



Action MP1106  
Materials, Physical and  
Nanosciences

**Smart and green interfaces - from single bubbles and drops to industrial, environmental and biomedical applications (SGI)**

**1st Annual Workshop Meeting**  
**Dublin, Ireland 13/09/2012**

**Christos Koukiotis**

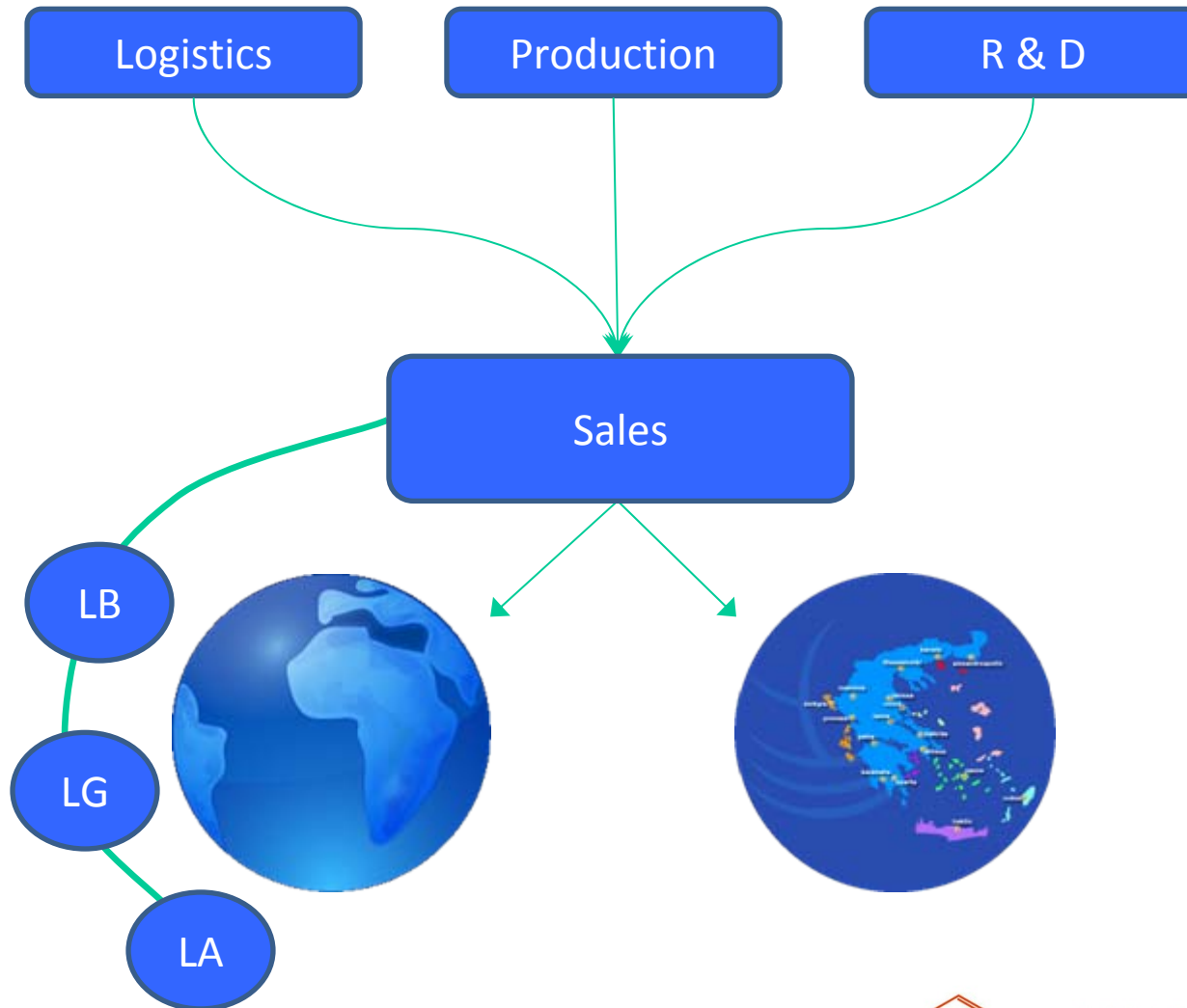
**R & D Manager**



**LOUFAKIS**  
CHEMICALS & LOGISTICS



# LOUFAKIS CHEMICALS



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CHEMICALS**



ISO 9001

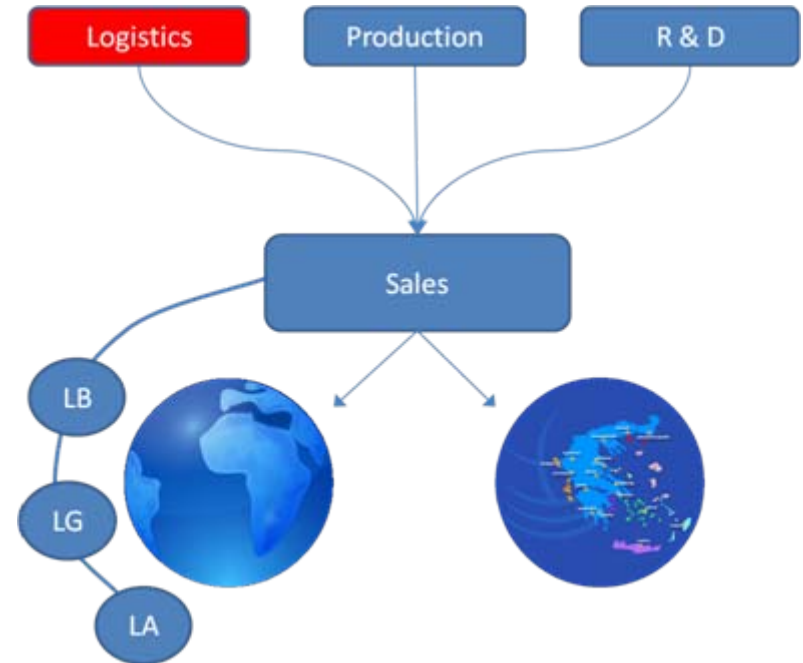
