

SUCCESS
GADGET®



Where there's a will
there's a way

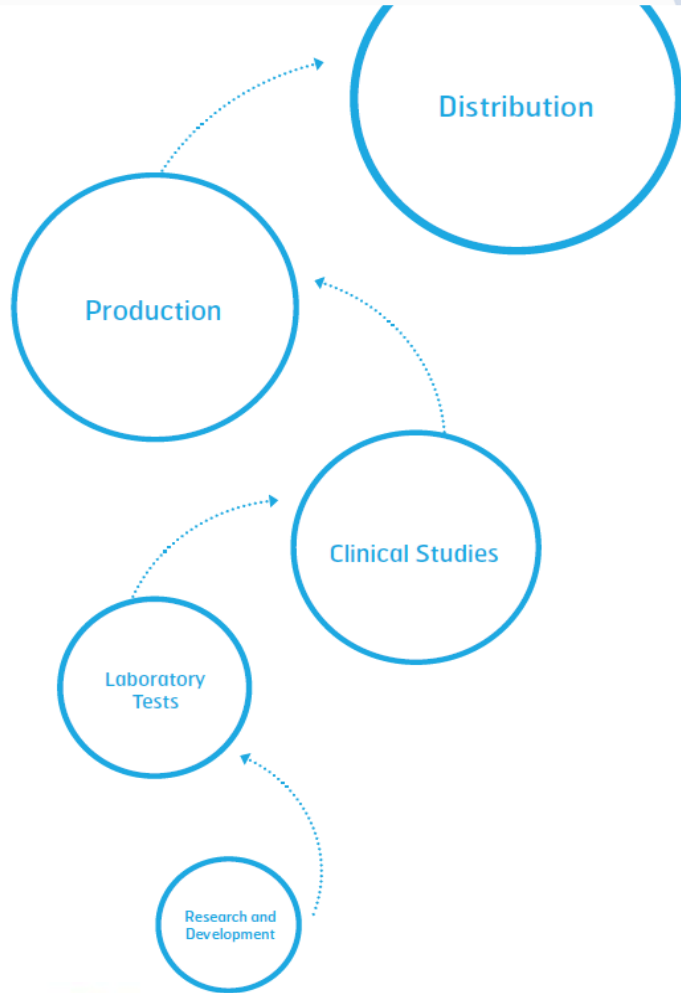
Nanotechnology
Textiles
Development
Research
Cosmetic
Wear



- Design and produce solutions based on nanotechnology that minimize and/or solve people's needs, contributing 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



Success Gadget technology was initially developed by a research group from University of Minho. Lately, the technology was optimized and patented, being known as Sil2U[®].





Environment
friendly

Easy
application

Multimarket
application

Safe for
Health

Efficacy and
durability

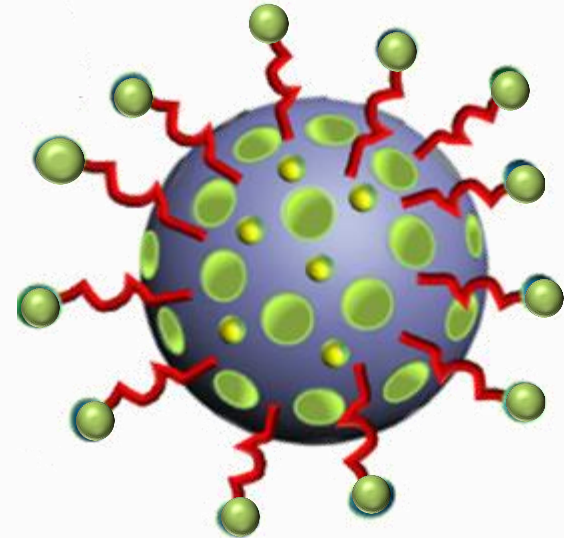
Success Gadget produces, develops and sells Sil2U[®] functionalized particles, revolutionising the paradigms of insect repellents and antimicrobials.

