

Dodatak

Roca, Sunčica

Supplement / Prilog

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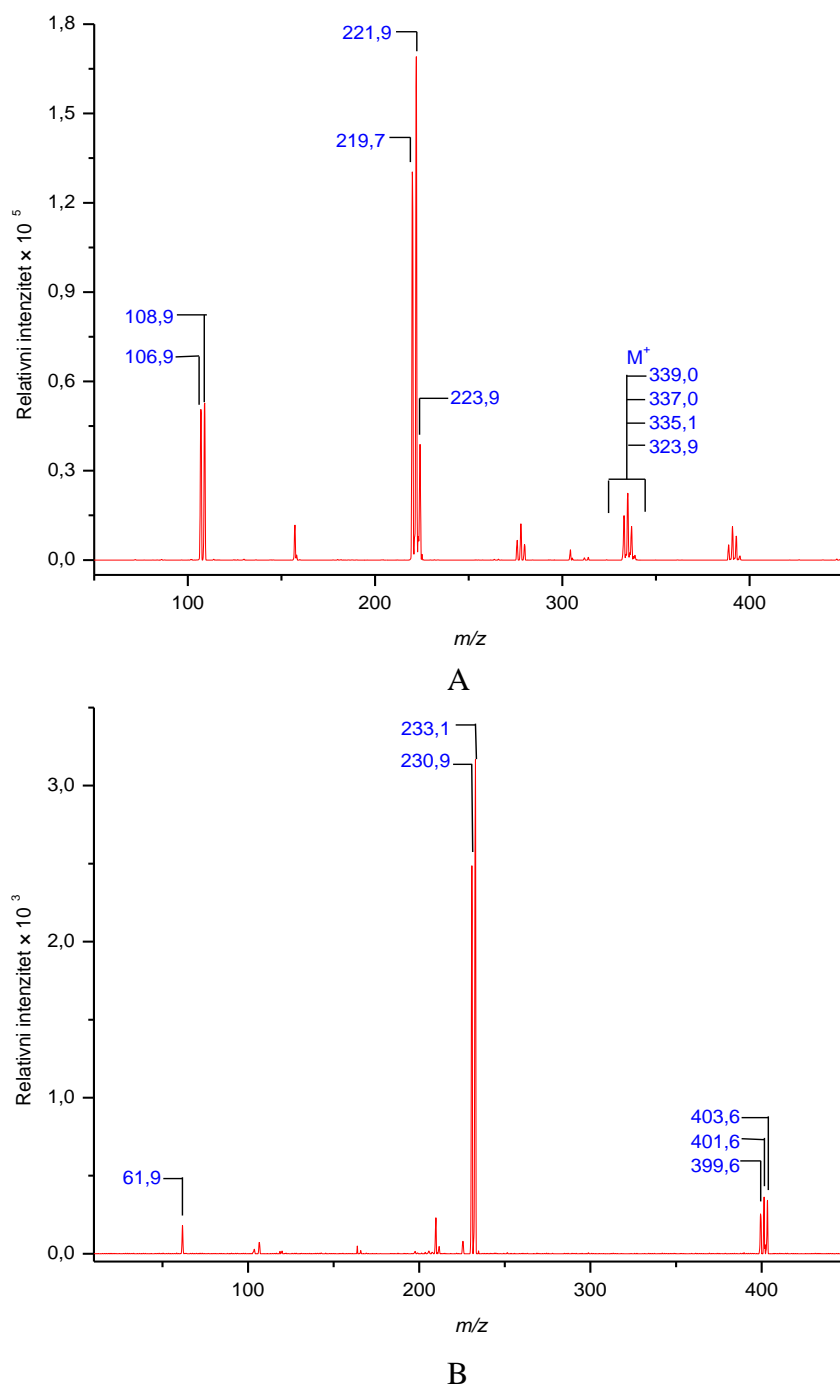
Repository / Repozitorij:

[Repository of the Faculty of Science - University of Zagreb](#)

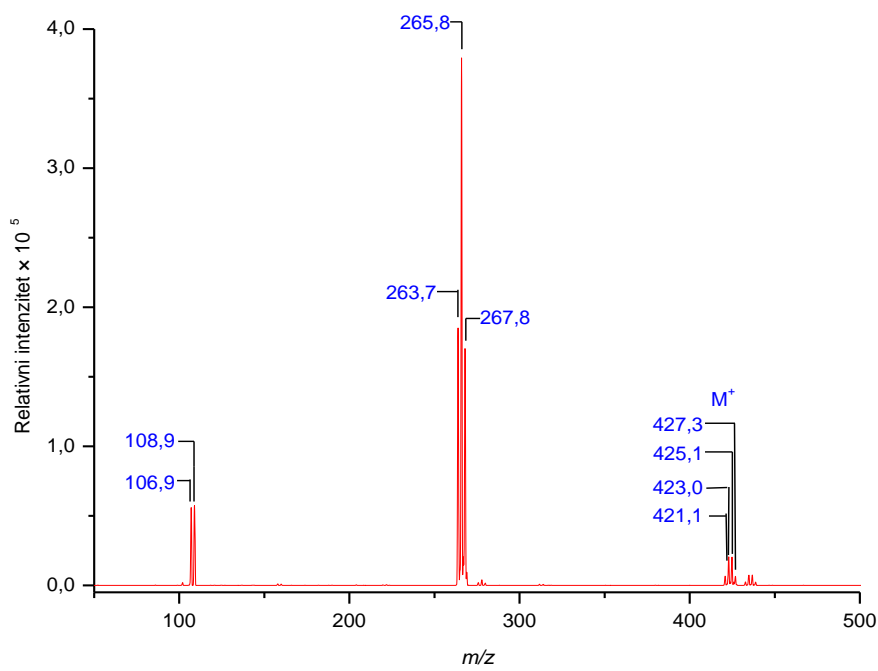


§ 8. DODATAK

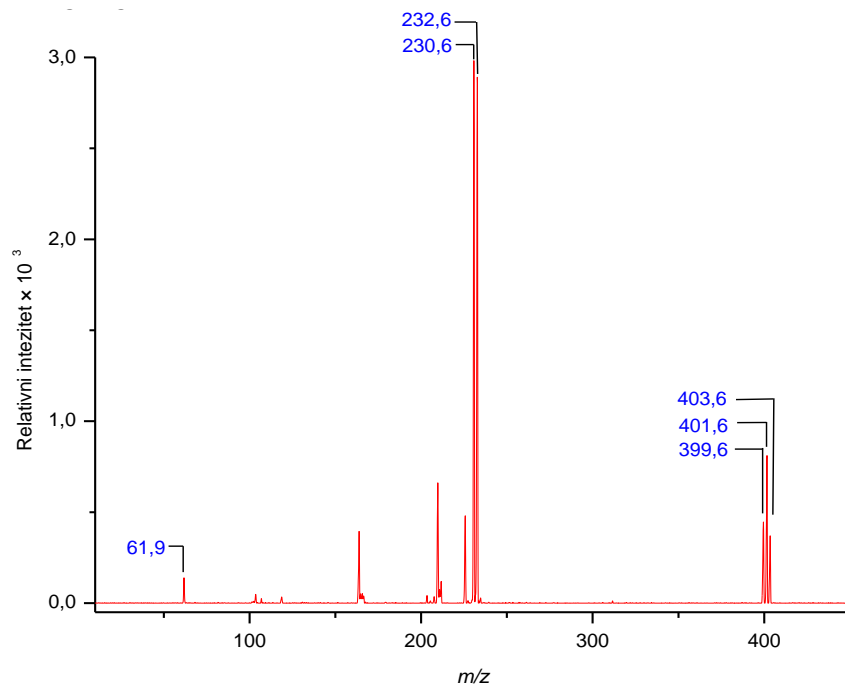
8.1. Spektri spektrometrije masa



Slika D1. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa [Ag(NO₃)(2-Clpy)₂], K1.

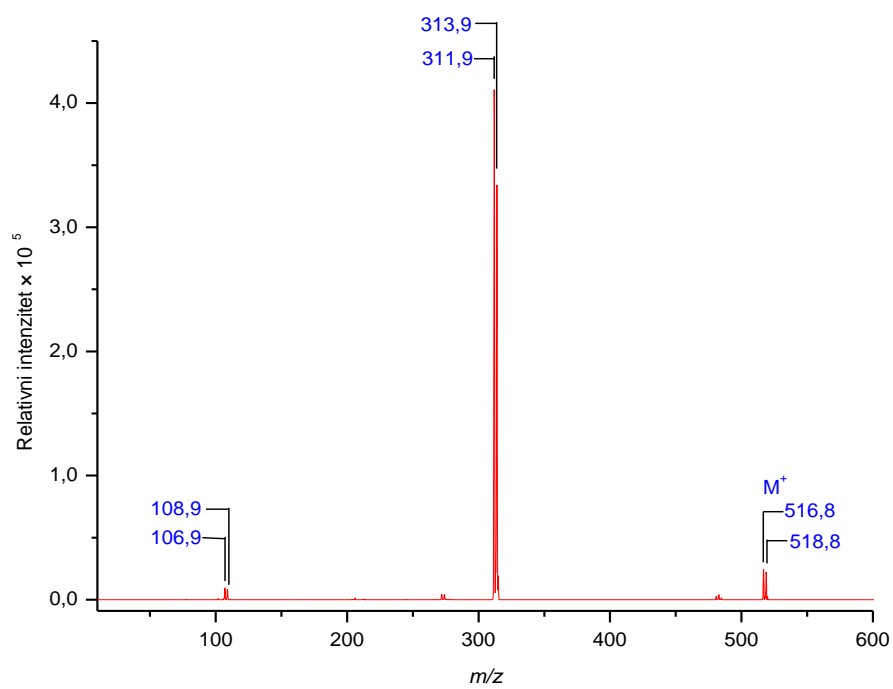


A

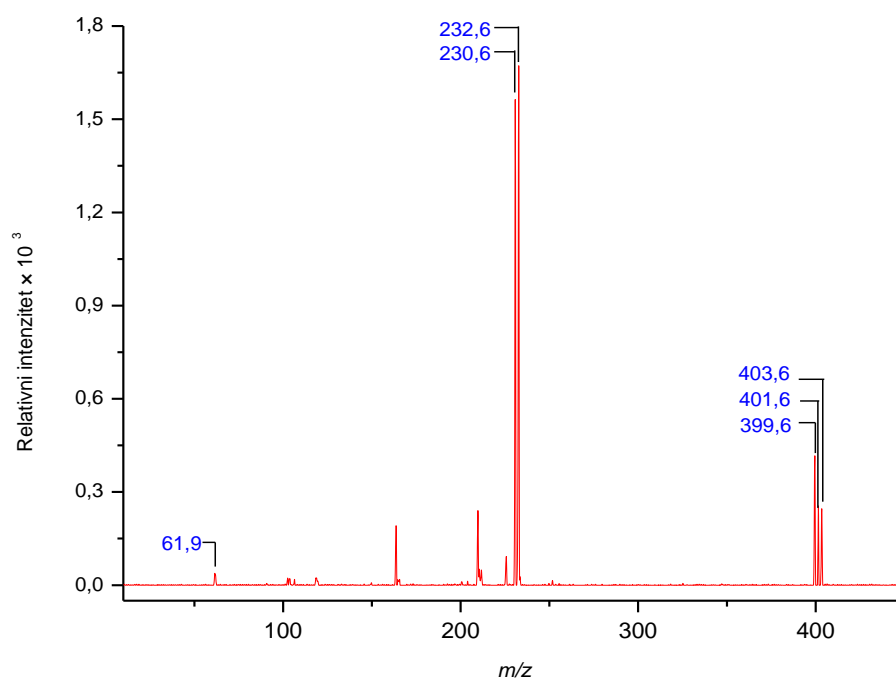


B

Slika D2. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa [Ag(NO₃)(2-Brpy)₂], K2.

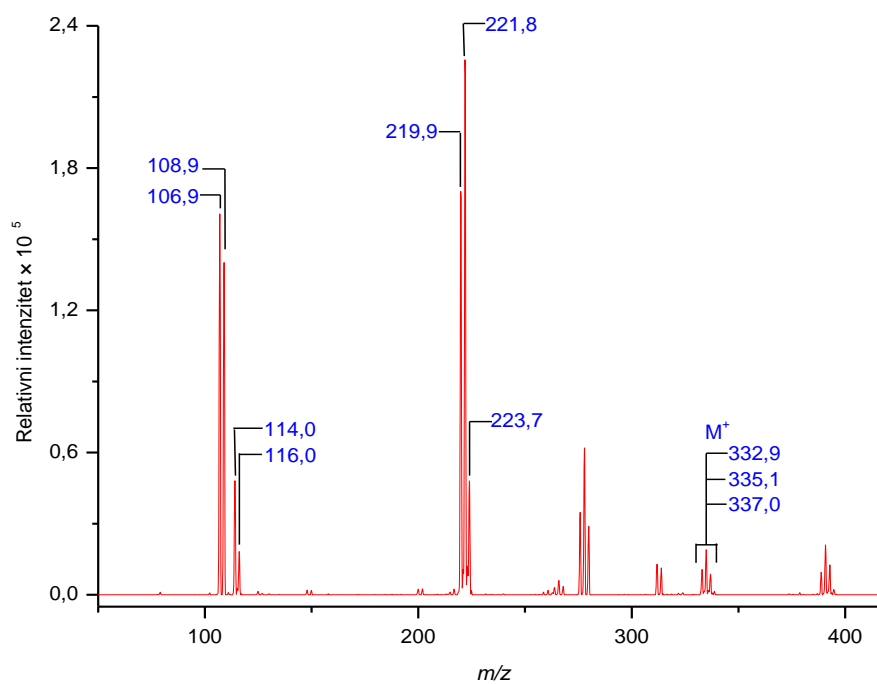


A

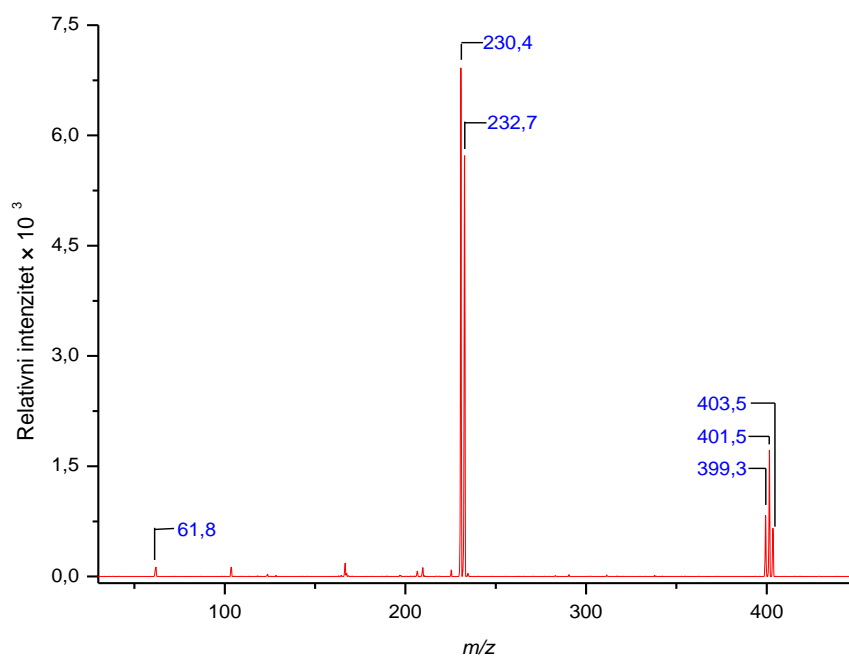


B

Slika D3. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa $[Ag(NO_3)(2-Ipy)_2]$, K3.

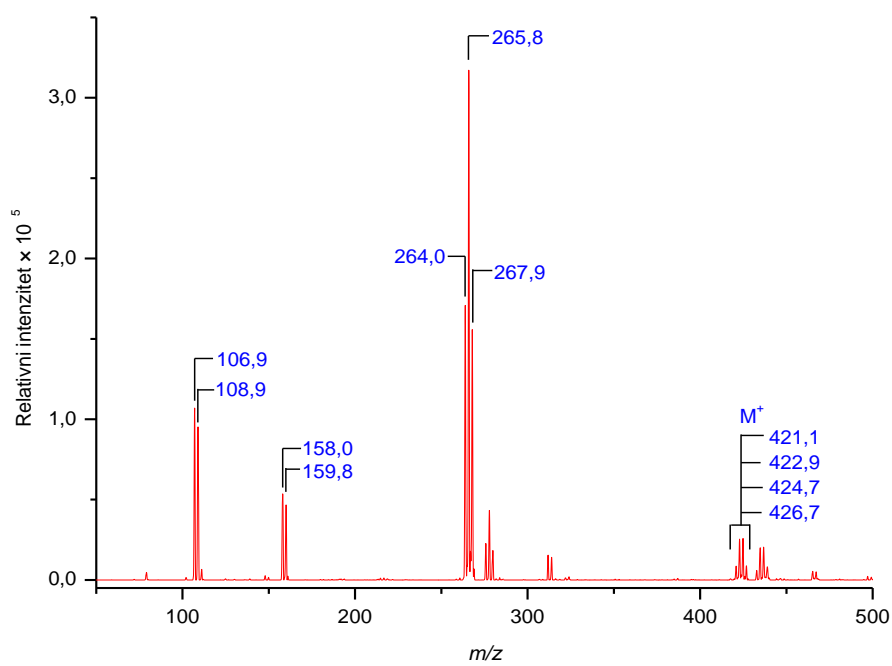


A

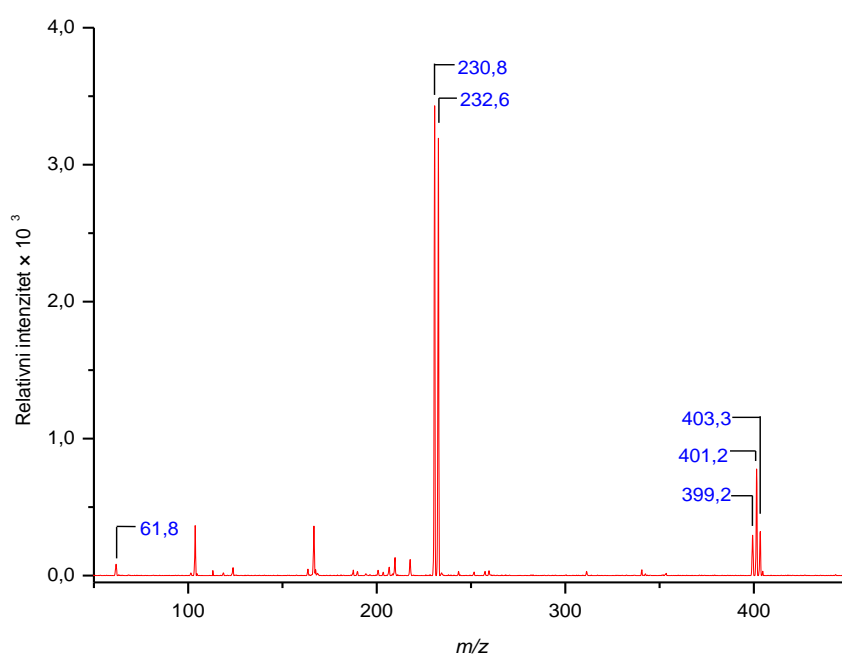


B

Slika D4. A) ESI^+ -MS i B) ESI^- -MS spektri kompleksa $[Ag(NO_3)(3-Clpy)_2]$, **K4**.

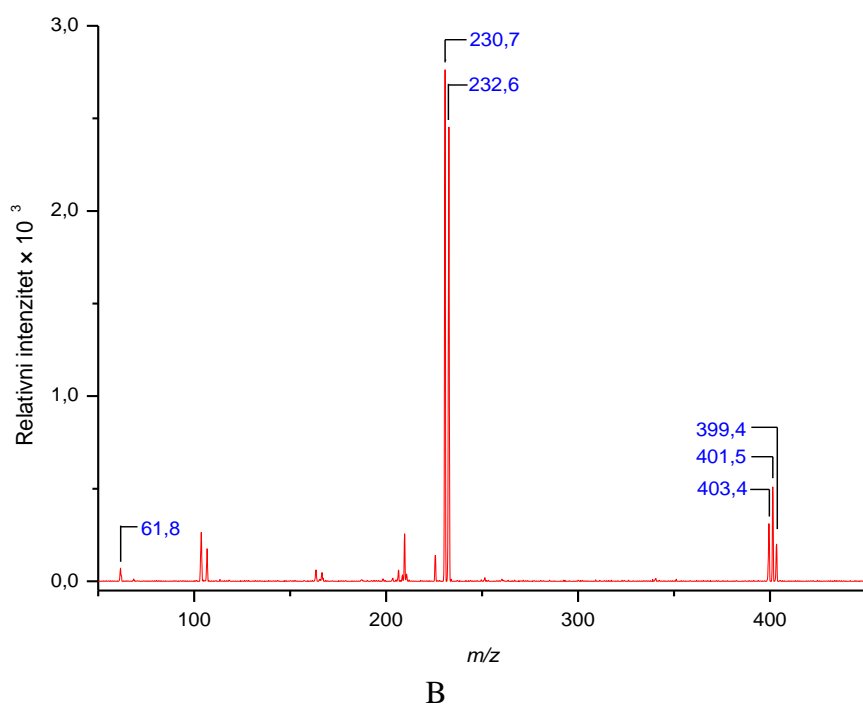
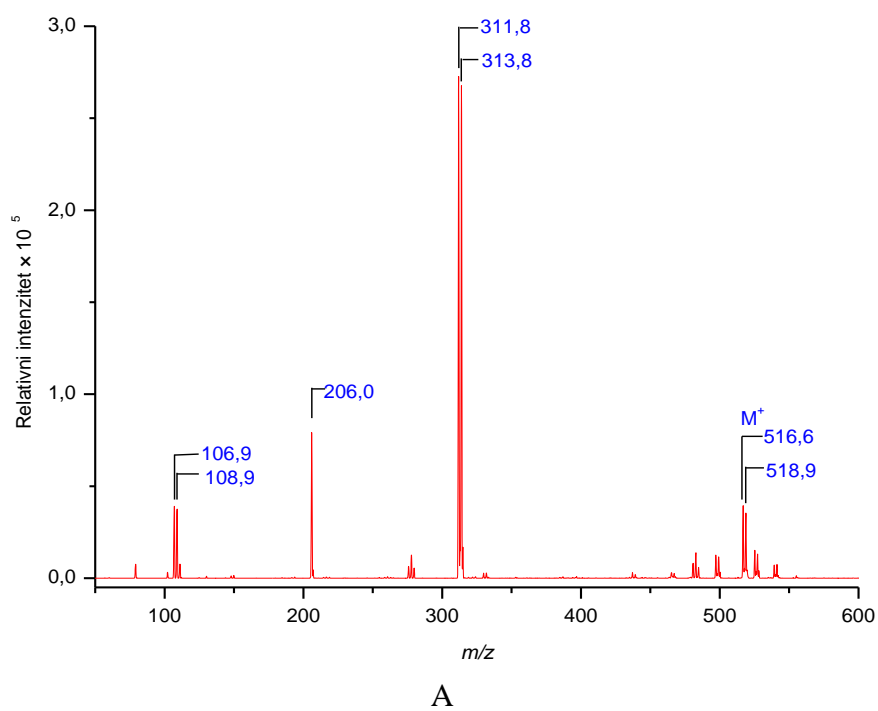


