

***Trabajo de Investigación Máster en
Experimentación Química***

ANEXO

**Síntesis y caracterización
de complejos
mononucleares de rutenio
que incorporan
estructuras azobencénicas
y fosfónicas. Aplicación
en catalisis homogénea y
heterogénea**

Rosa Maria González Gil

Directores:

Dr. Jordi García-Antón y Dr. Xavier Sala

Unitat de Química Inorgànica

Departament de Química

Facultat de Ciències

Universitat Autònoma de Barcelona

Septiembre 2012

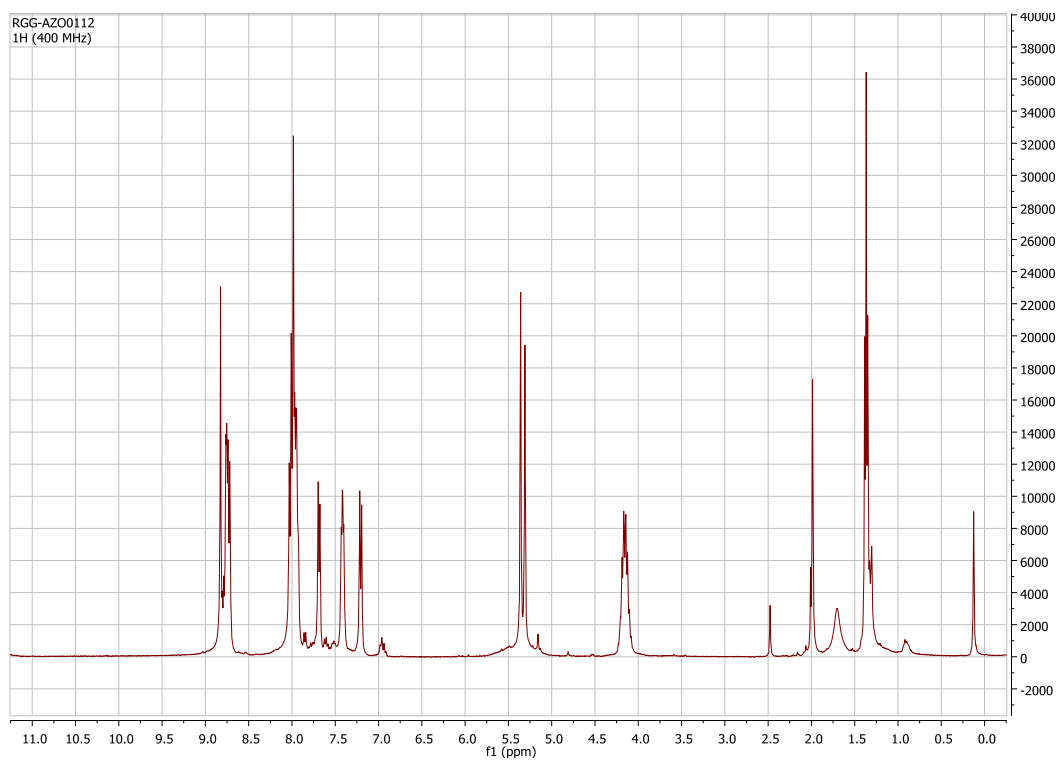


ANEXO

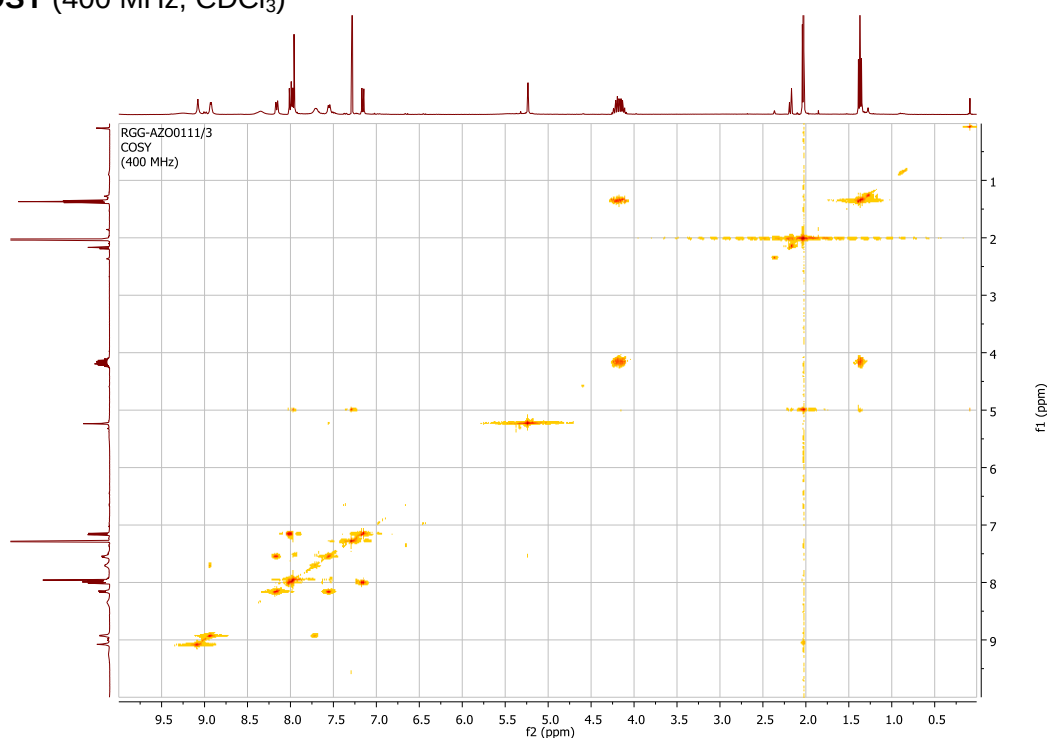
RESONANCIA MAGNÈTICA NUCLEAR

Ligando ttp-AZO_P (5)

