



# ET-1039: Nanotechnology



Presentation

Lecturer and tutorials  
Themes  
Laboratory  
Evaluation  
Calendar



# ET-1039: Nanotechnology



Lecturer: Dr. Francisco Fabregat Santiago

## Tutorials

Wednesday: 10:00 – 11:00  
12:00 – 14:00

Office: NA-3302-DD  
e-mail: [fran.fabregat@uji.es](mailto:fran.fabregat@uji.es)

# ET-1039: Nanotechnology

## Themes

1. Fundamentals of solid state.
2. Physical-chemical properties of nanostructures.
3. Nano Engineering
4. Applications with organic, inorganic and hybrid materials
  - 4.1 Electronic and optoelectronic devices,
  - 4.2 Solar cells
  - 4.3 Sensors
  - 4.4 Photocatalysis
  - 4.5 Batteries and supercapacitors
  - 4.6 Graphene
  - 4.7 new devices.



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## Laboratory

1. Nanostructured TiO<sub>2</sub> film
2. Water splitting
3. Electrochromism
4. Dye solar cells

Lab1  
(Tuesday)



Marisé García

Lab2  
(Monday)



Fran Fabregat



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## Evaluation

60% Written examination  
15% Lab memory  
25% Oral Presentation

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**Essays (in couples):**

written work (20-30 pages) + oral presentation (10-15 min)

- Batteries, Li-ion
- Batteries, metal-air
- Batteries, Li-S
- Supercapacitors
- Electrochromic materials
- Nanobiosensors
- Photocatalysis
- Piezoelectrics
- Graphene
- Solar cells (dye)
- Solar cells (organic)
- Solar cells (perovskite)
- Nanostructures fabrication methods
- Nanotechnology in textile industry
- Nanoengineering
- Quantum computing
- Catalysis
- Other suggestions accepted

# ET-1039: Nanotechnology

## Calendar

Laboratory     ○ TD1014  
 Presentations     □  
 Exam (09:00-13:00)     □

Gener 2020							
dll	dm	dc	dj	dv	ds	diu	
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