Method for the manufacturing of porous silicon luminescent multilayers

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)