



# ORION HIGH TECHNOLOGIES S.L.



### A Nanotechnology Company

www.orion-hitech.com orion@orion-hitech.com

All nanomaterials appearing in the pictures have been developed by our team





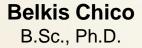
### Prof. José M. Pingarrón

- Full Professor of Chemistry at the Complutense University of Madrid since 1994.
- President of the Spanish Society of Analytical Chemistry (1998 2001).
- Vice-President of the Spanish Royal Society of Chemistry
- Spanish representative in the Division of Analytical Chemistry of the European Association for Chemical and Molecular Sciences.
- Member of the Analytical Chemistry Division Committee of IUPAC.
- Associate Editor of Electroanalysis journal
- Awarded with the Faculty of Chemistry Medal, the Complutense University of Madrid Medal and the Research Award on Analytical Chemistry of the Spanish Royal Society of Chemistry.



### The Founders







B.Sc., M.Sc.



Carlos Marchante José M. Pingarrón B.Sc., Ph.D.



B.Sc., Ph.D.



Eddy Sotelo Reynaldo Villalonga B.Sc., Ph.D.

**Nanomaterials** 

**Sensor & Biosensors** 

**Organic Synthesis** 

**Drug Delivery** 

**Polymer Chemistry** 

**Analytical Chemistry** 

**Enzyme Technology** 

**Medicinal Chemistry** 

+ 450 publications in top international journals

12 Patents

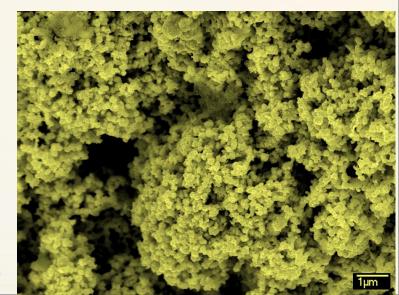
+ 50 International, National & Regional Projects Managed



### ORION HIGH TECHNOLOGIES S.L.

A research & development company headquartered in Madrid

Orion Hitech develops state-of-the-art products and technologies that are designed to solve real problems in human and veterinary medicine, agriculture, industry and environmental protection

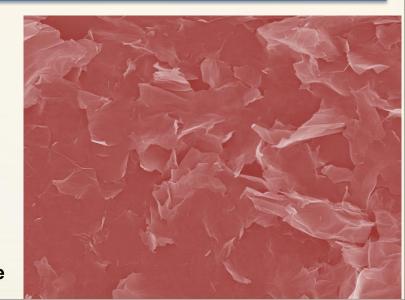




### ORION HIGH TECHNOLOGIES S.L.

At Orion HighTech we believe science and technology empower people and promote sustainable economic development.

**Our mission** is to provide new products, new solutions and new insight to our customers in the fields of analytical sensors, medicinal chemistry, nanomaterials and enzyme technology.





## Research & Development

#### **NANOMATERIALS**





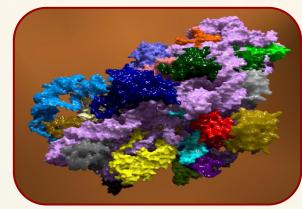




**Sensors & Biosensors** 



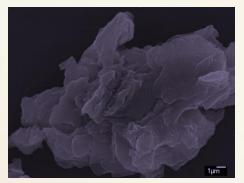
**Drug Discovery & Delivery** 



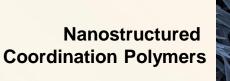
**Enzyme Technology** 



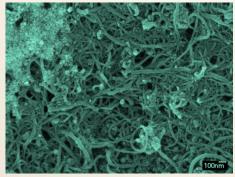
#### Nanomaterials Synthesis, Functionalization & Hybridization