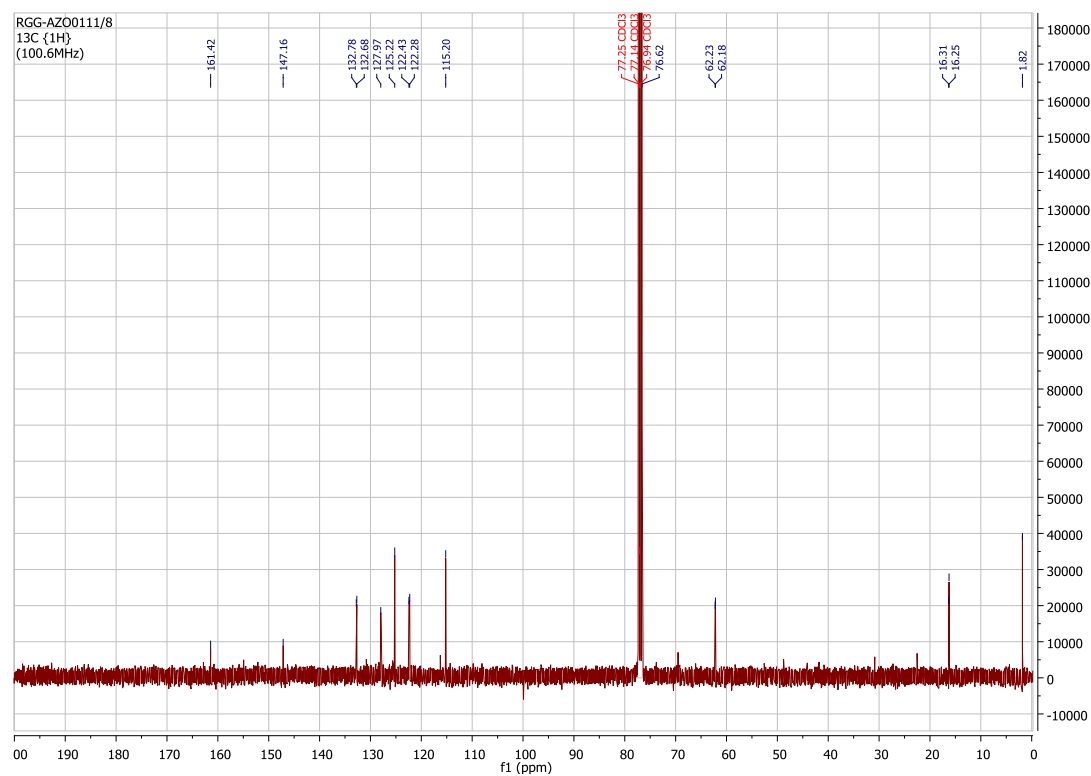
¹H- RMN (400 MHz, CDCl₃)



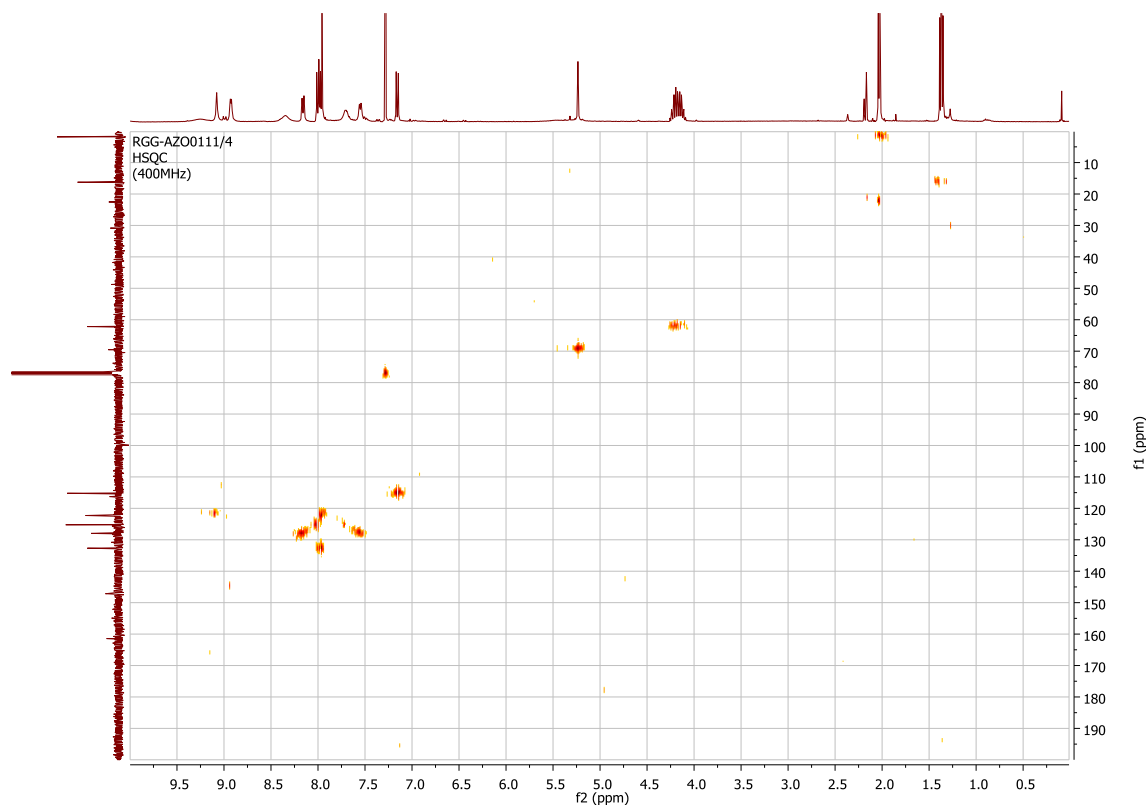
COSY (400 MHz, CDCl₃)



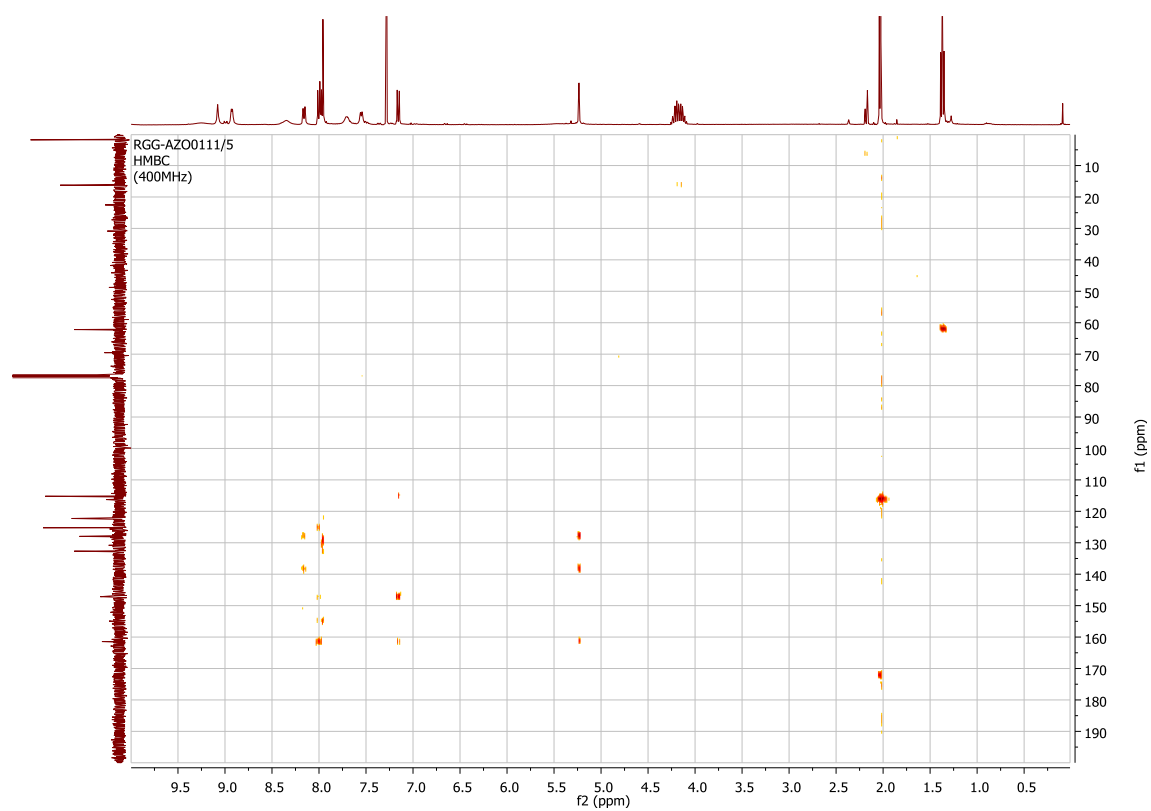
$^{13}\text{C} \{^1\text{H}\}$ -RMN (400 MHz, CDCl_3)



