



UNIVERSIDAD
NACIONAL DE
SAN MARTÍN

INS

Instituto de
Nanosistemas

CEP

Ciclo Crítica y Celebración
Fronteras de La Ciencia
Santiago de Chile, 26-9-2018

Nanotecnologías: la nueva frontera

Galo Soler Illia

Instituto de NanoSistemas, UNSAM

www.unsam.edu.ar/institutos/ins



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INS - Established in 2015

7 Research Groups in 2018

Research Projects

- **Nanomaterials Design**
- **Surface Tailoring**
- **BioSensors**
- **Nano-optics**
- **Nanomedicine**
- **Adsorbents**

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Galo Soler Illia
Nanoarchitectures



Diego Pallarola
Cell-Surface



Mariana Hamer
Sensors



Ignacio Boron
Biosensors



Marina Simian
Cancer + nano



Gastón Corthey
Laser femto



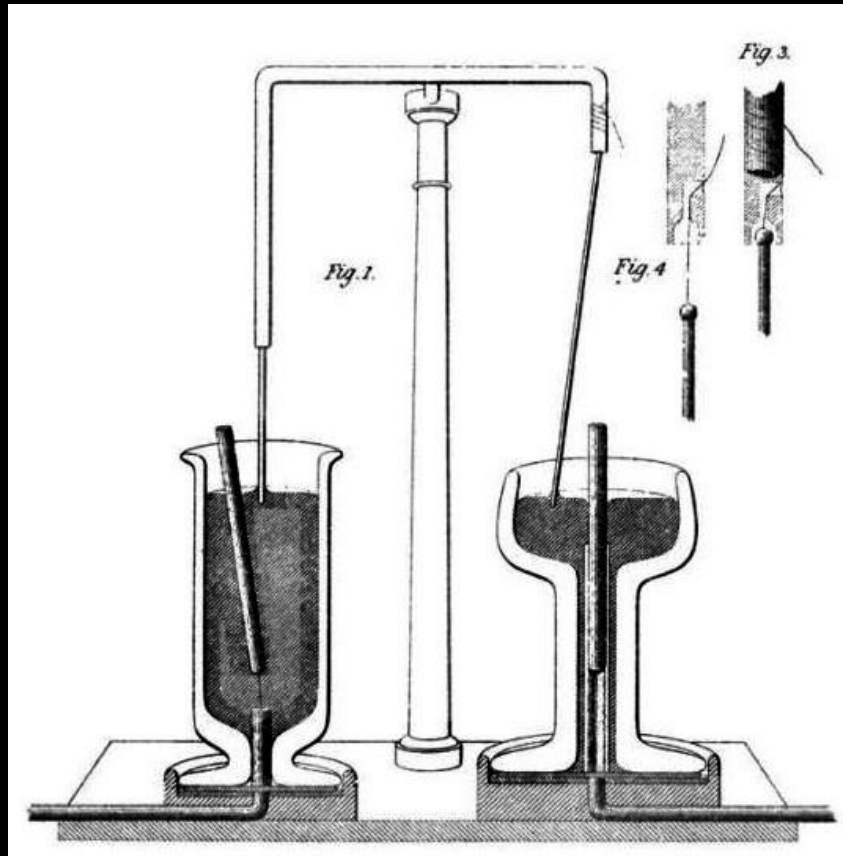
Fernanda Cardinal
Plasmonics



Instituto de Nanosistemas
INS UNSAM



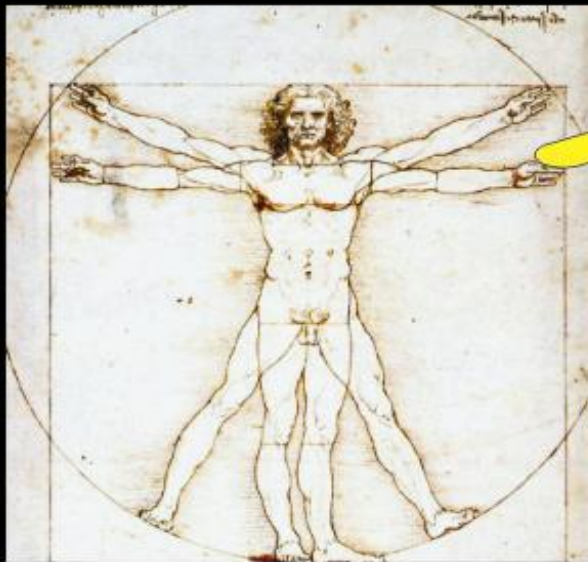
¿Para qué sirve un niño recién nacido?



