

SUCCESS
GADGET®



Where there's a will
there's a way

Nanotechnology
Textiles
Development
Research
Cosmetic
Wear



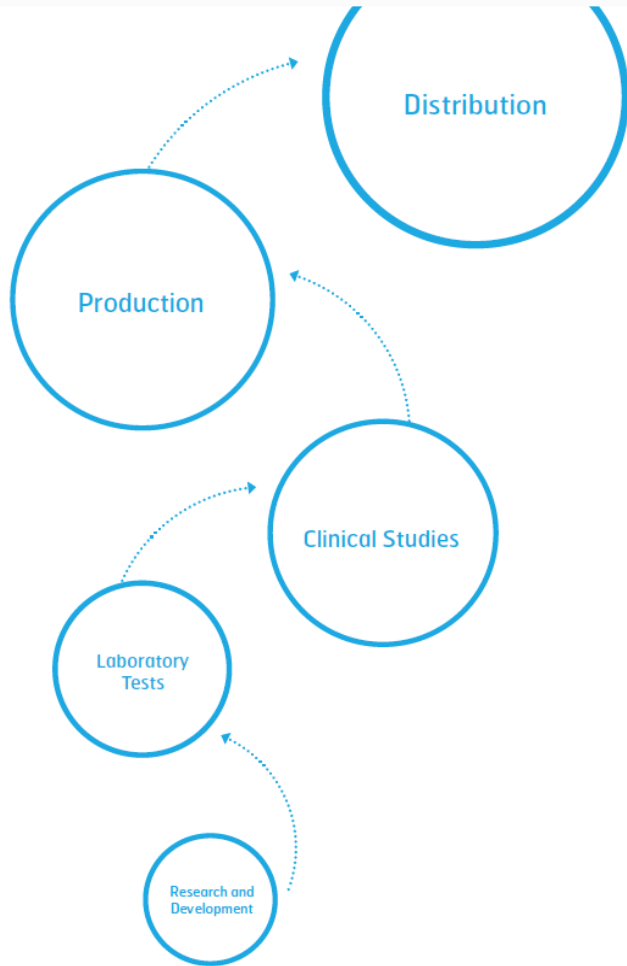
SUCCESS GADGET

OUR MISSION

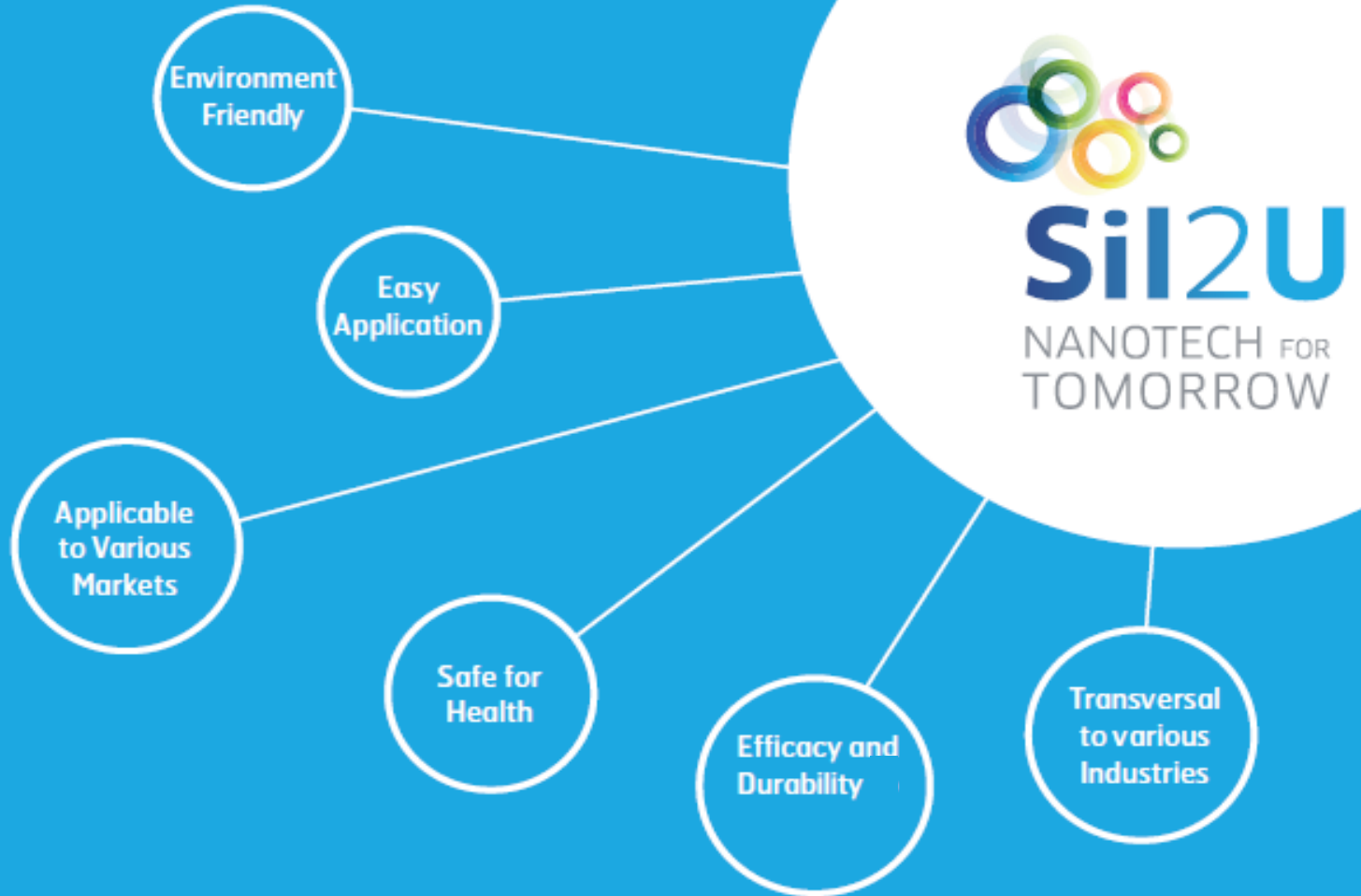
- Design and produce solutions in the field of nanotechnology that minimize and/or solve the needs of people and contribute to a healthier society.
- Identify and develop innovative solutions with high added value to be included in a wide range of applications.
- Challenge the established rules and paradigms, bringing gains in competitiveness and new markets of business.