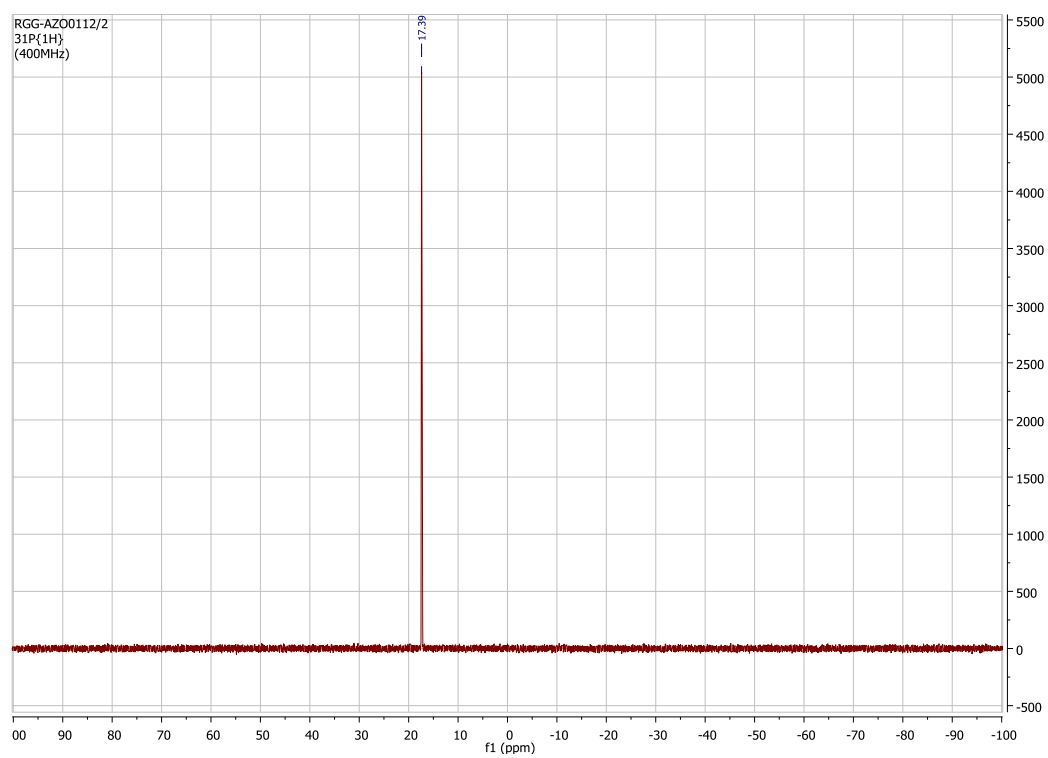
HSQC-RMN (400 MHz, CDCl_3)



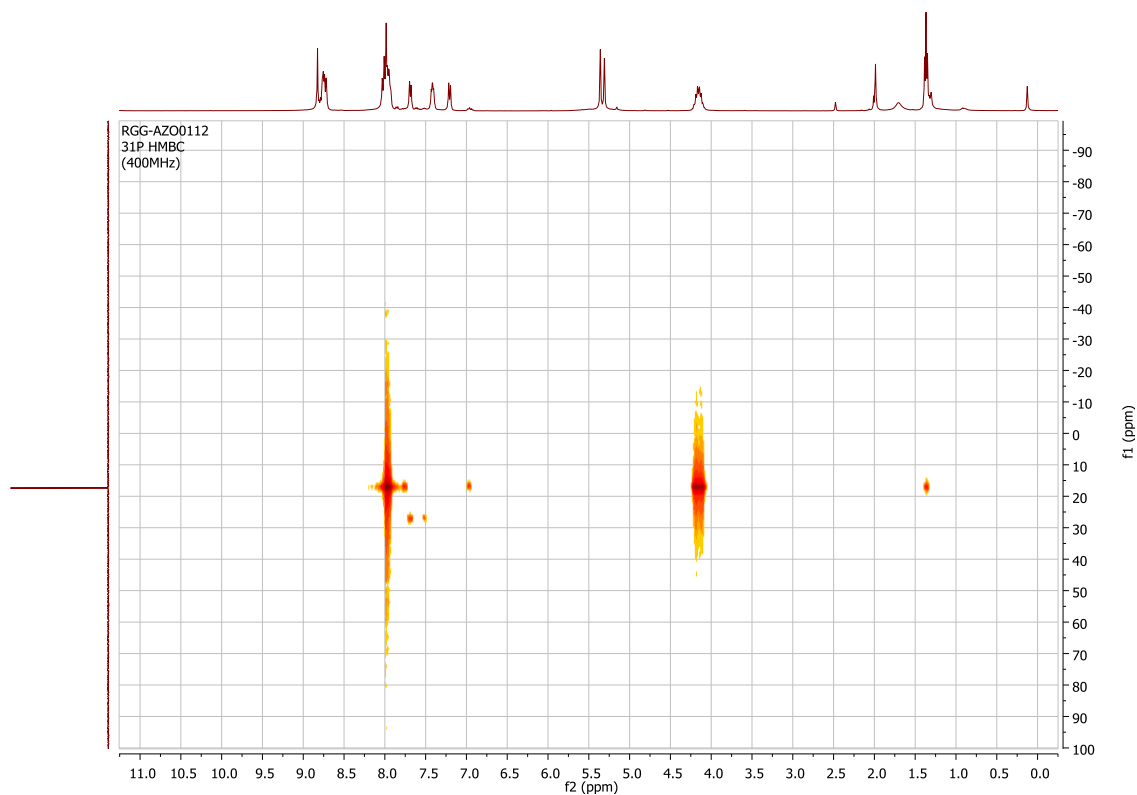
HMBC-RMN (400 MHz, CDCl₃)



