – whereby the tiniest particles available to man are used – to come up with the concept.

They built a thin layer, or "nanostructure," using minute particles of titanium dioxide, a substance that reacts with sunlight to break down dirt and other organic material and can be coated on cotton to keep the fabric clean.

Dr. Daoud said the clothes simply needed to be exposed to natural or UV light for the cleaning process to begin. Once triggered by sunlight, clothing made out of the fabric will be able to rid itself of dirt, pollutants and micro-organisms.

"Basically the whole thing started when we decided to make fabrics functional and more intelligent," he says.

Dr. Xin said even though the idea sounded futuristic, he believed the technology could be in everyday use in the near future. The scientists have been approached by several companies interested in making the concept a commercial reality.

He said the technology was complicated and the process to decompose the dirt was gradual.

Self-cleaning clothes would be ideal for people who don't have time to wash their clothes or don't have the facilities to do so, he believed.

"Like military people, or travelers, people who go hiking, who don't have a lot of water and time to wash their clothes," he said.

"This is a very good idea because then if the clothes get dirty, the dirt can be decomposed by the fabric itself. So after a few days in the sunshine, or even indoor light, the dirt will disappear."
He hoped to see the technology applied to clothing and interior textiles and other similar areas.

CNN's Phil O'Sullivan contributed to this story.

Find this article at:

<http://edition.cnn.com/2004/TECH/07/20/selfclean.clothes/index.html>

freedom

a time to create and a time to relax

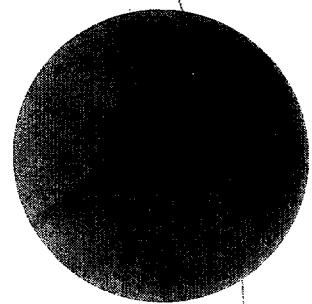
DOCUMENT 2

The power to choose enriches everything you do with the delicious flavor of freedom. You try to make the optimal choices about the kind of work you do, about your friends, about your leisure activities and your time off. You work and create, you travel and relax, you run, you stop and refuel, and sometimes, you just completely let go. Chasing the clock to fit it all in, you need clothes that will catch up with your pace.

Comfortable and versatile, Sensil® fibers go with you wherever you need or choose to go. With fabrics that offer designers new degrees of freedom to create to their imagination's delight, Sensil® allows you to truly free yourself.



Sensil® yarns can be used in seamless and circular knitting, offering designers the freedom to create activewear, swimwear and lingerie to their hearts' delight.



TRAVAIL A EFFECTUER

I. COMPTE RENDU EN FRANÇAIS (8 points)

Rendre compte **en français**, de manière ordonnée et cohérente, des éléments essentiels exposés dans le **DOCUMENT 1**.
(160 mots)

II. EXPRESSION EN ANGLAIS (12 points)

1) Do **you** think we'll wear self-cleaning clothes in the near future? Why or why not? (100 mots)

(4 points)

2) Describe and analyse **DOCUMENT 2**. (100 mots)

(4 points)

3) Can you think of other innovations in textiles that could become reality in the near future? (100 mots)

(4 points)