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

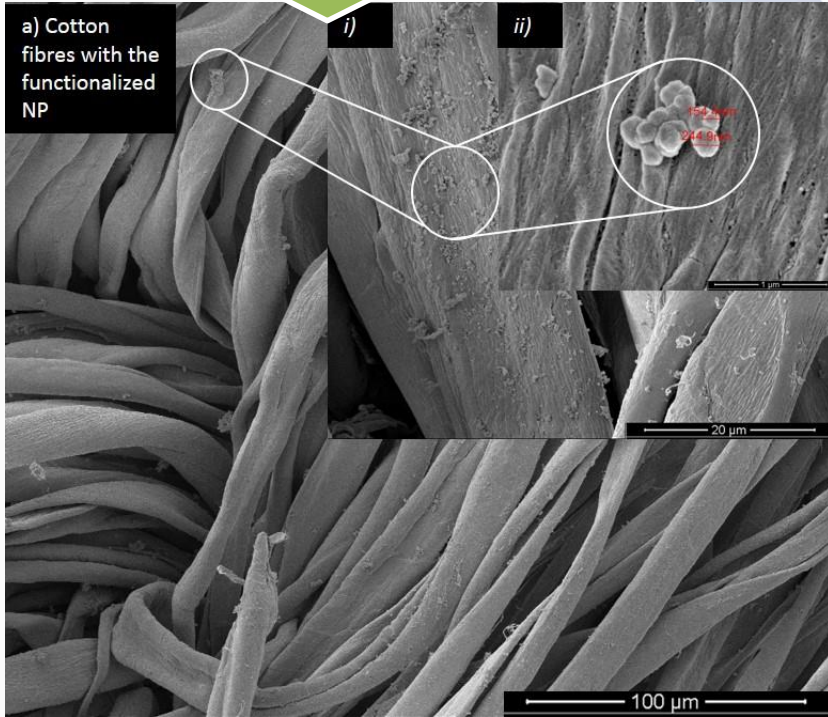


Sil2U[®] Particles



Sil2U[®] Particles
loaded with active
substances

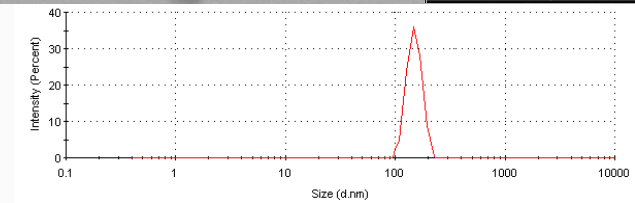
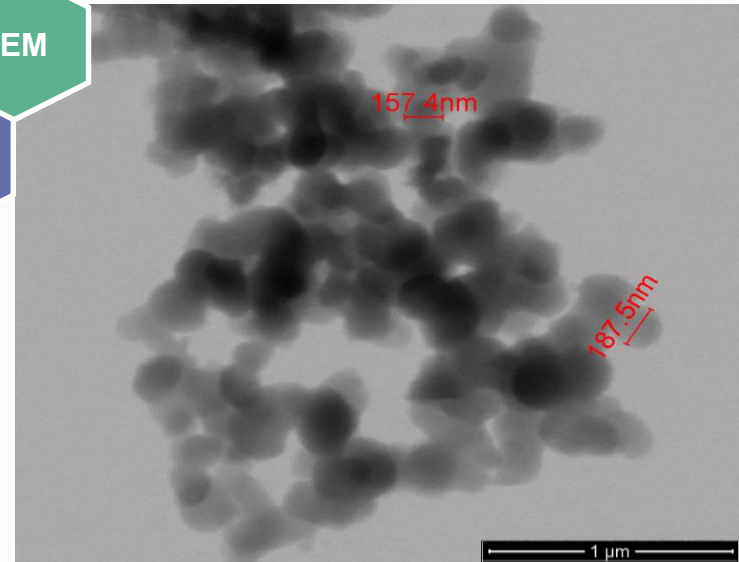
SEM



High surface area

SiI2U[®] silica mesoporous particles, size 100 – 200 nm.