M. Faraday
1821-Experimento Rotación Mag-El
1845-Teoría del electromagnetismo
1880-Electricidad y motores

R. Highfield, *New Scientist*, 2010

1 m



1 mm



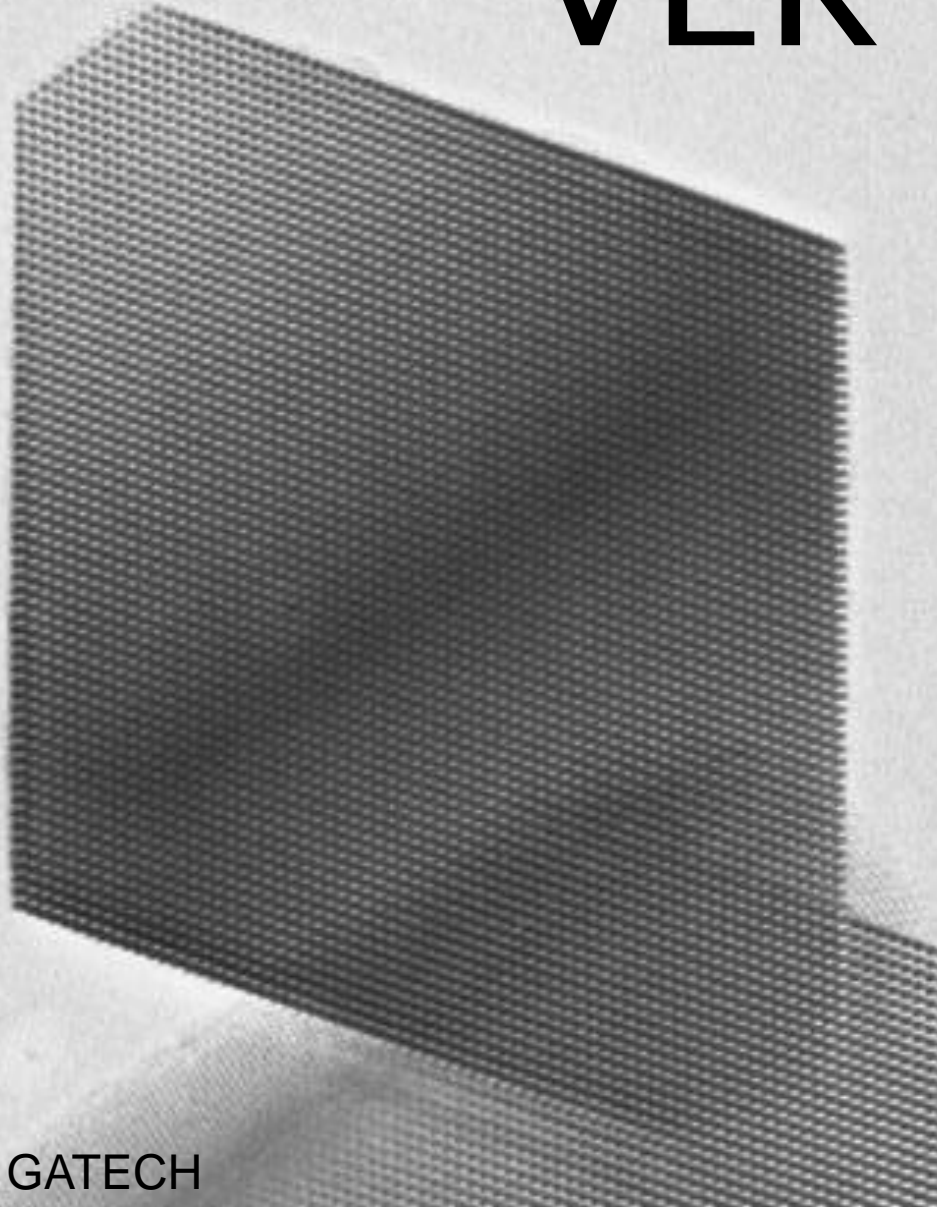
1 micra



1 nm

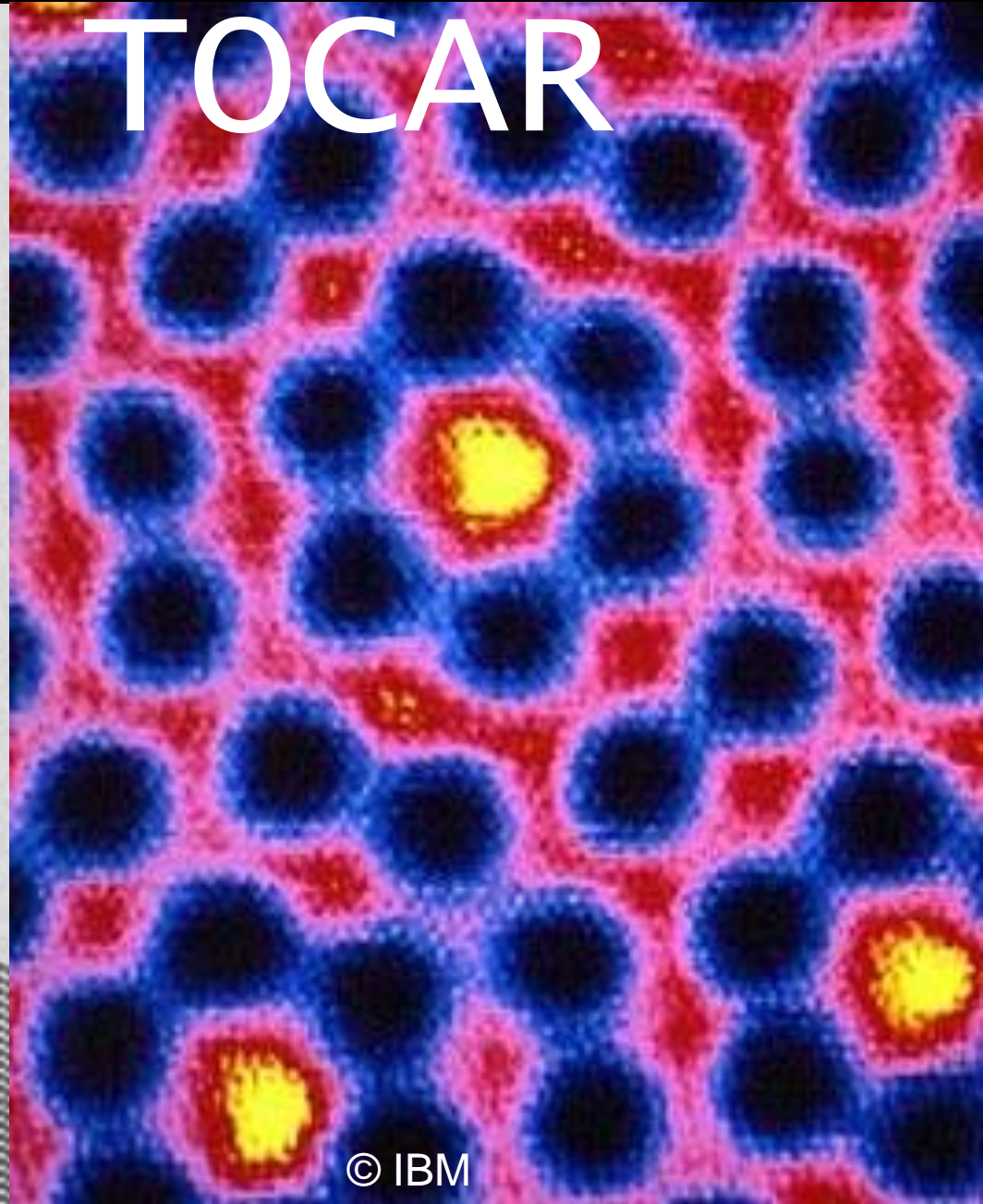
1:1.000.000.000

VER

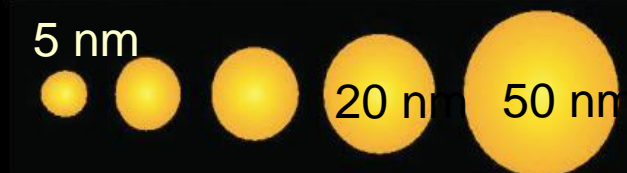
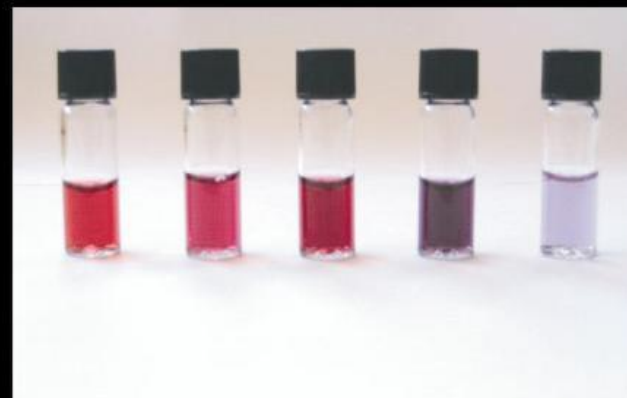
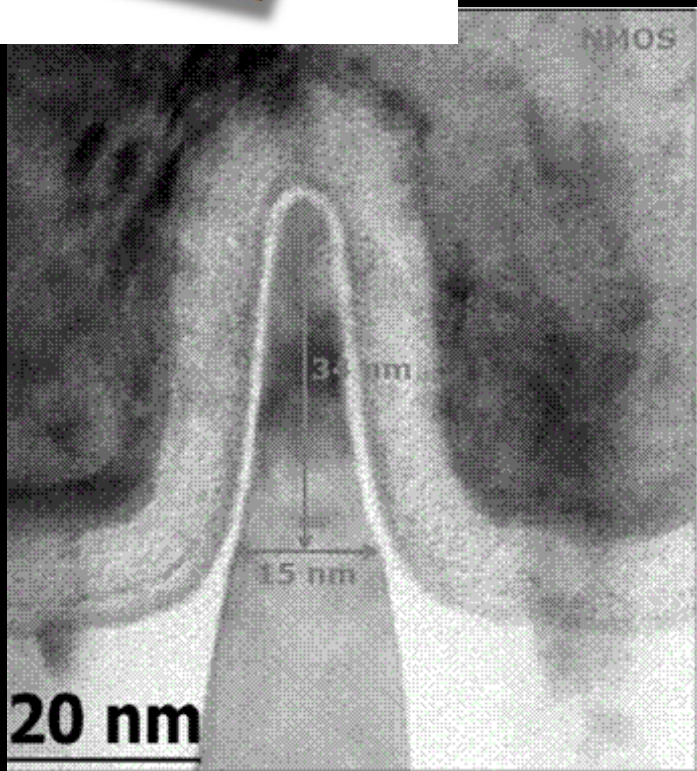


© GATECH

TOCAR

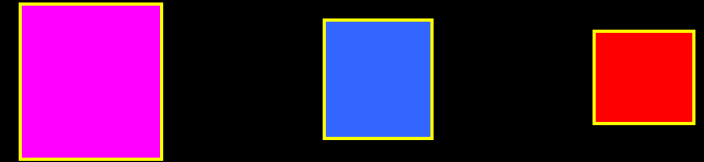


© IBM

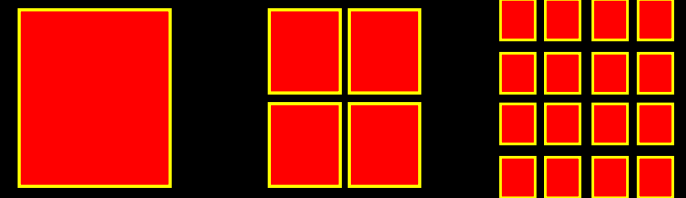


NANOESCALA

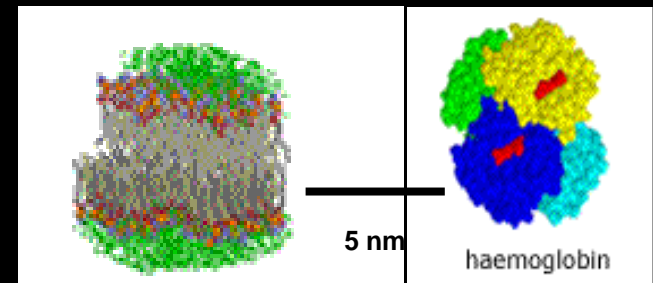
- Las **propiedades** dependen del **tamaño y forma** del objeto



- La relación **superficie:volumen** es enorme



