



## Application fields:

- Energy (fuel cells)
- Chemistry
- Electrochemistry



Platinum/soluble organic material composite for preparing a stable solution with controlled concentration

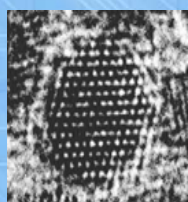


## FEATURES:

- Synthesis by chemistry in solution
- Controlled platinum content
- Material isolated in the form of soluble powder
- Composite material giving stable solutions of defined concentration
- Catalyst easily combined with different types of carrier

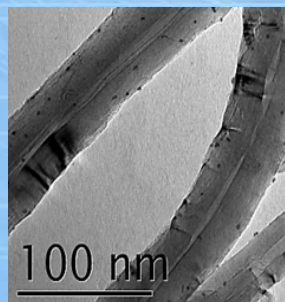
## Catalyst grafted with organic component for fuel cells

The synthesis of manipulable catalysts in a liquid medium by means of the grafting of an organic component allows simple controlled combination thereof with various types of finely divided carrier (carbon black, nanotubes). Active layers having high performance for optimized catalyst loadings can be formed.

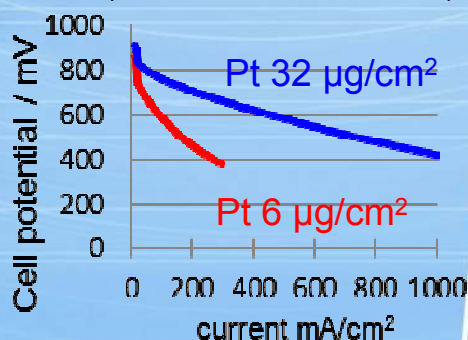


Grafted catalyst nanoparticle

Pt/nanotube composite



Fuel cell performances (Electrodes at the cathode)



• H. Perez, F. Raynal, M. Herlem, F. Etcheberry "Nanoparticles comprising a metal core and an organic double coating useful as catalysts and device containing the nanoparticles"; priority application number: FR0350460 filed on 27/08/2003; international publication number: WO/2005/021154.

• B. Baret, H. Perez, P.H Aubert "Dispersion of composite materials for fuel cells"; priority application number: FR 0704569 filed on 26/06/2007; international publication number: WO/2009/007604.

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