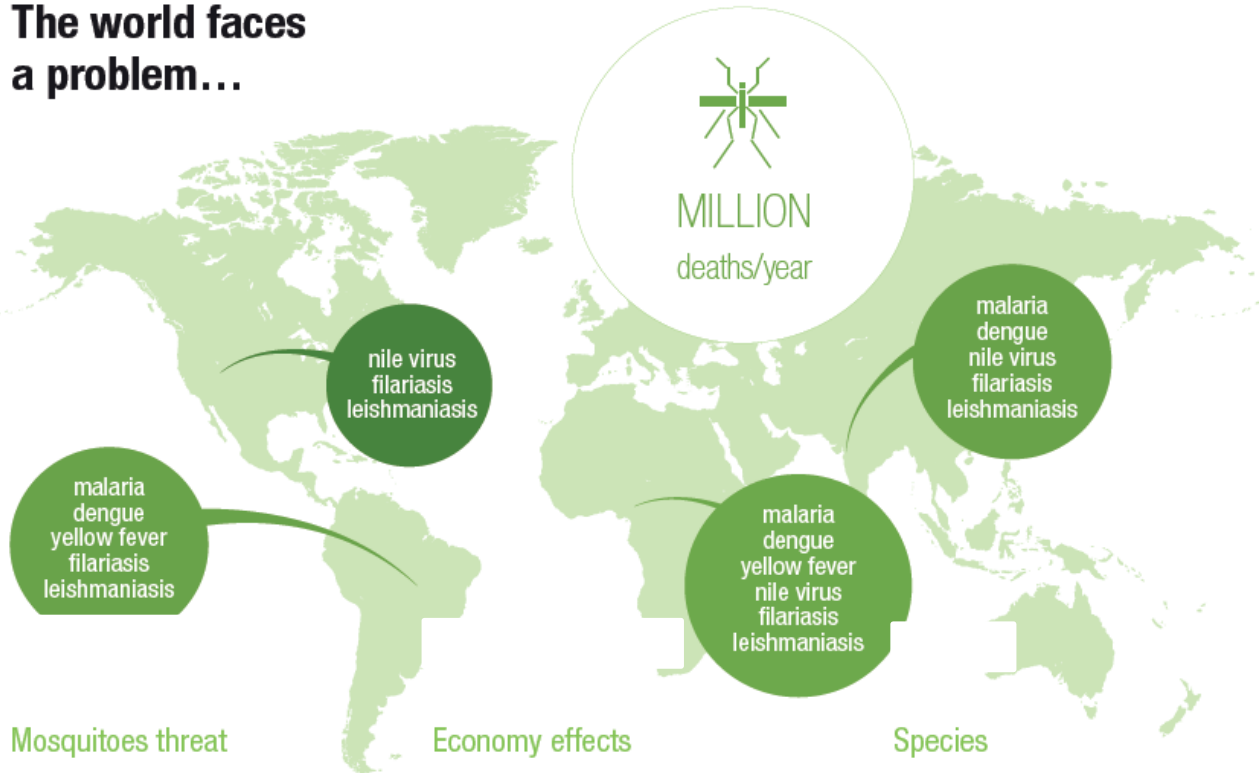
TEM
DLS



Enhances the durability of the active substances.

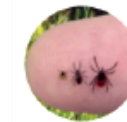
Protects active substances from environmental degradation.

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 **fly fever**, **bartonellosis** and **leishmaniasis**



Head Lice

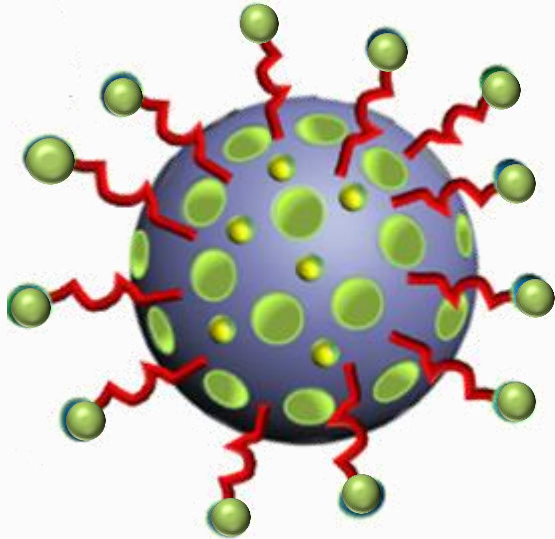
- Cause intense **itching and irritation**, **allergies** and **infections**