- Objetos nanométricos: **tamaño comparable con objetos biológicos**





Nanotechnology
Products Database

LOGIN | CREATE NEW ACCOUNT

HOME INTRODUCTION STATNANO.COM

Contact us

Product Submission

INTRODUCTION

Nanotechnology Products Database (NPD) provides a reliable source of information about nanotechnology products, currently used in a broad range of industrial applications. ...

A large banner image showing a field of wind turbines in the background and solar panels in the foreground. The sky is clear and blue. A search bar is overlaid on the bottom left of the banner.

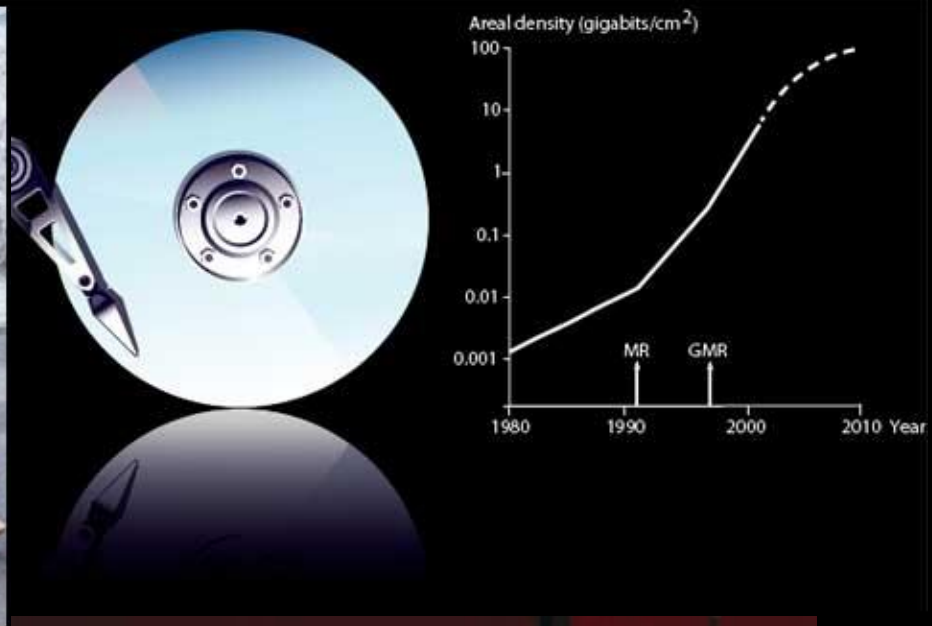
8368 PRODUCTS **2027 COMPANIES** **56 COUNTRIES**