ISO 14001

# LOUFAKIS CHEMICALS

## WAREHOUSES

### ❖ Industrial area of Sindos (Thessaloniki)

- 4 spaces 10.000 m<sup>2</sup> with storage capacity of 15.000 pallets.
- Refrigerators 600 m<sup>2</sup>.
- 15 tanks for chemicals with total capacity of 2000 m<sup>3</sup> from 70 to 300 m<sup>3</sup> each one.
- Packing services.
- Truck loading area.
- Access to the rail network and train loading facilities



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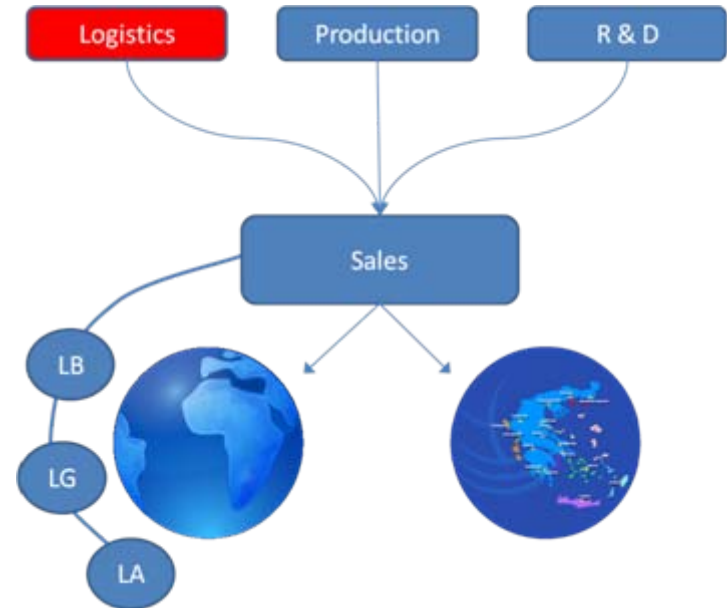
ISO 9001