SUCCESS GADGET



Our technology was initially developed by a Portuguese research group from University of Minho. It was in Success Gadget that the technology was optimized, being known as Sil2U[®].



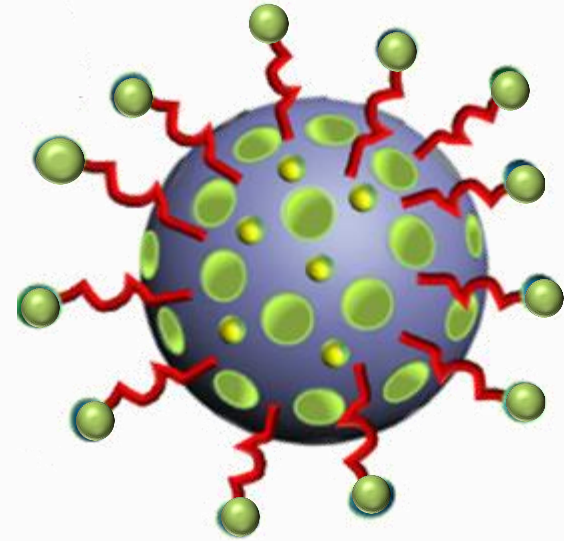
Success Gadget produces, develops and sells Sil2U[®] functionalized particles, revolutionising the paradigms of insect repellents and antimicrobials.

Sil2U[®] grants properties to several materials, through the use of **particles**, which work as a **carrier for the active agents**, attaching them to the substrates.