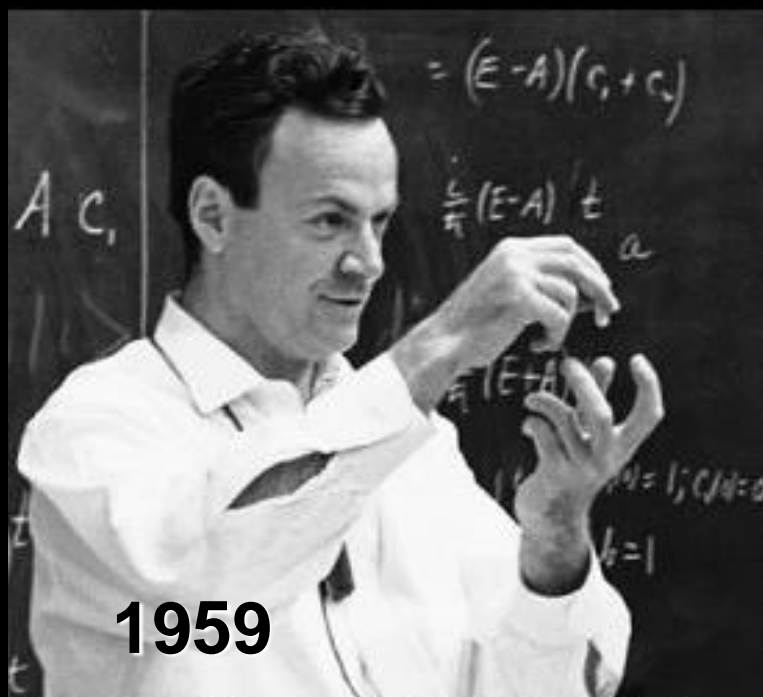
Search in Products, Companies, Nanomaterials, Countries, Industries, Properties and ... **GO**

ADVANCED SEARCH

FEEDBACK

<http://product.statnano.com/>

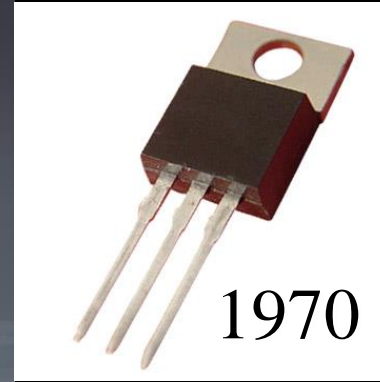




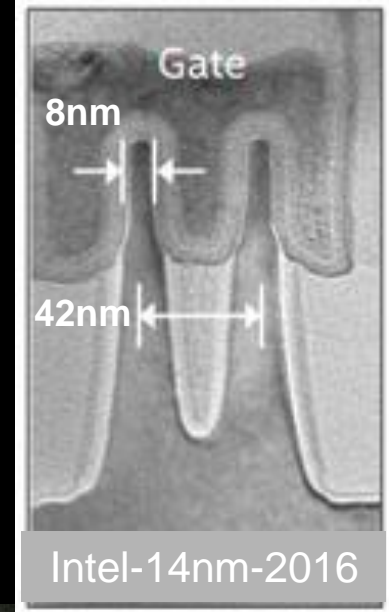
1959



1947

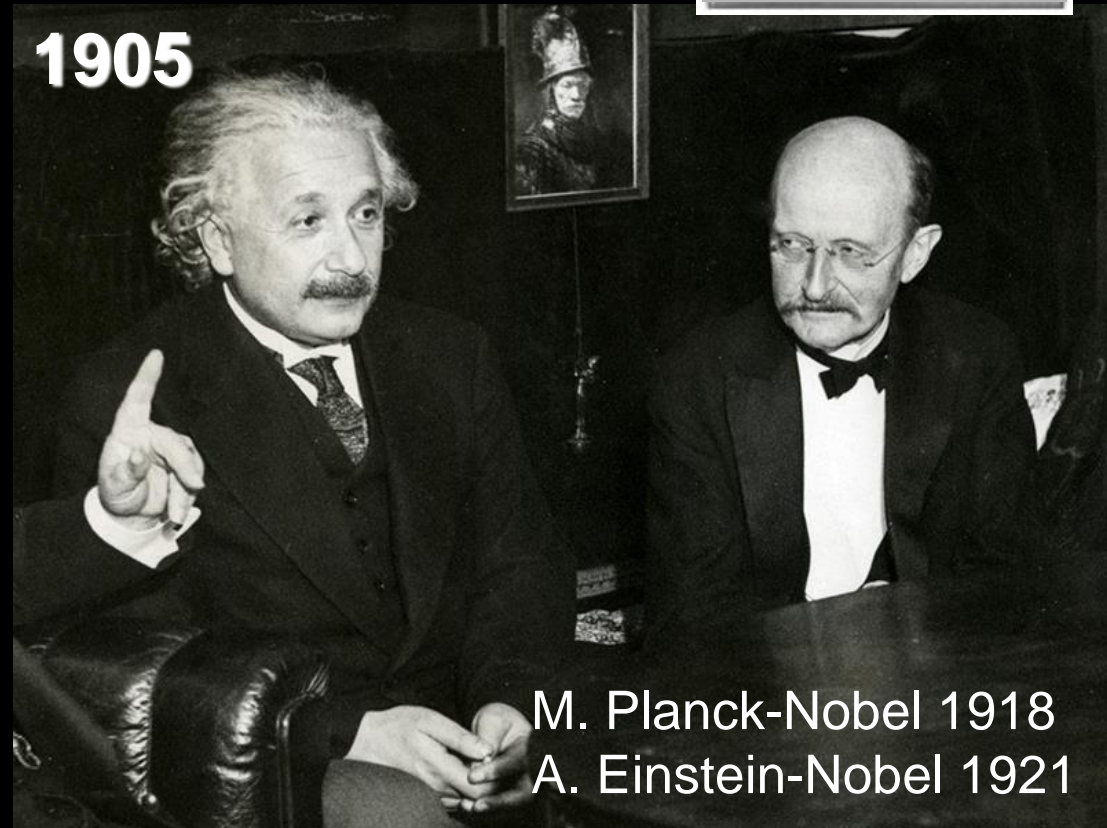


1970



Intel-14nm-2016

Electrónica y Miniaturización



1905

M. Planck-Nobel 1918
A. Einstein-Nobel 1921

Ekimov (1981)