³¹P-{¹H}-RMN (400 MHz, CDCl₃)

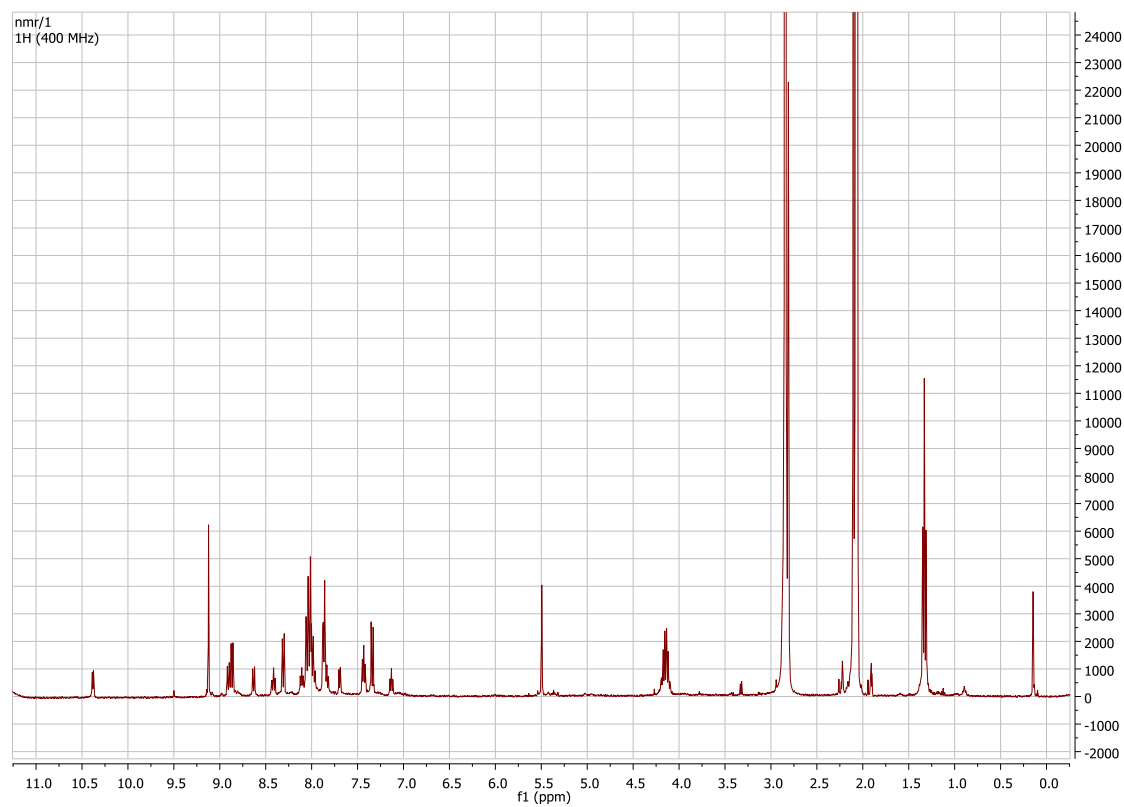


^{31}P - HMBC (400 MHz, CDCl_3)

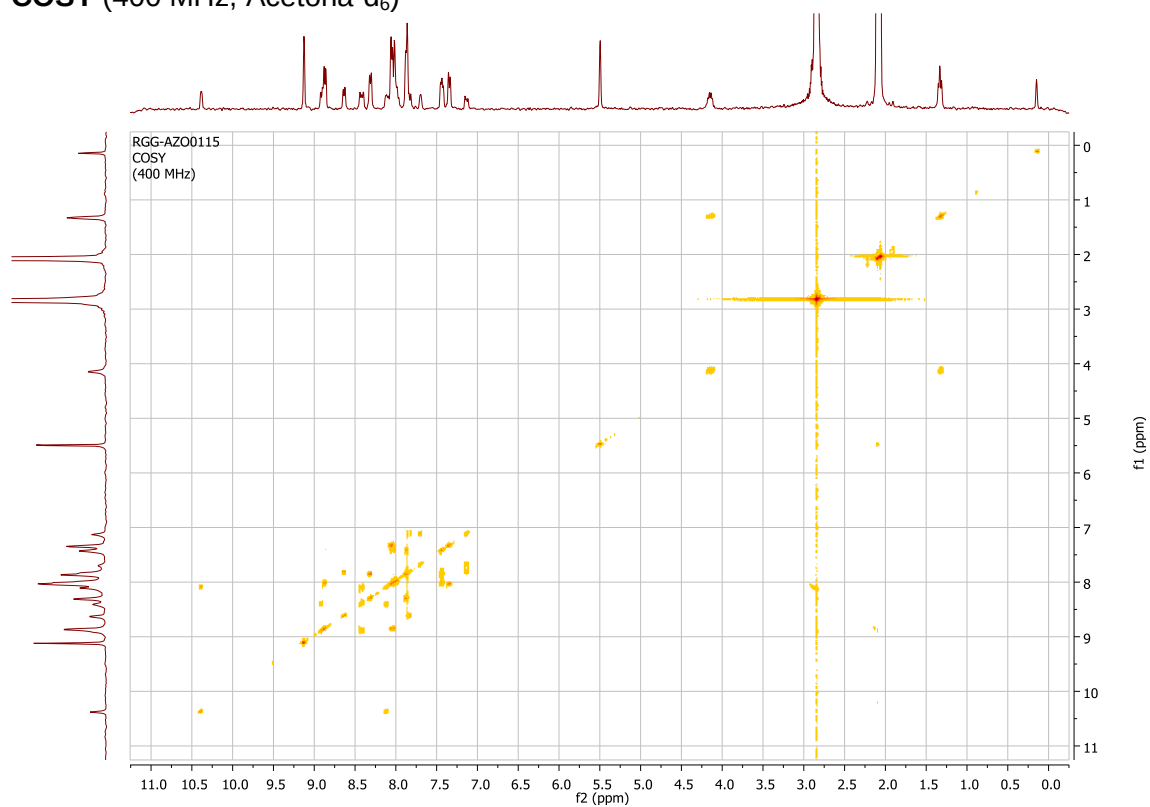


COMPLEJO C2: $[\text{Ru}^{\text{II}}\text{Cl}(\text{ttp-AZO}_P)(2,2\text{-bpy})](\text{PF}_6)$