ISO 14001

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## ❖ Industrial area of Oinofita (Viotia near Athens)

- 3 spaces of total area of 3.000 m<sup>2</sup> with storage capacity of 3.000 pallets.
- 6 tanks for chemicals with total capacity 500 m<sup>3</sup>.
- Packing services.



## ❖ Established subsidiary companies abroad :

**SOFIA :** warehouse owned by our subsidiary company **L.B. Chemicals**

**SKOPJA :** warehouse operated by our subsidiary company **L.A HEMIJA**

**BEOGRAD:** warehouse owned by our subsidiary company **L.G HEMIJA**



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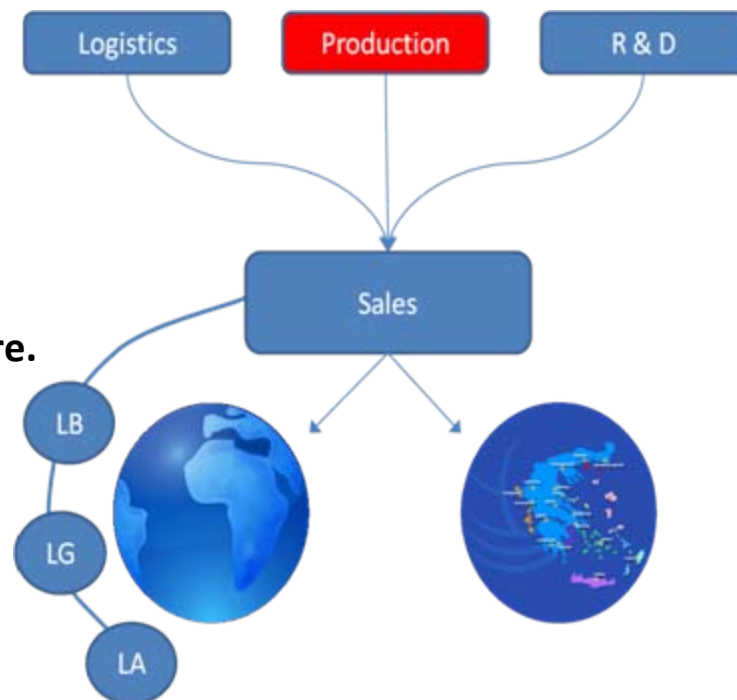
## PRODUCTION PLANT

❖ It is located in the industrial area of Thessaloniki

- Manufacturing unit for polymer emulsions
- Reactors equipped with heating-cooling systems.
- Glass-lined reactor capable of reactions under pressure.
- Agitators.

❖ We produce

- Polymer emulsions from VAM, VeoVa, acrylics for application to: paints, adhesives , printing construction materials & textile industry
- Chemicals for the textile industry.
- Chemicals for water treatment.
- Detergents & disinfectants for food ,feed and laundries.