Bawendi-Alivisatos-Murray (1995)

Alivisatos-Nanosys (2001)

2015- TV y tablets

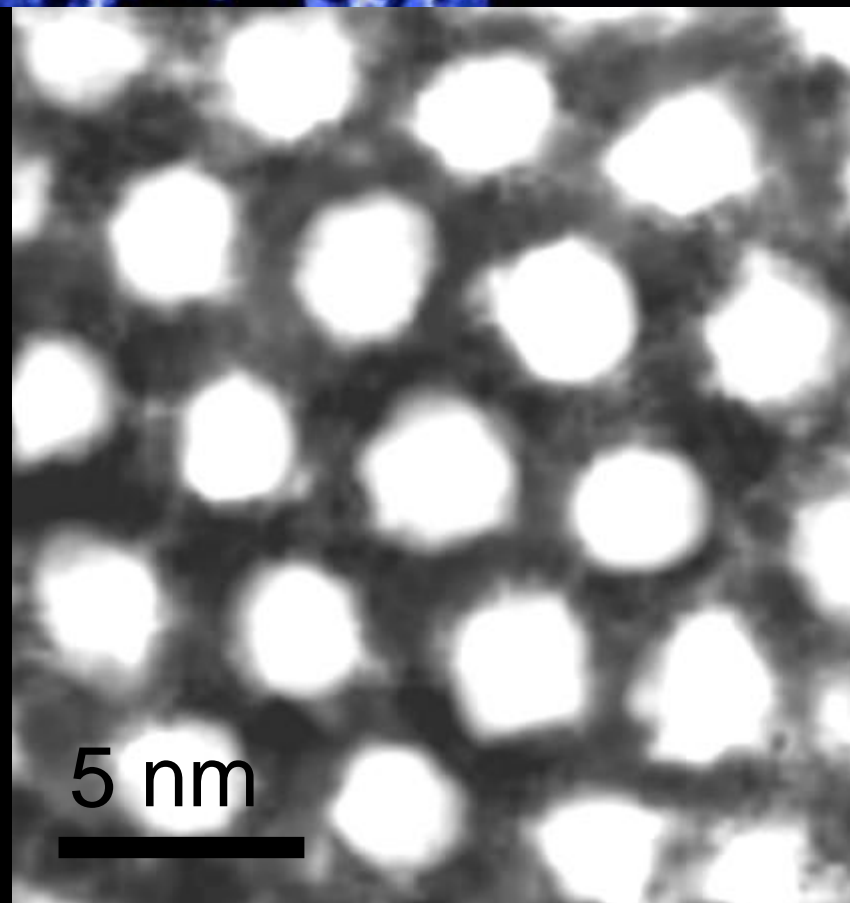
25 ton anuales – 600MUS\$ (2016)