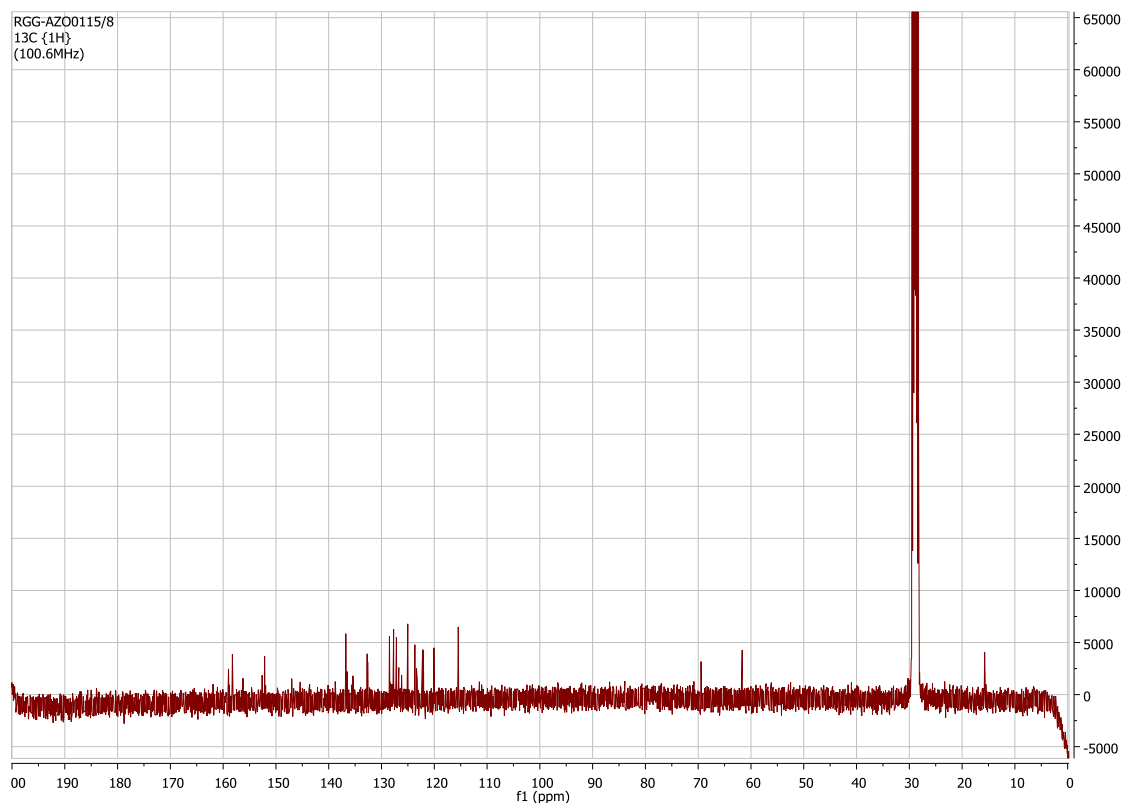
^1H -RMN (400 MHz, Acetona- d_6)



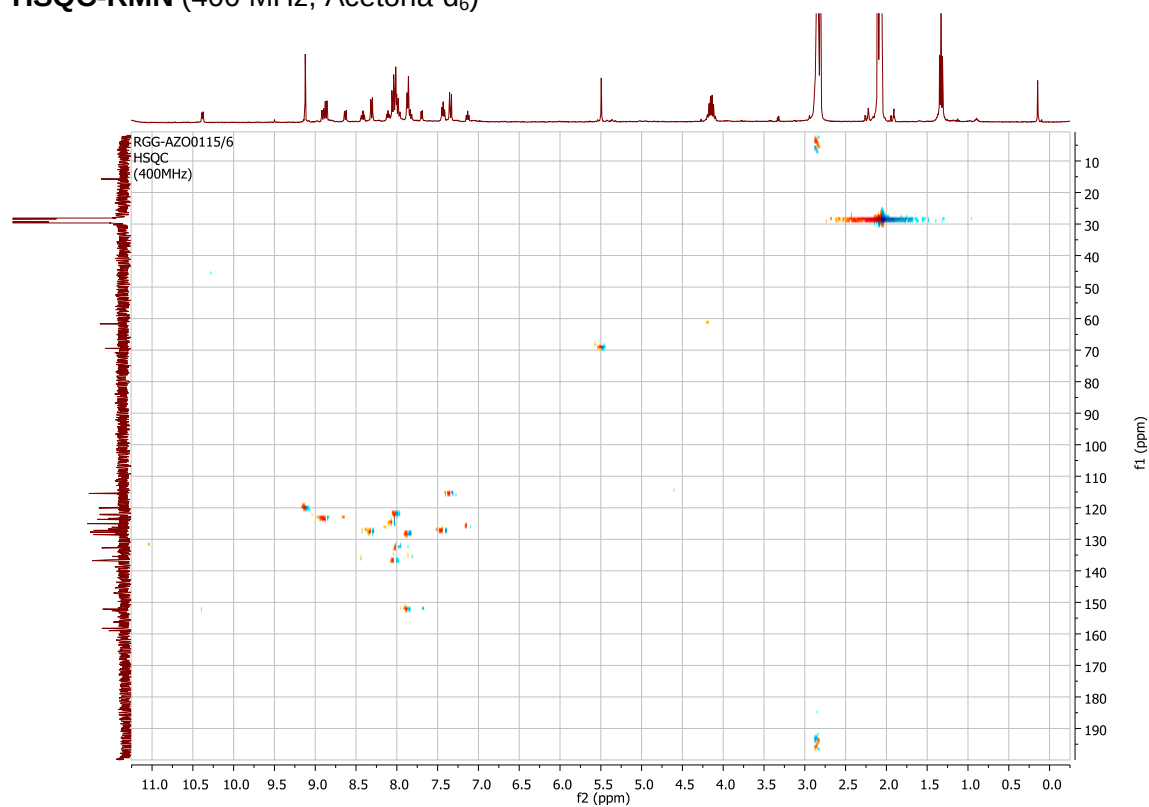
COSY (400 MHz, Acetona-d₆)