A

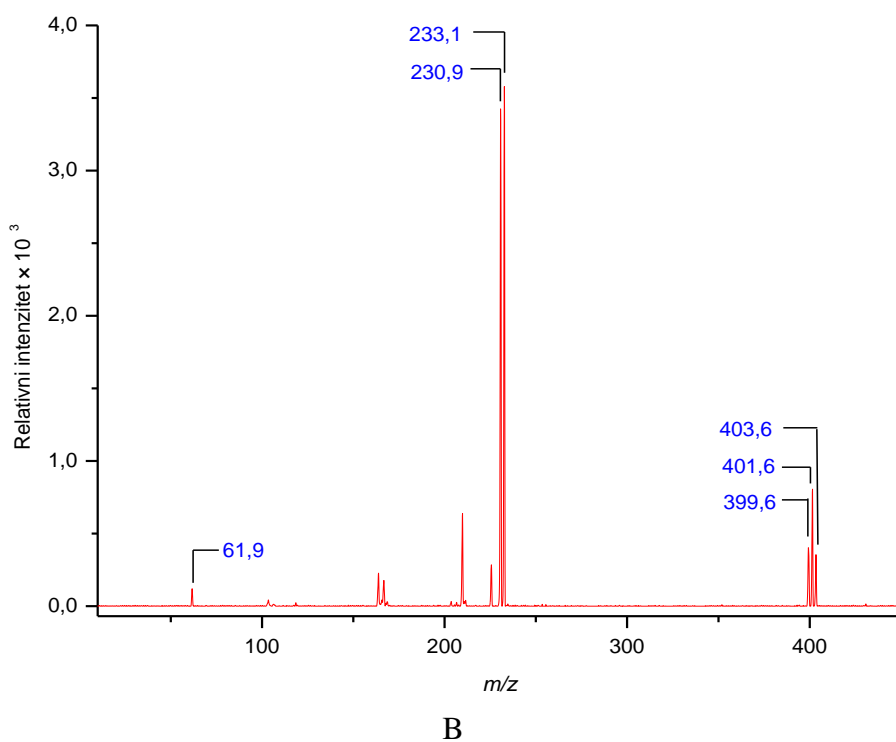
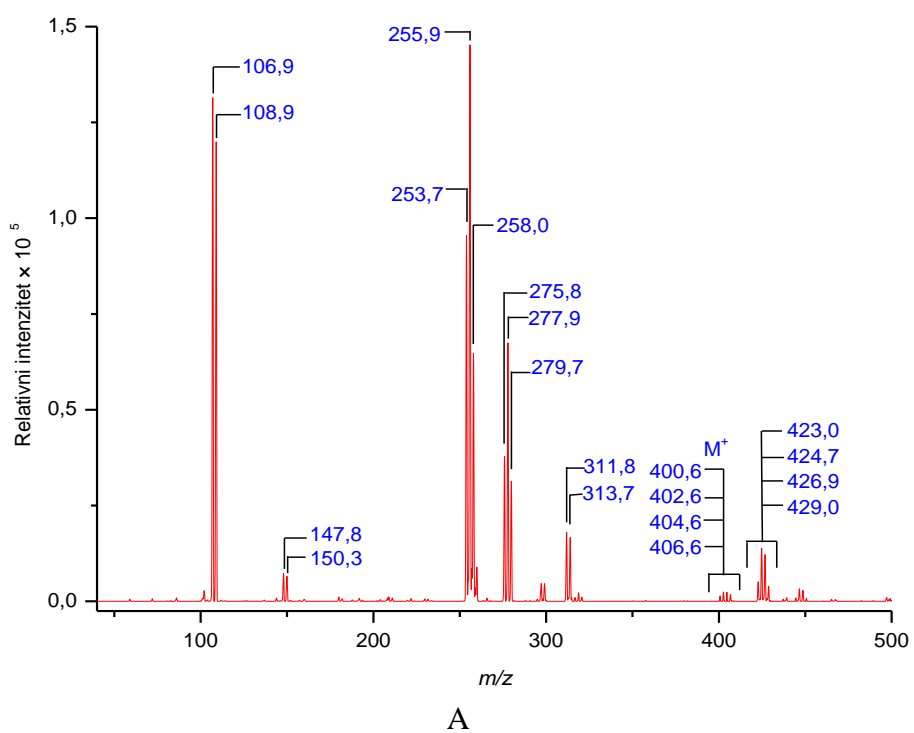


B

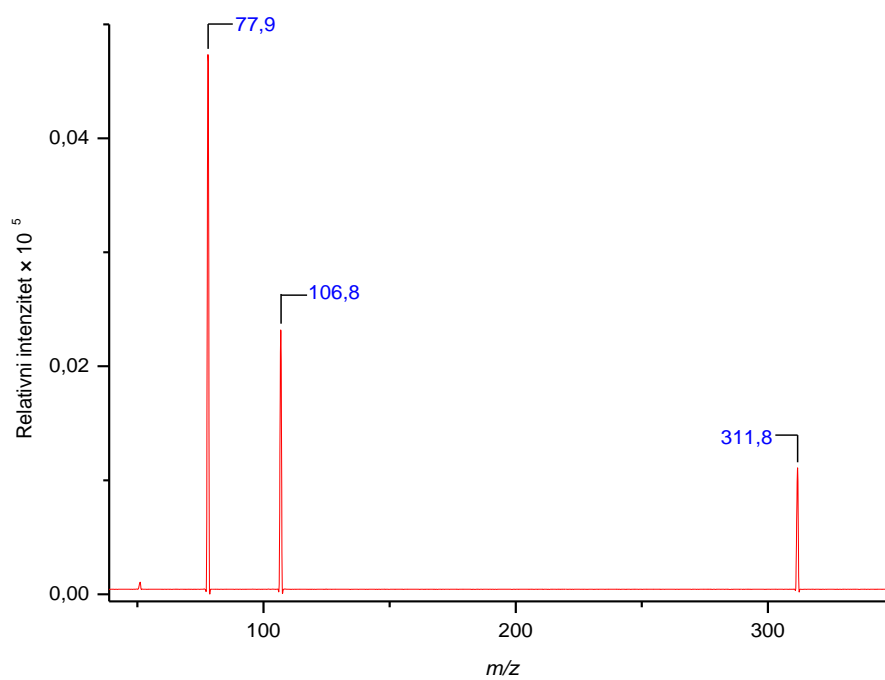
Slika D5. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa [Ag(NO₃)(3-Brpy)₂], K5.



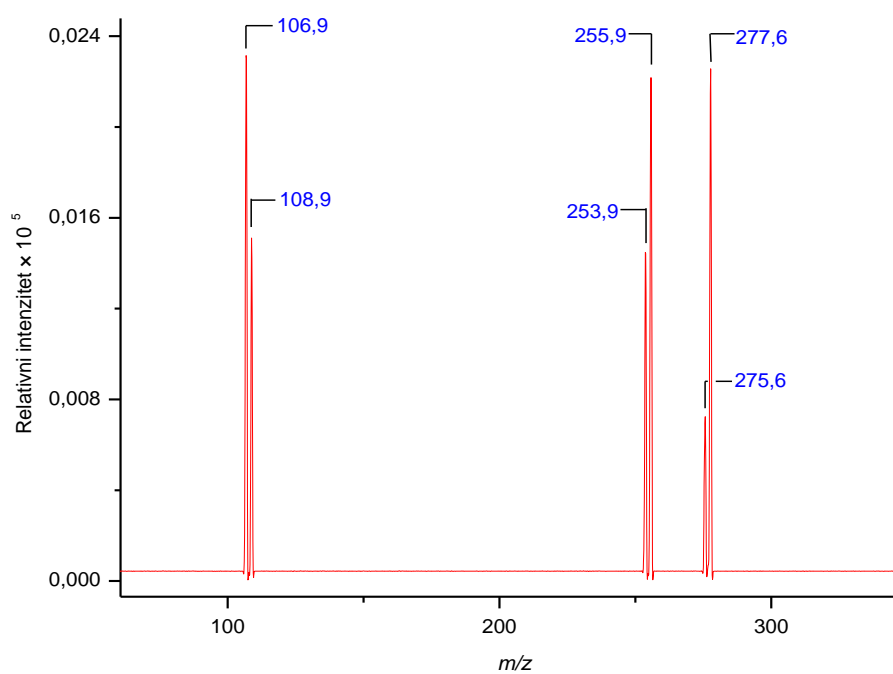
Slika D6. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa $[Ag(NO_3)(3-Ipy)_2]^+$, K6.



Slika D7. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa $[Ag(NO_3)(2,5-Cl_2py)_2]$, **K7**.

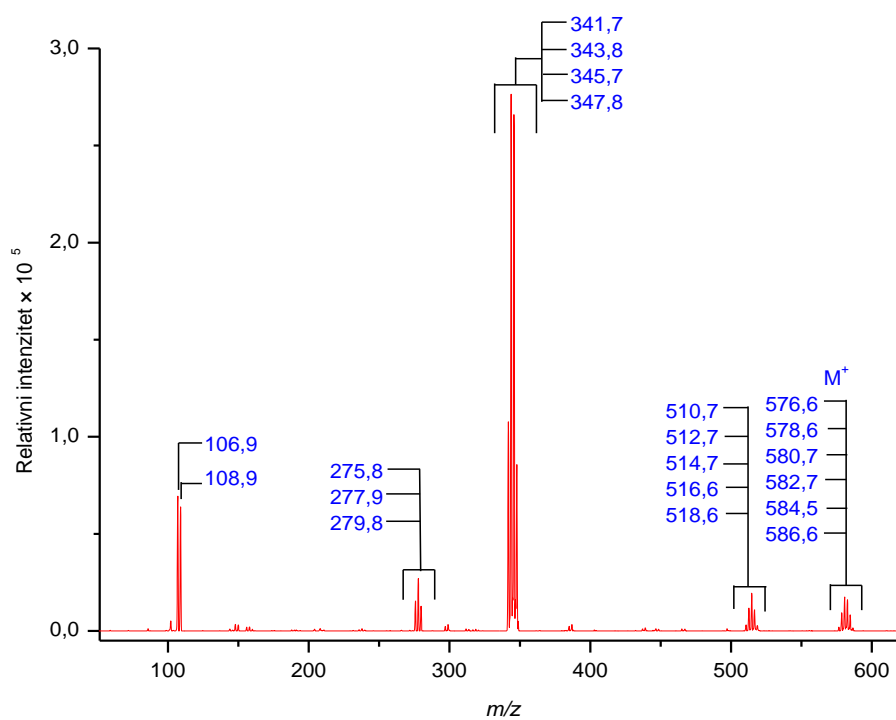


A

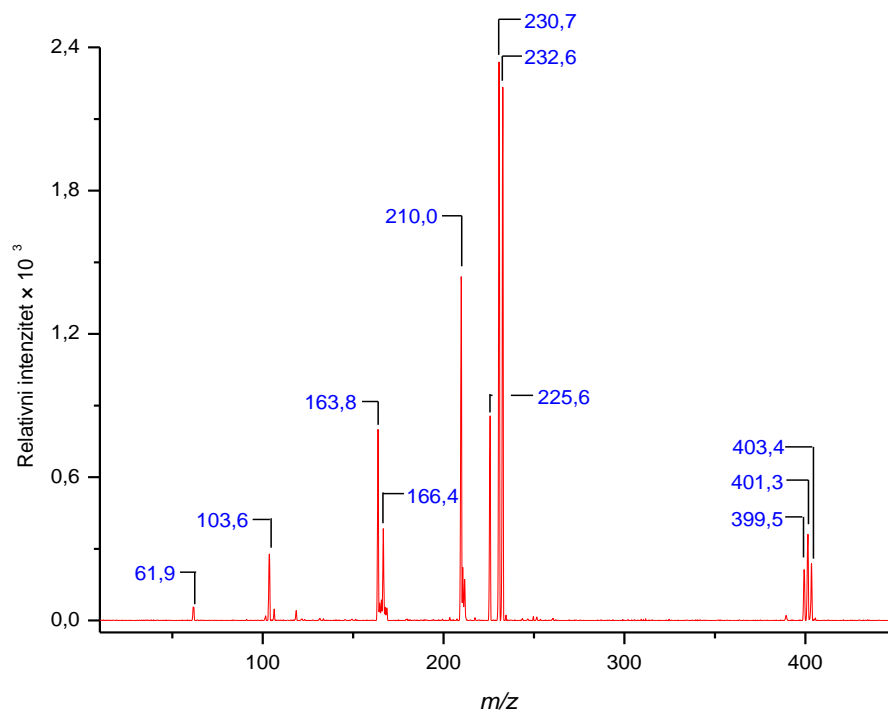


B

Slika D8. ESI⁺-MS/MS spektri dobiveni fragmentacijom iona A) m/z 311,8 i B) m/z 424,7 kod kompleksa $[Ag(NO_3)(2,5-Cl_2py)_2]$, K7.

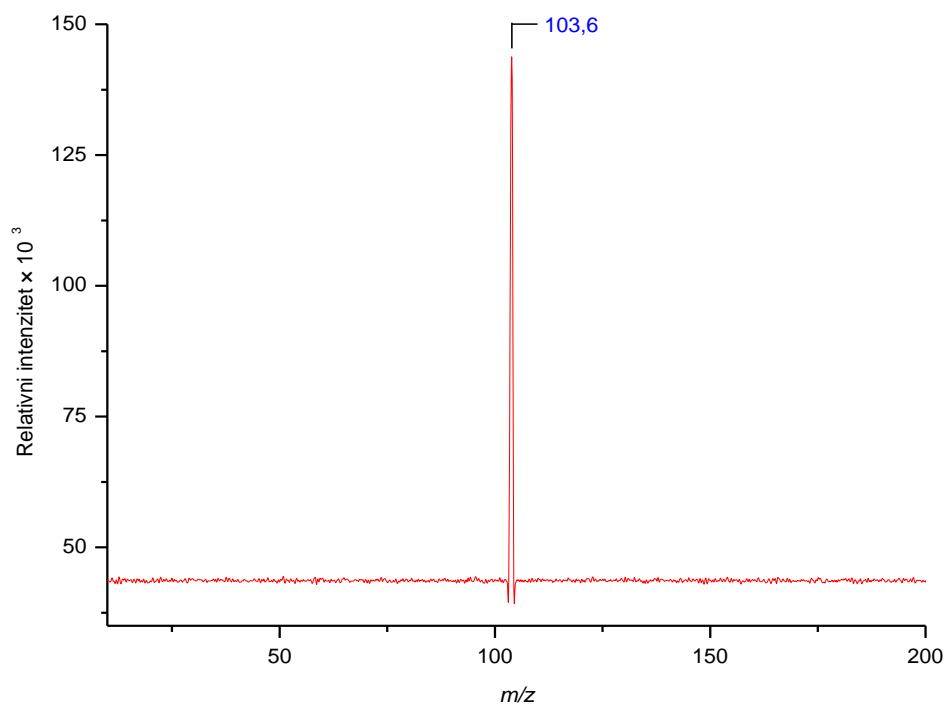


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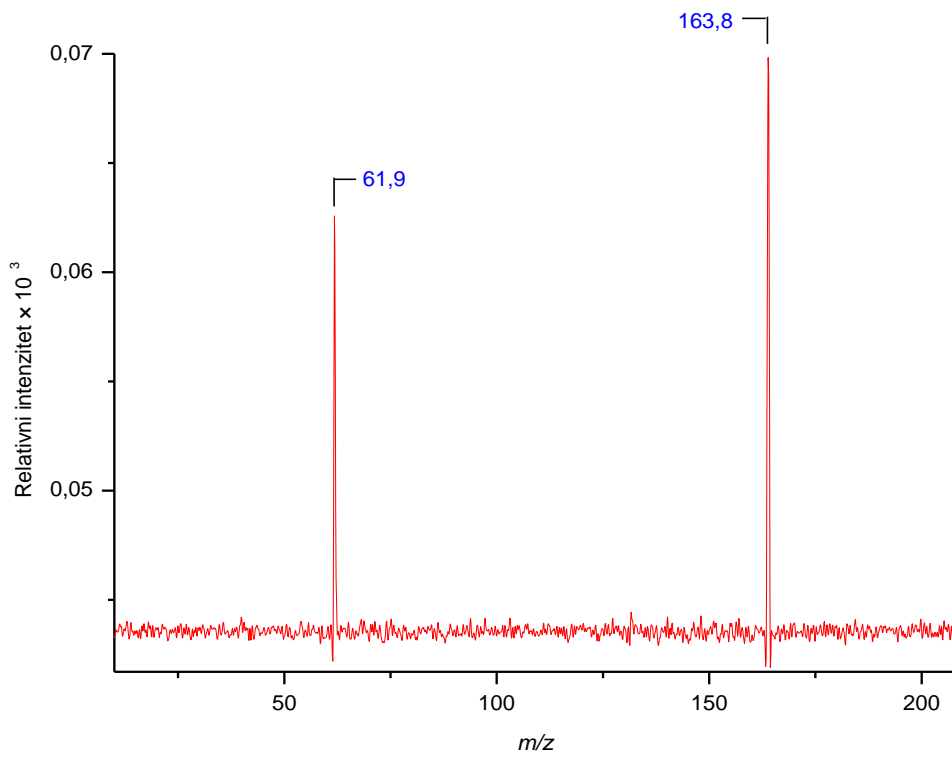


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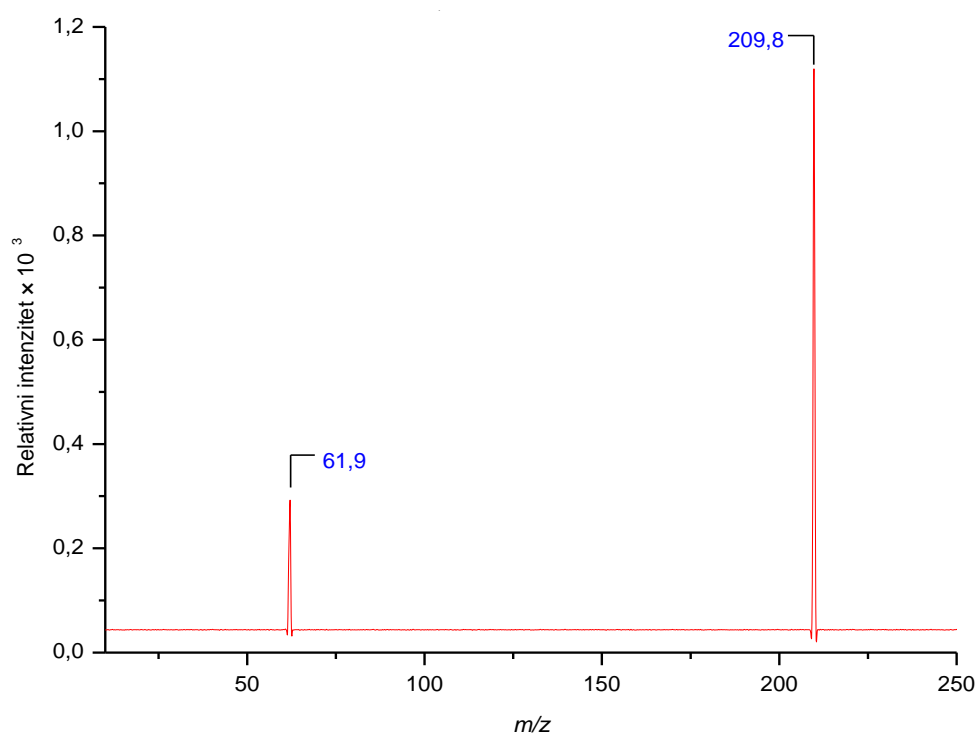
Slika D9. A) ESI^+ -MS i B) ESI^- -MS spektri kompleksa $[Ag(NO_3)(2,5-Br_2py)_2]$, K8.



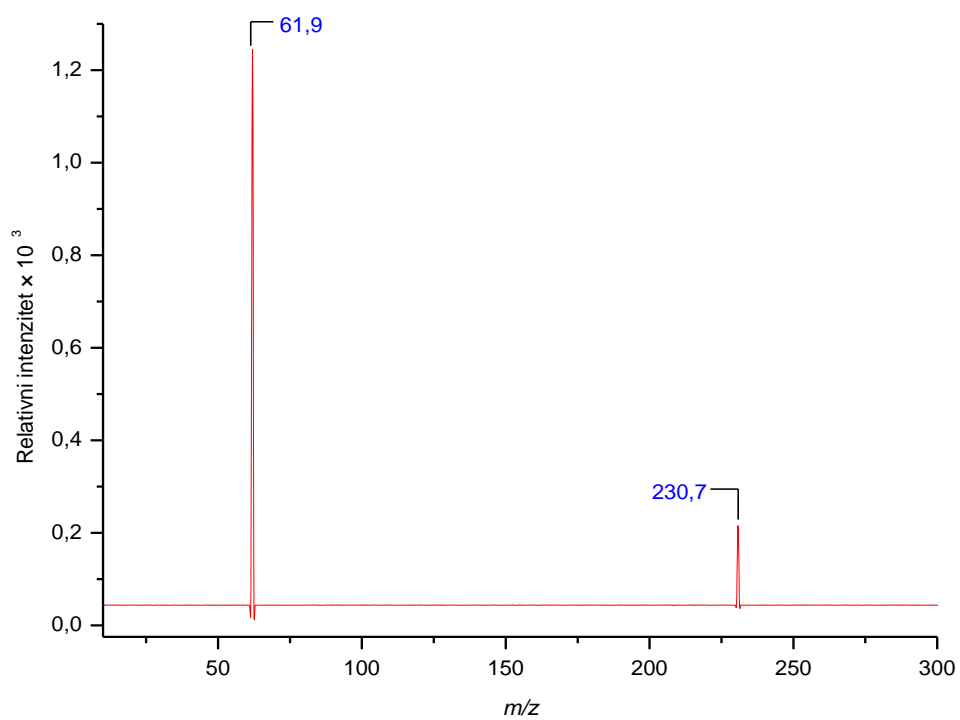
A



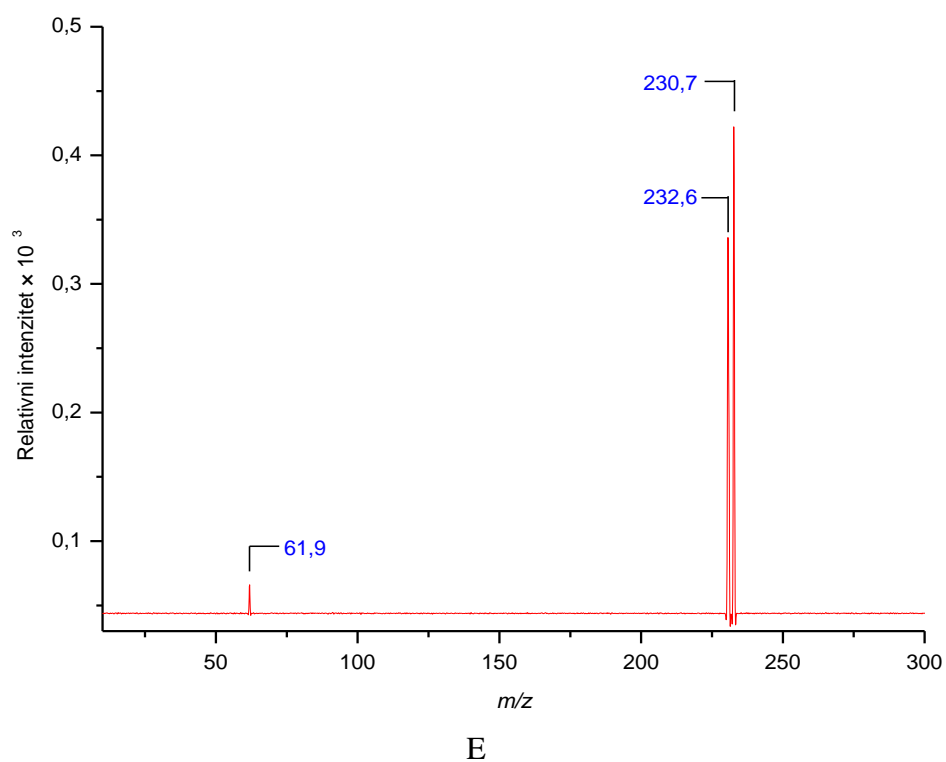
B



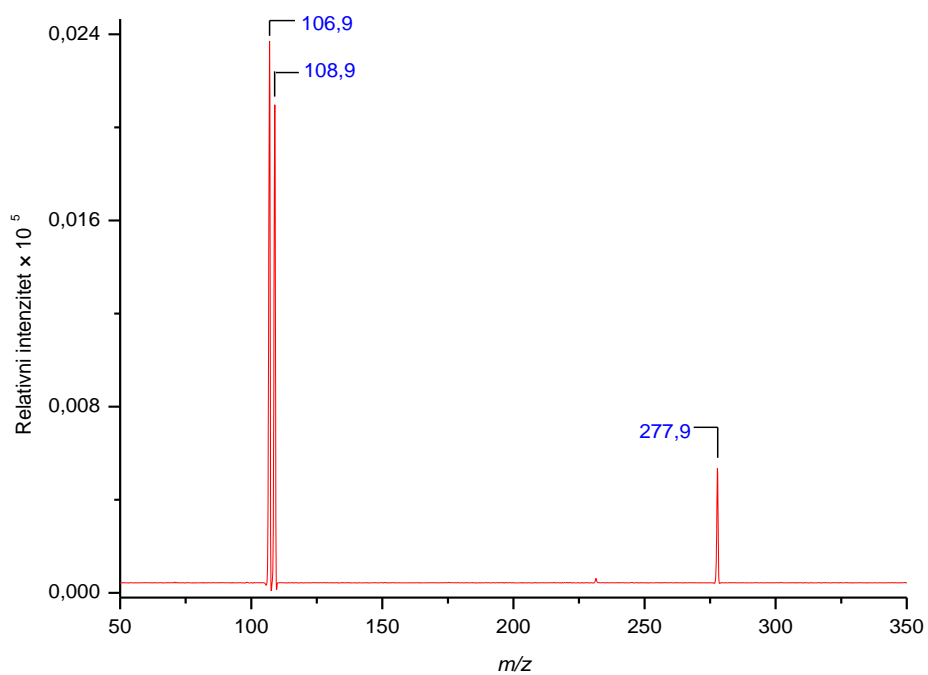
C



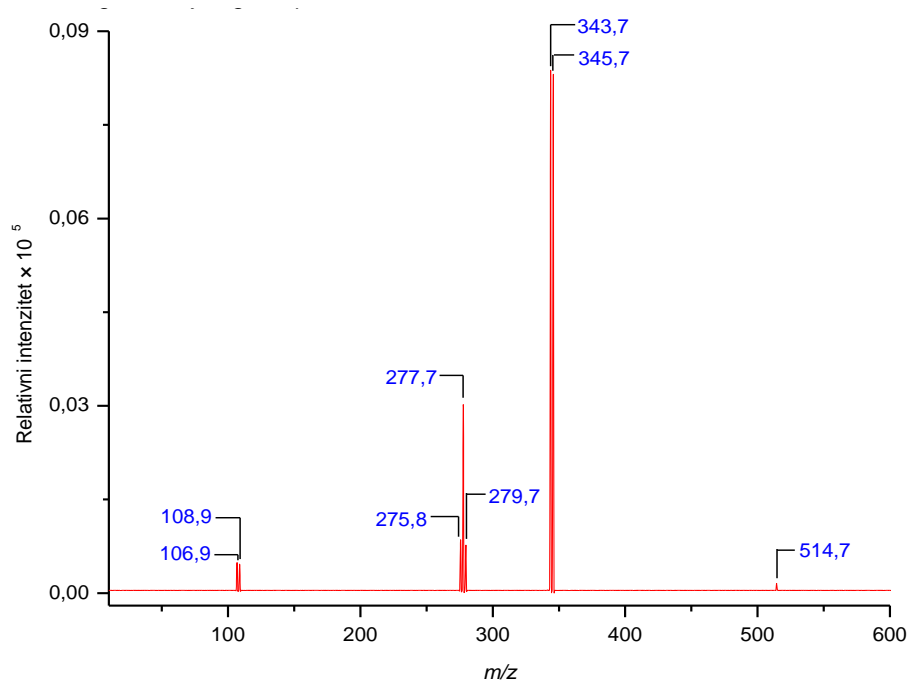
D



Slika D10. ESI-MS/MS spektri dobiveni fragmentacijom iona A) m/z 103,6, B) m/z 163,8, C) m/z 209,8, D) m/z 230,7 i E) m/z 401,3 kod kompleksa $[Ag(NO_3)(2,5-Br_2py)_2]$, **K8**.