Active Substance



Sil2U[®] Particles

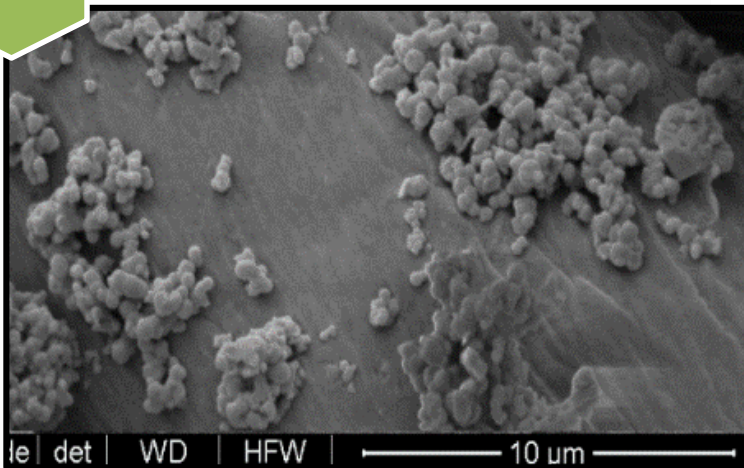


Sil2U[®] Particles
loaded with active
substances

High surface area

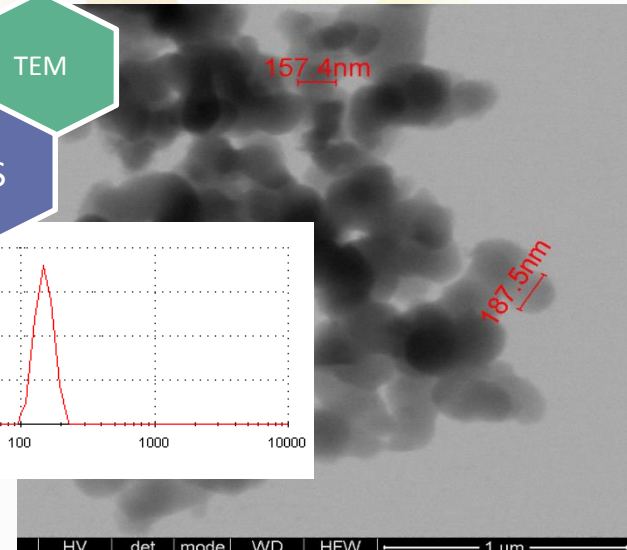
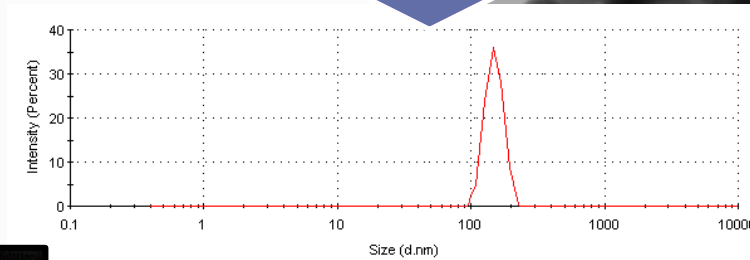
Sil2U[®] silica mesoporous particles, size 100 – 200 nm.