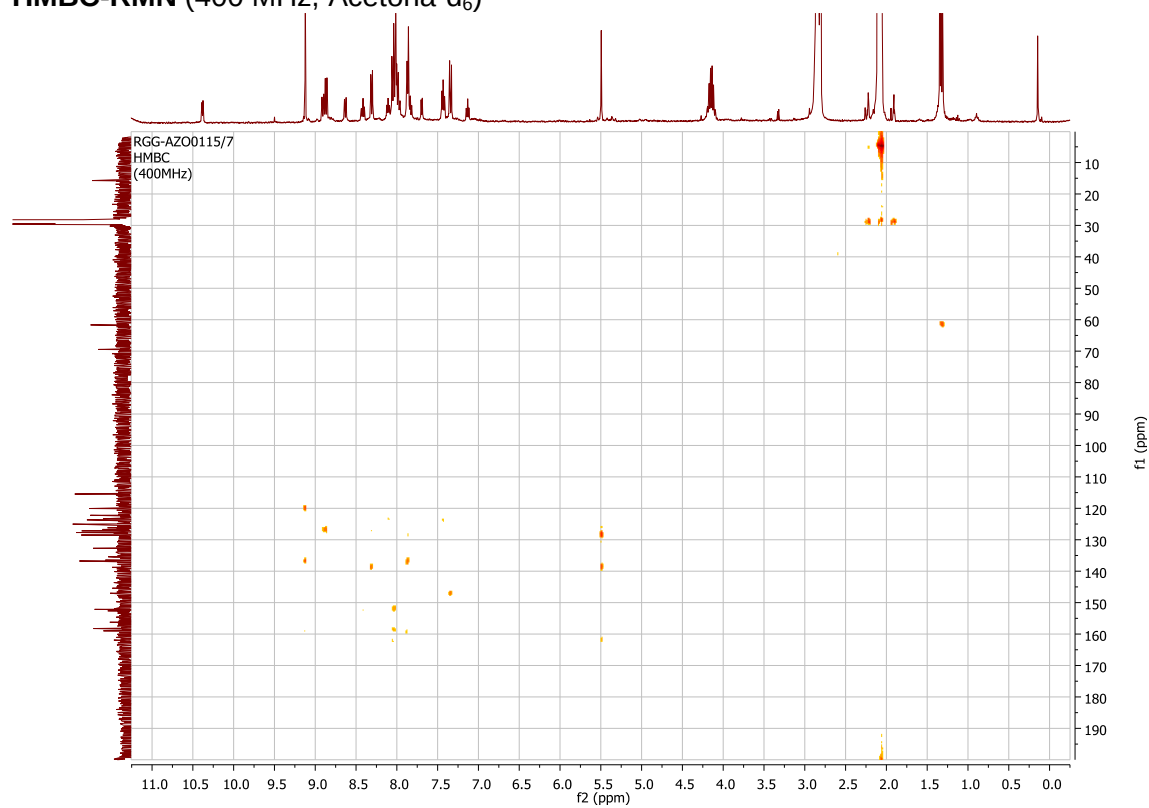
¹³C {¹H}-RMN (400 MHz, Acetona-d₆)



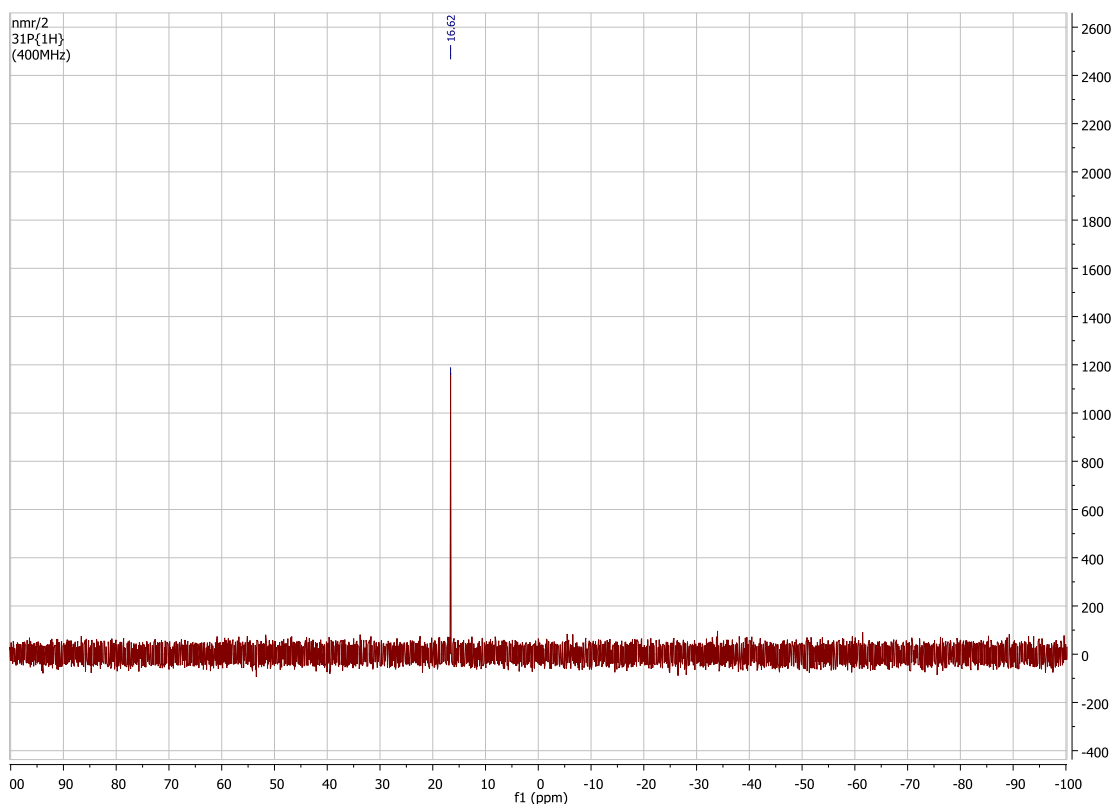
HSQC-RMN (400 MHz, Acetona-d₆)



