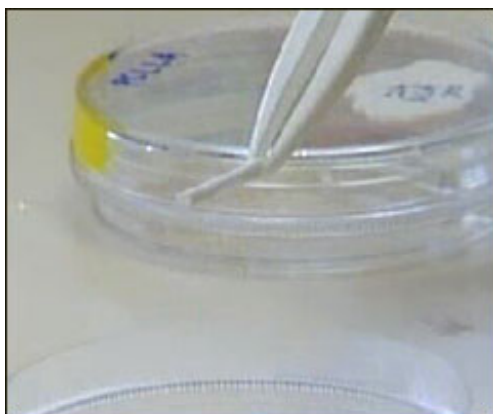



Affiliate Sites
[938LIVE](#) [Today](#)
[Home](#)
[Quick News](#)
[Singapore](#)
[Asia Pacific](#)
[World](#)
[Business](#)
[Sports](#)
[Technology](#)
[Analysis](#)
[Finance](#)
[Forum](#)
[Lifestyle](#)
[Video](#)
[TV Shows](#)
[Weather](#)
[About Us](#)
[RSS](#)
[7 Day News Archive](#)
Singapore News »

 Time is GMT + 8 hours
Posted: 15 June 2006 1651 hrs

NUS researchers develop nanofiber filter for bio-chemical defence

By Hasnita A Majid, Channel NewsAsia

SINGAPORE : Researchers from the National University of Singapore (NUS) have developed a material that changes chemical agents into non-toxic ones.

The material uses nanofibers.

A nanofiber is about 100 times smaller than the breadth of a strand of hair.

The S\$200,000 project is funded by the Defence Science And Technology Agency.

When there is a chemical attack, gas masks and protective suits come in handy when they use activated carbon in canisters to absorb the chemical gas such as sarin.

However, these protective suits are also uncomfortable as they are non-porous.

But a new nanofiber material developed by NUS may make a difference.

Made by electrospinning a starch-based compound, the nanofiber filter not only absorbs but also neutralises the chemical agents into non-toxic substances.

Professor Seeram Ramakrishna, Dean, Faculty of Engineering, National University of Singapore, said, "We have tested it in the past one year and synthesised the new compound, and we put it through stimulants and we find that it's 10 times better in terms of deactivation of chemical warfare agents, stimulants...it not only absorbs the chemical agents but actually detoxif(ies) them."


News videos

▶ URA, NParks start work on Marina Bay Landscape Masterplan

▶ Singaporeans have right attitudes towards retirement: survey

▶ Singapore adds 45,000 jobs in Q1

[more »](#)


M | T | W | T | F | S | S

TV Programmes

- Programmes
- Top 20 Programmes
- Advertising Rates
- TV Guide
- TV Guide for PDA

[more »](#)**Services**

- E-mail News
- Mobile News
- Newsbox
- Events
- eOffice

Classified Ads

- Friendship
- Garage Sale
- Handphones
- Property
- Vehicles
- Place An Ad

[more »](#)**What's On**

- World Cup Contest
- Experience Asia
- LKY Global Business Plan Competition

Bookmark**As a Homepage**

This nanofiber filter also paves the way for a lighter and more comfortable protective gear.

As they can be manipulated into different designs, this means that when interwoven into protective suits, they will allow moisture and vapour in and out of the protective suits without reducing their protective functions.

They are also expected to be 50-70 percent lighter than charcoal impregnated suits that are currently used.

The nanofiber filter holds much promise as it can be used in other applications.

Because of its ability to absorb and neutralise harmful agents, there are plans, for example, to use this technology in protective masks so that they will be even more effective in hazardous situations.

The nanofiber technology has already been used in NUS' other labs, for example, to create scaffolds for growing stem cells.

In future, there are plans to use it in water and air purification treatment.

This project has been published in the online edition of the international journal "Nanotechnology" and will be published in print version at the end of the month.

NUS has also signed a Memorandum of Understanding with the world's leading company in air filtration - Donaldson Filtration - to collaborate on some projects. - CNA/ms

Copyright © 2006 MCN International Pte Ltd

 [E-mail this page](#)

 [Print this page](#)

 [Forum](#)

Singapore Local News »

- Singaporeans have right attitudes towards retirement: survey
- Smoking ban extended to food outlets from 1 July
- 45,000 jobs created in first three months of this year
- PM Lee visits Australian War Memorial in Canberra
- Tommy Koh receives CH2M HILL's "Building A Better World" award
- Singaporean killed in bus-truck collision in Malaysia
- NTUC working on combining job recreation with skill redevelopment
- Singapore Food Festival to kick off on July 1
- NUS researchers develop nanofiber filter for bio-chemical defence
- World Cup screenings a boon for coffeeshop operators, bane for some residents
- URA, NParks start work on Marina Bay Landscape Masterplan
- Innovative mix of football and art on display outside Raffles City
- Jalan Jurong Kechil site offered for retirement housing

Singapore Business News »

- Singapore adds 45,000 jobs in Q1
- H2 land sales to supply 3,300 hotel rooms to prepare for 2015 tourist target
- Keppel FELS clinches fourth rig order from India
- Yanlord Land Group offering 242m shares at S\$1.08 each in IPO
- Singapore shares close 0.95% higher
- World's first India-focused ETF makes debut on SGX
- Singapore's April retail sales up nearly 7% from a year ago
- Singapore shares rebound but too soon to say if gains sustainable
- Nominations open for 2006 Enterprise 50, e50.startup awards
- M1 disconnects some 100,000 prepaid mobile phone cards

- Singapore-made films going to Shanghai international after successful sales at Cannes
- Cheaper CD blues in Singapore
- Soccer: Woodlands Wellington lose to Sporting Afrique 2-0 in S.League match

[back to top ^](#)

[Affiliate Sites](#) : [CNA.tv](#) | [Teletext](#) | [TODAY](#) | [938LIVE](#) | [Radio Singapore International](#)

[News](#): Asia Pacific, Singapore, World, Business, Technology, Sports, Latest News, Headlines, Summary, 7 Day News Archive [Finance](#):
Currency Outlook, Unit Trusts [Forum](#): Market Talk, Currency Talk, Futures Talk [Information](#): Lifestyle, Newsbox, Events, Travel, TV Guide
[Weather](#): Singapore, Asia Pacific, World [Services](#): Teletext, Chinese site, SMS News Alert, Video, Singapore Stock Monitor, E-mail News
Alerts, Office Tools, Bookstore [Singapore](#): 4D, TOTO, Singapore Sweep [About Us](#): Contact Us, Terms & Conditions, Site Map

Copyright © 2006 MCN International Pte Ltd. All Rights Reserved.

Use of this Site is subject to our terms and conditions of use.

Your continued use of this Site shall be construed as your agreement to abide by our terms and conditions of use.