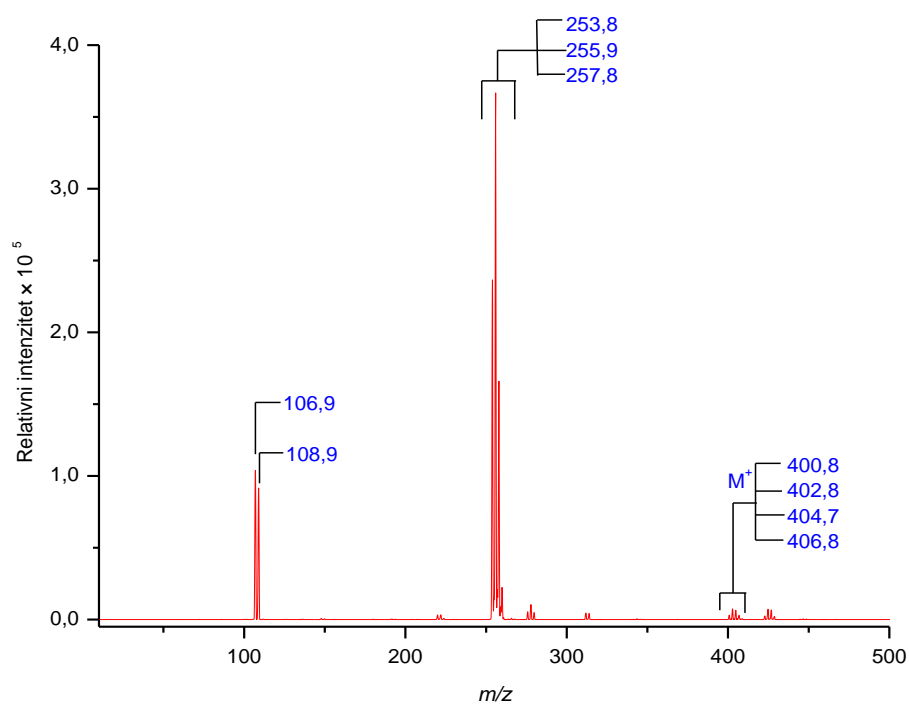


A

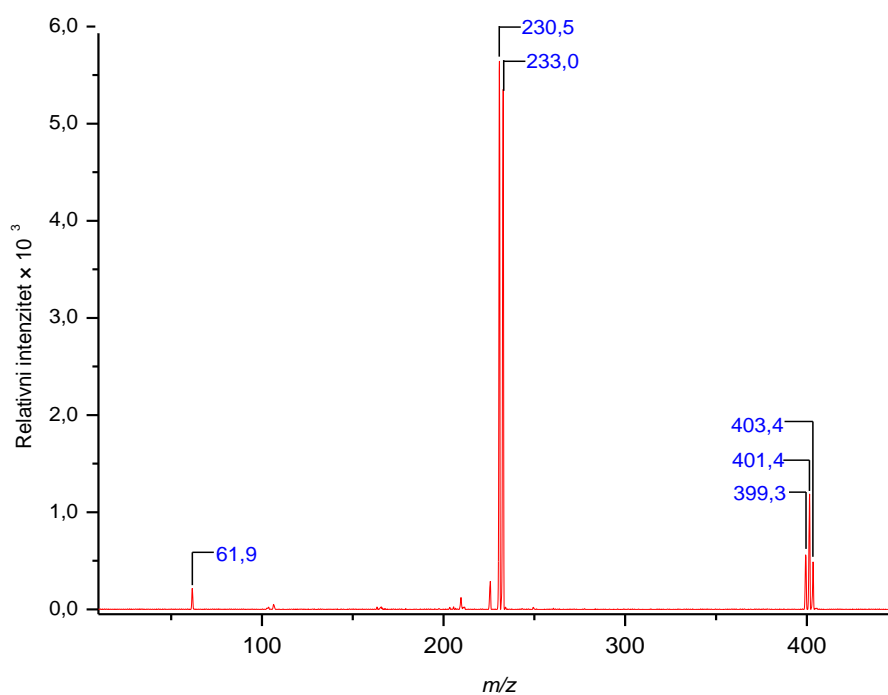


B

Slika D11. ESI⁺-MS/MS spektri dobiveni fragmentacijom iona A) m/z 277,9 i B) m/z 514,7 kod kompleksa [Ag(NO₃)(2,5-Br₂py)₂], **K8**.

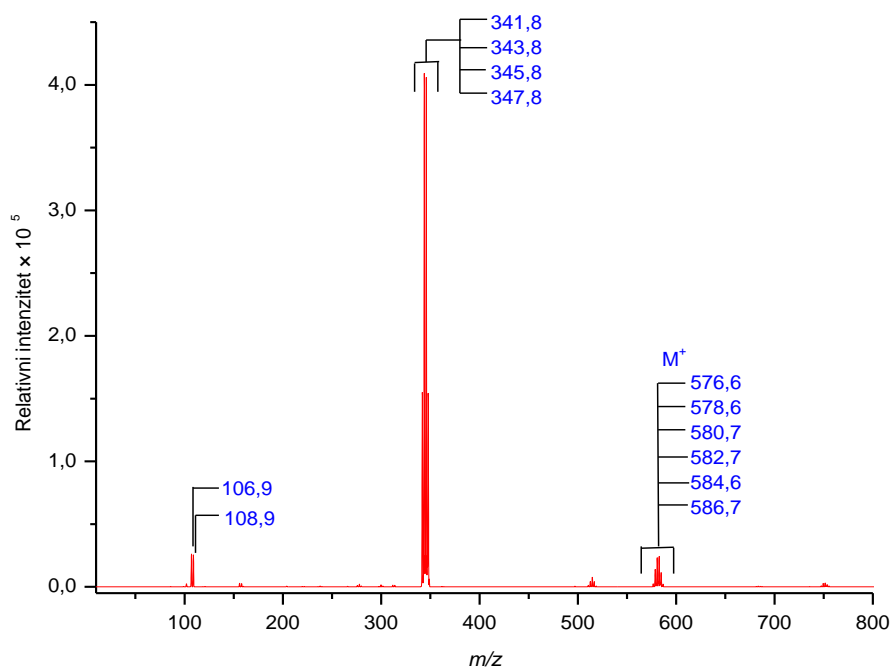


A

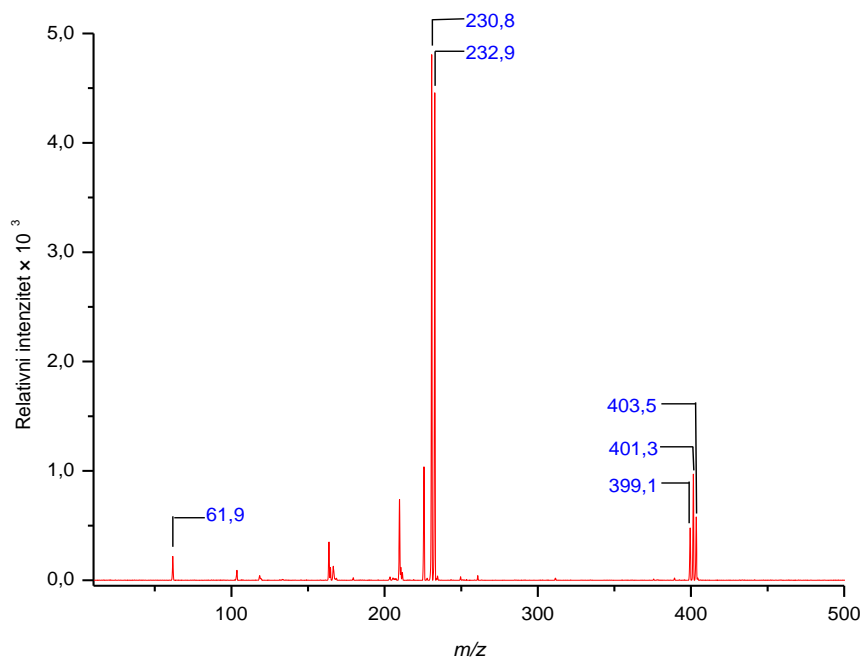


B

Slika D12. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa $[Ag(NO_3)(2,6-Cl_2py)_2]$, **K9**.

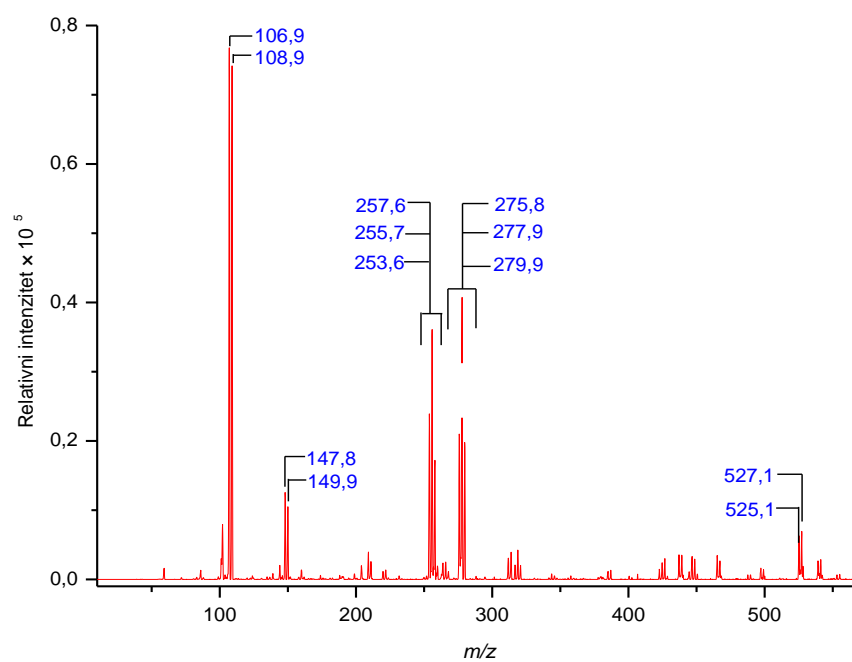


A

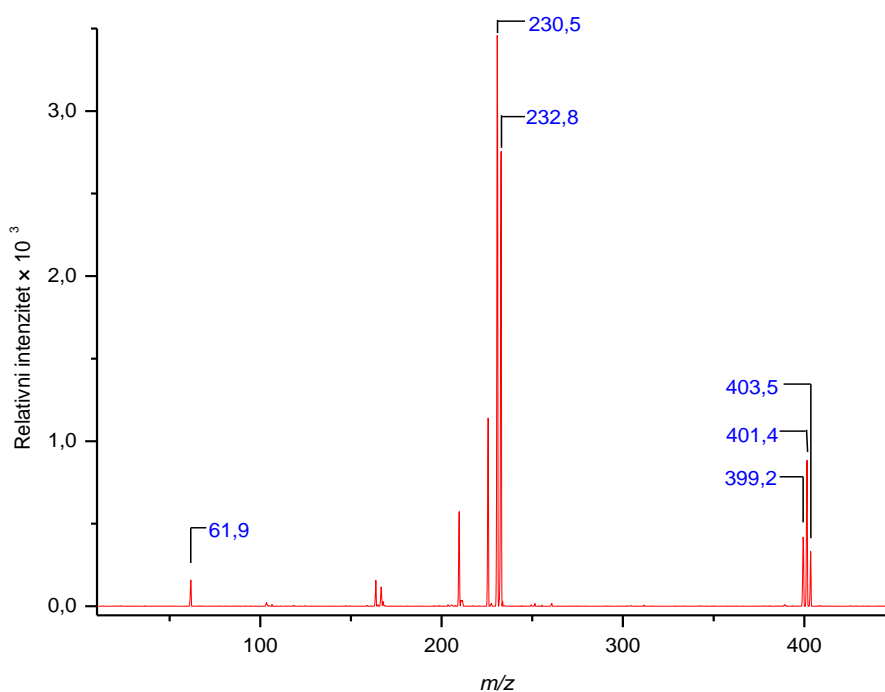


B

Slika D13. A) ESI^+ -MS i B) ESI^- -MS spektri kompleksa $[Ag(NO_3)(2,6-Br_2py)_2]$, K10.

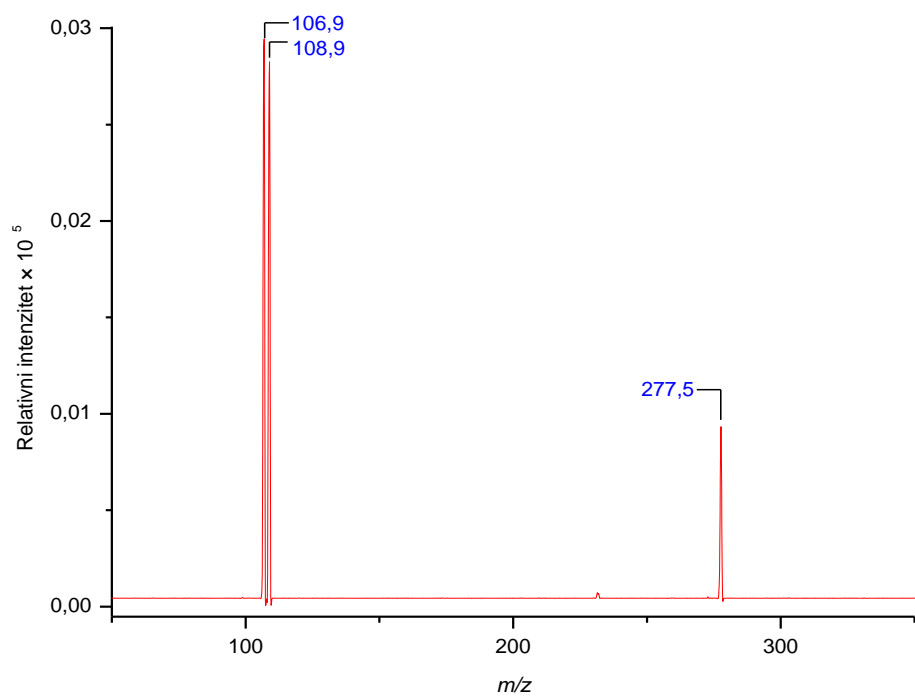


A

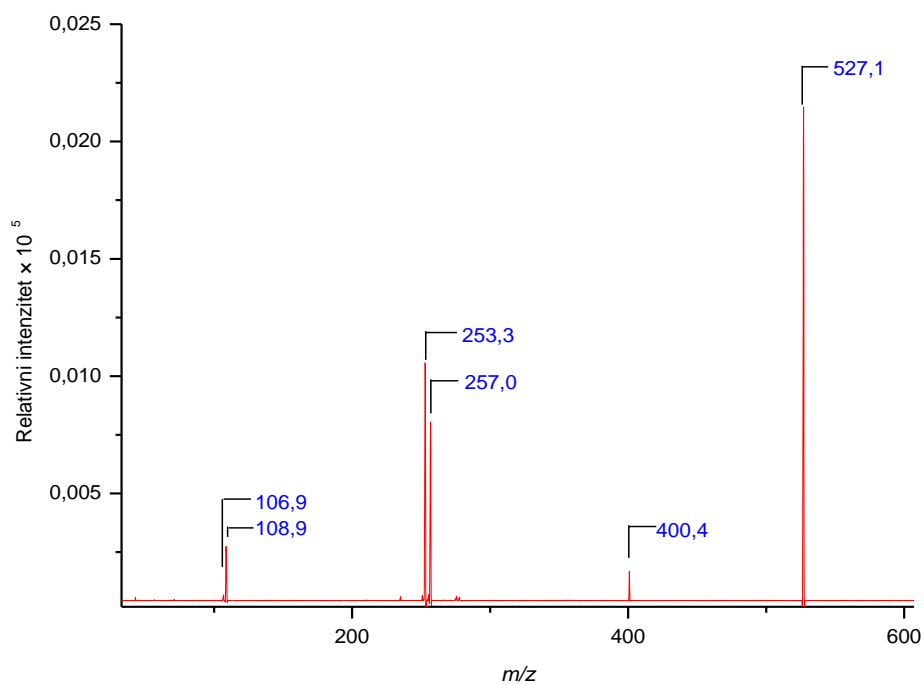


B

Slika D14. A) ESI⁺-MS i B) ESI⁻-MS spektri kompleksa [Ag(NO₃)(3,5-Cl₂py)₂], **K11**. Molekulski ion u ESI⁺-MS spektru nije pronađen.

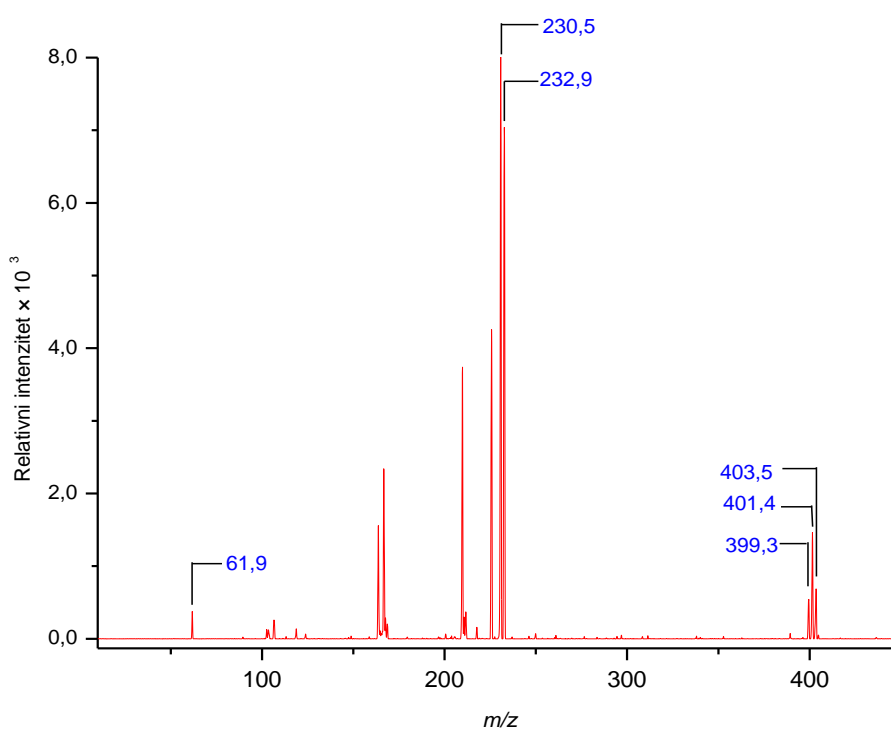
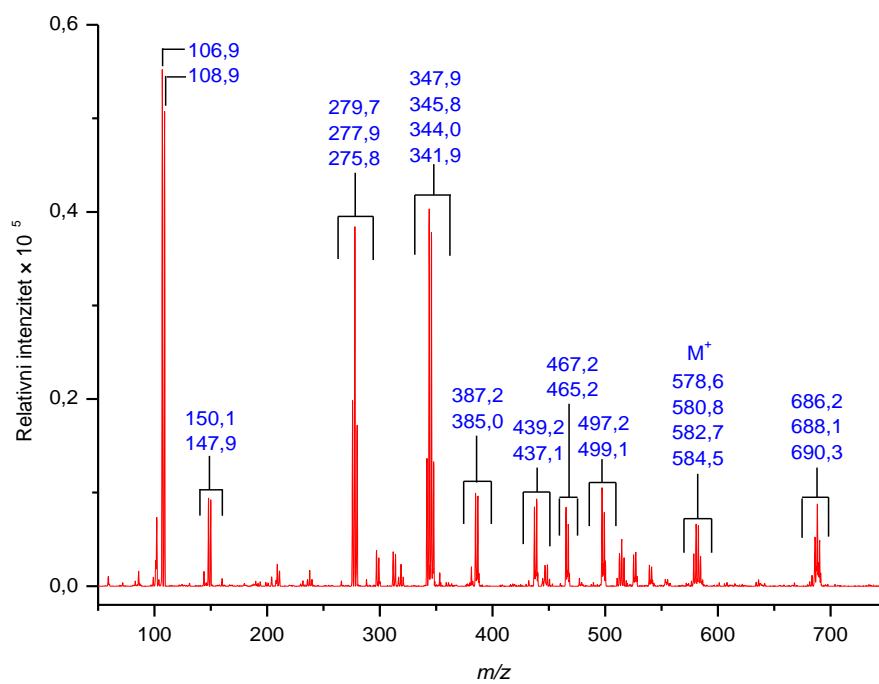


A

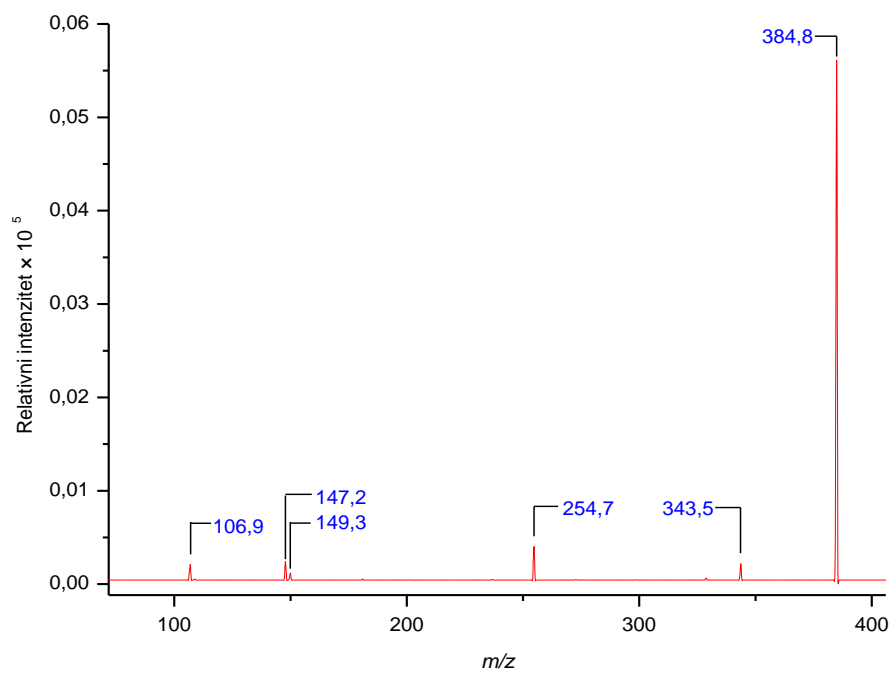


B

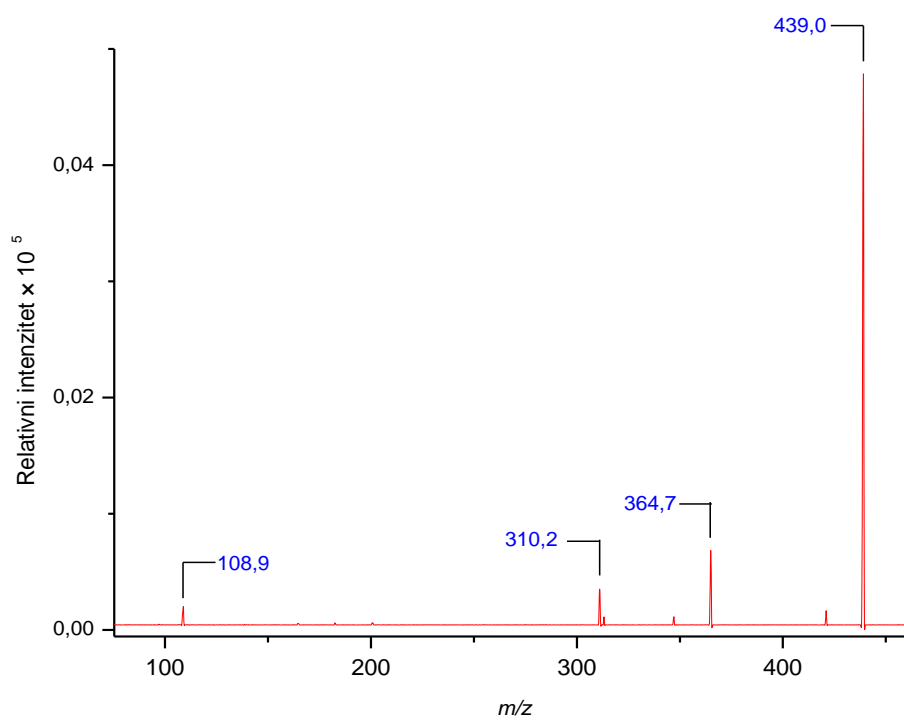
Slika D15. ESI⁺-MS/MS spektri dobiveni fragmentacijom iona A) m/z 277,5 i B) m/z 527,1 kod kompleksa [Ag(NO₃)(3,5-Cl₂py)₂], **K11**.