SEM



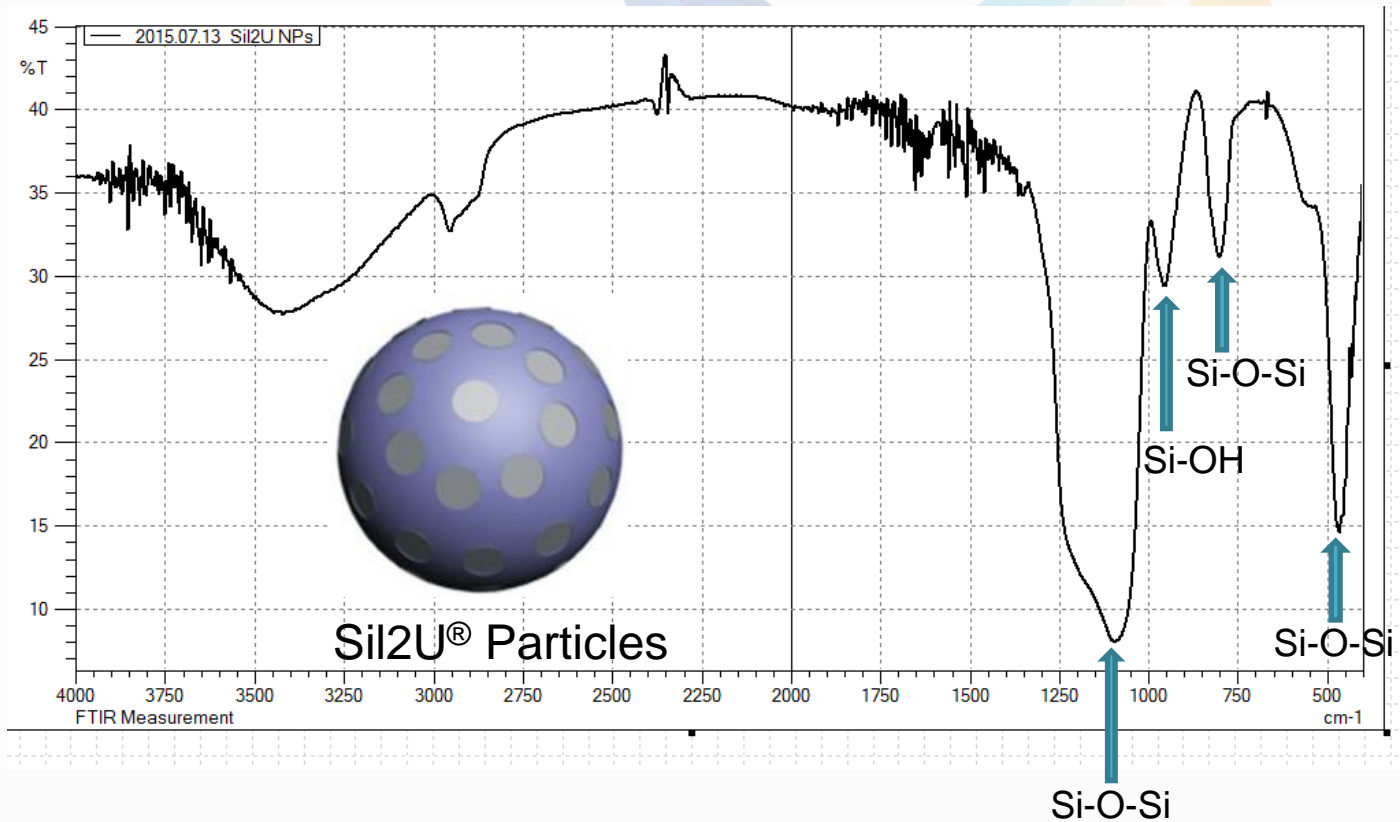
TEM

DLS



Enhances the durability of the active substances on the materials.

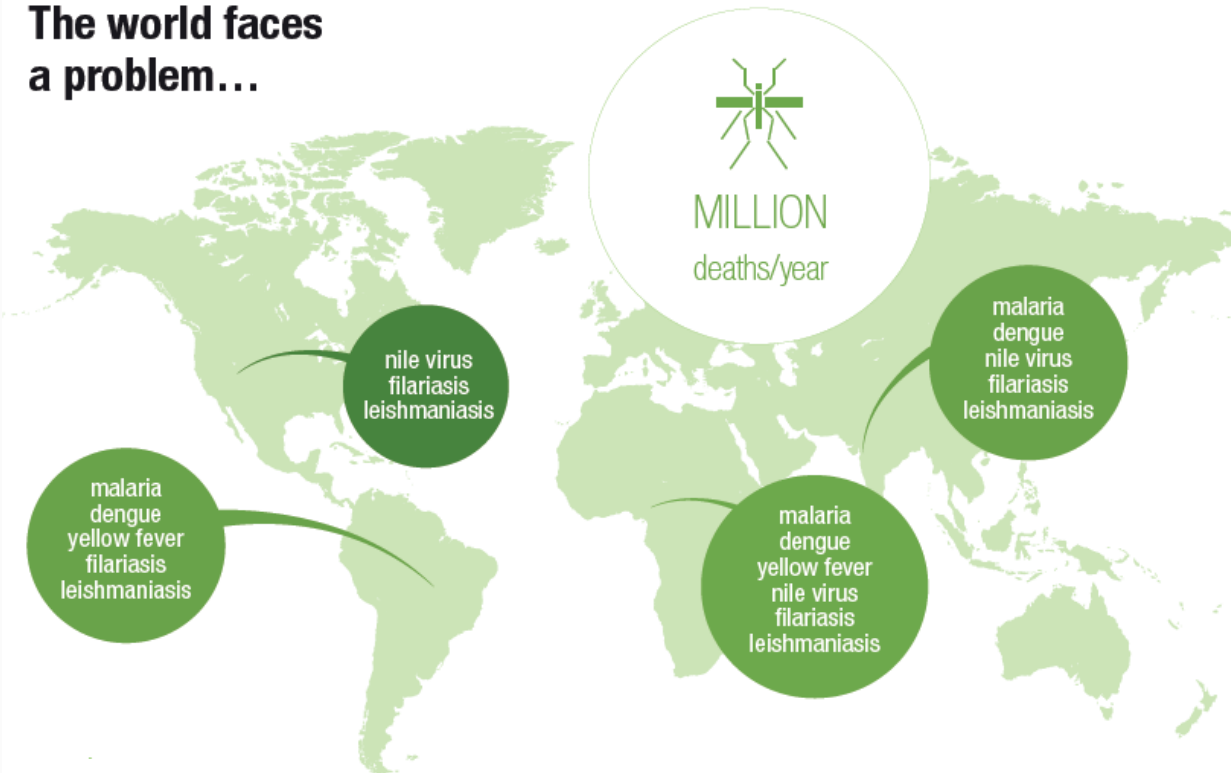
Protects active substances from environmental degradation.