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## SALES

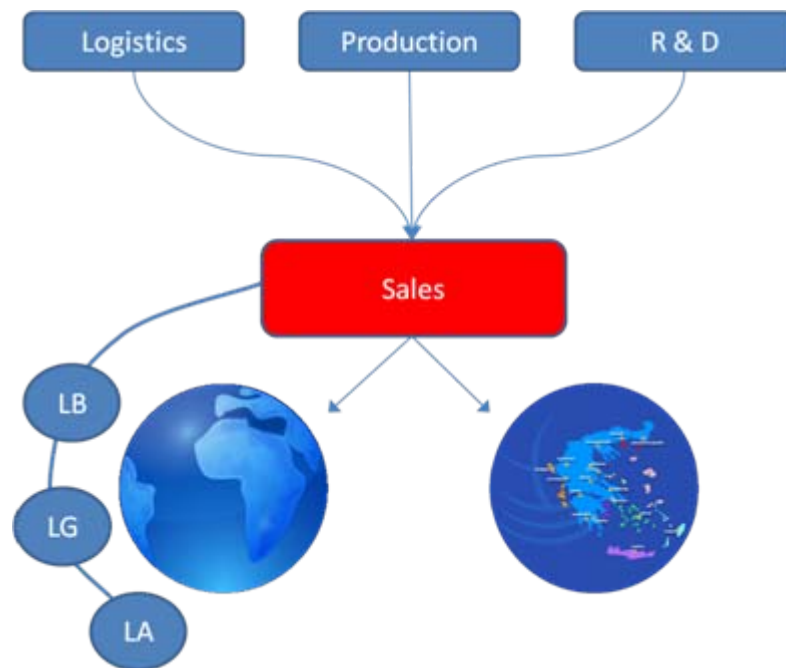
### ❖ Industrial sectors

- Construction materials
- Detergents - Cosmetics.
- Food Industry
- Feed Industry
- Water treatment.
- Industrial Laundries.
- Metals.
- Other

### ❖ Sales region

- North Greece
- South Greece
- Abroad

❖ Company offers to its customer technical support and services they need by experts : Chemists, Chemical engineers, Food scientists , Agricultural & Mechanical engineers



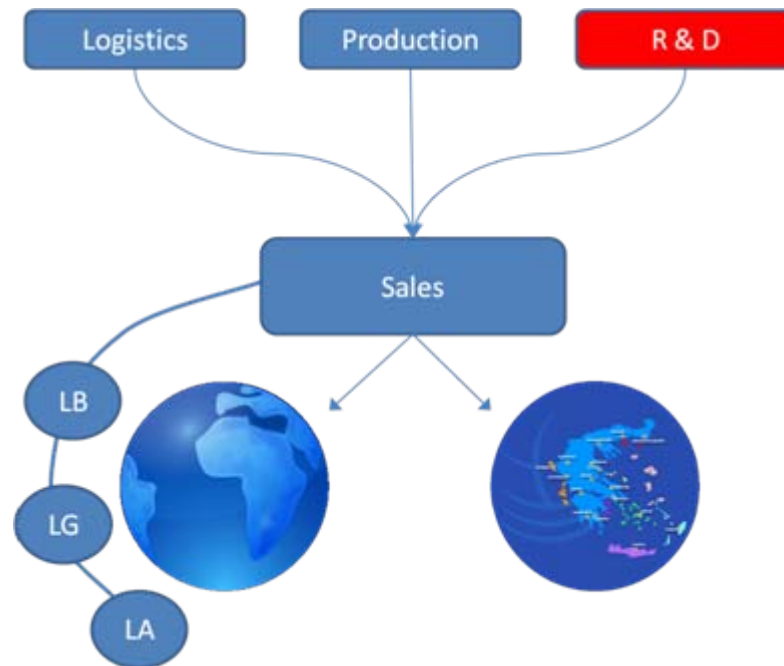
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# LOUFAKIS CHEMICALS

## RESEARCH & DEVELOPMENT

- ❖ It is located in the industrial area of Thessaloniki
  - Loufakis Chemicals has a very well, hi-tech, equipped laboratory: Lab reactors, head space GC, Malvern dynamic laser scattering, FTIR, Color spectrophotometer, Tensiometer, UV-Vis, Scrub resistance meter and others.
  - 5 researchers chemists / chemical engineer.
- ❖ Activities
  - Research for development of new innovated products for the company.
  - Research for development of new application of the products.
  - Research for solving of customers problems.
  - Research to optimise of production methods.
  - Quality control.
- ❖ Collaborations
  - Research institutes in Greece and abroad, such as Aristotle University of Thessaloniki., CERTH, ETAKEL, Heri (Pera, Great Britain), Uni of Pardubice (Czech), Uni of Minho (Portugal).



