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Cover

See Rebecca Somers, Mounji G. Bawendi and Daniel G. Nocera, page 579.

Manipulation of fluorescent resonant energy transfer between a CdSe nanocrystal and an analyte reporter is a predominant optical sensing mechanism of CdSe chemical and biological sensors.

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CHEMICAL SCIENCE

C25

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Chemical Science

April 2007/Volume 4/Issue 4

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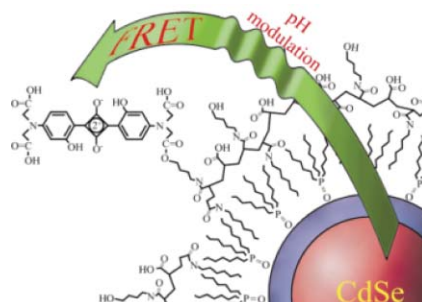
TUTORIAL REVIEWS

579

CdSe nanocrystal based chem-/bio- sensors

Rebecca C. Somers, Mounji G. Bawendi* and Daniel G. Nocera*

Nanocrystals not only are good imaging agents but they can also be sensors of their biological and chemical environment.



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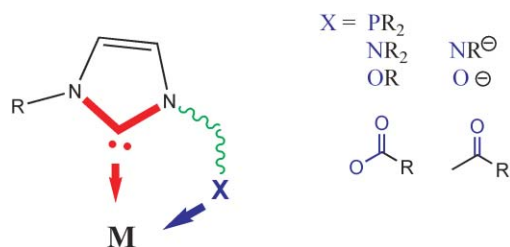
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The chemistry of functionalised N-heterocyclic carbenes

Olaf Kühnl*

Functionalised carbenes. Which functional groups are possible and is it always advantageous to introduce them? A tutorial review.

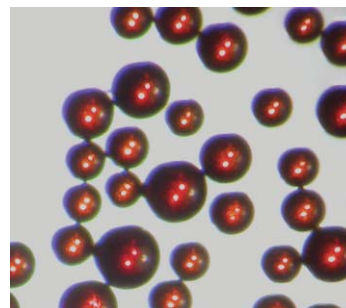


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Applications of phosphine-functionalised polymers in organic synthesis

Meritxell Guinó and King Kuok (Mimi) Hii

This *tutorial review* demonstrates the versatility of phosphine-functionalised polymers in modern organic synthesis.



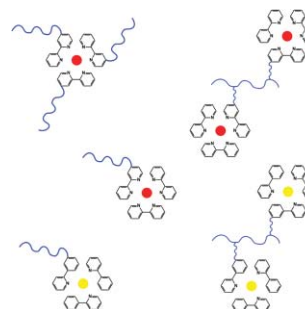
CRITICAL REVIEWS

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Functional ruthenium(II)- and iridium(III)-containing polymers for potential electro-optical applications

Veronica Marin, Elisabeth Holder, Richard Hoogenboom and Ulrich S. Schubert*

This critical review explores synthetic pathways to polymeric light-emitting ruthenium(II) and iridium(III) complexes with bipyridine ligands in the side chain or end-functionalized in the polymer backbone. Different polymerization techniques and end-coupling procedures are described.

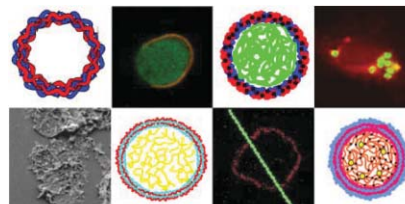


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Release mechanisms for polyelectrolyte capsules

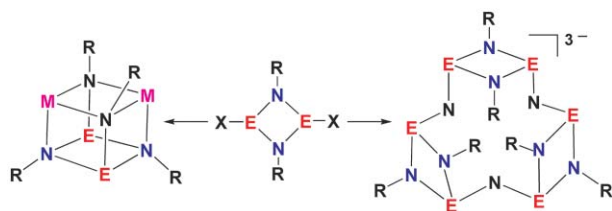
Bruno G. De Geest, Niek N. Sanders, Gleb B. Sukhorukov, Joseph Demeester and Stefaan C. De Smedt*

Polyelectrolyte capsules are novel materials having high potential in the biomedical field. In this review an overview is given of the different mechanisms to obtain drug release from these capsules.



Polyelectrolyte capsules: multifunctional drug delivery vehicles of the future?

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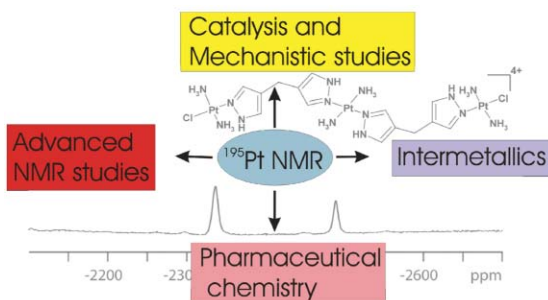


Chemistry of pnictogen(III)–nitrogen ring systems

Maravanji S. Balakrishna, Dana J. Eisler and Tristram Chivers*

The E_2N_2 ($E = P, As, Sb, Bi$) ring system is a versatile template for the construction of novel compounds ranging from metal complexes to macrocycles.

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^{195}Pt NMR—theory and application

Brett M. Still, P. G. Anil Kumar, Janice R. Aldrich-Wright and William S. Price*

This review highlights the progress in ^{195}Pt NMR over the last 25 years. In particular, some of the recent applications of ^{195}Pt NMR in catalytic and mechanistic studies, intermetallics and drug binding studies are discussed. The latest developments in the theoretical knowledge and experimental advances have made ^{195}Pt NMR an essential tool for examining molecular interactions and a rich source of information in many other fields.

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