

# Method for the manufacturing of porous silicon luminescent multilayers



Envision  
Sustainable  
Illumination

## Description

This is a manufacturing method of porous silicon luminescent photonic structures through electrochemical etching of crystalline silicon assisted with hydrogen peroxide or polyoxometalates, wherein the anode is a crystalline silicon substrate. The porous silicon produced by this method is characterized by a luminescent emission at room temperature in the region of the visible spectrum.

## Application

These photonic and luminescent structures can be used as the active parts in light-emitting diodes known as LEDs, lasers, solar cells, photochemical sensors, among others.

## Stage of development

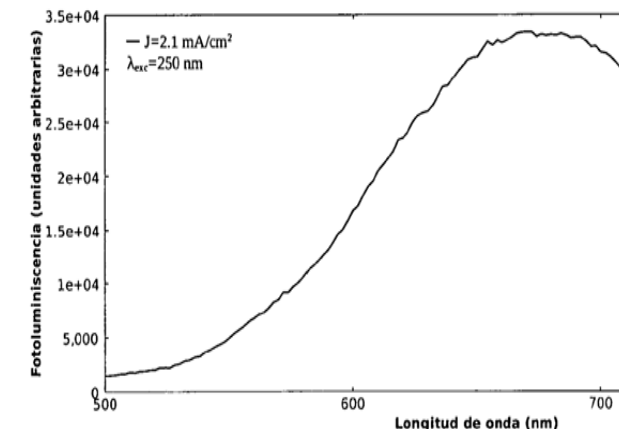
Experimental (laboratory)

## Market potential

It is estimated that the market for LED will grow twelve times, reaching 25,000 million in 2023, with the largest growth in optics and electronics.

## Transferring conditions

- ✓ Technological development agreement (optional).
- ✓ Licensing (includes front payment and royalties)



Contacto UNAM:

UNAM Contact:

Ing. César León  
cesar.leon@unam.mx  
+52 (55) 56 58 56 50  
Ext. 208

La información de esta ficha es propiedad de la Universidad Nacional Autónoma de México. Únicamente con fines informativos.

The information in this document is property of the Universidad Nacional Autónoma de México. Informational purposes only.

**Tecnologías UNAM**  
**UNAM Technologies**