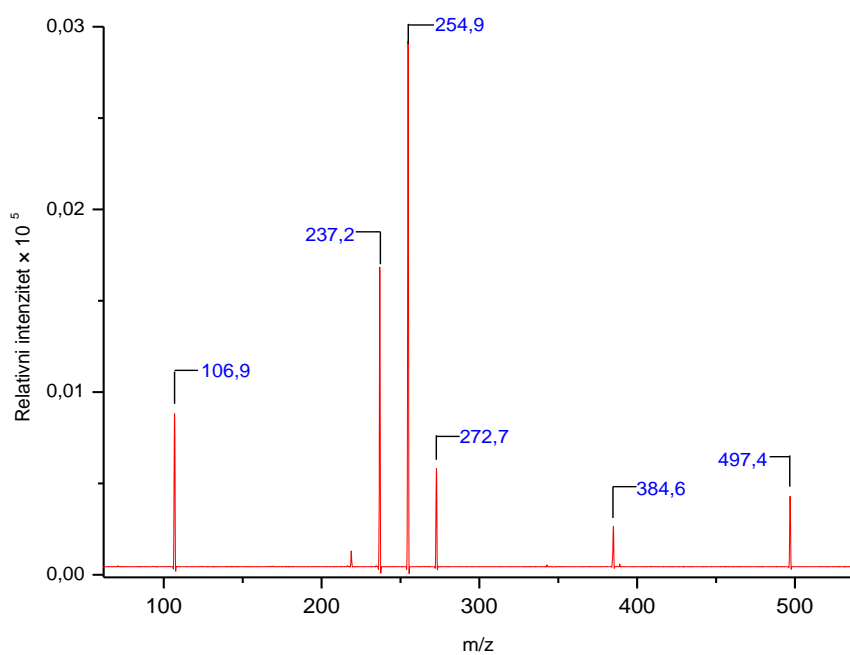
Slika D16. A) ESI^+ -MS i B) ESI^- -MS spektri kompleksa $[Ag(NO_3)(3,5-Br_2py)_2]$, K12.



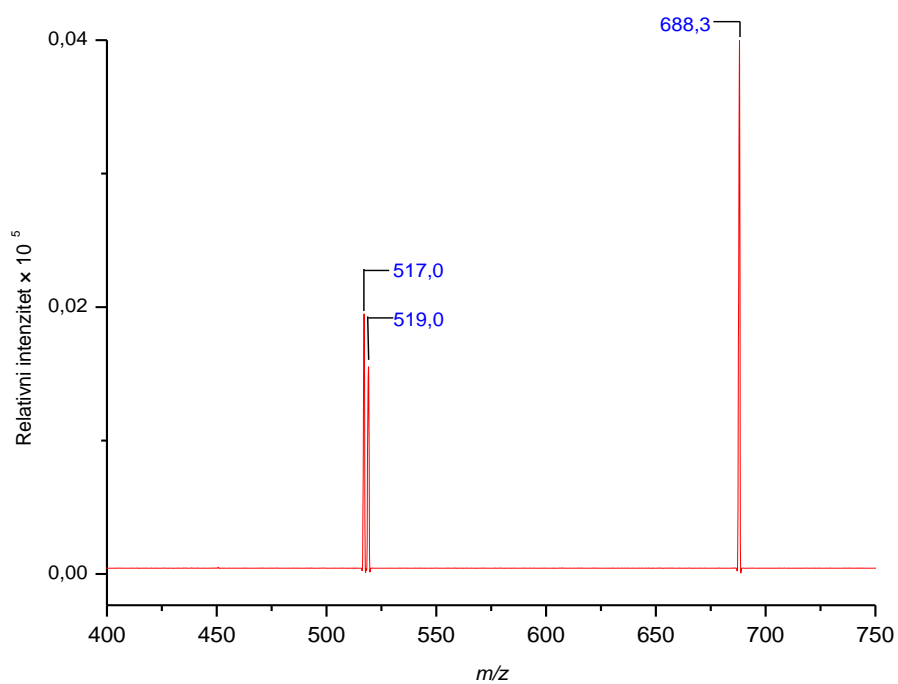
A



B



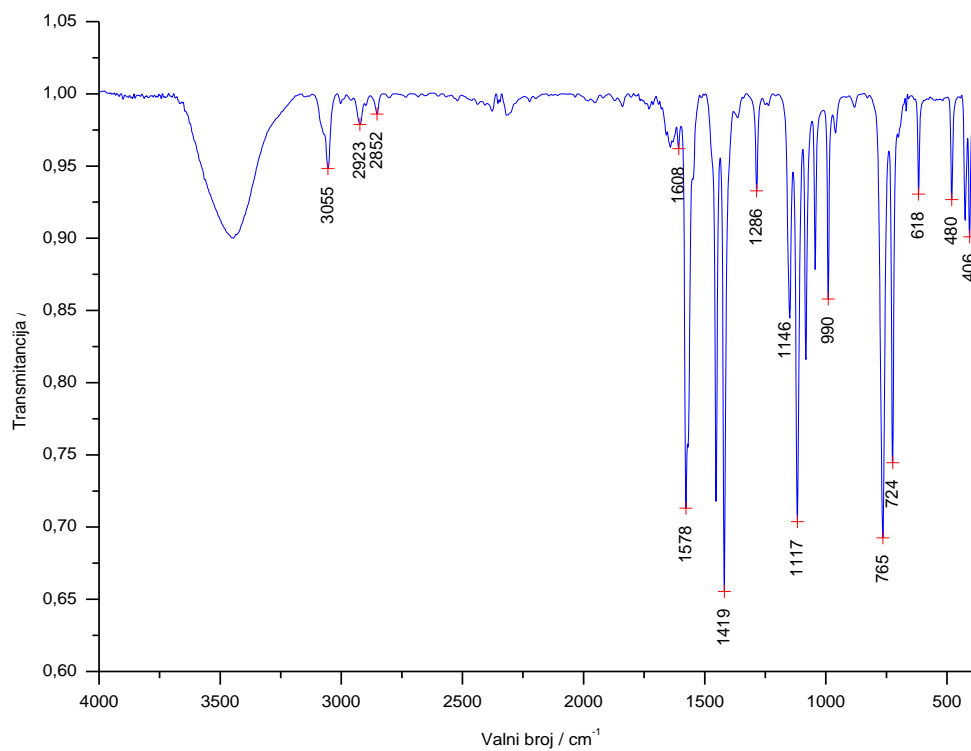
C



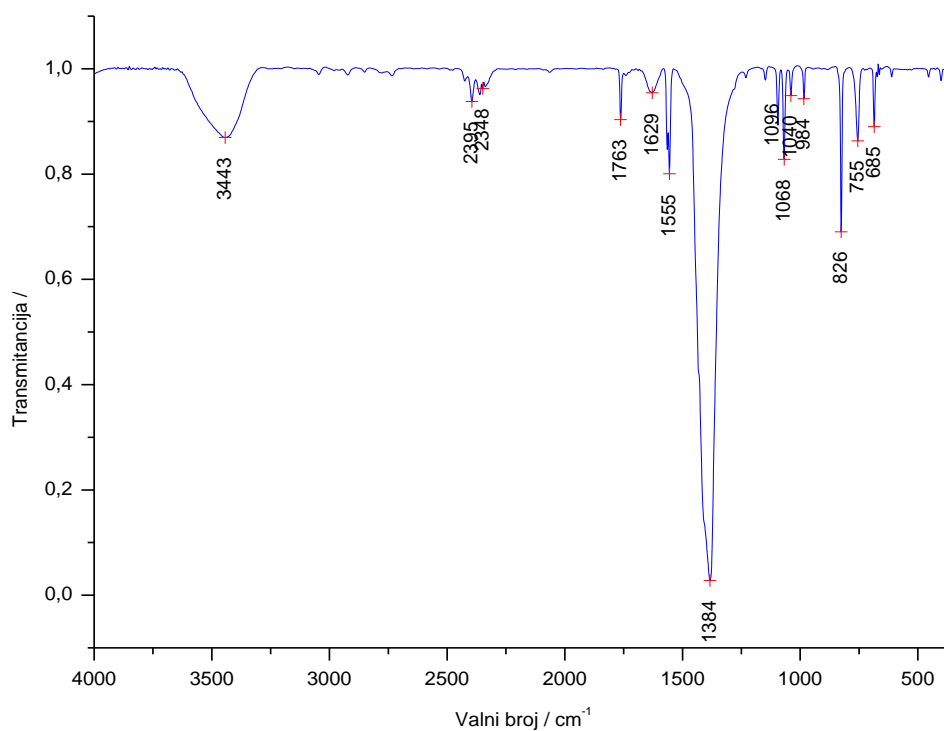
D

Slika D17. ESI⁺-MS/MS spektri dobiveni fragmentacijom iona A) m/z 385,0, B) m/z 439,0, C) m/z 497,4 i D) m/z 688,3 kod kompleksa $[Ag(NO_3)(3,5-Br_2py)_2]$, **K12**.

8.2. Infracrveni spektri

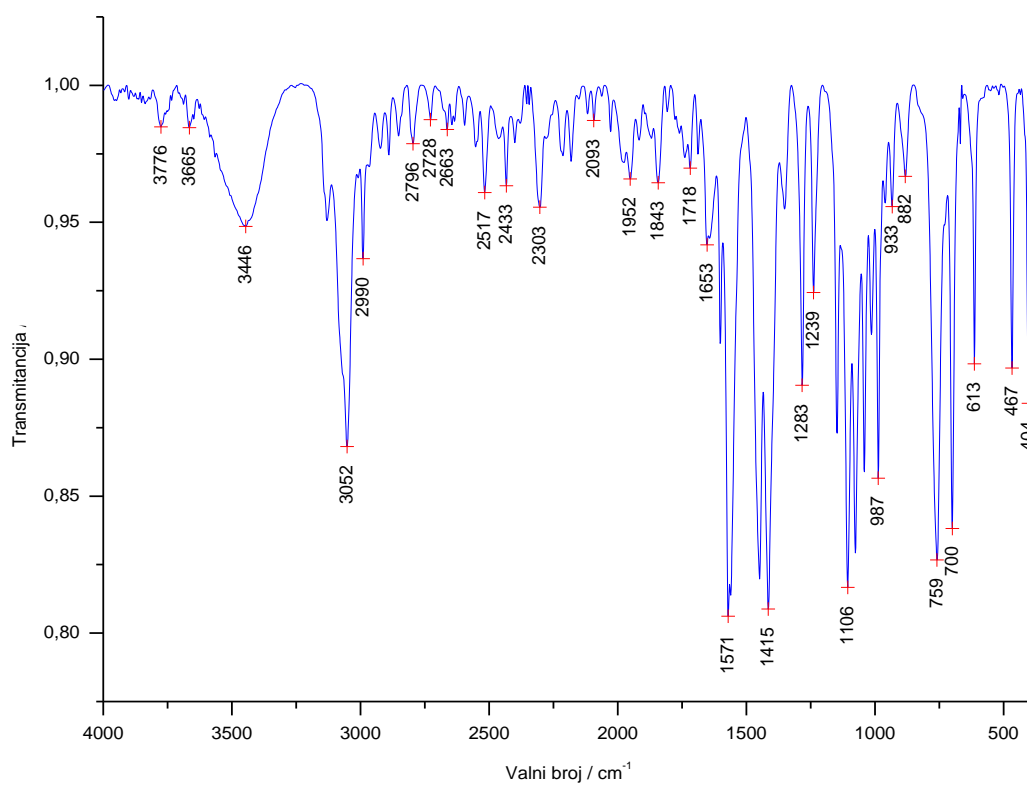


A

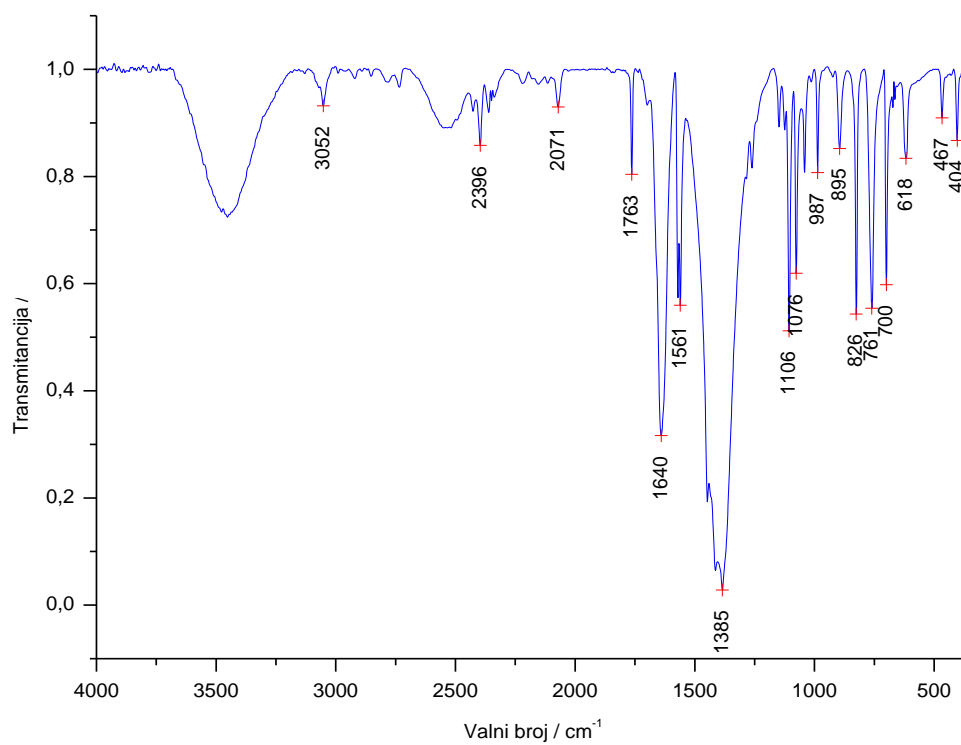


B

Slika D18. Spektri IR A) 2-Clpy (LI) i B) [Ag(NO₃)(2-Clpy)₂] (KI).

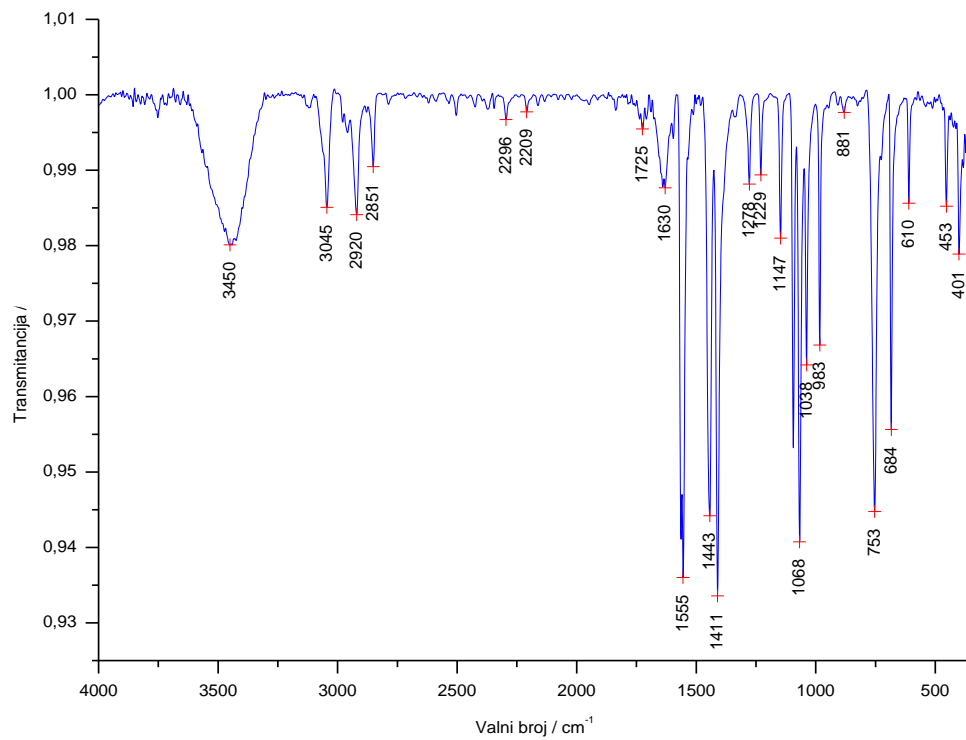


A

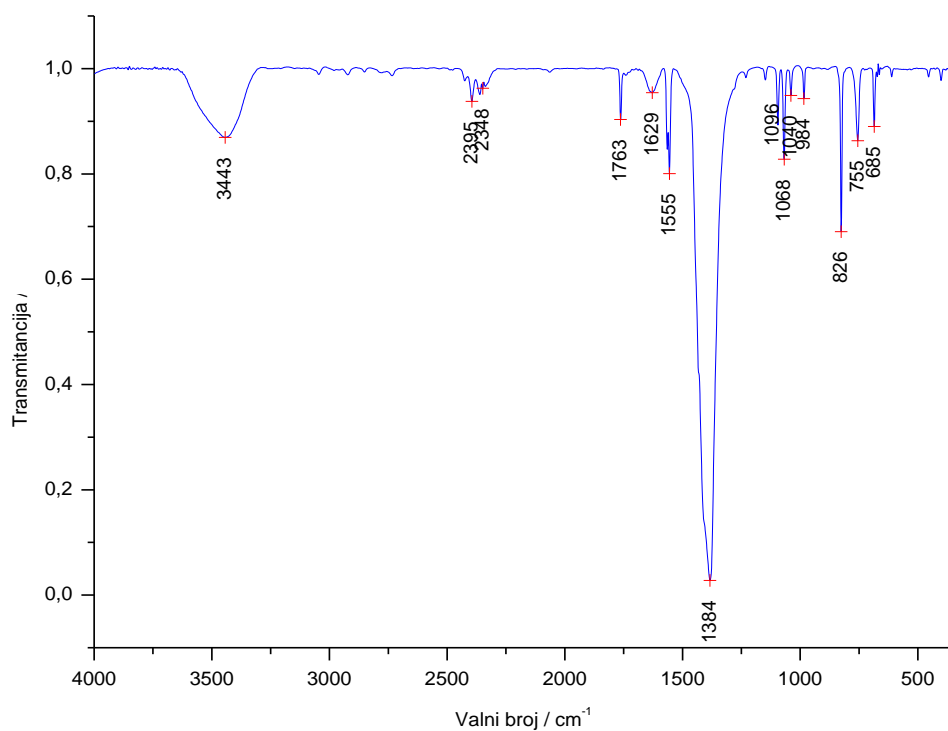


B

Slika D19. Spektri IR A) 2-Brpy (L2) i B) [Ag(NO₃)(2-Brpy)₂] (K₂).

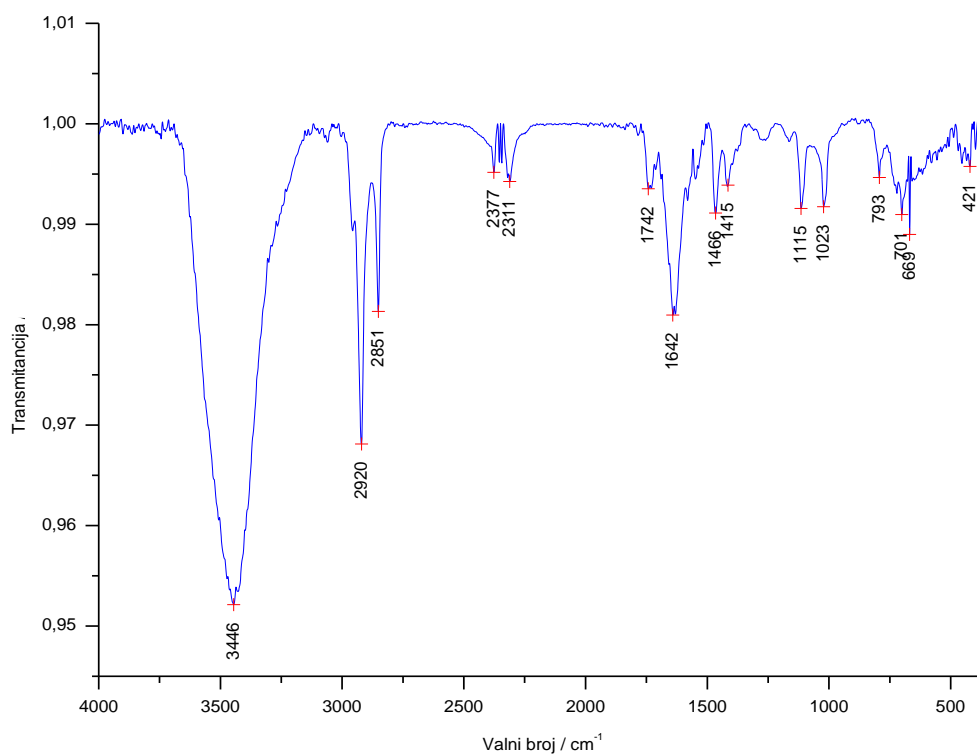


A

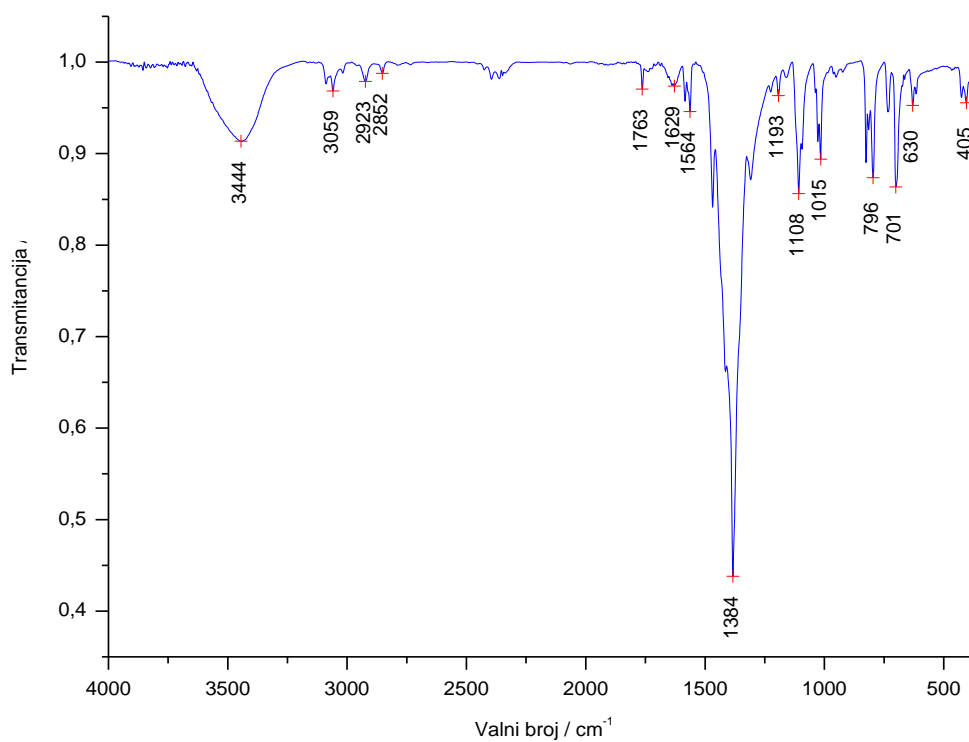


B

Slika D20. Spektri IR A) 2-Ipy (L3) i B) [Ag(NO₃)(2-Ipy)₂] (K3).