Si2U[®] particles loaded with the active substances.



The world faces a problem...



Mosquitoes

- **Anopheles**
→ Transmission of **malaria** (*Anopheles gambiae*)
- **Aedes and Albopictus**
→ Transmission of **dengue** and **yellow fever** (*Aedes aegypti*)
- **Culex spp.**
→ Role in diseases such as **West Nile virus** and **encephalitis**



Thicks and Chiggers

- **Ixodes and Amblyomma spp.**
→ Known as vectors of tick-borne diseases, like **Lyme disease**, **ehrlichiosis**, **tularemia**



Biting flies

- Like deer, black and stable flies – Capable of transmitting diseases like **fever**, **bartonellosis** and **leishmaniasis**



Head Lice

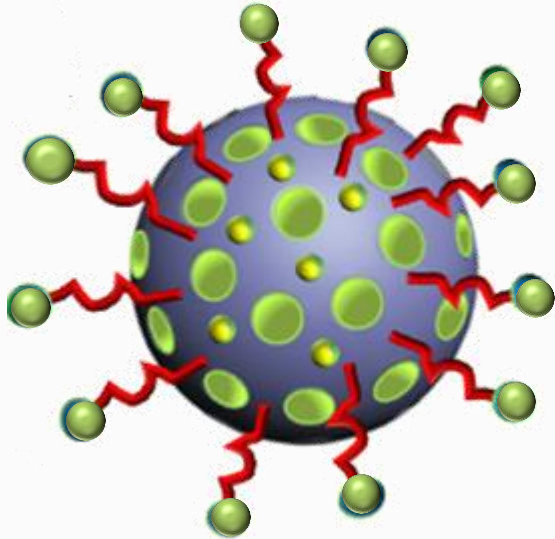
- Cause intense **itching and irritation**, **allergies** and **infections**



Wasps and bees

- Their bite can induce **adverse reactions**, ranging from localized pain and swelling, to potentially fatal conditions

Sil2U® Particles loaded IR3535®



Mode of action olfactory-based effect
(insects avoid entering regions with
IR3535®)

Efficacy Studies Mosquitoes
Ticks and Deer ticks
Lice
Sand flies
Stable flies and Deer flies
Black flies
Wasps and Bees

Key Properties

Safe repellent with excellent toxicological data
Broad spectrum
Skin feel and smell: not sticky, nearly odorless

IR3535®

INSECTICIDES

Repellent

Ticks, Fleas, Mosquitoes, Ants

TOXICITY

NO Skin Irritation Cases

Nothing absorbs into the bloodstream.

ODOR

No odor

SIDE EFFECTS

No side effects!

Killing

Ticks, Fleas, Mosquitoes, Ants

TOXICITY

Skin Irritation Cases

Up to 56% of DEET applied topically penetrates human skin & 17% absorbs into the bloodstream.