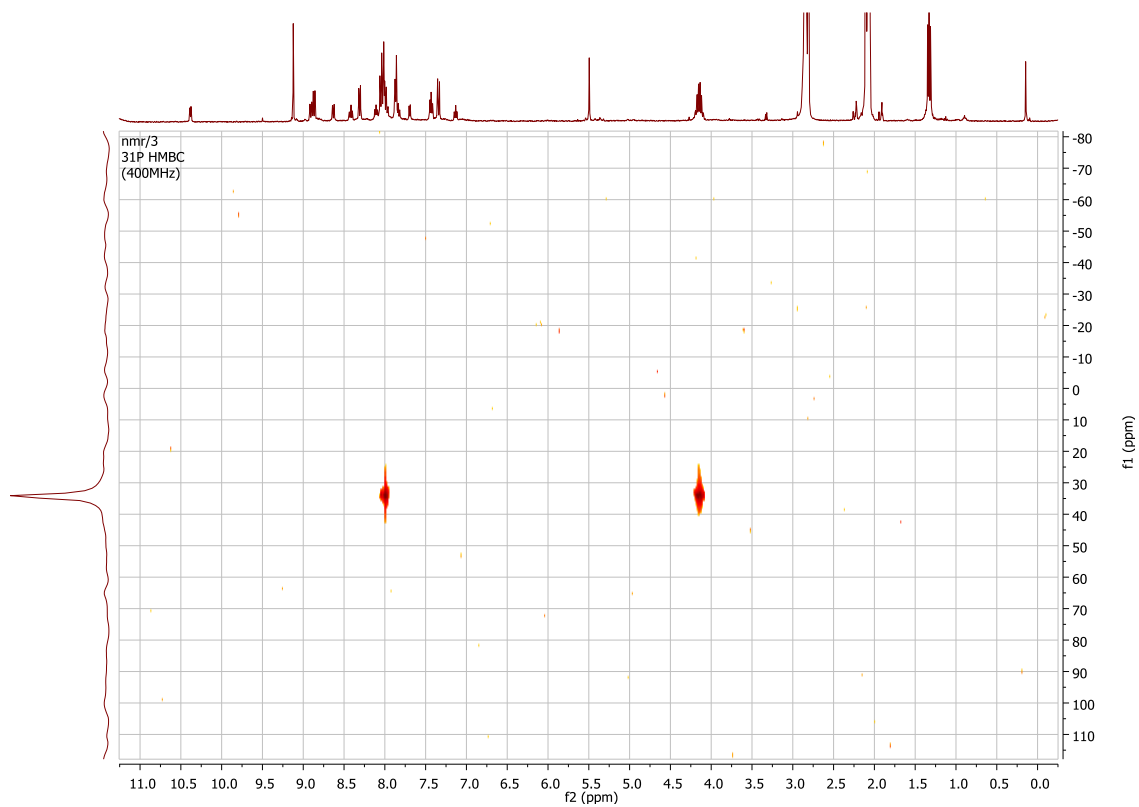
HMBC-RMN (400 MHz, Acetona-d₆)



$^{31}\text{P}\{-^1\text{H}\}$ -RMN (400 MHz, Acetona- d_6)



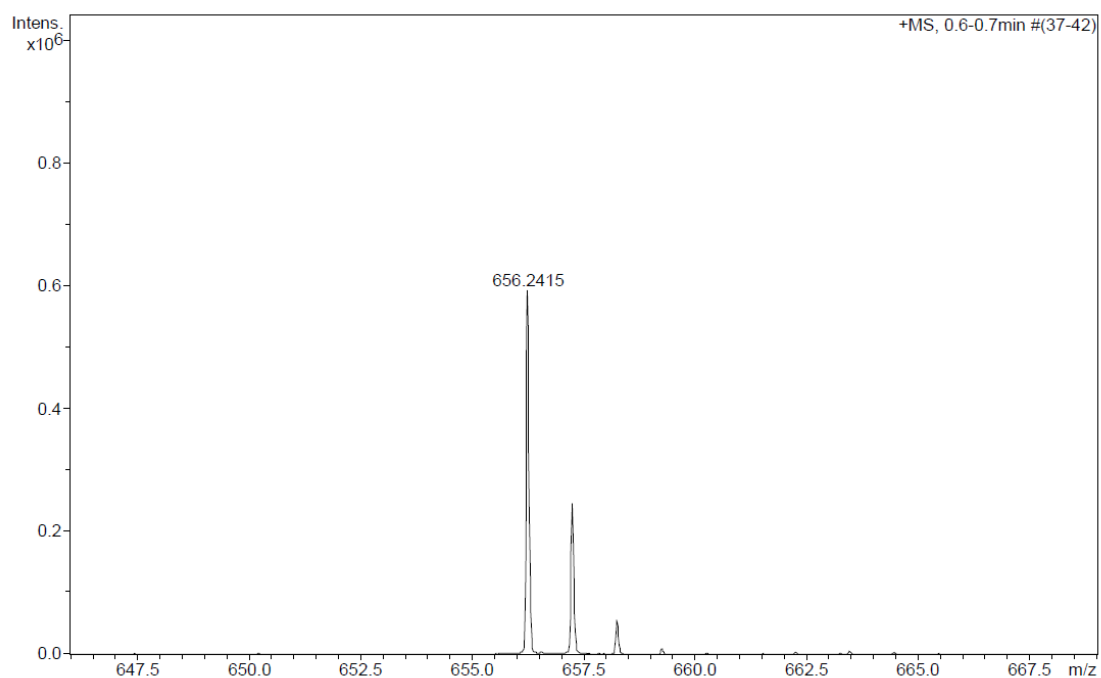
^{31}P - HMBC (400 MHz, Acetona- d_6)



