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Nanotechnology : the missing piece of the life puzzle

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In all the countries the appetite of scientists for nanotechnology, and the belief in its ability to provide more efficient solutions to technical issues that are facing our societies, have been growing very fast during the last decade. Also, a tremendous development of membrane technologies has led to consider them like “dominant technologies”, with the emergence of a new think-tank / action-tank named “membrane engineering” and a lot of applications with environmental issues (water, air...). Because many of these technologies depend on nano-scale processes, it is reasonable to expect a strong impact of nanotech on performance of membrane systems of the future, particularly in tremendous field such as desalination. Nature on its side has solved long ago the problem of controlling the selective transfer of water and salts, with wonderful nano-tools: aquaporins , ion conducting channels ... Today researchers are trying to imitate nature with new aquaporin-laced polymer membranes, aquaporin mimicking carbon nanotubes... In what extend human achievements for highly efficient membranes have been delayed by our ignorance of nanotech? In what extend sustainability may be affected by revolutions in progress on this area? This is the kind of questions that our presentation intends to deal with.

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