UNIVERSITAT DE BARCELONA

Departament de Química Inorgànica

Notícies Inorgàniques

Any 1, Núm. 1, Febrer de 2002

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Notícies Inorgàniques *pretén ser una eina de comunicació dirigida als estudiants i en general a tots els membres de la Facultat, dels resultats més importants i atractius que de manera continuada es van produint en el món de la Química, amb especial èmfasi en el camp de la Química Inorgànica. Entenem que una divulgació ràpida i d'accés fàcil ajudarà a tothom a mantenir més viu l'interès per la recerca i la innovació científica.*

A cada notícia o comentari s'adjunta una referència, on pot trobar-se més informació.

No cal dir que esperem els vostres comentaris i suggeriments per tal de millorar ***Notícies Inorgàniques****.*

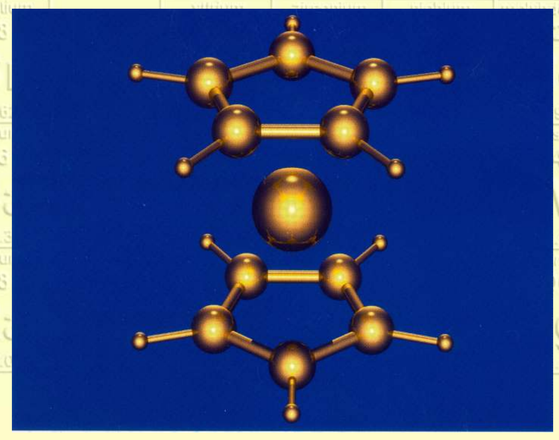
Els editors.

50è aniversari del ferrocè

On Dec. 15, 1951, two chemists at Duquesne University in Pittsburgh published a landmark paper reporting the synthesis of "a new type of organo-iron compound" they called dicyclopentadienyliron [*Nature*, **168,** 1039 (1951)].

The structure they proposed for the molecule turned out to be wrong. But the report triggered a flurry of intense activity at other labs and ushered in the age of modern organometallic chemistry.

To mark the 50th anniversary of the discovery of that compound, now known as ferrocene, the Journal of Organometallic Chemistry has published a special issue containing some 850 pages. The issue offers personal recollections from six people close to the discovery, plus more than 100 papers reporting new results concerning ferrocenes and ferrocene-containing materials.

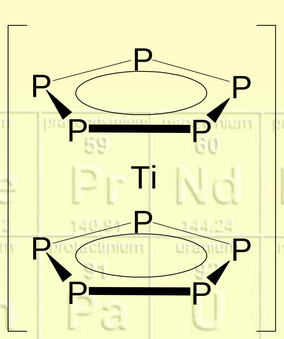


Font: *Chem. Eng. News*, 3 desembre 2001, 37

El primer metal·locè sense carboni

Fifty years after the first metallocene--ferrocene--made its debut, chemists at the University of Minnesota have prepared what they say is the first unambiguously characterized carbon-free metallocene. It was synthesized by reacting a hexacarbonyltitanate ($[Ti(CO)_6]^{2-}$) complex with white phosphorus (P_4) in pyridine solution at room temperature.

The decaphosphatitanocene shown appears to be the first complex that has been conclusively proven to have a transition metal sandwiched between two inorganic rings. The Minnesota researchers -postdoc Eugenijus Urnezius, graduate student William Brennessel, and chemistry professor John E. Ellis -are hoping to make related complexes with other metals.

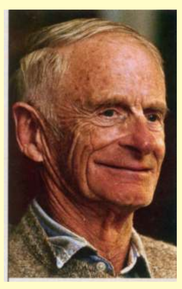


Font: *Chem. Eng. News*, 23 abril 2001, 59

Premi Nobel 2001: catàlisi asimètrica

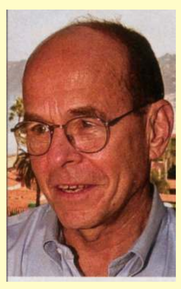
The 2001 Nobel Prize in Chemistry will be shared by three scientists who devised techniques for catalytic asymmetric synthesis--the use of chiral catalysts to accelerate the production of single-enantiomer compounds for pharmaceutical use and a wide range of other applications.