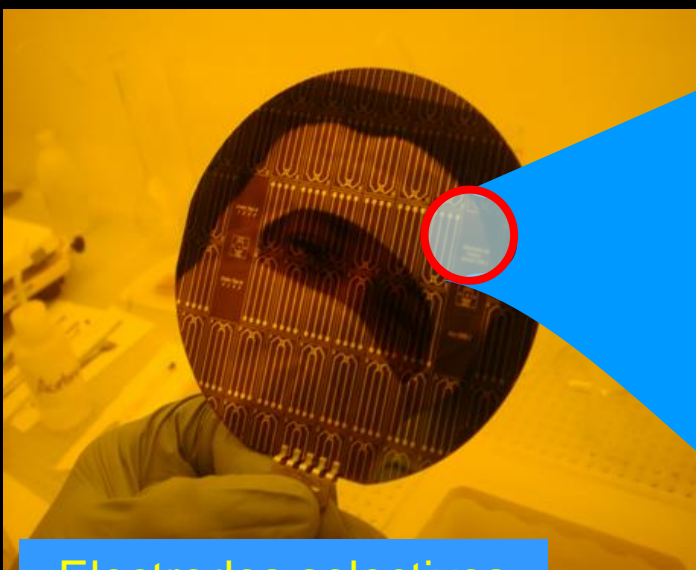




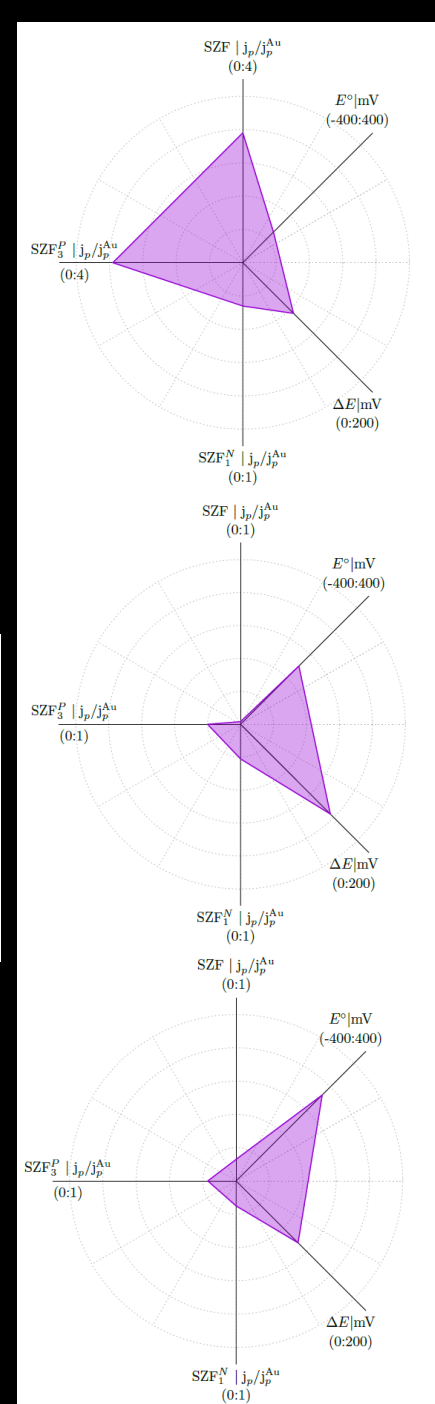
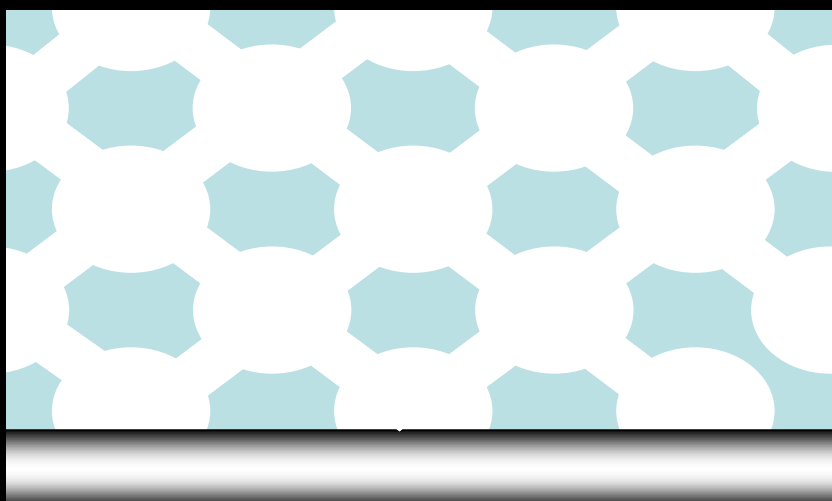
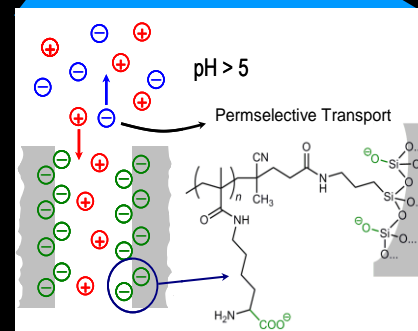
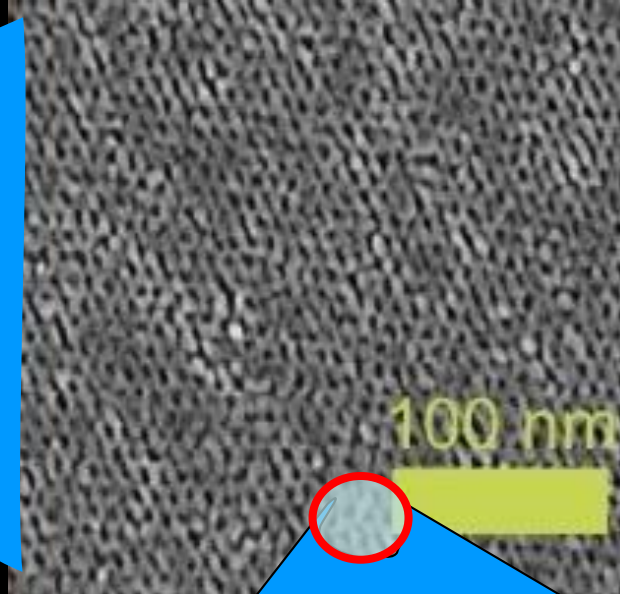
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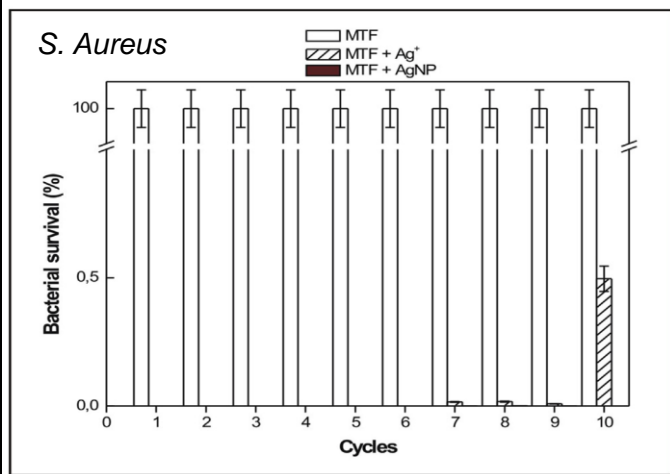
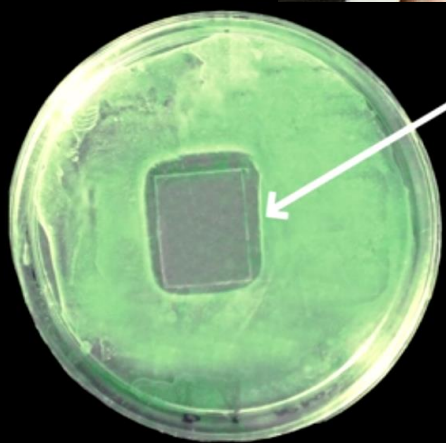
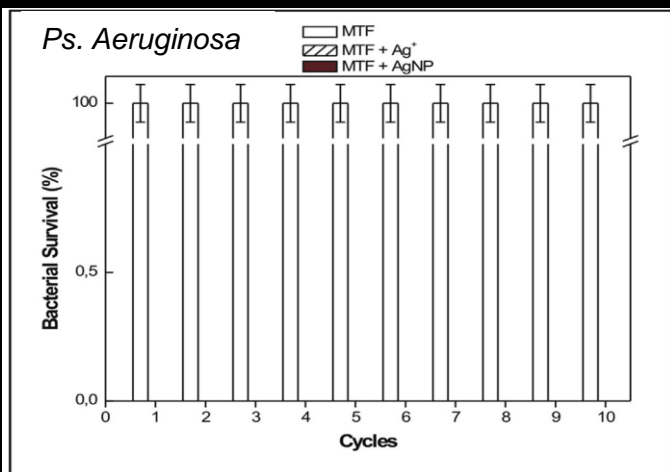