**Graphene & Graphene Derivatives** 

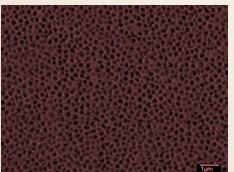






Carbon Nanotubes-Based Hybrid Materials

Anisotropic Metal Nanoparticles



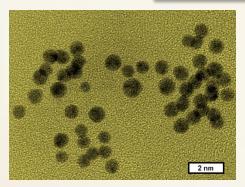
Micro & Nanoporous
Thin Films



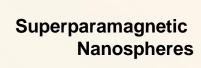
Metal Nanoparticles-Based Thin Films

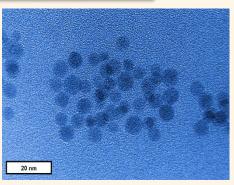


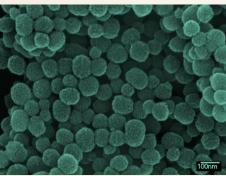
#### Nanomaterials Synthesis, Functionalization & Hybridization



Metal Nanoclusters (less than 1 nm)

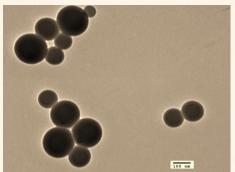






**Mesoporous Nanoparticles** 

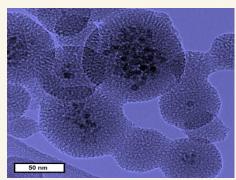
Polymer Coated Magnetic Nanoparticles





Metal Nanoparticles-Based Porous Materials







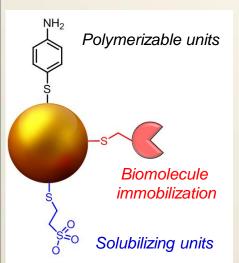
Nanomaterials Synthesis, Functionalization & Hybridization

All this nanomaterials can be provided with selected functionalities

Chemical groups: -NH<sub>2</sub>, -COOH, -SH, -N<sub>3</sub>, biotin, etc.

Polymers: Mono & bi-functional PEGs, end-group activated dextrans, etc.

Proteins: Streptavidin, enzymes, antibodies, lectins, etc.

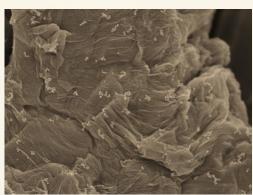


Sugars: Cyclodextrins, glucose, galactose, etc.

**Nucleic Acids: DNA & RNA.** 

**Other Nanomaterials** 

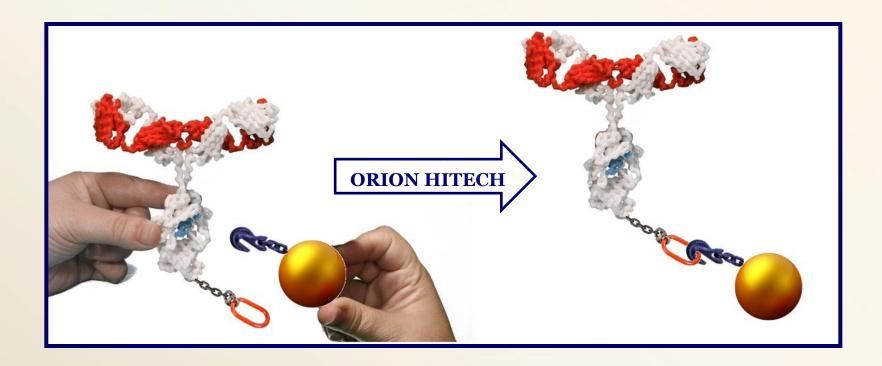
Graphene-Au Nanoparticles Hybrid





Nanomaterials Synthesis, Functionalization & Hybridization

We have developed original methods for selective, fast and one-pot labeling of biomolecules with nanoparticles, nanoclusters and quantum dots

