

RESPECTEZ les caractéristiques du template SVP

Title of the Event	L'or en Occitanie 2019		<i>ici le logo de la conférence</i> 	
Nature	Colloque national			
Language	French	Nb of attendees	50	
Location	Montpellier, France			
Porteur(s) <i>avec courriel</i>	Nathalie Tarrat tarrat@cemes.fr			
NEXT Laboratory(ies) involved	- CEMES - LCPQ			
Dates	December 5-6, 2019			
URL link				

Event scope and topics
<p>Gold, chemically inert in its bulk form, becomes an incredibly effective catalyst when its size approaches the nanometre. Dr. Haruta's discovery in 1984 sparked intense research in catalysis. In addition, gold nanoparticles (AuNPs) of a few tens of nanometers confine the electromagnetic field of a light wave due to the plasmon resonance phenomenon, which has led to intensive research in nano-optics since the 2000s. This research was based on major advances in the chemical synthesis of nanoparticles: beyond the initial spherical nanoparticles, chemists have developed methods for manufacturing core-shell nanoparticles, nanostars and many other forms in which crystal growth and surface chemistry considerations are involved. One consequence of the joint mastery of the synthesis and interpretation of optical properties has been the use of these objects in increasingly complex environments, particularly in biochemistry and then in biology (gold being biocompatible). This brief overview shows that scientific study around a gold nano-object makes it possible to bring together very varied disciplinary skills: synthesis, reactivity, optics, biology, medicine, etc.</p> <p>Why did gold play such a role? This is largely due to the very high chemical stability of gold, which makes it possible to have metal nano-objects that are not denatured by oxidation phenomena. A gold nanosphere can be synthesized in solution, then deposited on a substrate and transferred under vacuum to conduct catalytic studies, without the gold being oxidized. This is not the case with silver and neither with most metals. In addition, gold is biocompatible. These facilities multiply the opportunities for collaboration between scientists from different backgrounds. It is on the basis of this observation that we want to initiate this meeting, which will make it possible to identify scientists, belonging to the Occitanie region, who are interested in this metal in its various applications.</p> <p>The main objective of this thematic days is to identify researchers and students from Occitanie working or likely to work on nanometric gold (theoretical and experimental approaches). The diversity of the themes around gold will promote synergy at the local level and make it possible to initiate joint projects that will be facilitated by the geographical proximity of the various actors.</p> <p>There is also a need to raise researchers' awareness of multidisciplinary approaches and the development of a common language, as well as to enable young researchers to increase their knowledge of gold nanoparticles and to have a broader vision of the field in which they conduct their research.</p>