Wasps and bees

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

Sil2U[®] Particles loaded with 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

IR 3535[®]

INSECTICIDES

Repellent action

Ticks, Fleas, Mosquitoes, Ants

TOXICITY

NO Skin Irritation Cases

Nothing absorbs into the bloodstream.

ODOR

No odor

SIDE EFFECTS

No side effects!

Killing action

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

APPLICATIONS

Domestic use



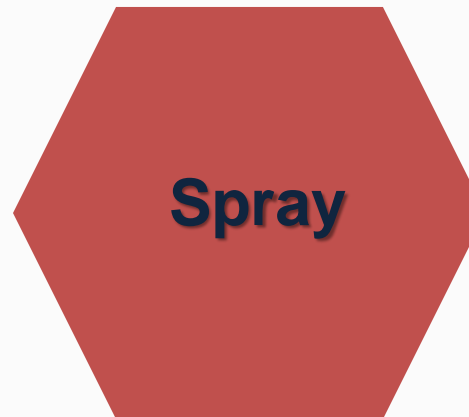
Spray
Wipes
Lotion/cream
Textile softener
Additive



Professional use



Spray
Textile finishing
Additive



Textile

Sil2U[®] Anti-insect Textile Softener, by the use of silica particles loaded with active ingredients, provides lasting **insect repellency properties** to the **textiles** against mosquitoes and flying or crawling insects.

Spray

Active substances: IR3535[®]

Cosmetic

Use: 30 g/L, diluted in water to soak the garments or in a textile facility as softener treatment.

Physical State: Liquid

Paint Additive

Colour: Whitish

Shelf life: 12 months



Aedes aegypti Mosquito¹

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

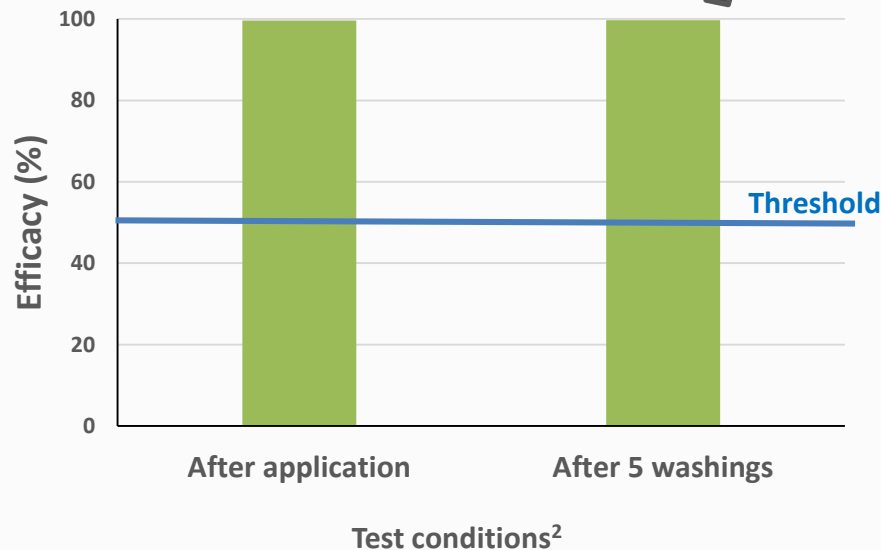
Textile

Spray

Cosmetic

Paint Additive

Hand in Cage technique results



After **30** washes, IR3535 has still quantification in the textiles.

Long term efficacy



Where there's a will there's a way

¹ Washes made according to ISO 105-C06:2010, A1M (10 steel balls)
² Tests based on WHO guidelines (Hand in Cage technique)

Tests performed by



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>