According to the Royal Swedish Academy of Sciences, (http://www.nobel.se/chemistry) the discoveries made by the three men "have had a very great impact on academic research and the development of new drugs and materials and are used in many industrial syntheses of drugs and other biologically active compounds."



W. S. Knowles

R. Noyori



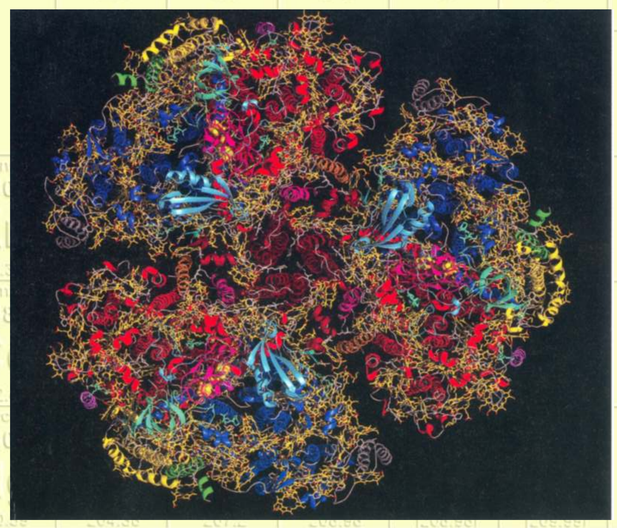
K. B. Sharpless

Font: *Chem. Eng. News*, 15 octubre 2001, 5

Resolta l'estructura del fotosistema I

After more than 10 years of effort, a team of German chemists and crystallographers has worked out the three-dimensional structure of photosystem I, the larger of the two huge protein-cofactor complexes where the initial steps of photosynthesis take place in plants, green algae, and cyanobacteria. The work is a long-term collaboration between a team of biophysical chemists at the Technical University of Berlin led by Petra Fromme and Horst T. Witt and a team of crystallographers at the Free University of Berlin led by Norbert Krauss and Wolfram Saenger [*Nature*, **411**, 909 (2001)]

The photosystem, which the researchers crystallized in its trimeric form, contains 12 different proteins in each monomer, along with 96 chlorophylls and more than 30 other cofactors. For the first time, the structure allows them to exactly locate each of the chlorophylls within the protein complex and to begin to figure out how these molecules work together as a system to gather solar energy and then transfer that energy to the center of the complex, where electron-transfer reactions convert it to the chemical energy that drives almost all life on Earth.



Font: *Chem. Eng. News*, 25 juny 2001, 9

Vidres que s'autonetegen gràcies al TiO_2

British glassmaker Pilkington says it is the first to make a glass that could put professional window washers out of business. All the glass needs is sun and rain to stay clean. Now in production, the glass should be available in new windows later this year.

Pilkington Glass's Kevin D. Sanderson, an inorganic chemist with a Ph.D. from Imperial College of Science, Technology & Medicine at London University, says the glass cleans itself by two modes. First, the TiO_2 on its surface acts as a catalyst in the presence of ultraviolet light to reduce organic dust and grime to water and carbon dioxide. Second, because TiO_2 reduces surface tension, rainwater "sheets down the surface" and washes dirt away.

Font: *Chem. Eng. News*, 2 juliol 2001, 8

Breus

- Ha calgut un segle, 34 edicions i 100 reimpressions per traduir el Holleman-Wiberg, *Lehrbuch der Anorganischen Chemie*, a l'anglès.
- Acaba d'aparèixer la segona part del "llibre vermell", *Nomenclature of Inorganic Chemistry II - Recommendations 2000*.
- Ha sortit el segon número de la *Revista de la Societat Catalana de Química*.
- S'ha compilat una base de dades de "reaccions que no funcionen": http://www.accelrys.com