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FACOLTA' DI SCIENZE

Dipartimento di Chimica Inorganica, Analitica
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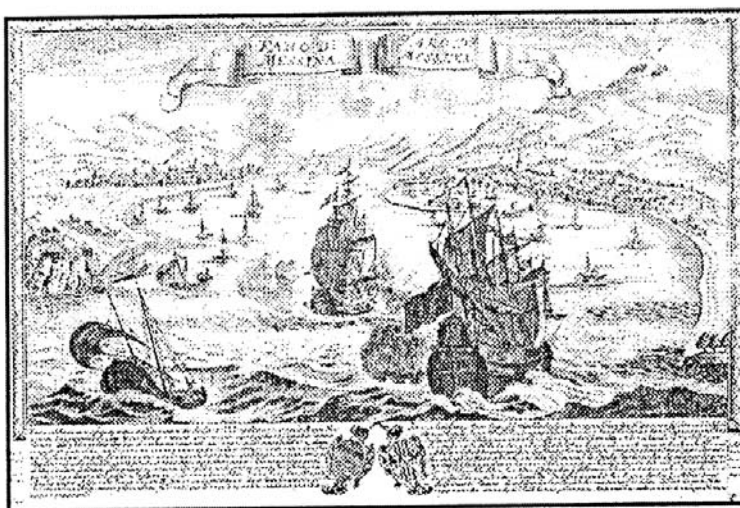
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Classe I di Scienze Fisiche
Matematiche e Naturali

WORKSHOP ON PLATINUM CHEMISTRY

ABSTRACTS



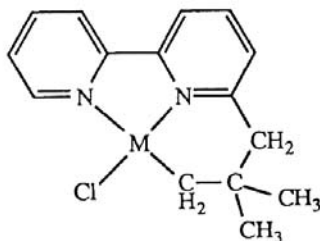
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**SYNTHESIS AND REACTIVITY OF CYCLOMETALLATED
DERIVATIVES (d^8) WITH HETEROCYCLIC
NITROGEN LIGANDS**

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Following our interest in the synthesis and reactivity of cyclometallated derivatives of d^8 metal ions with substituted pyridines and 2,2'-bipyridines¹, here we report new species arising from direct activation of alkyl C-H bonds.

The reaction of 6-(neopentyl)-2,2'-bipyridine, HL, with palladium(II) and platinum(II) intermediates, affords either adducts (HL)MCl₂ ($M = Pd$) or cyclometallated species (L)MCl, 1, ($M = Pd, Pt$) where L acts as an anionic terdentate ligand.



The new six-membered complexes, 1, will be compared with the five-membered species obtained from 6-(*t*-butyl)-2,2'-bipyridine.

From 1, ($M = Pt$), a series of cationic mono and dinuclear species have been isolated by displacement of chloride with neutral mono or bidentate ligands, L^* , $[(L)Pt(L^*)]^+$ and $[(L)Pt - \mu(L^*) - Pt(L)]^{++}$.

In the case of palladium(II), under different conditions, a second type of metallated complexes can be obtained, which imply the "roll-over" of a pyridine ring.

The reactivity of the new metallated species with CO will be described and compared with that observed in metallated systems derived from benzyl-substituted ligands.

REFERENCES

- [1] G. Minghetti, M.A. Cinellu, S. Stoccoro, A. Zucca, *Inorg Chem.*, **1990**, 29, 5137; S. Stoccoro, G. Chelucci, M.A. Cinellu, A. Zucca, G. Minghetti, *J. Organomet. Chem.*, 450, **1993**, C15, and references therein cited.

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