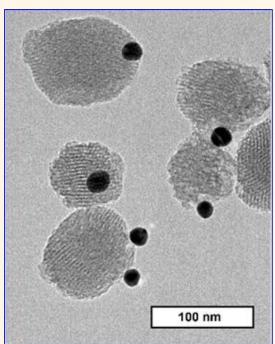




## The Challenge

### **BIO-NANOROBOTS**



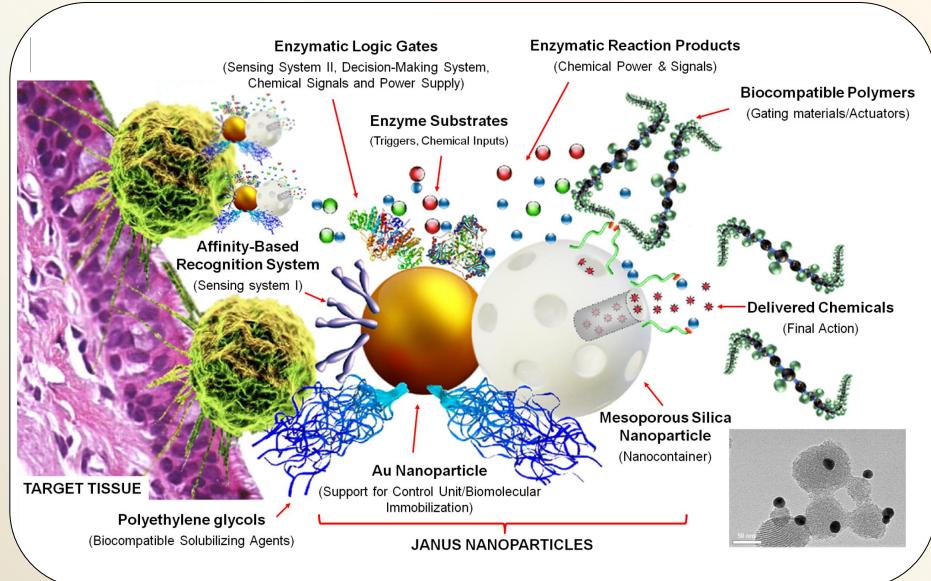






### The Challenge

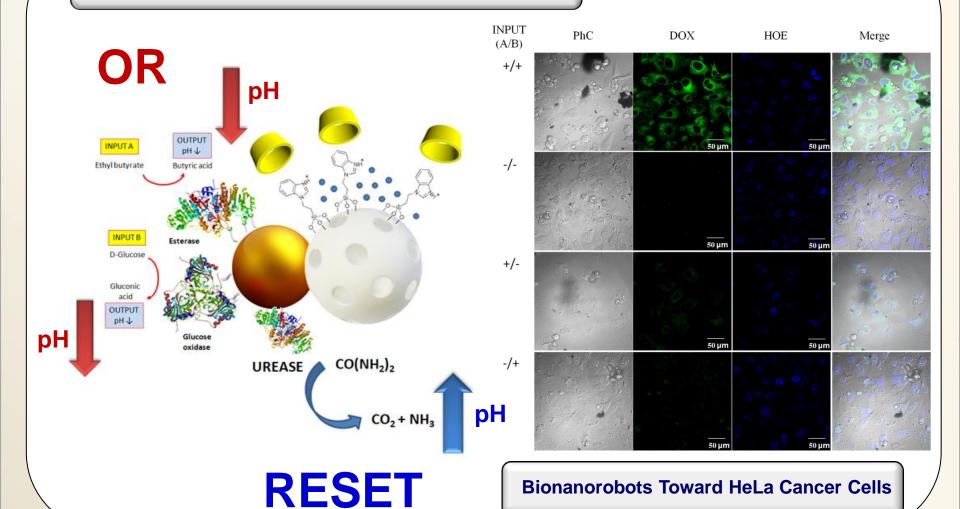
#### HITECH





#### **HITECH**

#### **Bionanorobot Controlled by an Enzymatic Microchip**

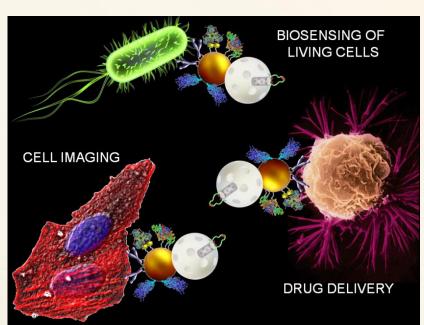






#### WE ARE CONVINCED OUR NANOMATERIALS CAN CHANGE THIS WORLD





### AND CAN EMPOWER OUR INVESTORS