Electrodos selectivos



Superficies antibacterianas

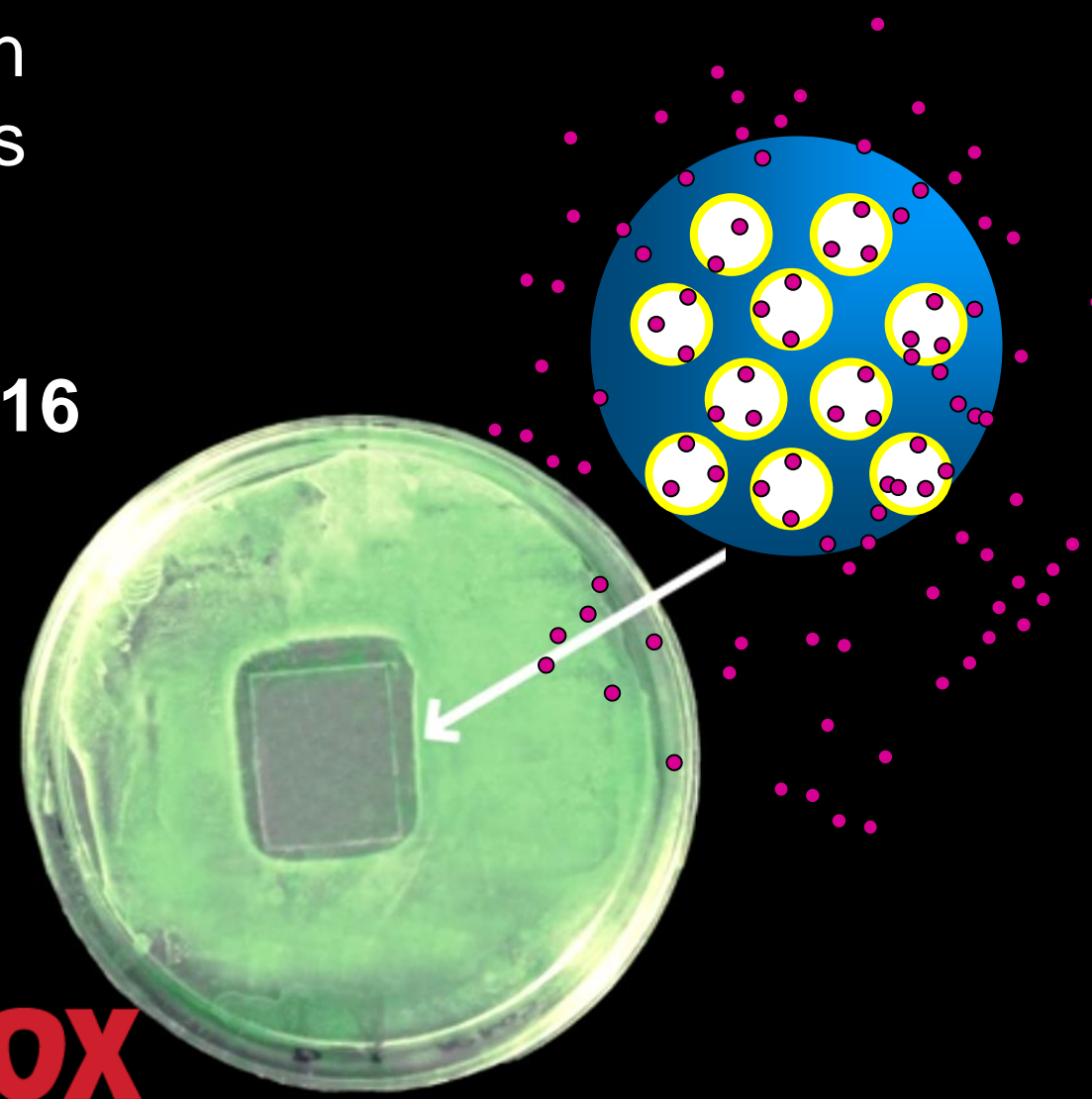


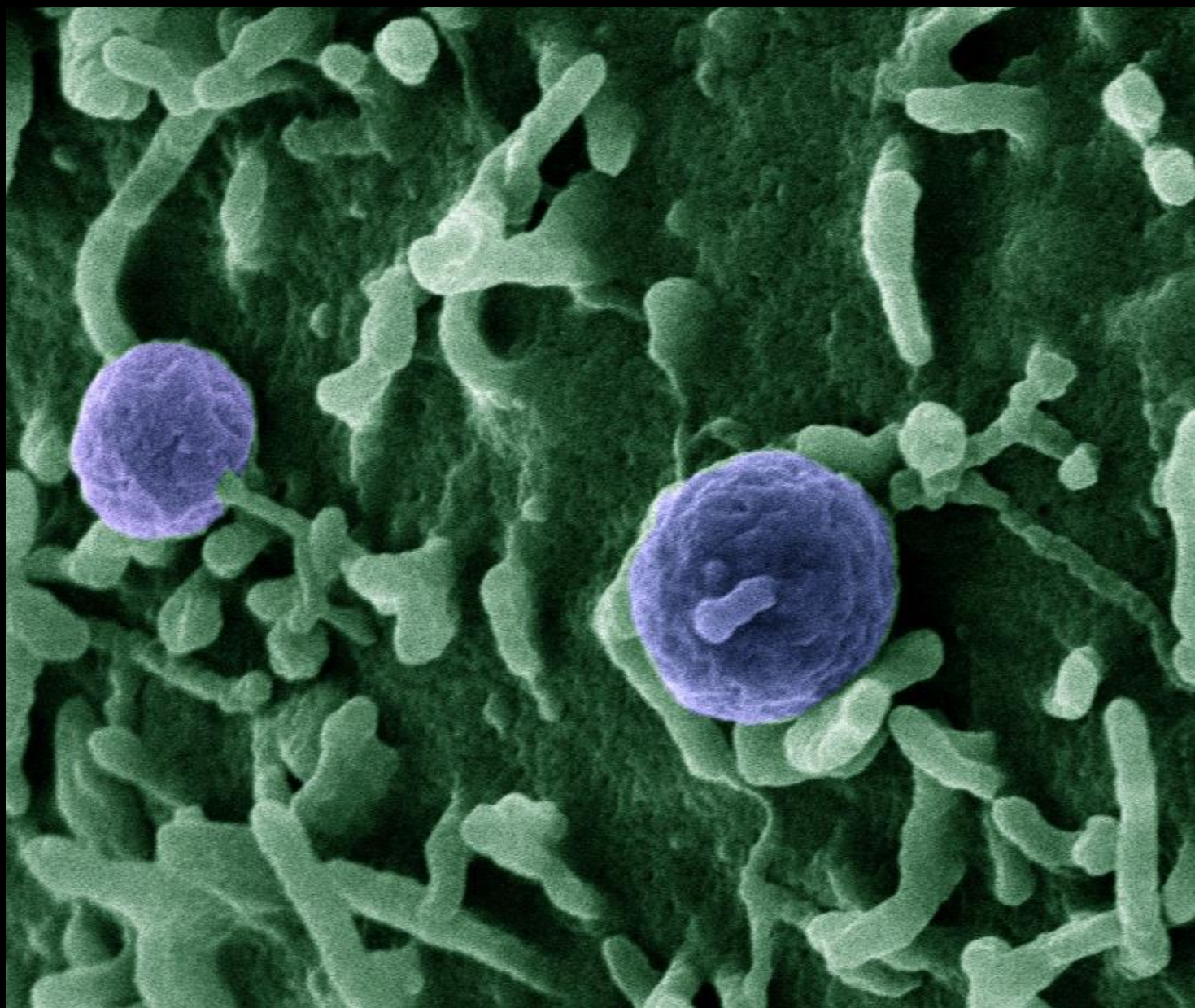
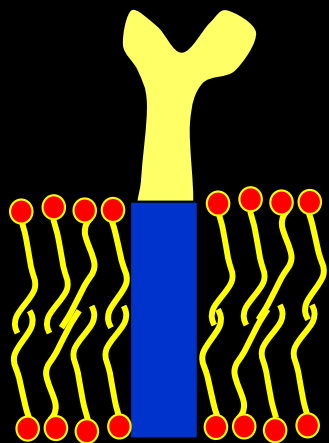
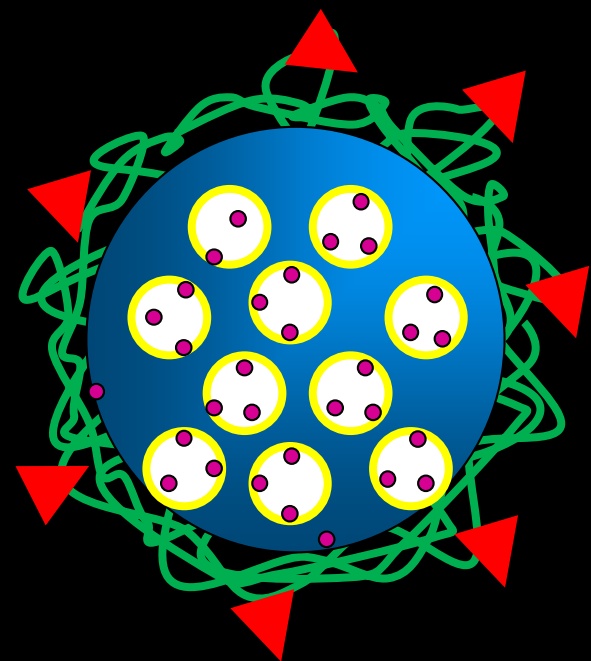
Del Laboratorio al Producto

Materiales nanoporosos con propiedades antibacterianas

CNEA-UBA-UNSAM
Gran Premio INNOVAR 2016

EMPRETECNO 2017





Generación de RRHH



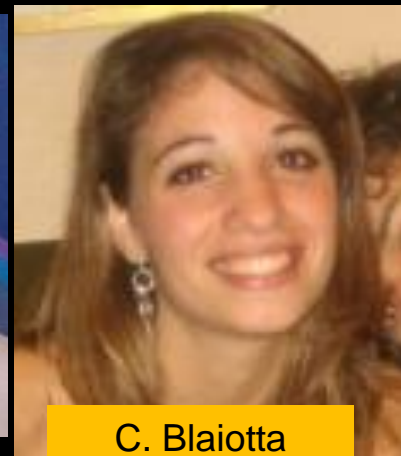
M. Alderete-Hybridon



B. Scalise-Sokotherm



A. Calvo-Y-TEC



C. Blaiotta
ADOX/Hybridon



J. Galdorporpora
Hybridon



Nico López Abdala
TENARIS



R. Medina-YPF



