

**Scuola in Scienze di Base "Galileo Galilei  
Dottorato in Scienze Chimiche  
Colloquio Galileiano**

*12 Giugno 2006, ore 16,00*

*Aula Magna del Dipartimento di Matematica,  
Universit degli Studi di Pisa,  
Largo Pontecorvo (ex-Marzotto),  
P I S A*

**Prof. Frank Albert COTTON**

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College Station, Texas, USA

**"Coupling of Dinuclear Redox Centers in Various Structural Contexts"**

Many compounds are now known in which transition metal atoms are united by bonds of order greater than one, including those of order four. Quadruple bonds are based on *d* orbitals and they are expected only among the transition elements. The presence of multiple bonding has been established conclusively. A great variety of molecules have been synthesized, containing two pairs of quadruply bonded molybdenum(II) ions ("dimolybdenum") with different linkers. Several molecular properties depend on the strength of the electronic coupling of the two dimolybdenum units, and the coupling can be tuned by varying the linkers. These molecules have then been studied by many physical techniques (electrochemistry, EPR, magnetic susceptibility, electronic spectroscopy and X-ray crystallography) to evaluate the magnitude of the coupling.

Tutti gli interessati sono caldamente invitati ad intervenire.

Prof. Maurizio Persico  
Presidente del Corso di Dottorato  
in Scienze Chimiche

Prof. Francesco Pegoraro  
Direttore della Scuola  
Galileo Galilei