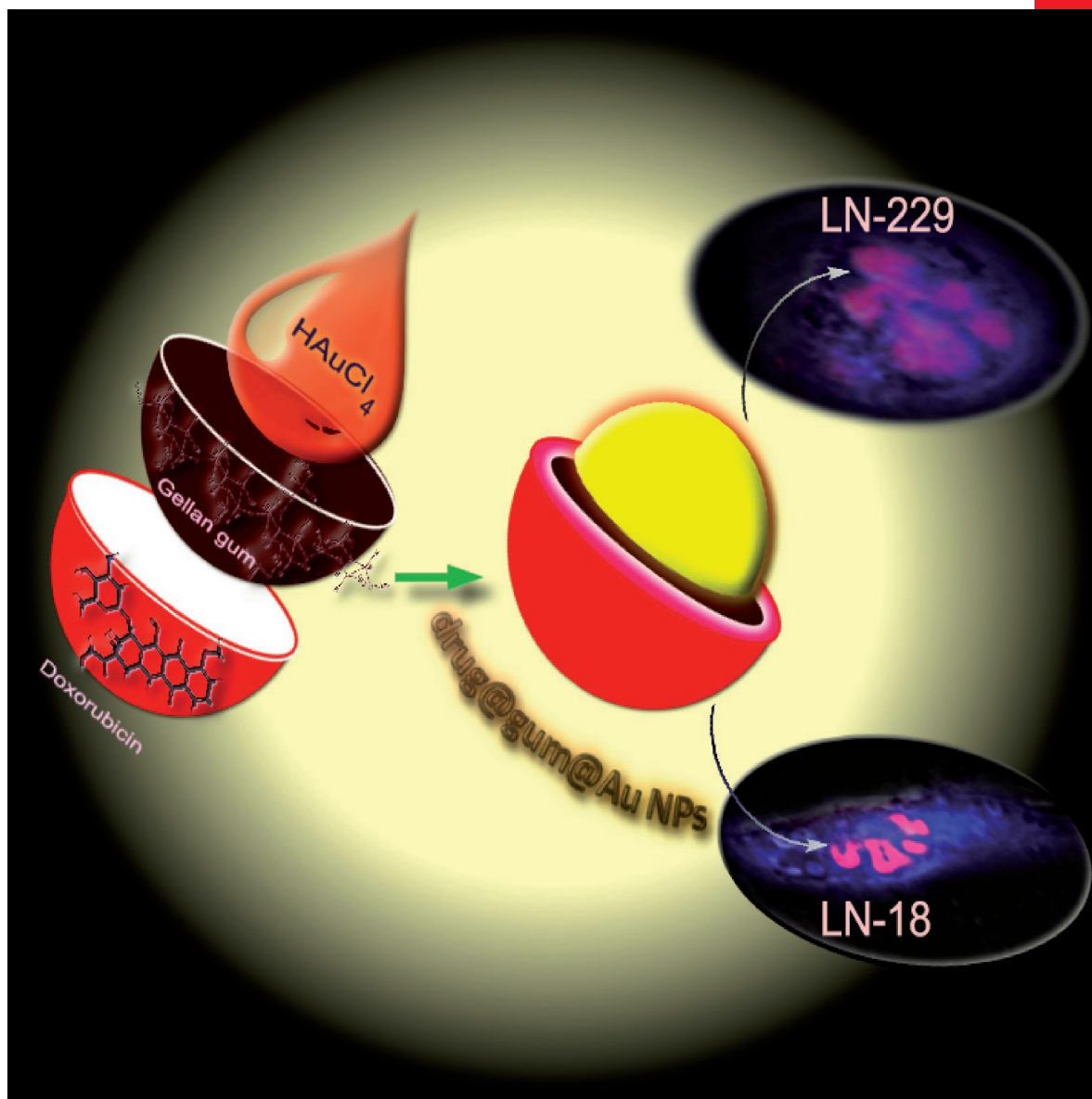


# CHEMISTRY

## A EUROPEAN JOURNAL

14/33

2008



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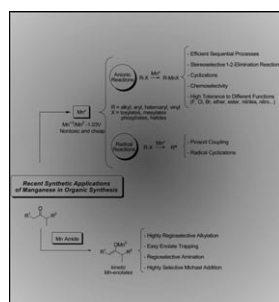
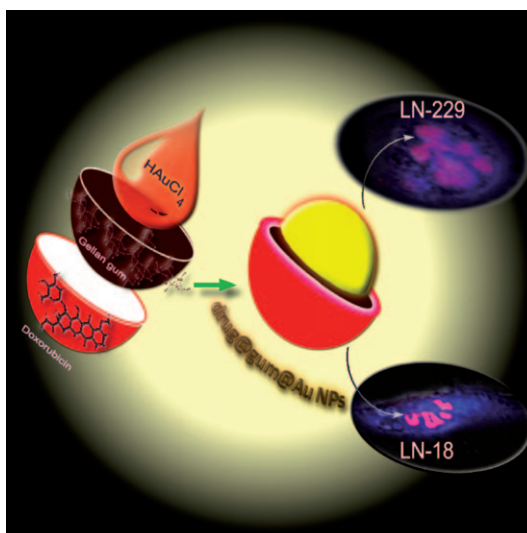
Recent Synthetic Applications of Manganese in Organic Synthesis  
J. M. Concellón et al.

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# Gellan gum, widely used...

... in the confectionary and food industries, has reducing and stabilizing properties that can be used to synthesize gum-capped gold nanoparticles. In their Full Paper on page 10244 ff., A. Shiras, V. Pokharkar, B. L. V. Prasad et al. demonstrate the synthesis of gellan gum capped gold nanoparticles that were loaded with an anti-cancer drug, doxorubicin hydrochloride. The drug-loaded gold nanoparticles show enhanced cytotoxicity effects on glioma cell lines, and could also be expanded to the delivery of other biologically active molecules.

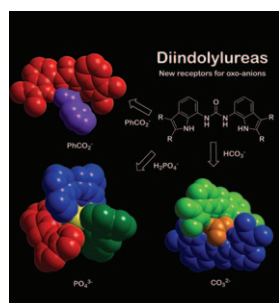
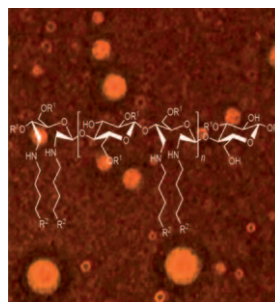


## Manganese in Organic Synthesis

In their Concept article on page 10184 ff., J. M. Concellón et al. describe how after the publication of methods to prepare active manganese, the number of synthetic applications of this metal in organic chemistry has increased. Manganese-promoted processes show selectivities, versatilities, and efficiencies which are comparable to, or—in many cases—higher than other traditional metals.

## Green Chemistry

In their Communication on page 10196 ff., F. Jérôme et al. show that glycerol could be a very convenient solvent for conducting environmentally friendly organic reactions. Like water, glycerol is safe and very cheap, but its use as a solvent requires the development of surfactant combined catalysts to favor better diffusion of organic substrates in glycerol and to limit the intrinsic reactivity of glycerol.



## In a Bind

In their Full Paper on page 10236 ff., P. A. Gale et al. describe the synthesis of two new diindolylureas that form particularly strong complexes with oxo-anions. These compounds show selectivity for dihydrogen phosphate and bind this anion with a stability constant of approximately  $5000 \text{ M}^{-1}$ , compared with values of 520 to  $775 \text{ M}^{-1}$  for carboxylates. Thiourea analogues show a much lower affinity and selectivity for anionic guests and the origin of this difference in behavior is discussed.

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