V. Oestreicher
TECSAN



F. Ojeda-Laring



J. Penelas-Lanxess

Nanociencias y Nanotecnologías

Cambio de Paradigma:

“el tamaño importa”

La Materia se puede “programar”

Enfoque interdisciplinario

Realimentación

Ciencia de calidad para tecnología de punta

Preguntas disparadas por tecnología



UNSAM

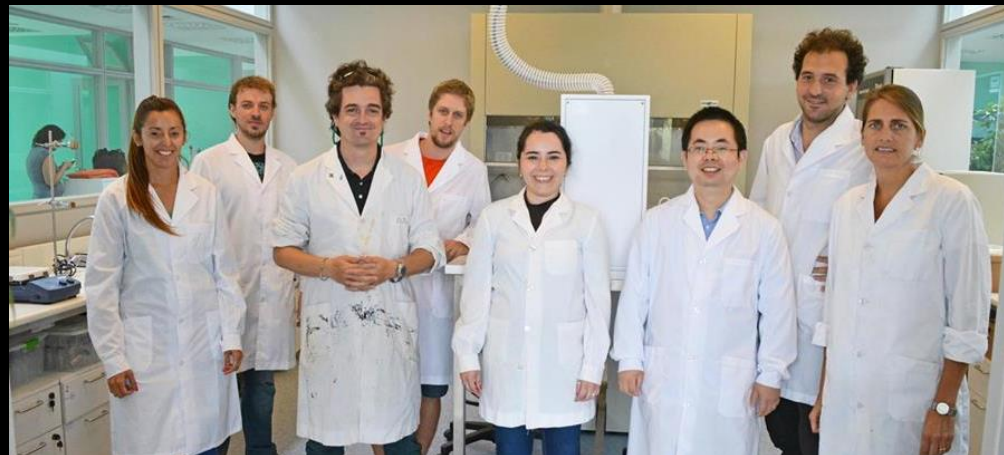
Gracias !

Colaboraciones

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H. Amenitsch (Elettra)
L. Liz-Marzán, S. Moya (Donosti)
– L. D. Carlos (Aveiro) – I. Szleifer (Chicago)

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