

# Colloidal nanoparticles: a hot topics of current research in material chemistry with great potential for innovation in biomedical, energy and environmental sectors

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One of the most important challenges of the last years is represented by the synthesis of (bio)organic/inorganic hybrid structures with properties opportunely designed and changed by manipulating the organization of single components contributing to the realization of novel multifunctional and composite nanostructures that reflecting the synergy among the components, have the potential to overcome the functionality of traditional materials and address specific applications.

This presentation will report the most recent results obtained in my laboratory in the design and fabrication of specialized systems involving properly functionalized nanoparticles and nanostructures with highly controlled physical and chemical properties and a careful surface engineering.