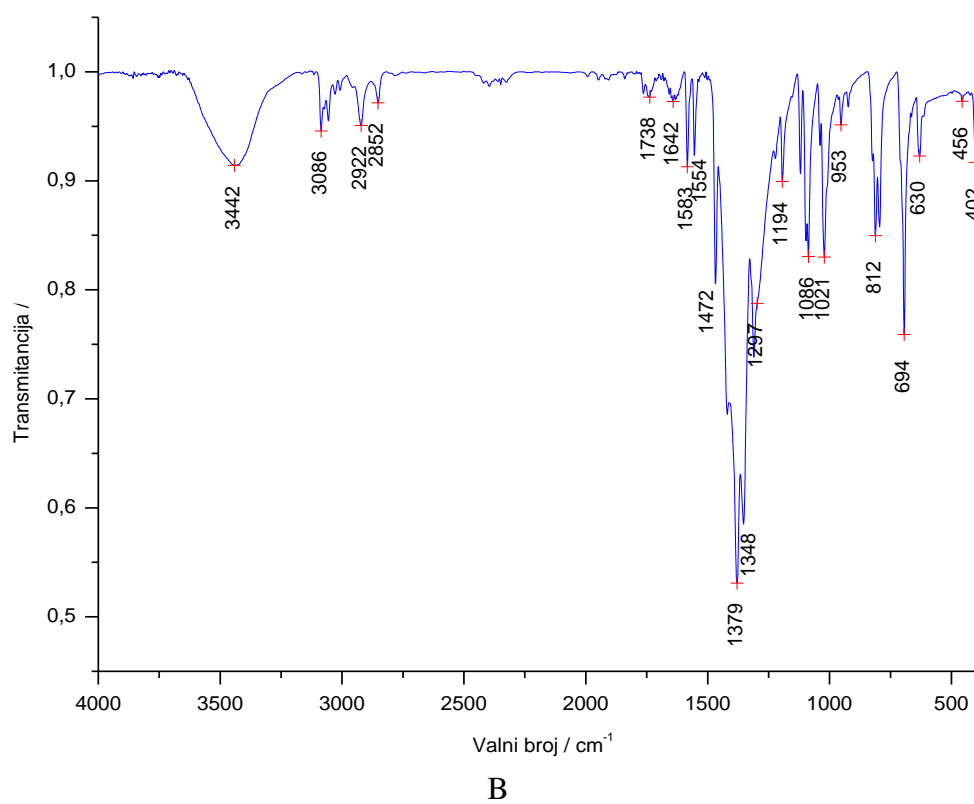
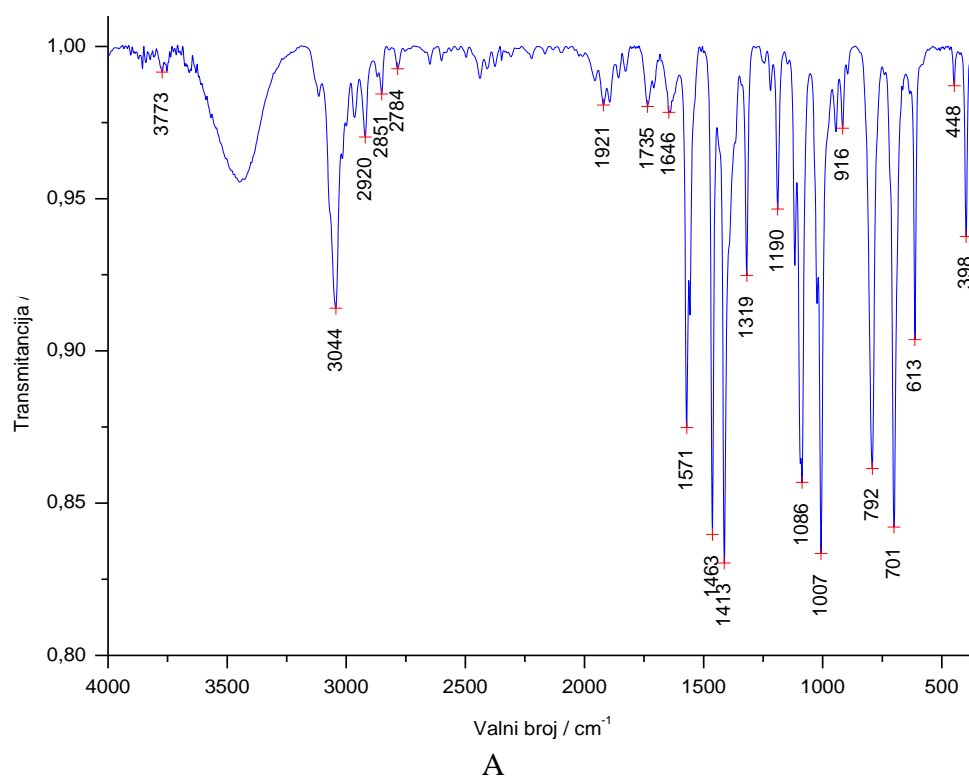


A

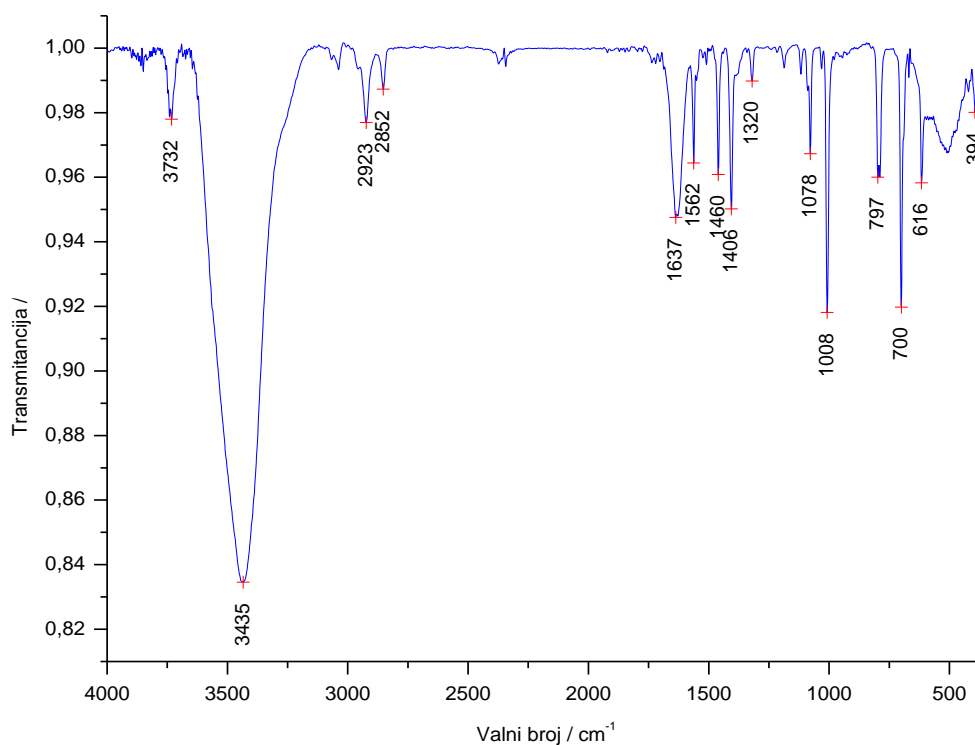


B

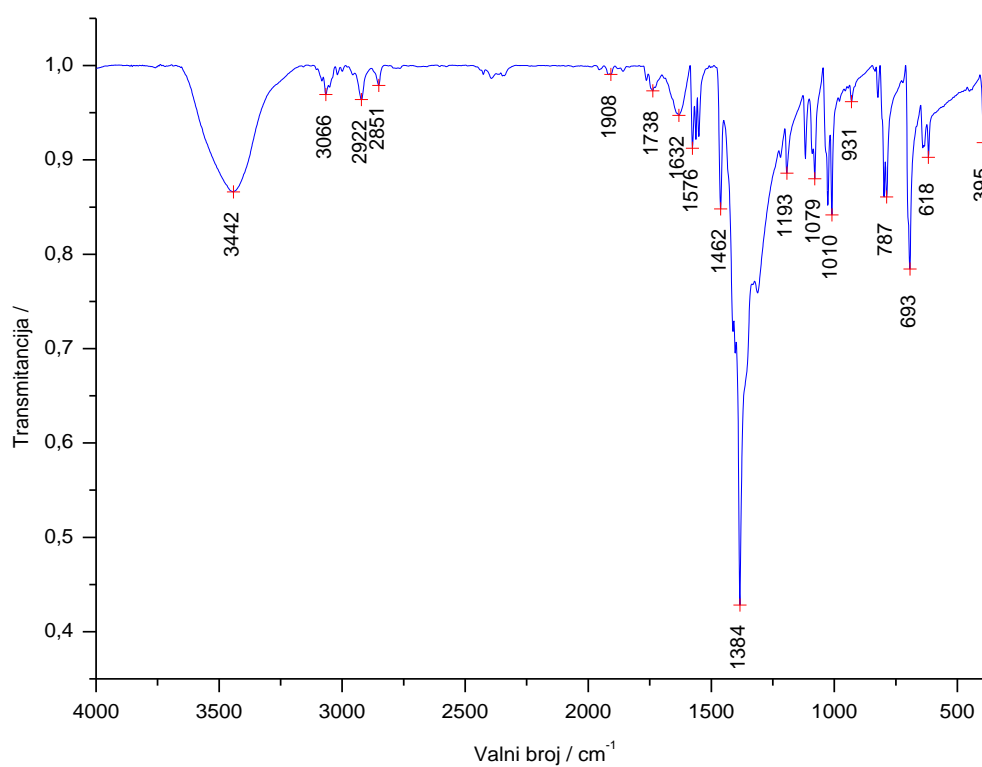
Slika D21. Spektiri IR A) 3-Clpy (L4) i B) [Ag(NO₃)(3-Clpy)₂] (K4).



Slika D22. Spektri IR A) 3-Brpy (L5) i B) [Ag(NO₃)(3-Brpy)₂] (K5).

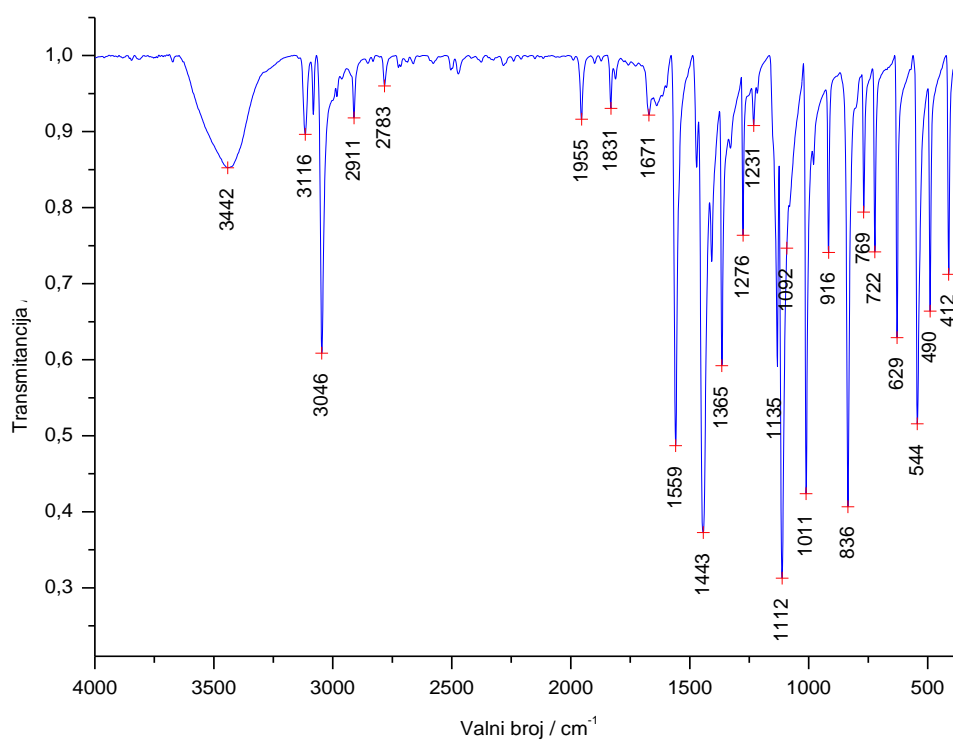


A

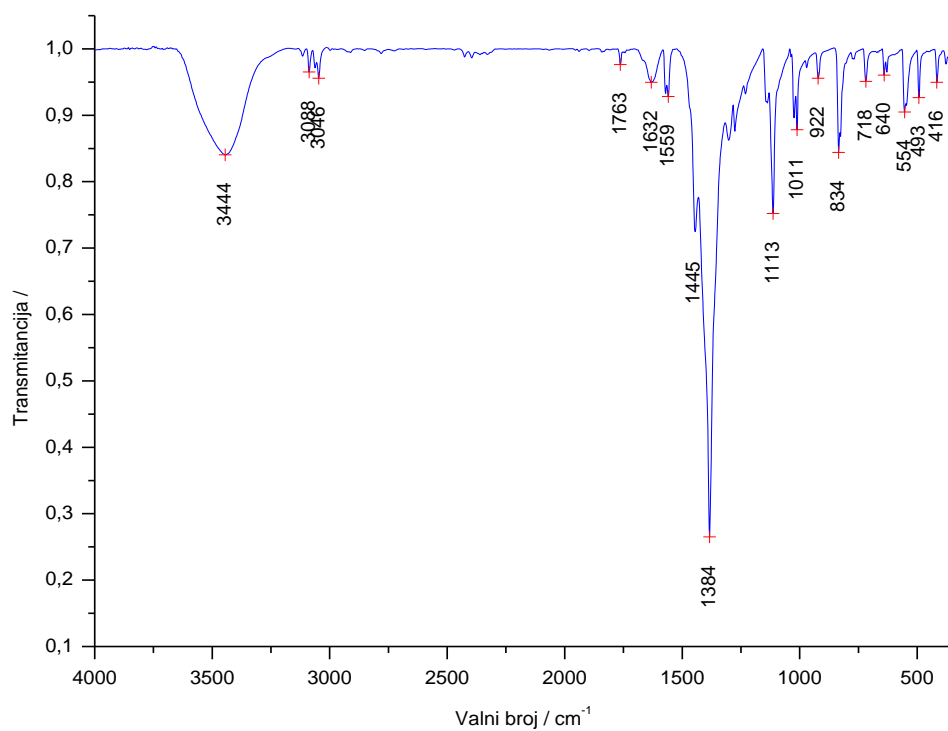


B

Slika D23. Spektri IR A) 3-Ipy (L6) i B) [Ag(NO₃)(3-Ipy)₂] (K6).

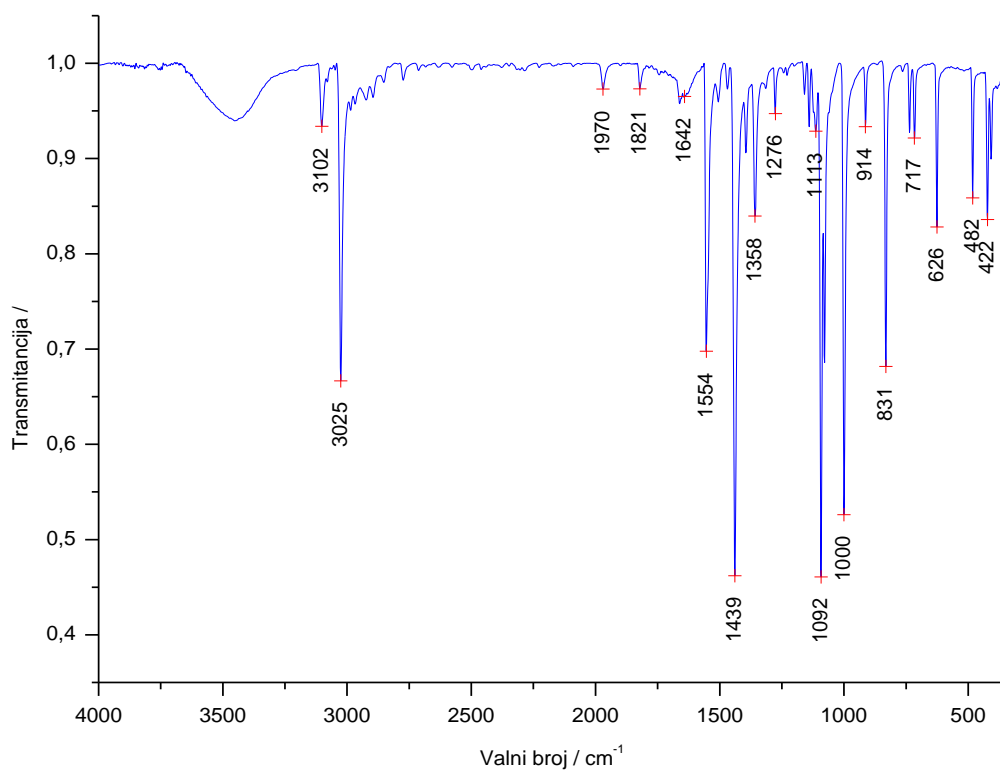


A

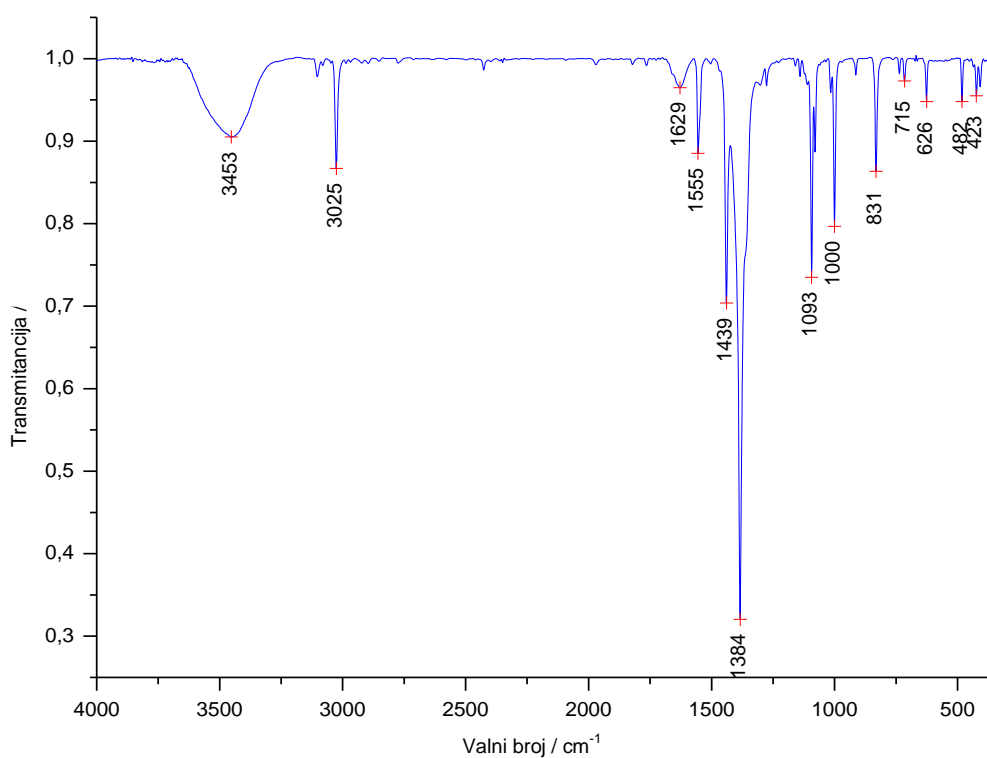


B

Slika D24. Spektri IR A) 2,5-Cl₂py (L7) i B) $[\text{Ag}(\text{NO}_3)(2,5\text{-Cl}_2\text{py})_2]$ (K7).

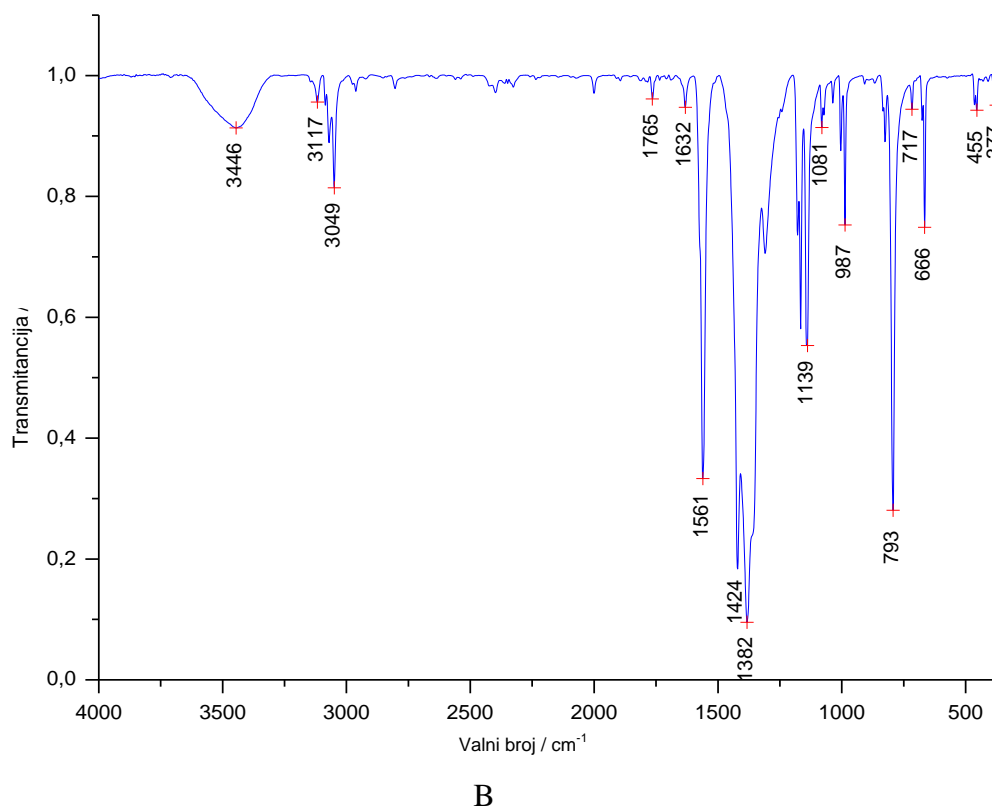
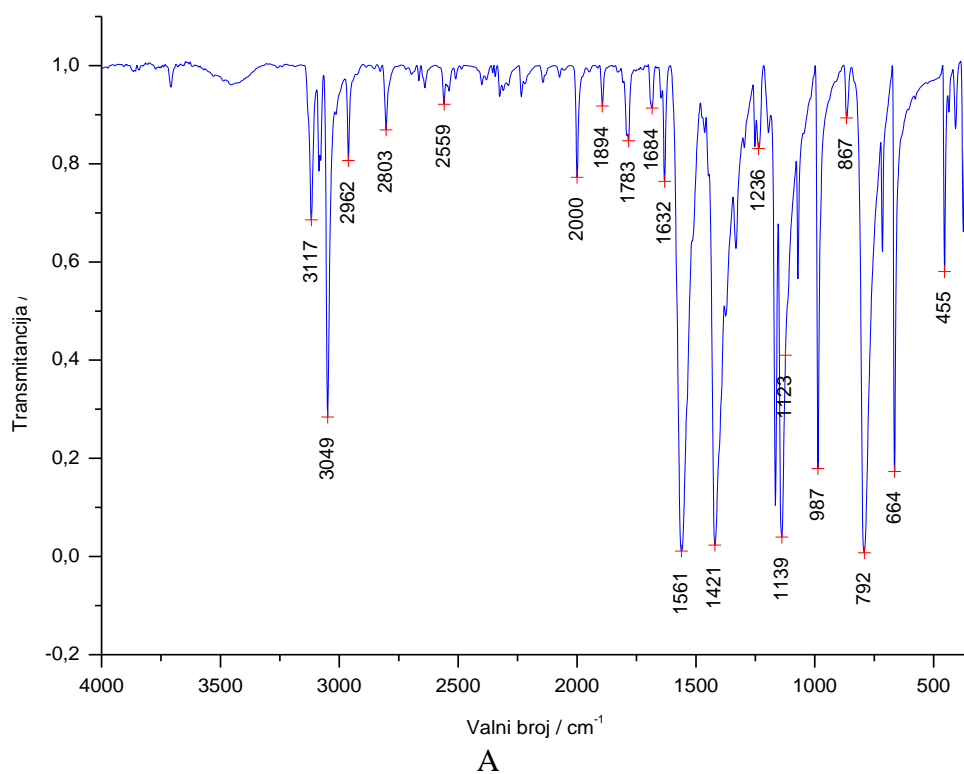