# SELECTED RESEARCH PROJECTS

- “Research for the development of chemical flocculants and decolorants which are employed in liquid waste treatment units”. PAVET 1996**
- “Application of Poly-Aluminum Chloride (PACl ) in water treatment of potable and industrial water” . PAVE '99 2000-2001.**
- “LIQUIDECODYE” - Ecological Liquid Dyes for Textile Applications, EPAN - EUREKA**
- “FRESH” - OPTIMISATION OF COTTON FABRIC PROCESSING FOR A FLAME RETARDANT FINISH funded under the FP5/ CRAFT (Co Number: G1ST-CT-2002-50270) 1/3/2003 – 28/2/2005**
- “Exploitation of computer aided design tools for the design, simulation, control and optimization of polymerization processes”, which was one of the sub-projects of the umbrella - project “Innovation Pole of Central Macedonia” funded by the GSRT under the programme EPAN**
- “Development of granular binary ferric-manganese oxy- hydroxide for arsenic removal from potable water” funded by 7th Framework Program AquAsZero, Project No 232241, FP7-SME-2008-1/ RESEARCH FOR SMES. 1/7/2009 – 31/6/2011.**
- “NANOPROTECTION - Advance hybrid nano-materials for the protection and the waterproofing of surfaces”, funded by the GSRT under the programme "Competitiveness & Business Dexterity» in the frame of NSRF (National Strategic Reference Framework 2007–2013) Project No 639. 1/1/2011 – 31/12/2013**

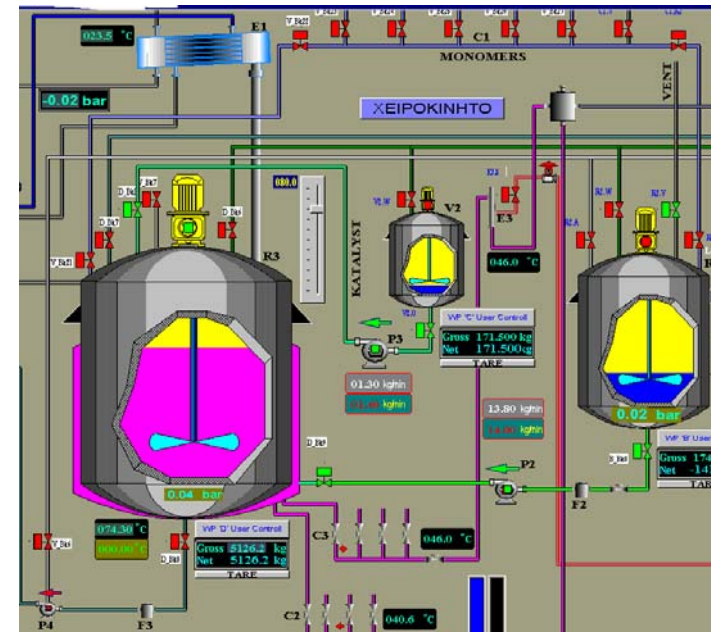
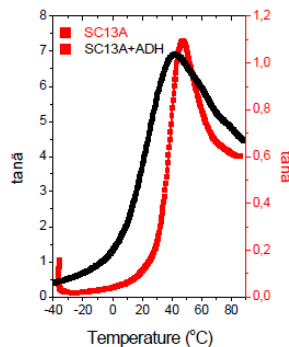
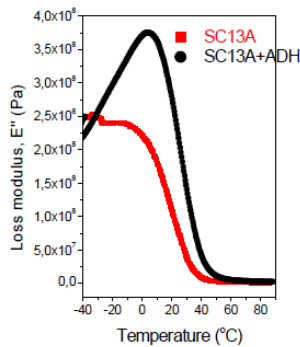
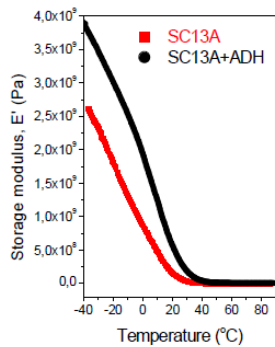