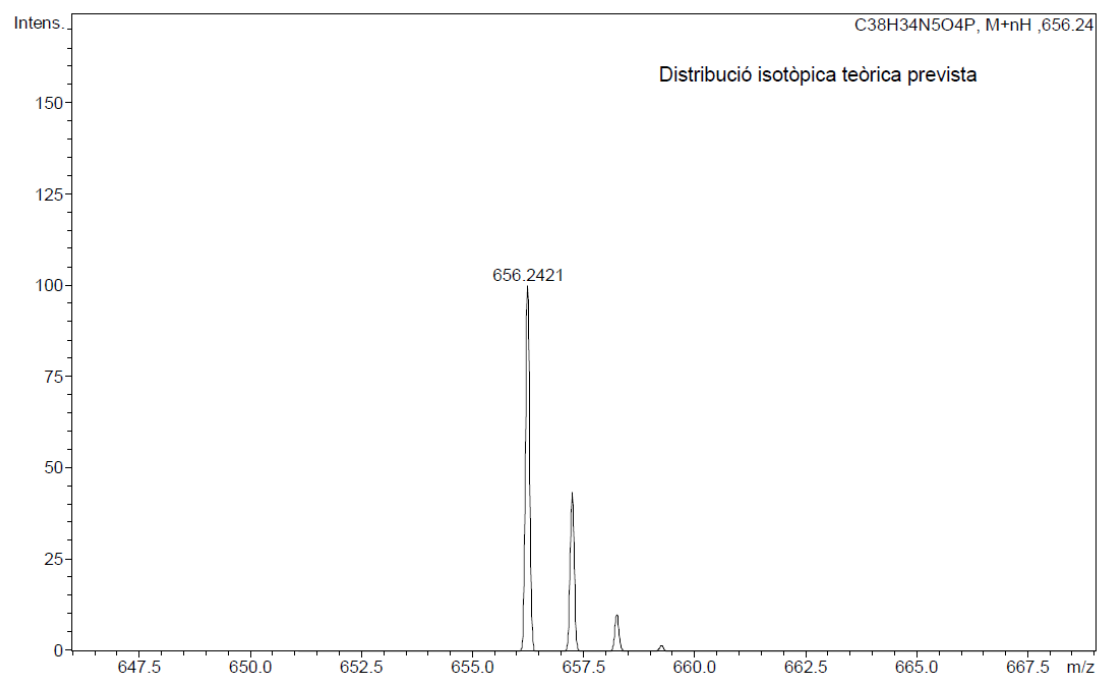
ANÁLISIS DE ESPECTROMETRIA DE MASAS

ESI-MS del ligando ttp-AZO (5) (DCM:EtOH 1:40)

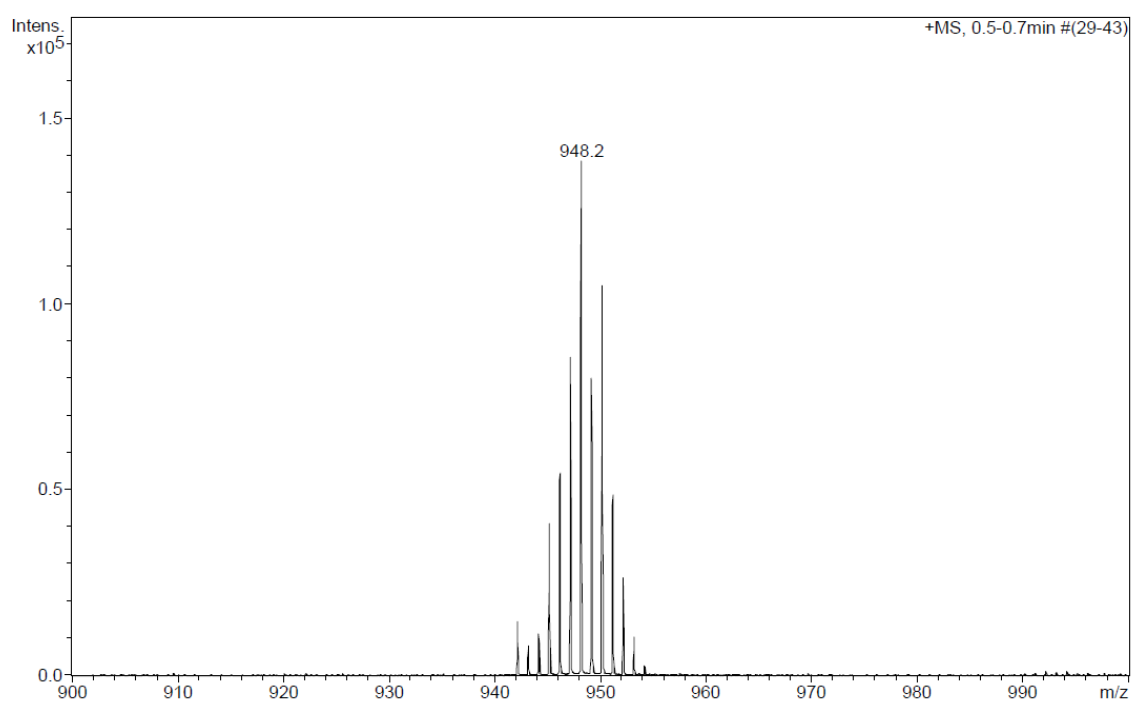
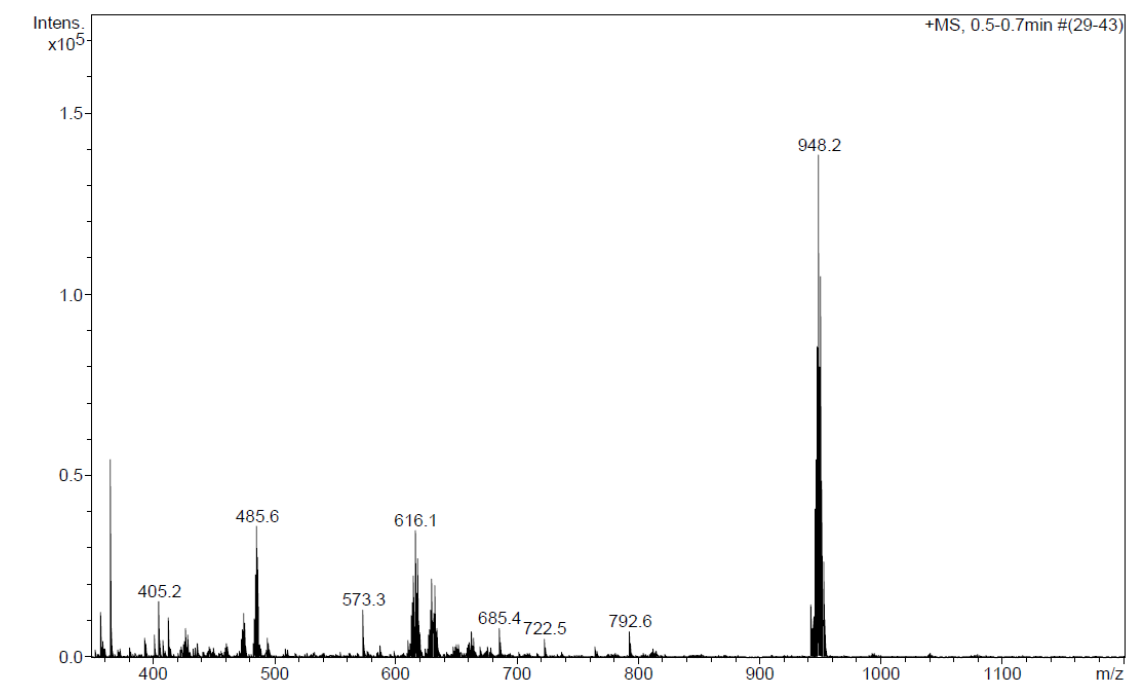
Experimental



Teórico



ESI-MS del complejo C2 (MeOH): $[Ru^{II}Cl(ttp-AZO_p)(2,2-bpy)](PF_6)$



ESI-MS del complejo C3 (MeOH): $[Ru^{II}Cl(ttp-AZO_D)(2,2-bpy)](PF_6)$