A

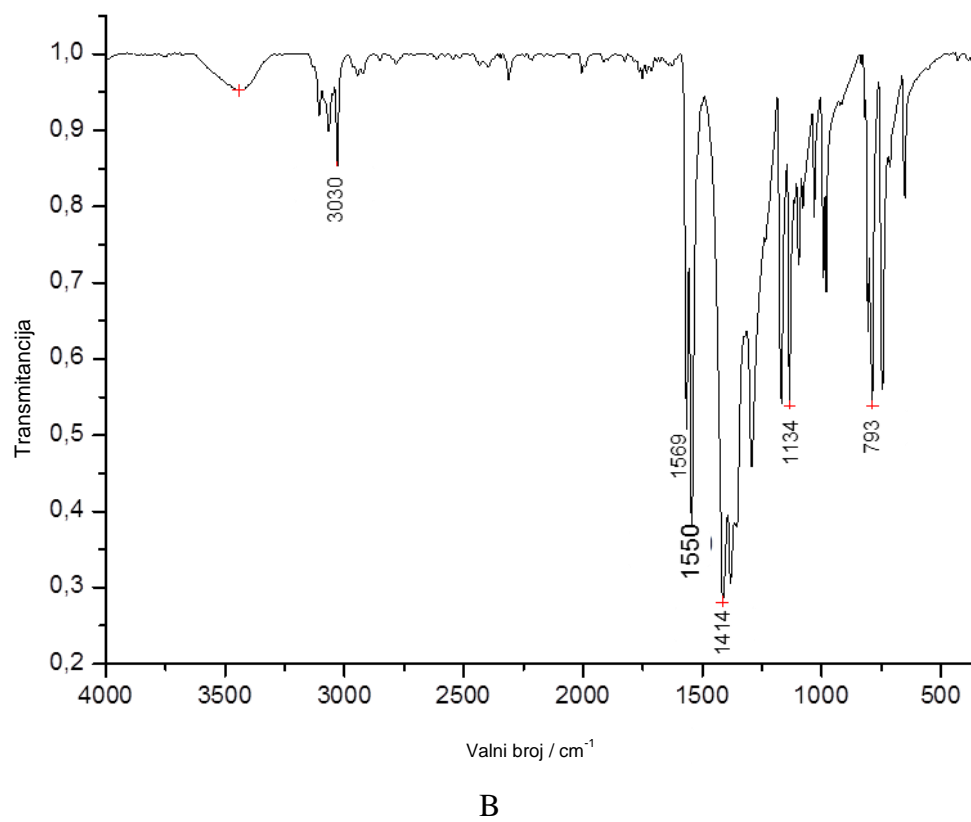
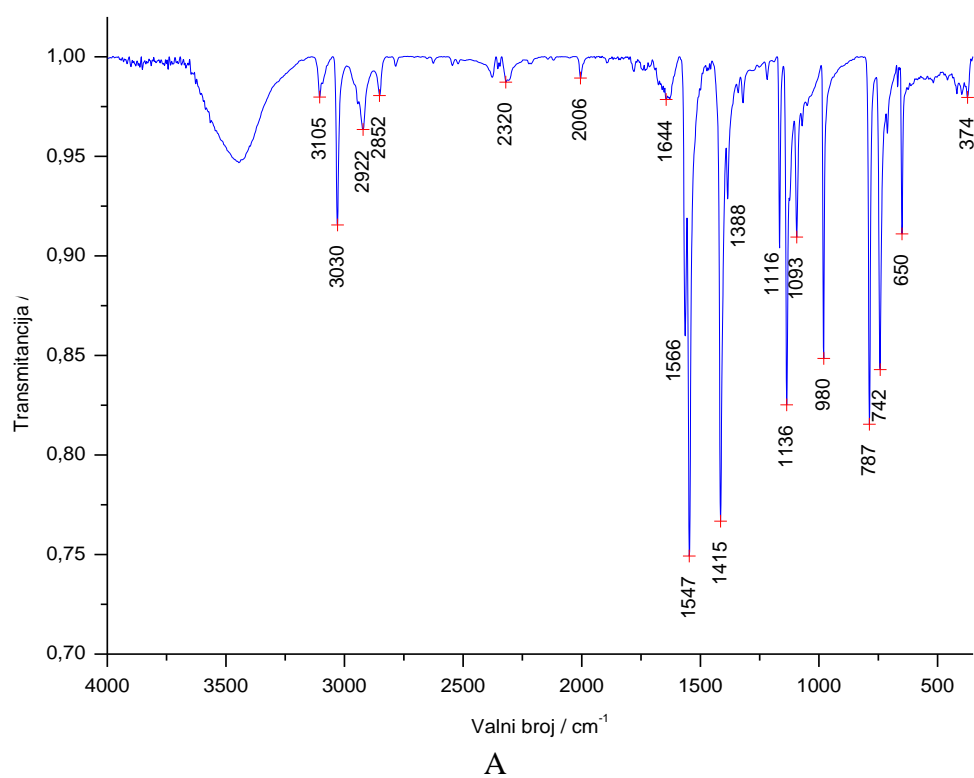


B

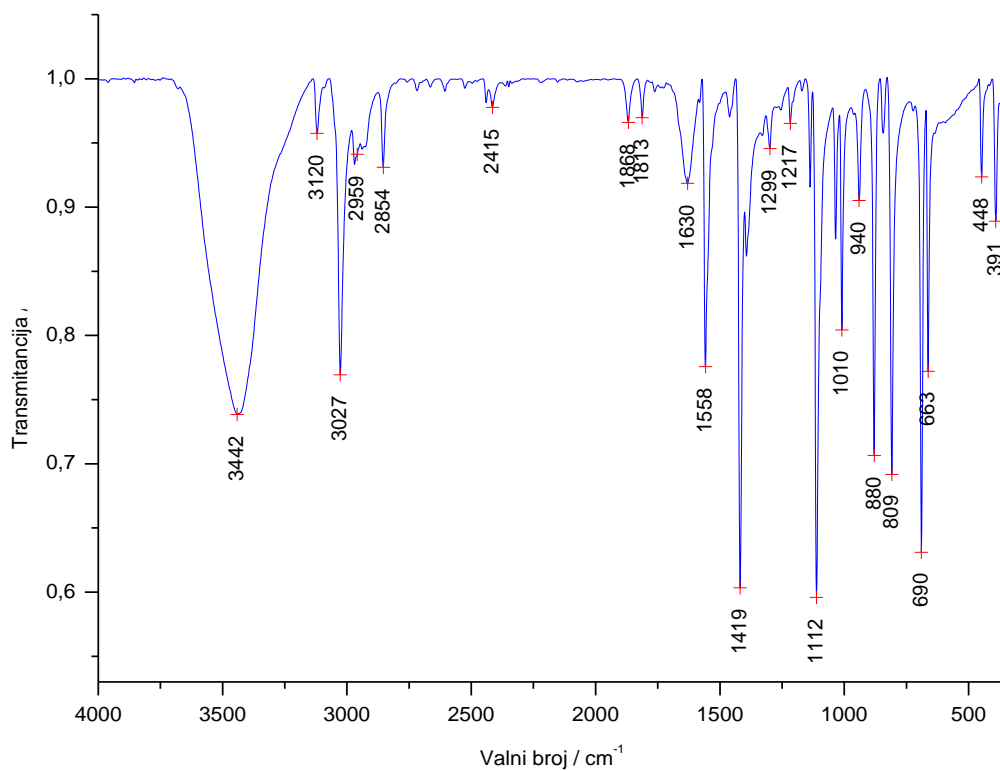
Slika D25. Spektri IR A) 2,5-Br₂py (L8) i B) [Ag(NO₃)(2,5-Br₂py)₂] (K8).



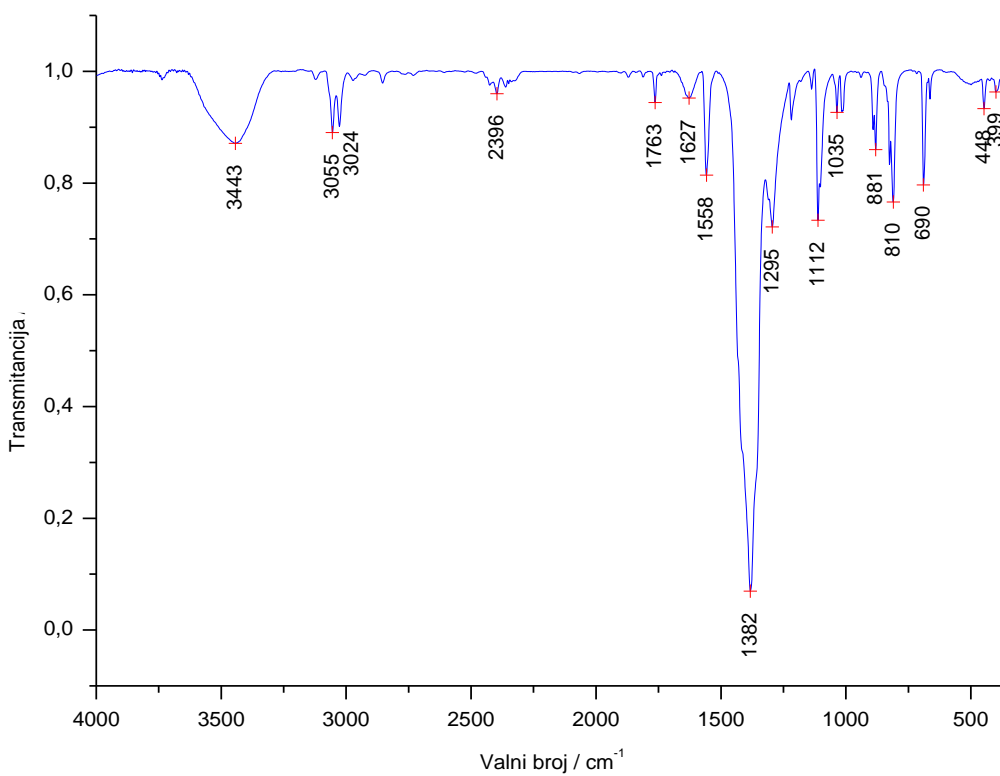
Slika D26. Spektri IR A) 2,6-Cl₂py (L9) i B) [Ag(NO₃)(2,6-Cl₂py)₂] (K9).



Slika D27. Spektri IR A) 2,6-Br₂py (L10) i B) [Ag(NO₃)(2,6-Br₂py)₂] (K10).

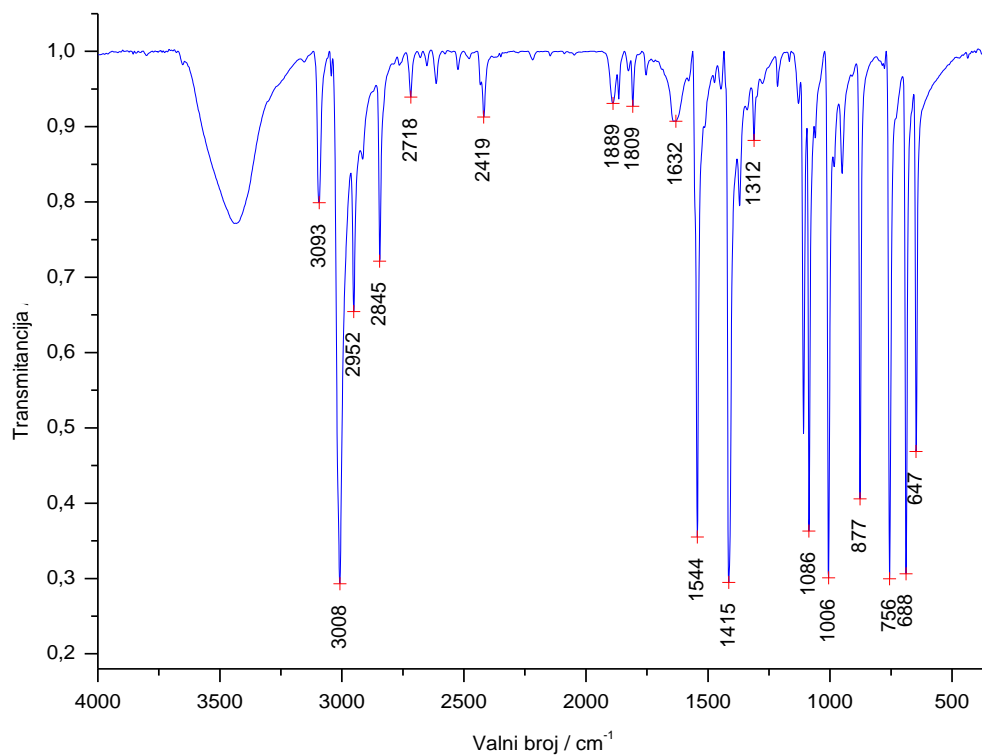


A

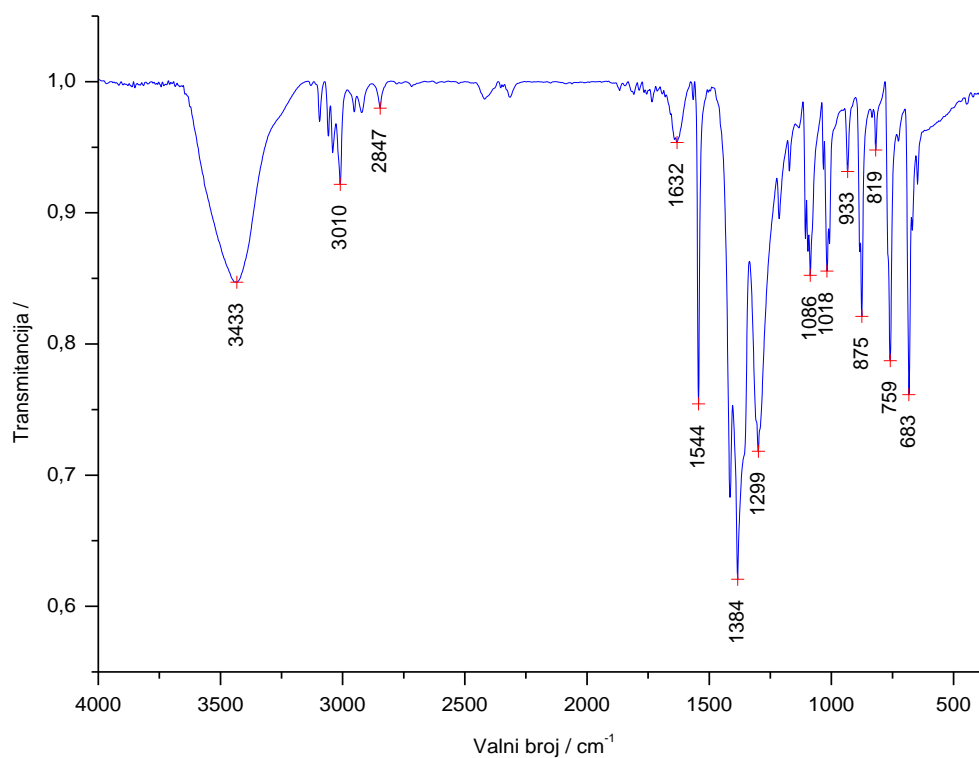


B

Slika D28. Spektri IR A) 3,5-Cl₂py (LII) i B) [Ag(NO₃)(3,5-Cl₂py)₂] (KII).



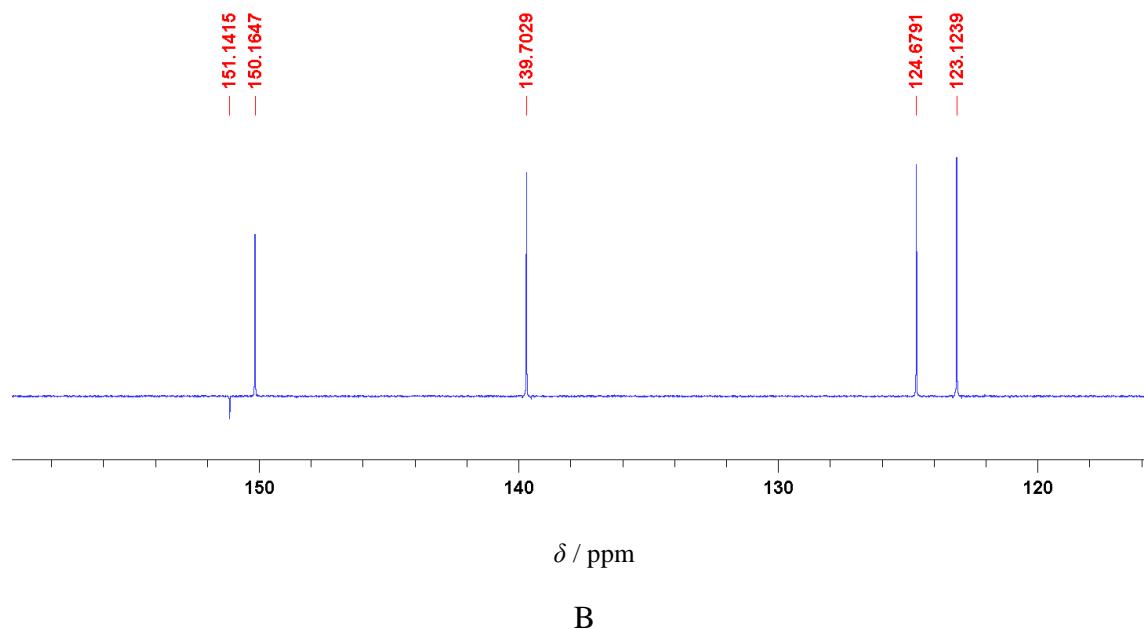
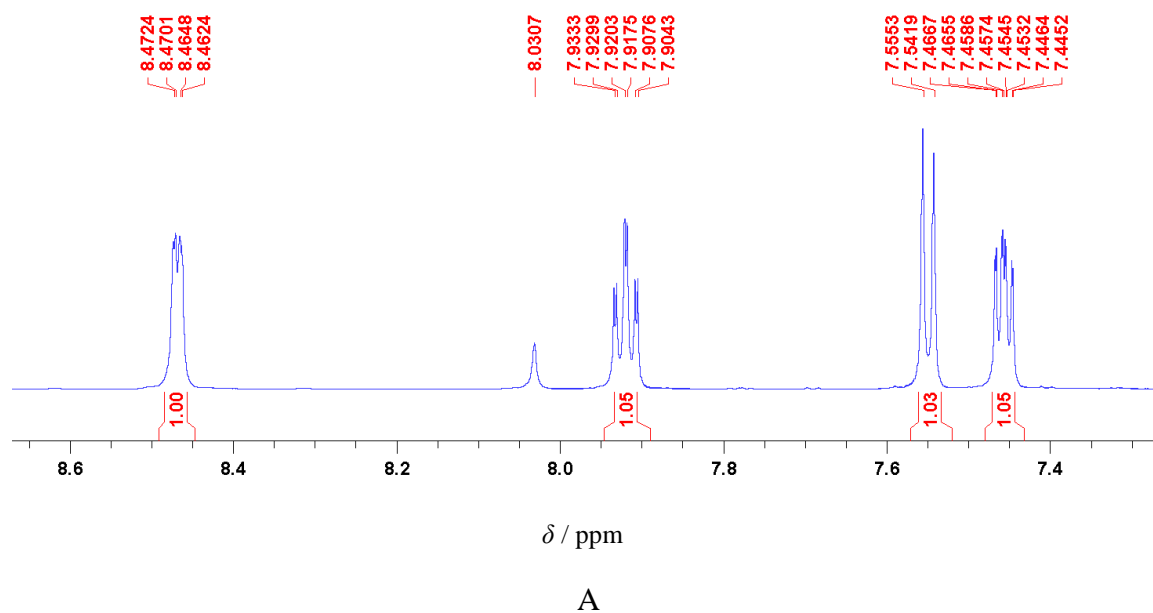
A



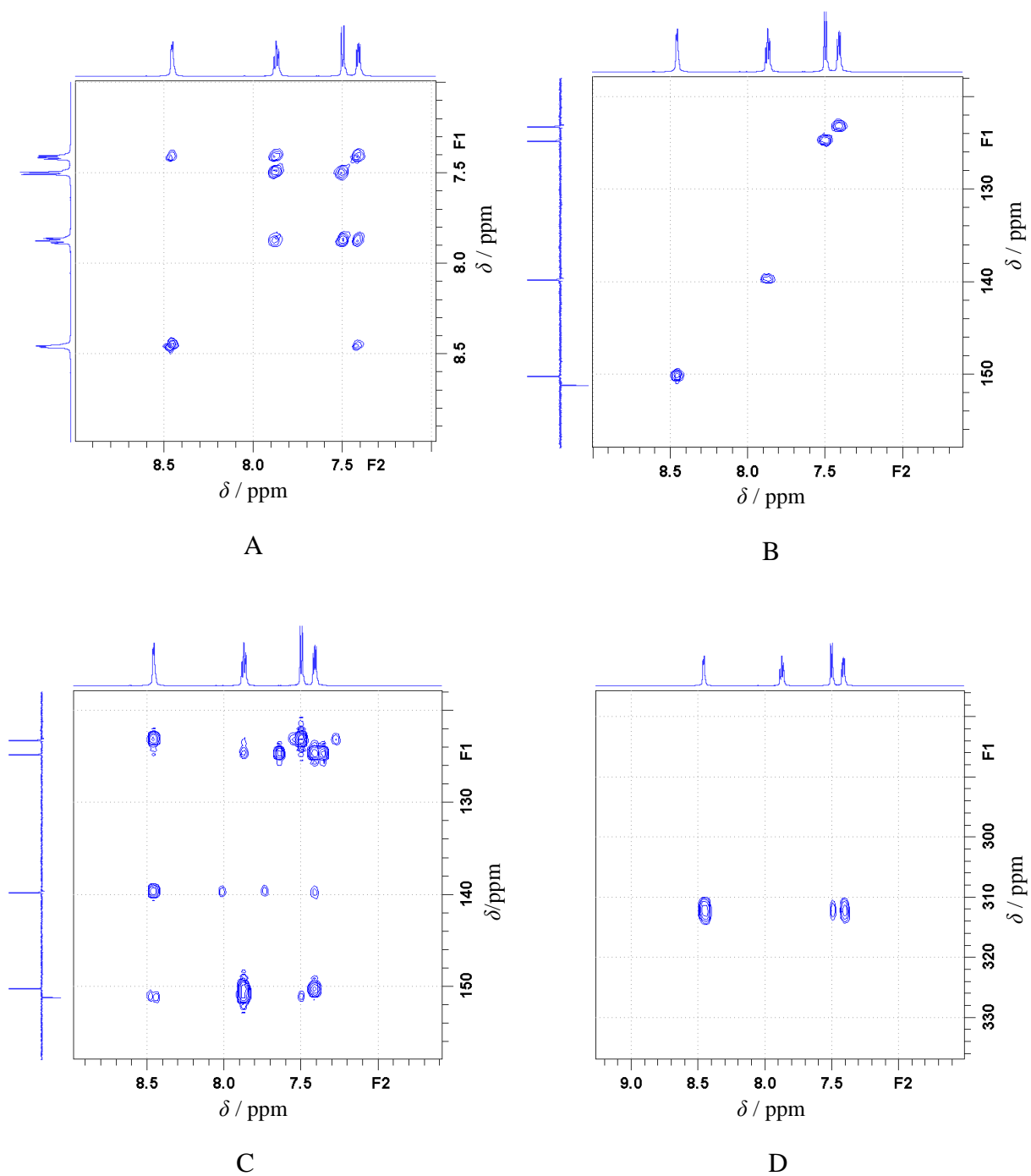
B

Slika D29. Spektri IR A) 3,5-Br₂py (L12) i B) [Ag(NO₃)(3,5-Br₂py)₂] (K12).

