



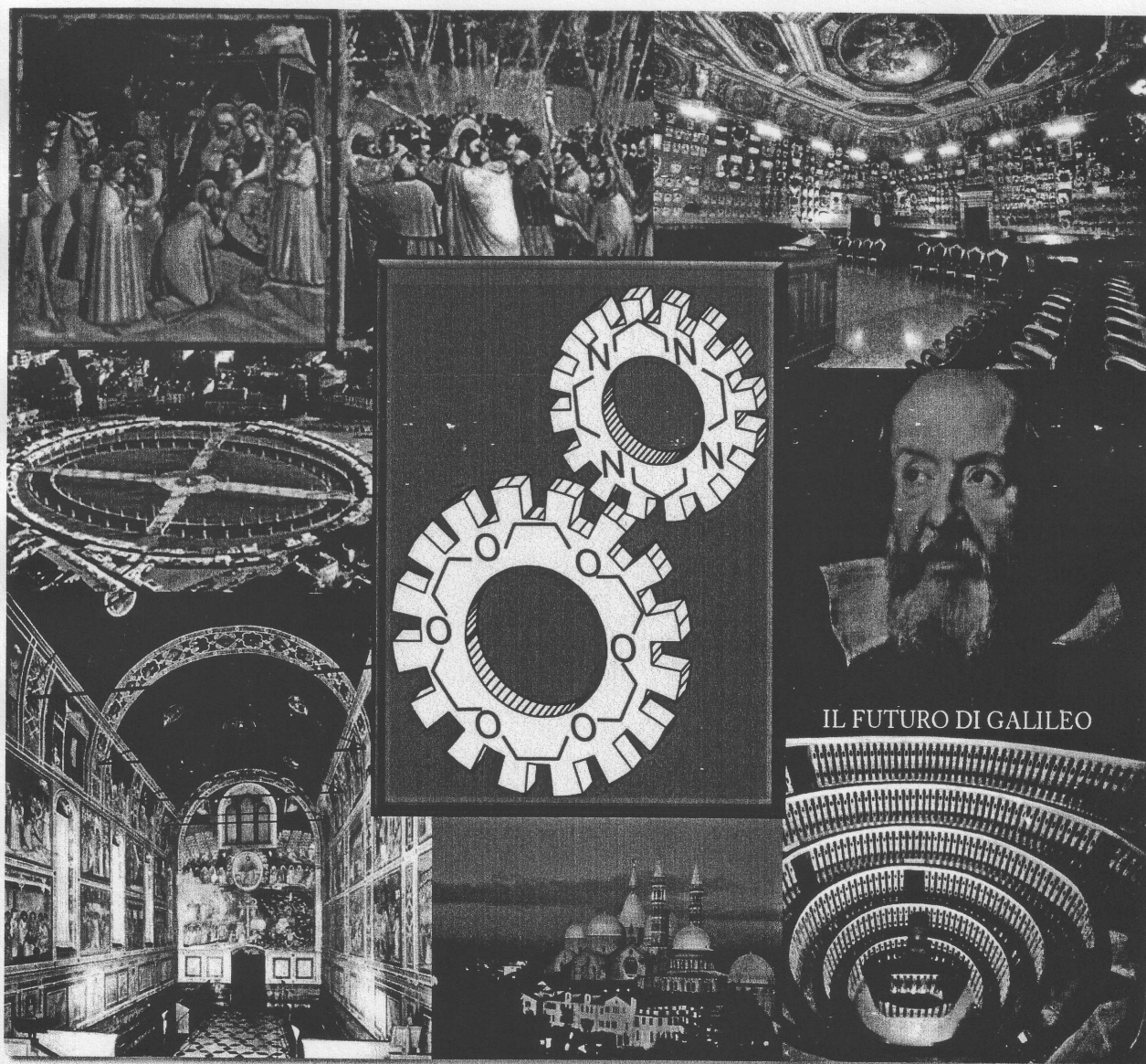
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## Novel hydrogel for dispersion of carbon nanotube-based catalysts

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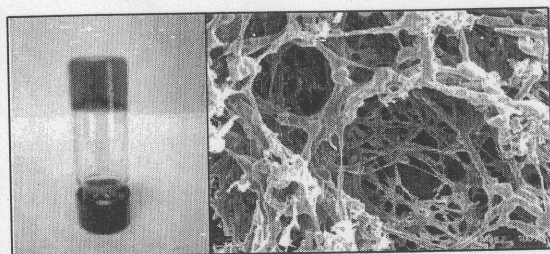


Fig. 1 CNTs/pDOTABr hydrogel hybrid, SEM.

multi-walled carbon nanotubes (Fig. 1). The obtained CNT hybrids are characterized by UV-vis-NIR spectrophotometry, rheological measurements and Scanning Electron Microscopy (SEM) (Fig.2).

The hydrogel from pDOTABr is used to disperse a recently studied CNT-POM oxygen-evolving supramolecular complex. Electrochemical measurements provide evidence that the activity of the catalyst is not modified by this new medium, opening up the possibility to adopt the reported hydrogel to disperse highly insoluble carbon nanotube-based catalysts without the need of chemical modification.

Novel hydrogels based on the positively charged surfactant N-[p-(n-dodecyloxy-benzyl)]-N,N,N-trimethylammonium bromide (pDOTABr)<sup>1</sup> and on the zwitterionic surfactant p-dodecyloxy-benzylmethylamine oxide (pDOAO) allow to obtain stable aqueous dispersions of pristine

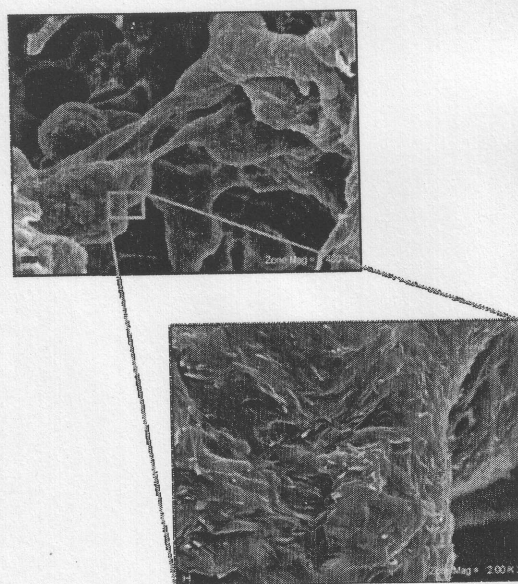


Fig. 2. Hydrogel network of CNTs/pDOTABr visualized by SEM.

<sup>1</sup> A. Di Crescenzo, R. Germani, E. Del Canto, S. Giordani, G. Savelli, A. Fontana, *Eur. J. Org. Chem.*, 2011, 5641-5648.