ODOR

Strong Chemical Odor

SIDE EFFECTS

Nervous System Damage & Inhibited Motor Skills

Textile

Application	Textile (Kg)	SIL2U (Kg)	Batch (L)	Durability	Protection ²	Detergents resistance
Pad-Batch	1	0.09	1.5	80 Washes ¹	> 95 %	√
Spraying	1	0.09	1.5	80 Washes ¹	> 95 %	√

Different textiles substrates tested:



Aedes aegypti

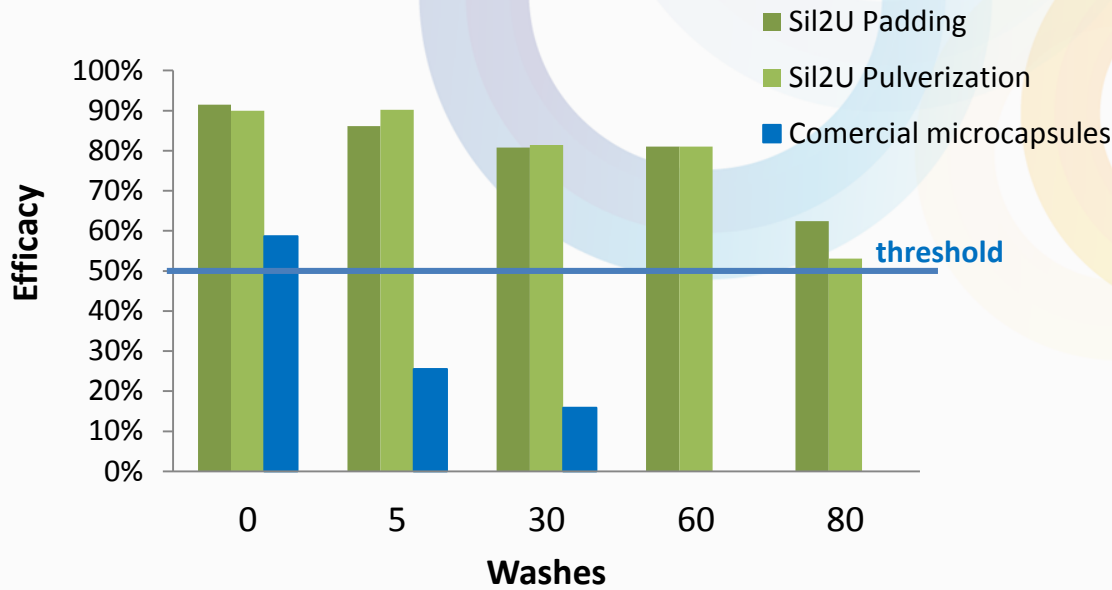
Transmission of **dengue** and **Zika**

Textile

Spray

Cosmetic

Paint Additive



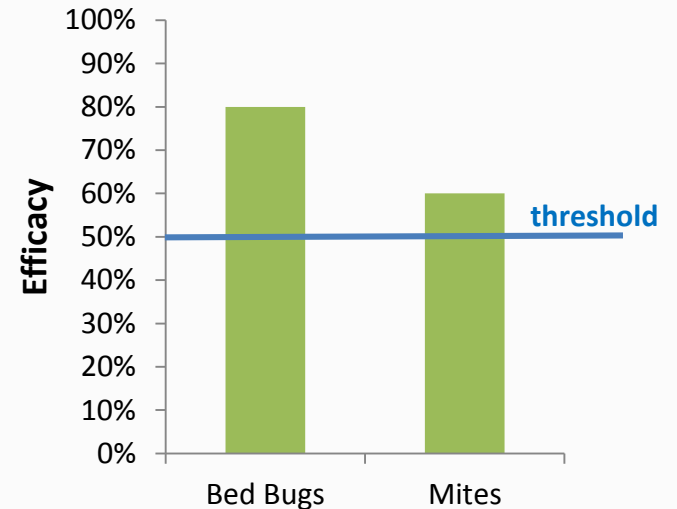
Mosquito
Aedes aegypti
Transmission of **dengue**
and **Zika**



Bed Bug
Cimex lectularius



Mites
Eriophyes tiliae



Sil2U® YouTube Chanel

Sil2U by Succes Gadget - ENglish Version - YouTube



www.youtube.com/watch?v=WJeKavfxN68

Sep 30, 2014 - Uploaded by successgadget

We were the first company in Portugal dedicated to bio functional textiles using nanotechnology in the production ...

<https://www.youtube.com/watch?v=WJeKavfxN68>

Sil2U® Efficacy

Teste Antimosquito - Success Gadget || IHMT - YouTube



www.youtube.com/watch?v=3tNp0BeHFhc

Oct 2, 2014 - Uploaded by successgadget

Ensaio realizado no IHMT, onde são expostas duas caixas com aproximadamente 50 mosquitos cada ...

<https://www.youtube.com/watch?v=3tNp0BeHFhc>