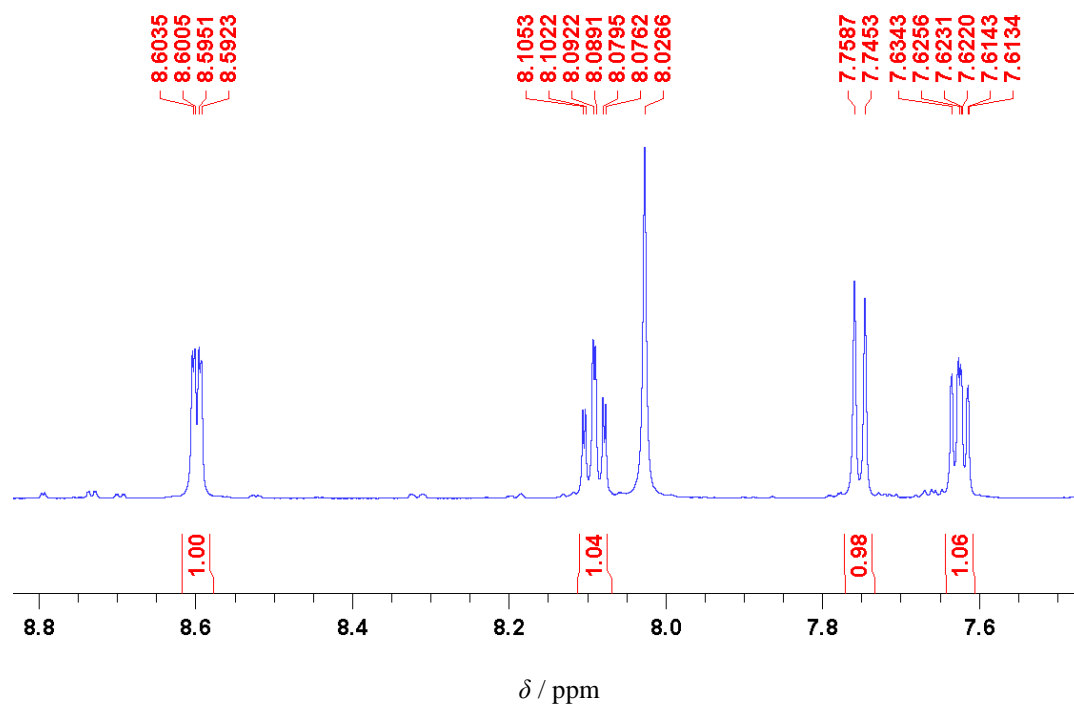
8.3. Slike spektara i drugi odabrani podaci dobiveni spektroskopijom NMR



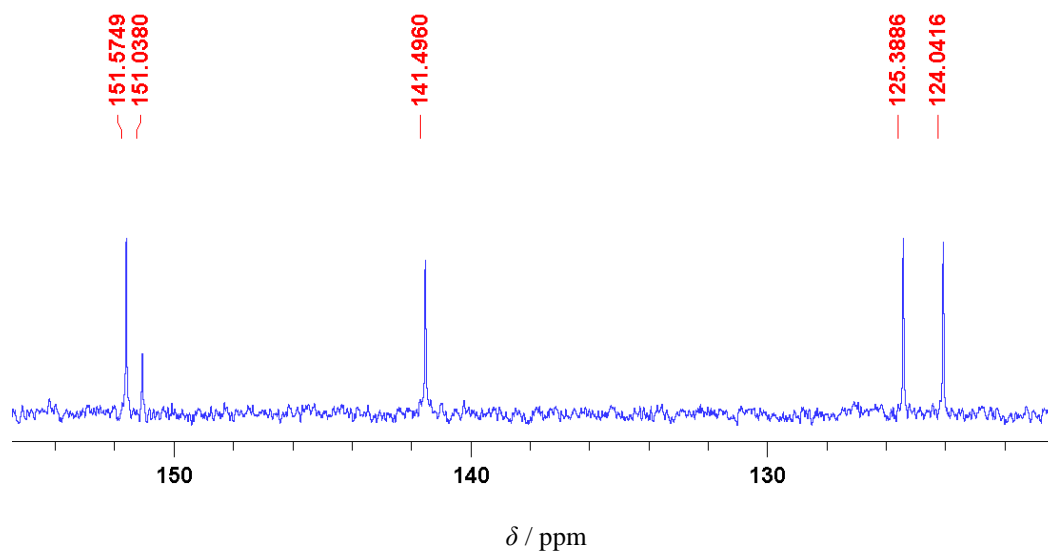
Slika D30. A) ^1H i B) ^{13}C spektri spoja 2-Clpy, (L1).



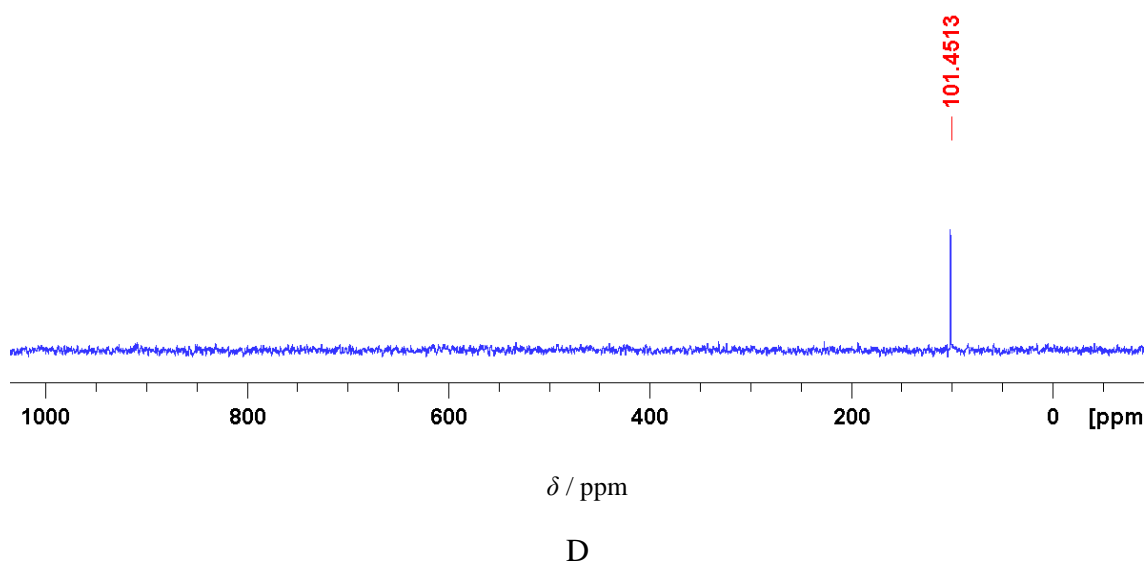
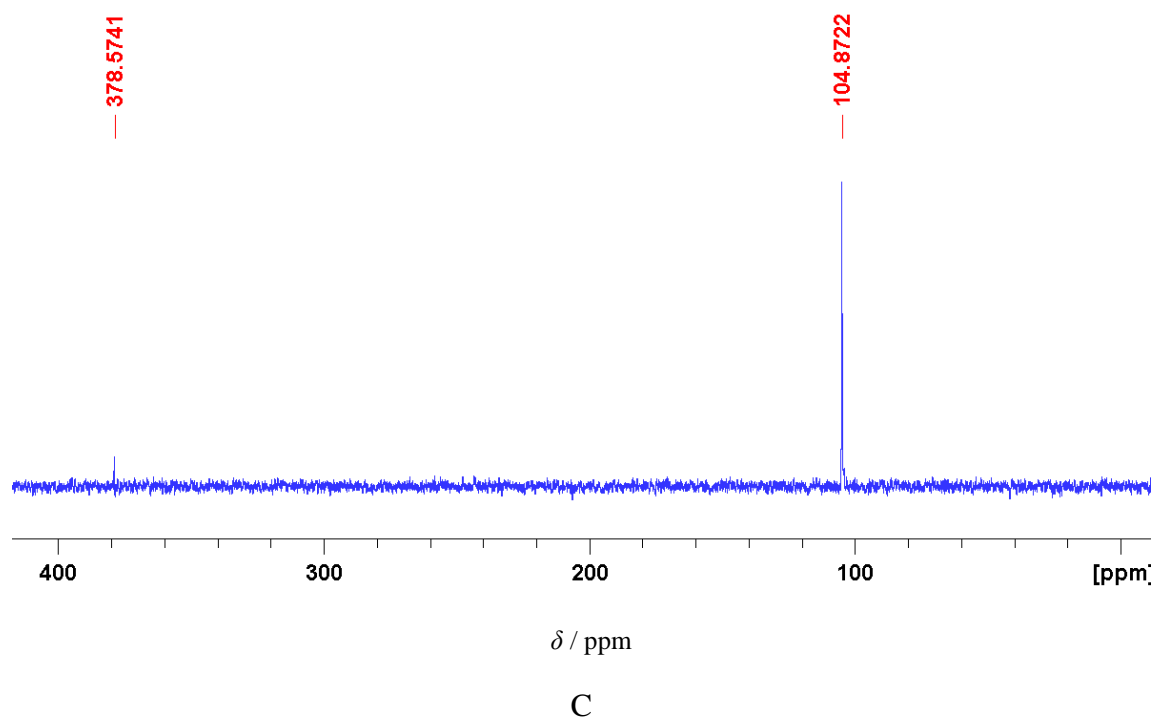
Slika D31. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 2-Clpy, (L1).



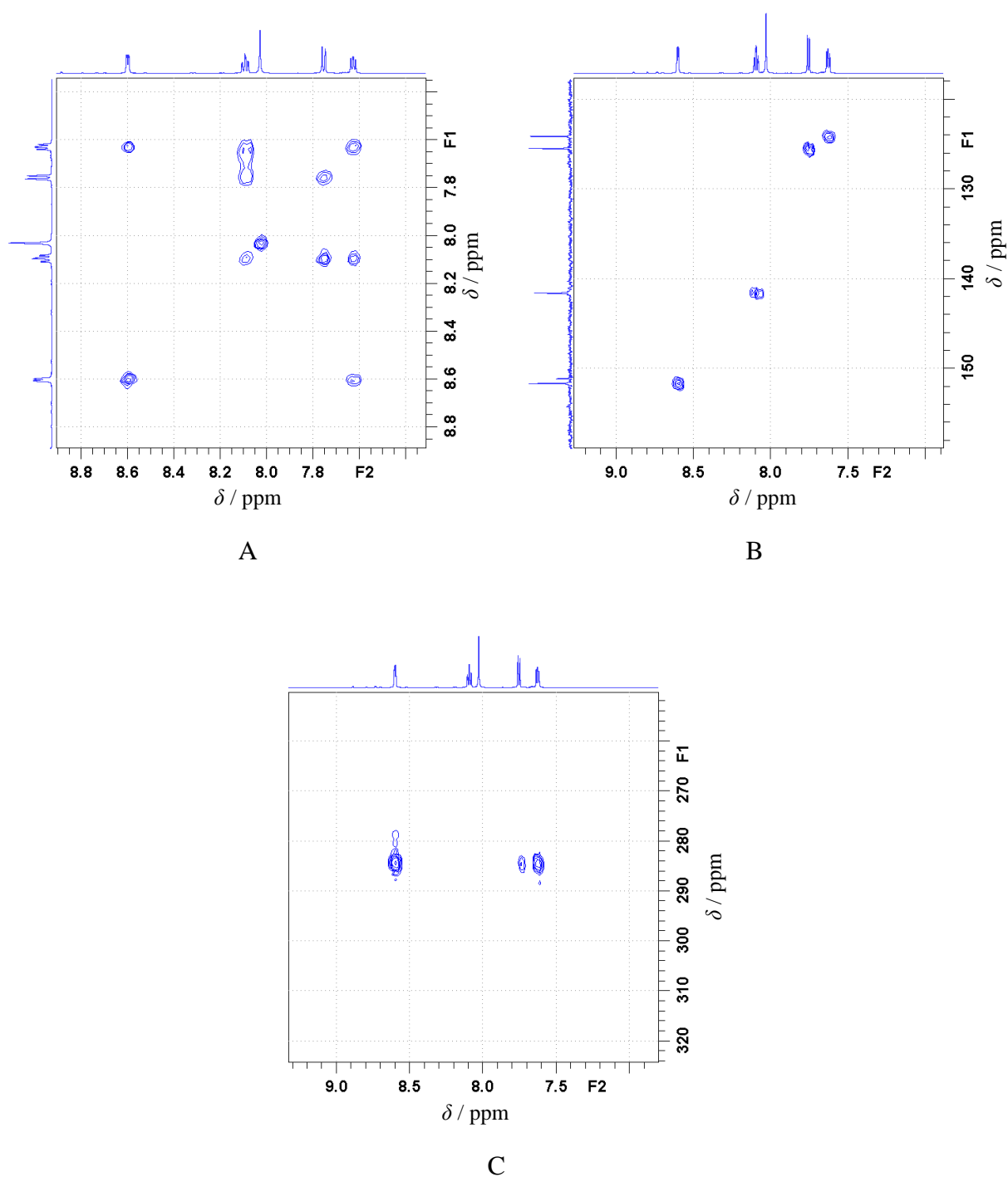
A



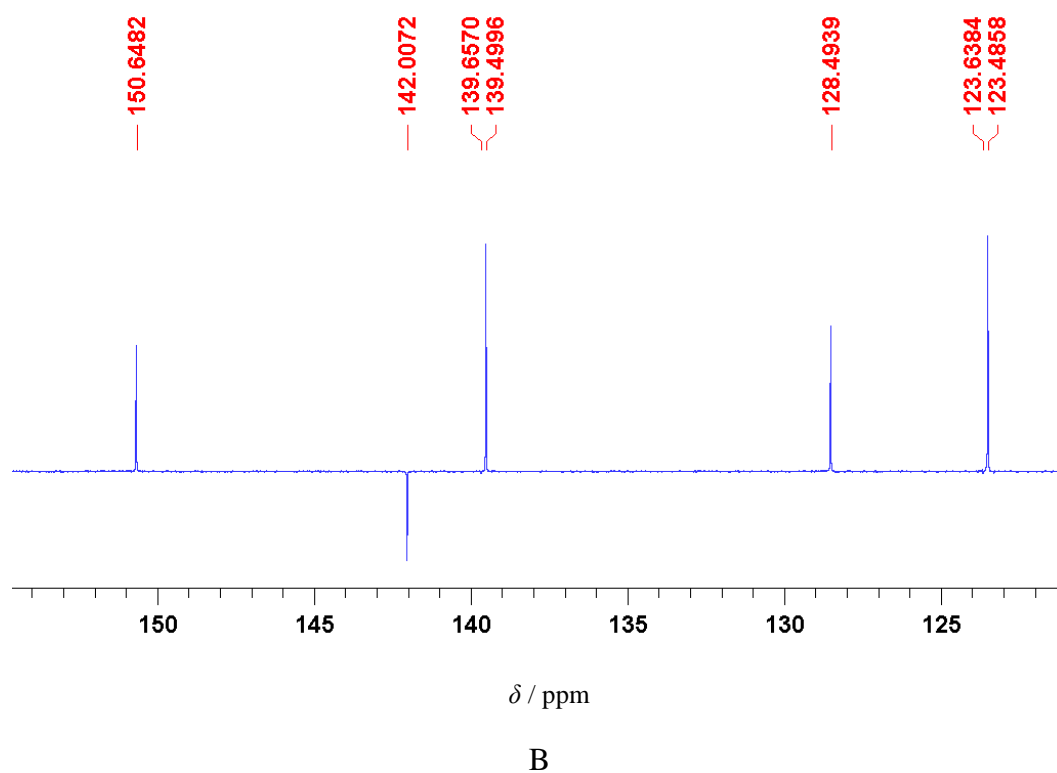
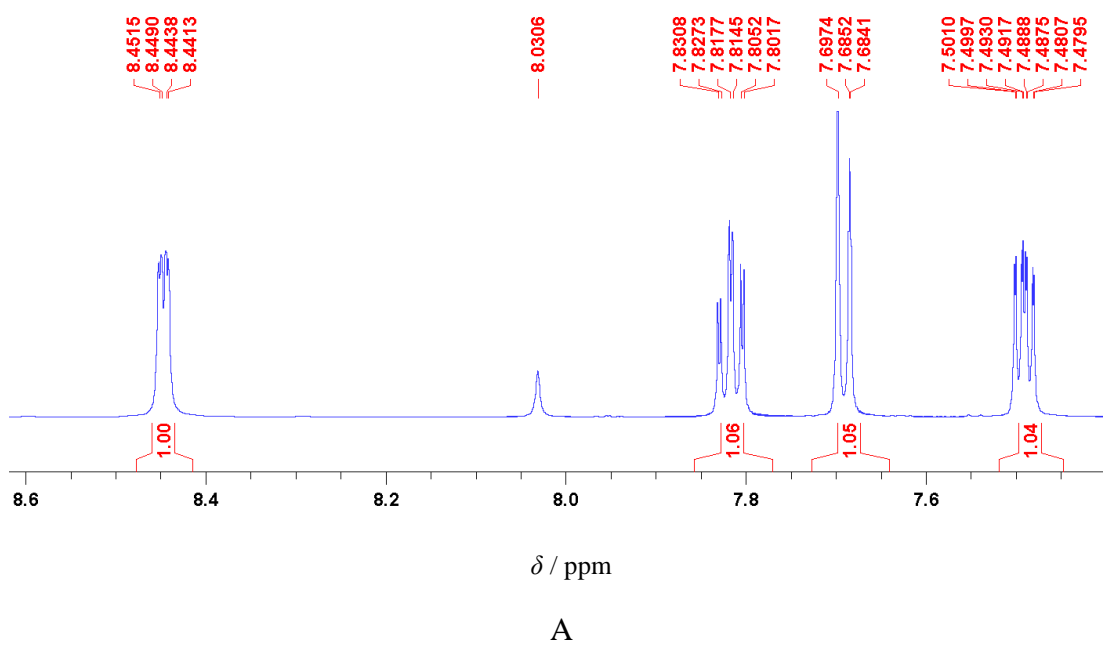
B



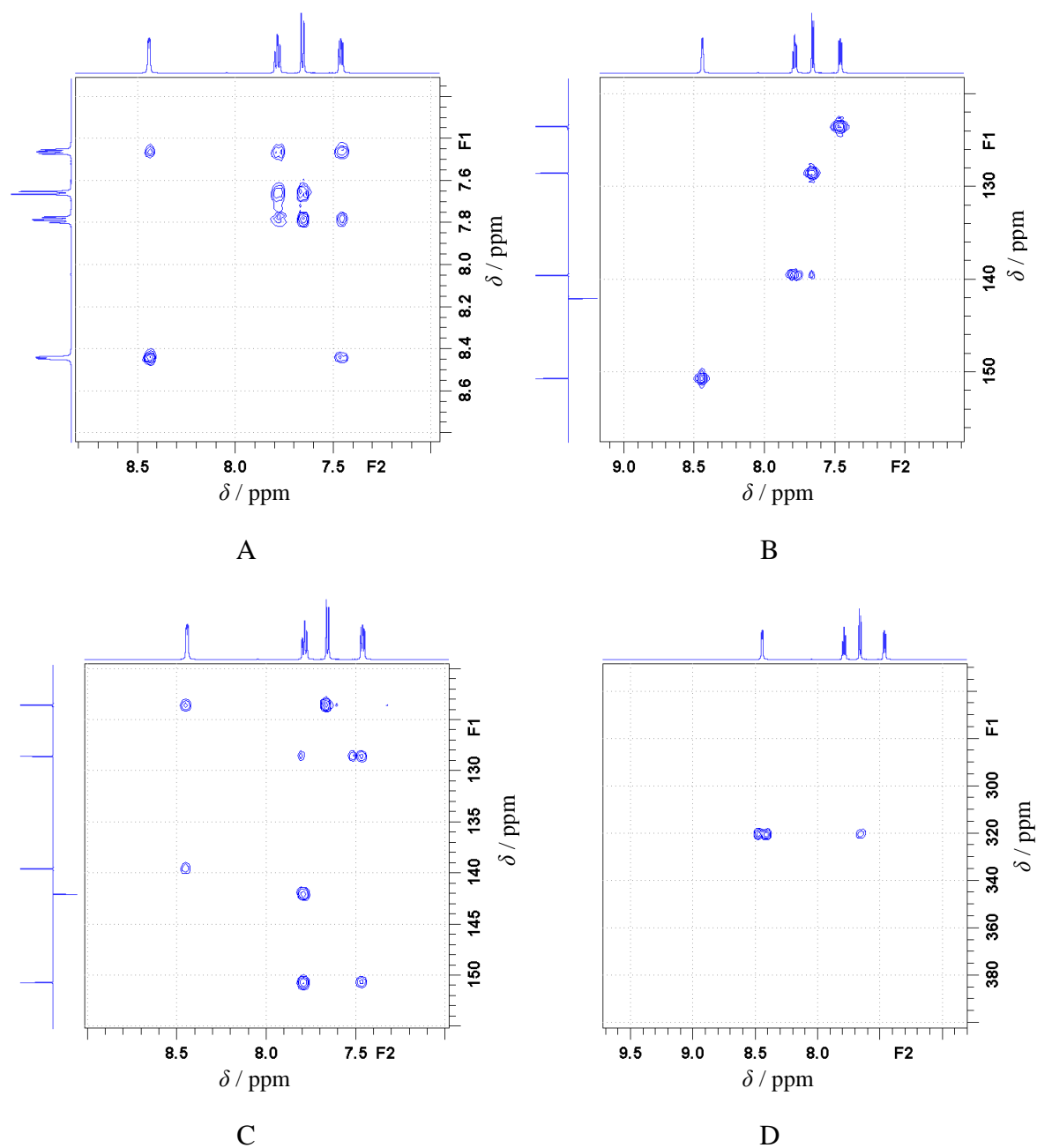
Slika D32. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri spoja $[\text{Ag}(\text{NO}_3)(2\text{-Clpy})_2]$, (K1).



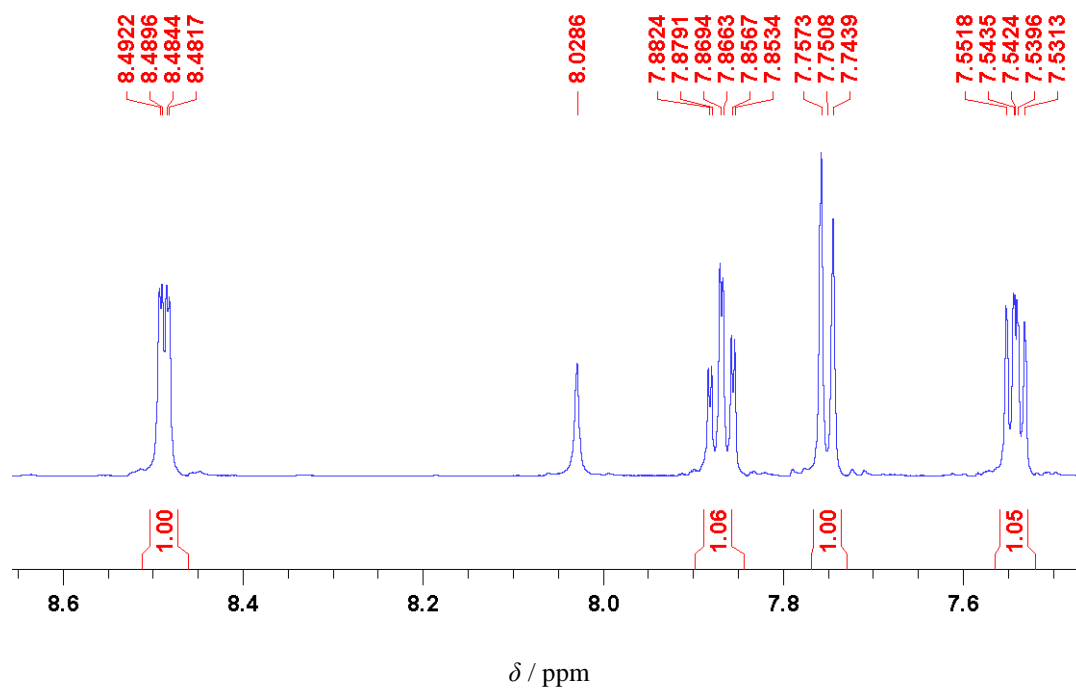
Slika D33. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC i C) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2\text{-Clpy})_2]$, (K1).



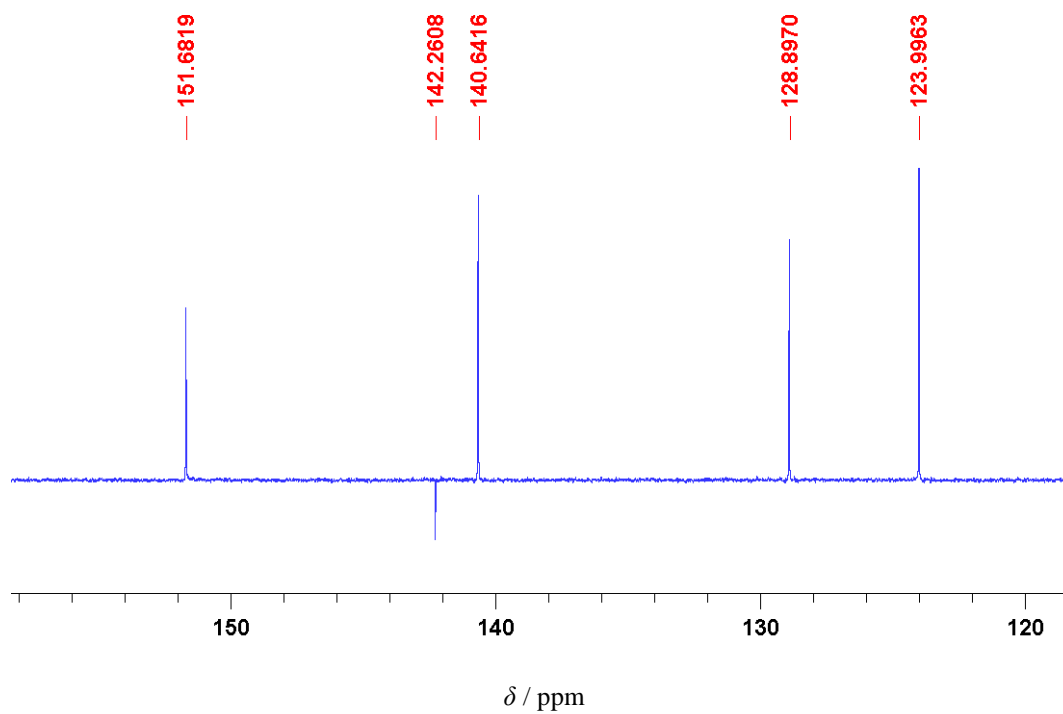
Slika D34. A) ^1H i B) ^{13}C spektri spoja 2-Brpy, (L2).