# RESEARCH IN EMULSIONS

➤ Very close co-operation with the local University for emulsion polymers etc

➤ Five papers in peer-reviewed journals have been published the last years

- Nanolatexes
- Self-crosslinking latexes
- Food colloids



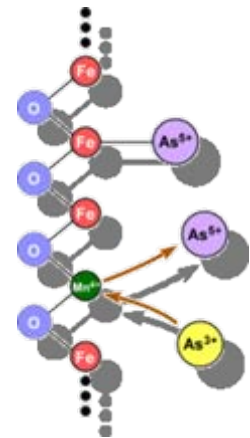


# Aqu As zero



**Fe-Mn adsorbent for the removal of both trivalent [As(III)] and pentavalent arsenic [As(V)] from potable water**

- Patented product
- Successfully passes the leaching tests of As
- [www.aquazero.com](http://www.aquazero.com)



# Characteristics of AquAszero

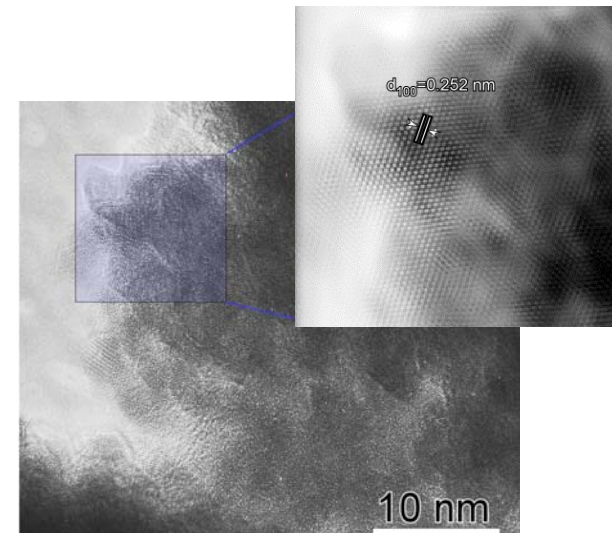
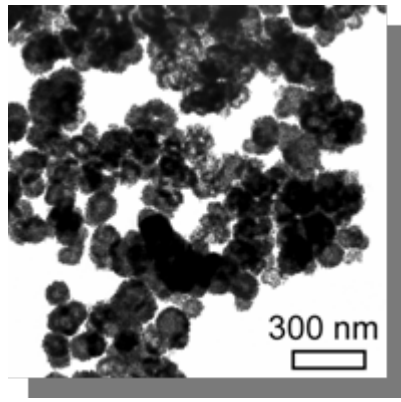
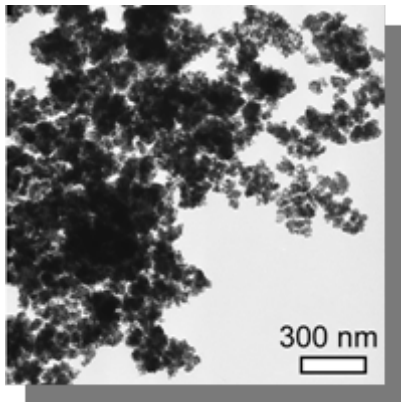
Structure of Manganese Feroxide  $\delta\text{-Fe}_x\text{Mn}_{1-x}\text{OOH}$

High specific surface area (250-300 m<sup>2</sup>/g)

TEM observations: Aggregates of small nanocrystals with hollow aggregates

Nanostructure material with nanocrystals size below 4nm

High-resolution images illustrate oxy-hydroxide structure



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# THANK YOU FOR YOUR ATTENTION

You can find us at

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