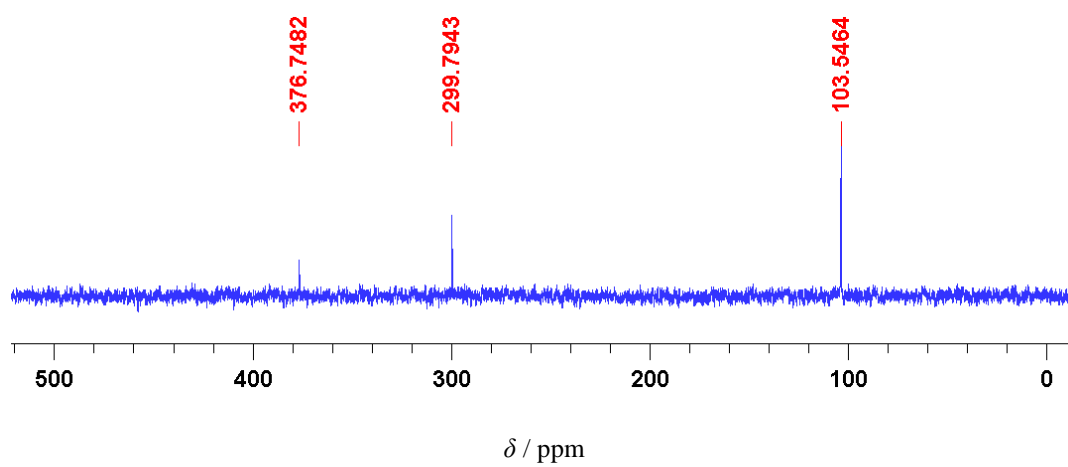
Slika D35. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 2-Brpy, (L2).



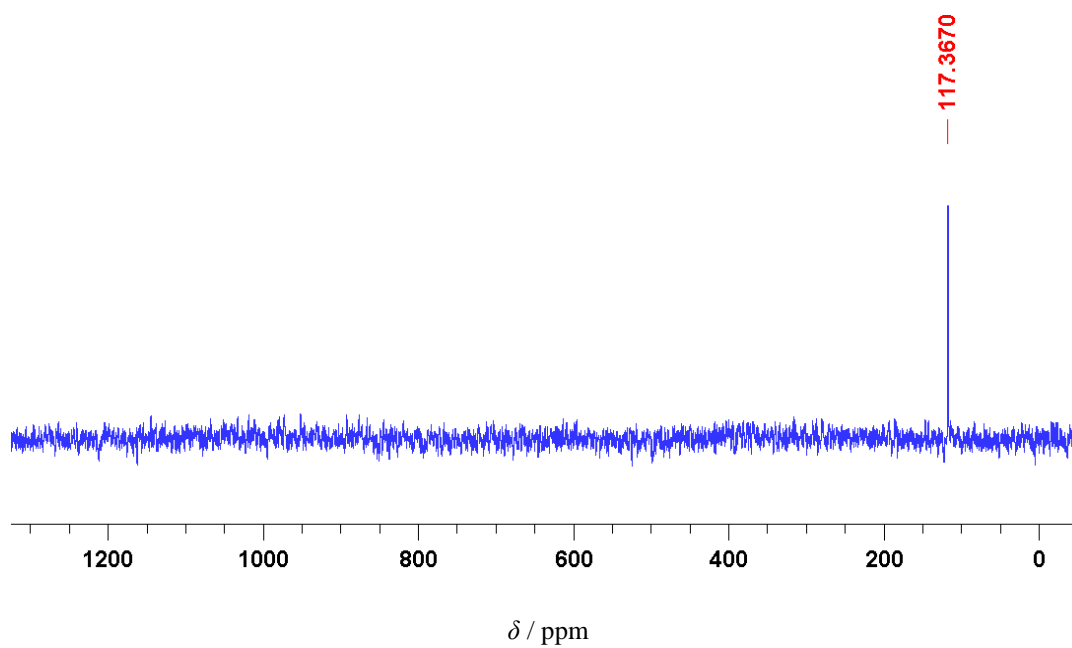
A



B

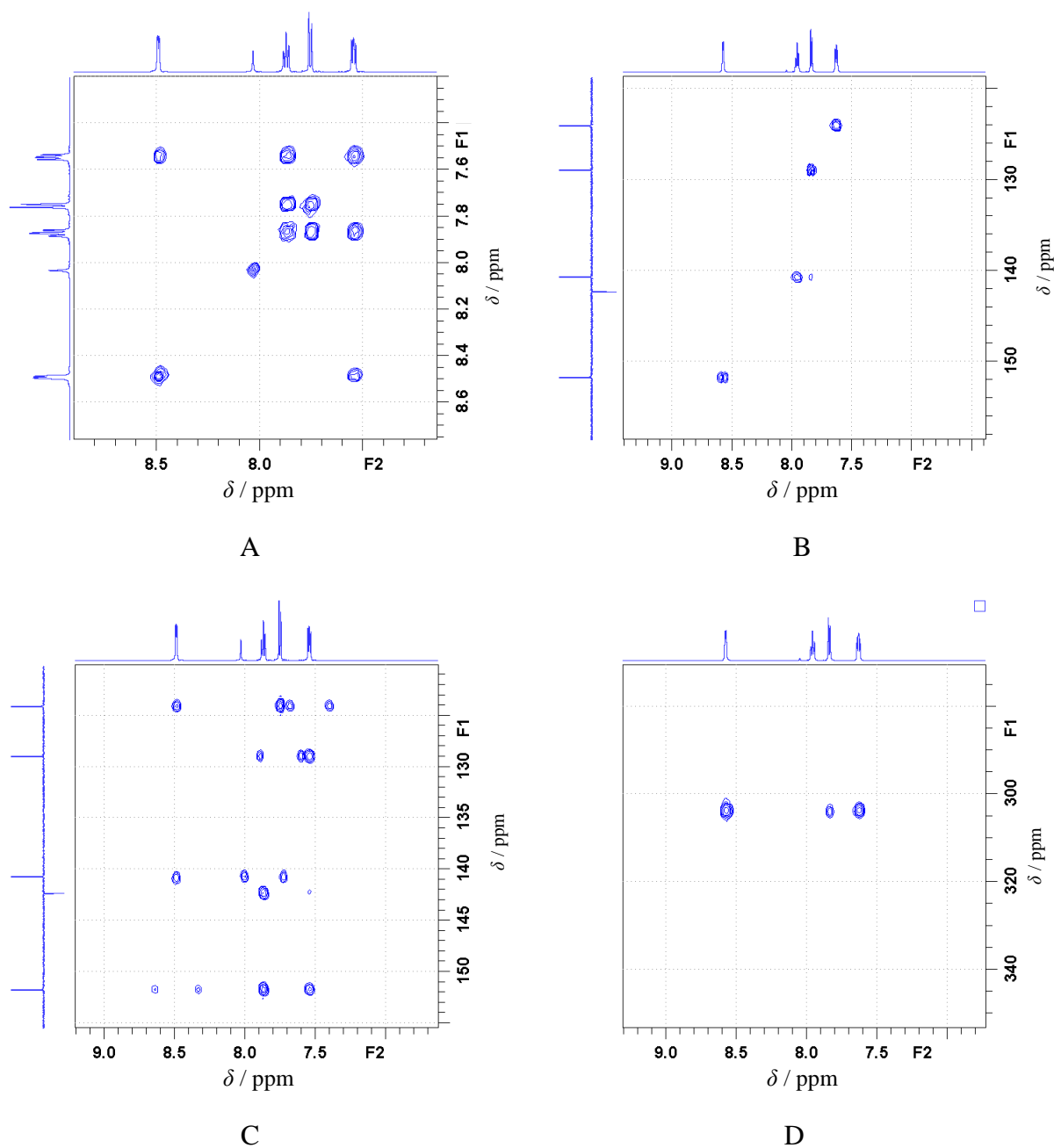


C

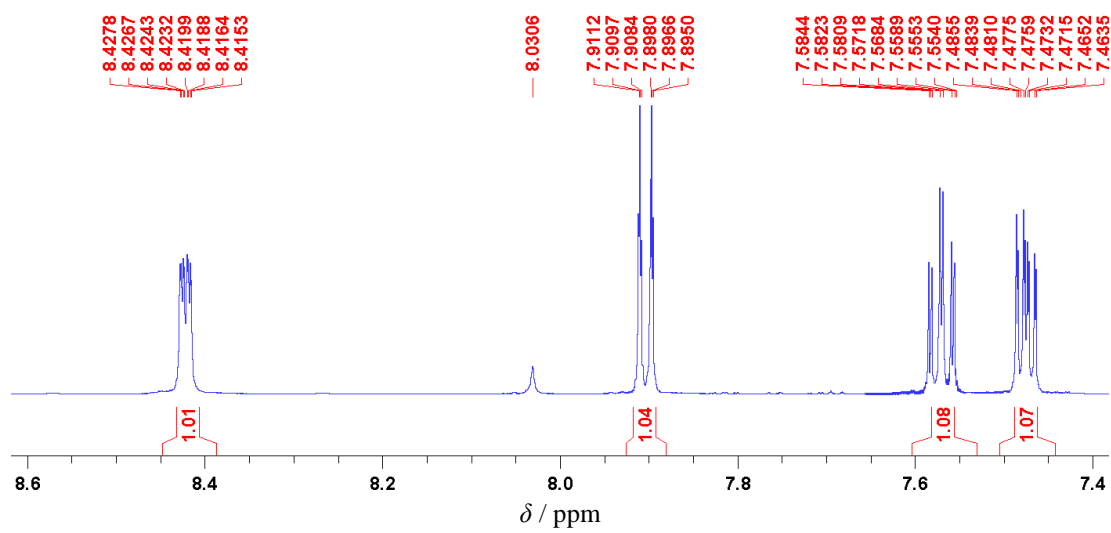


D

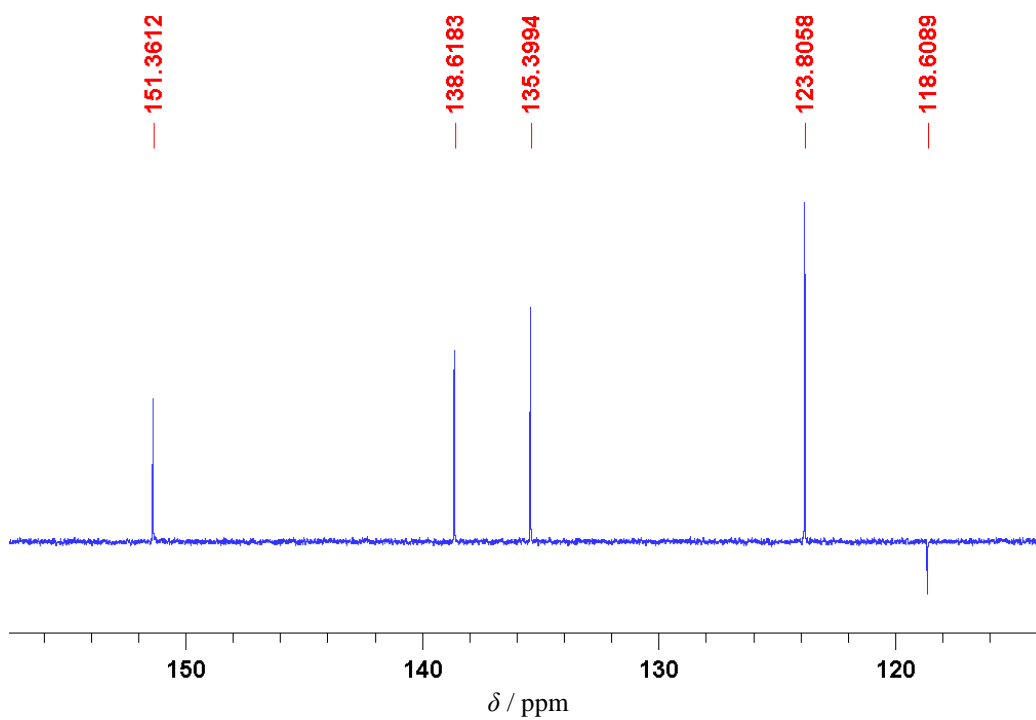
Slika D36. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri spoja $[\text{Ag}(\text{NO}_3)(2\text{-Brpy})_2]$, (K2).



Slika D37. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja $[\text{Ag}(\text{NO}_3)(2\text{-Brpy})_2]$, (**K2**).

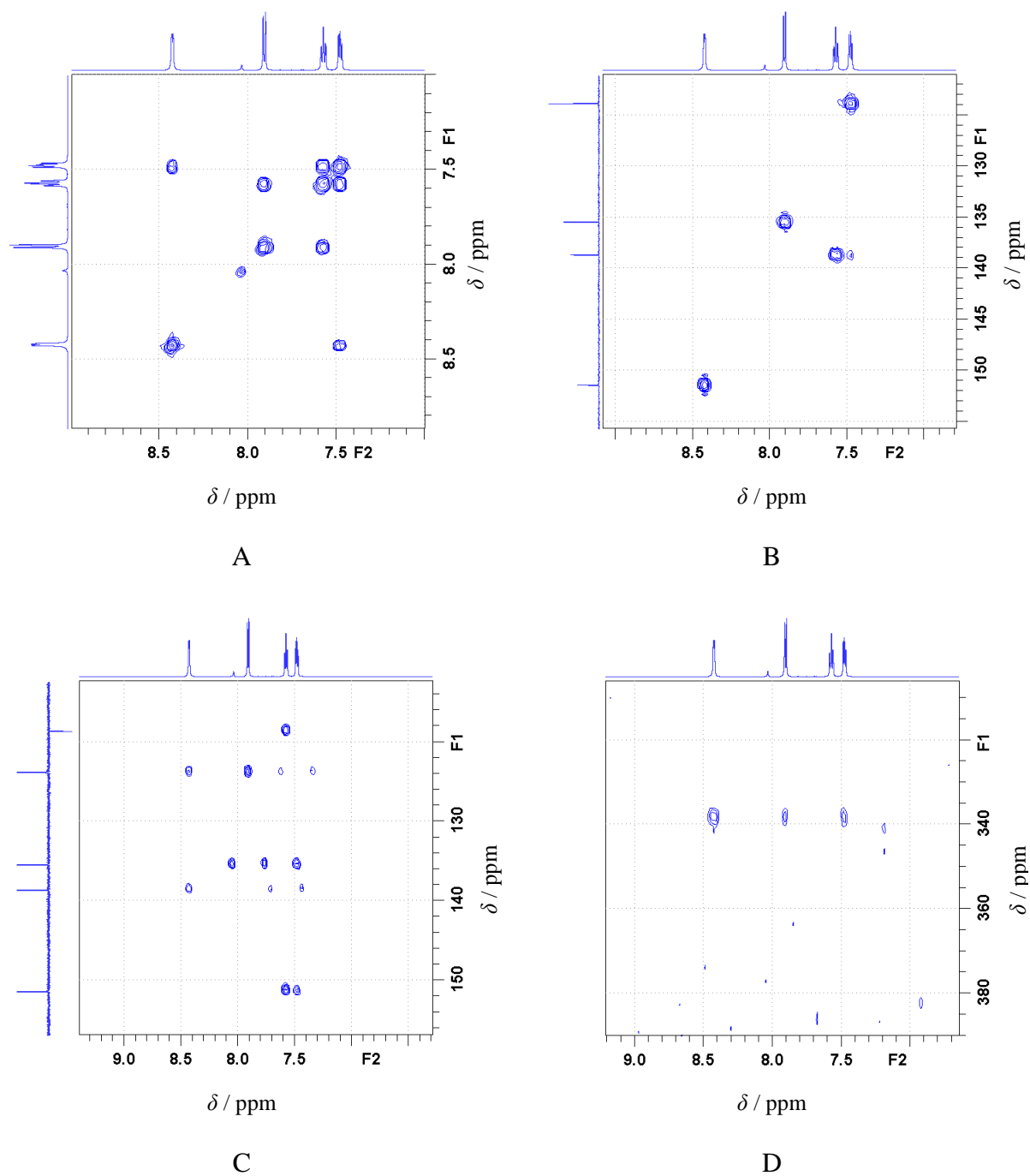


A

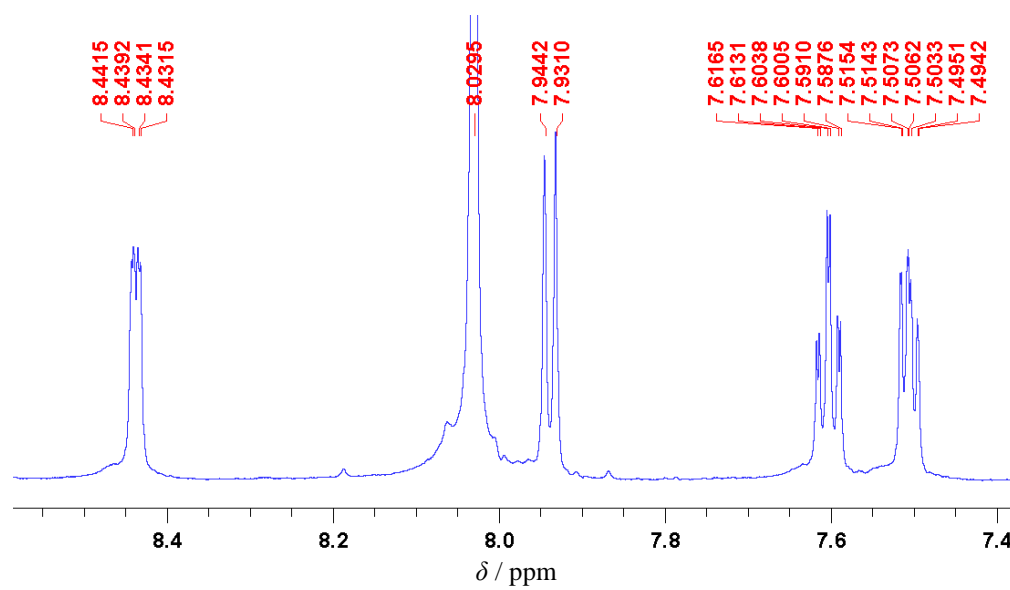


B

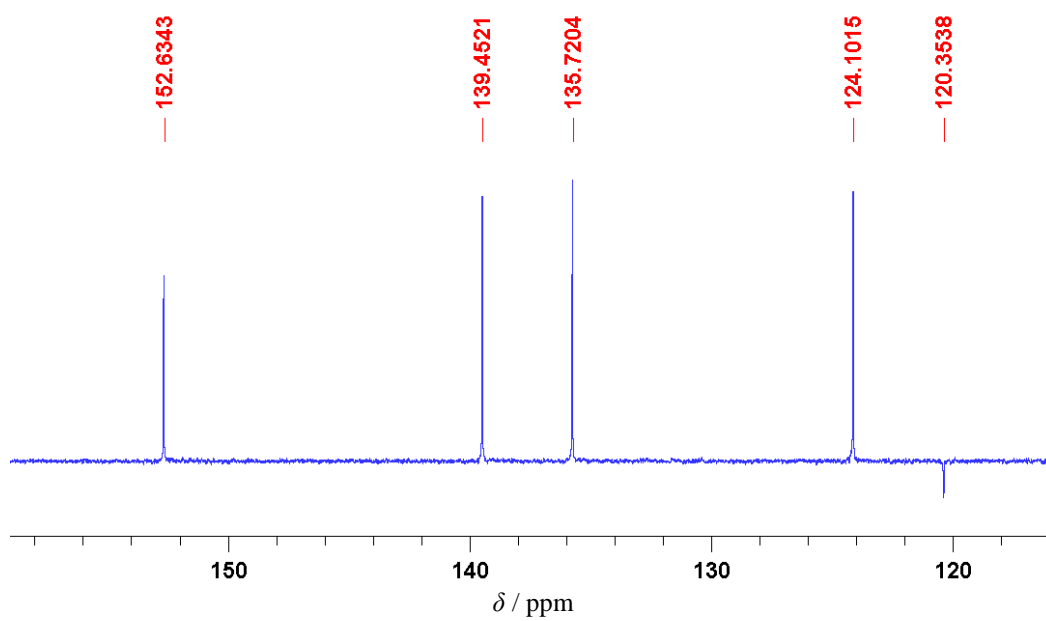
Slika D38. A) ¹H i B) ¹³C spektri spoja 2-Ipy, (L3).



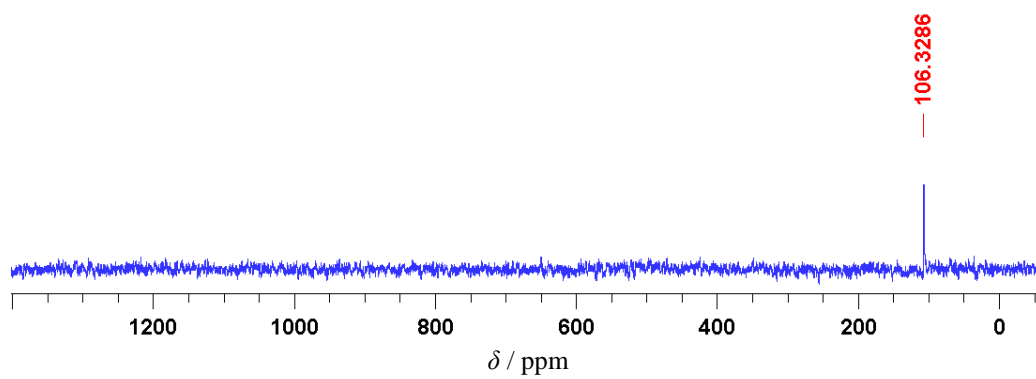
Slika D39. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR liganda 2-Ipy, (**L3**).



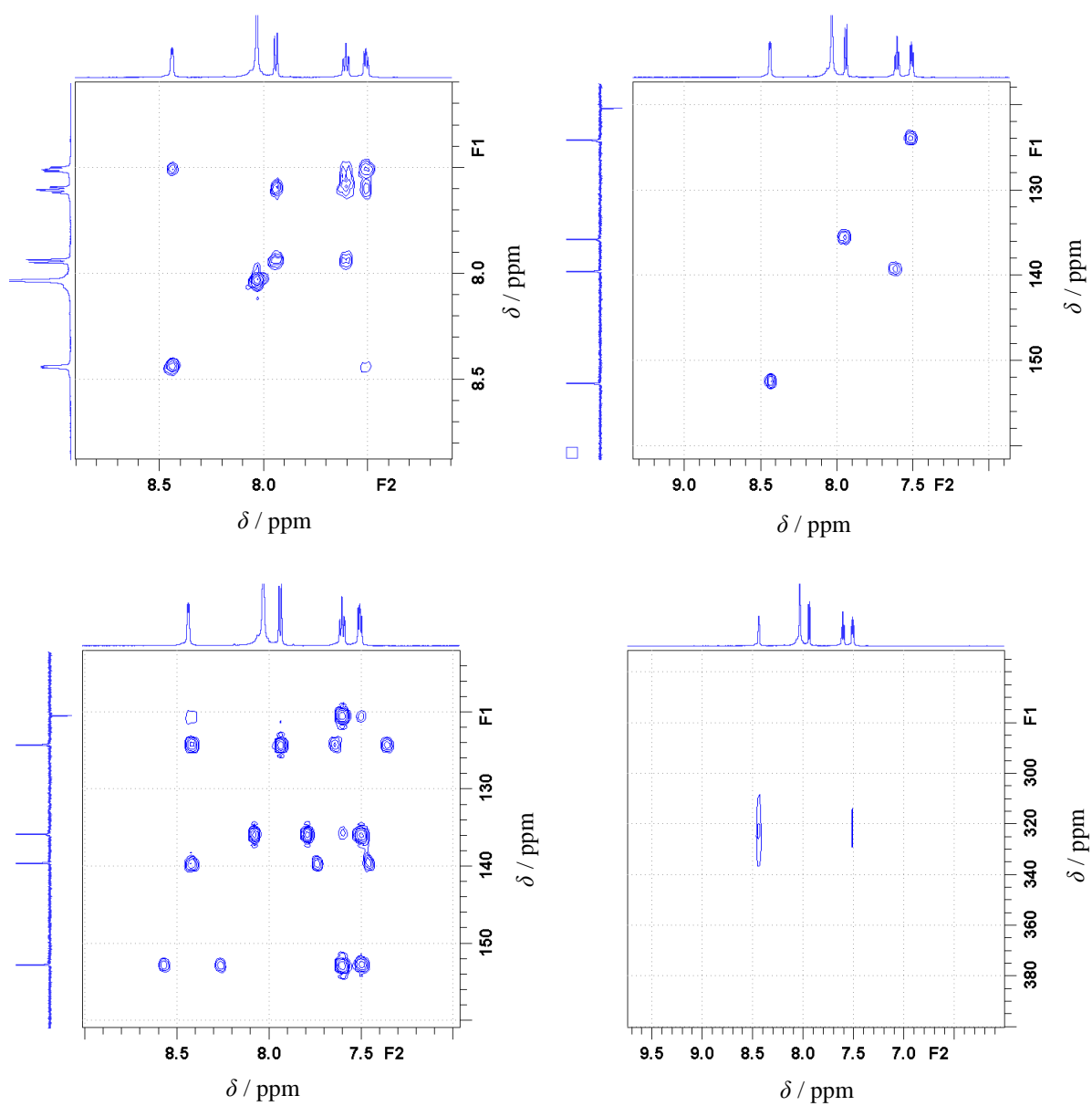
A



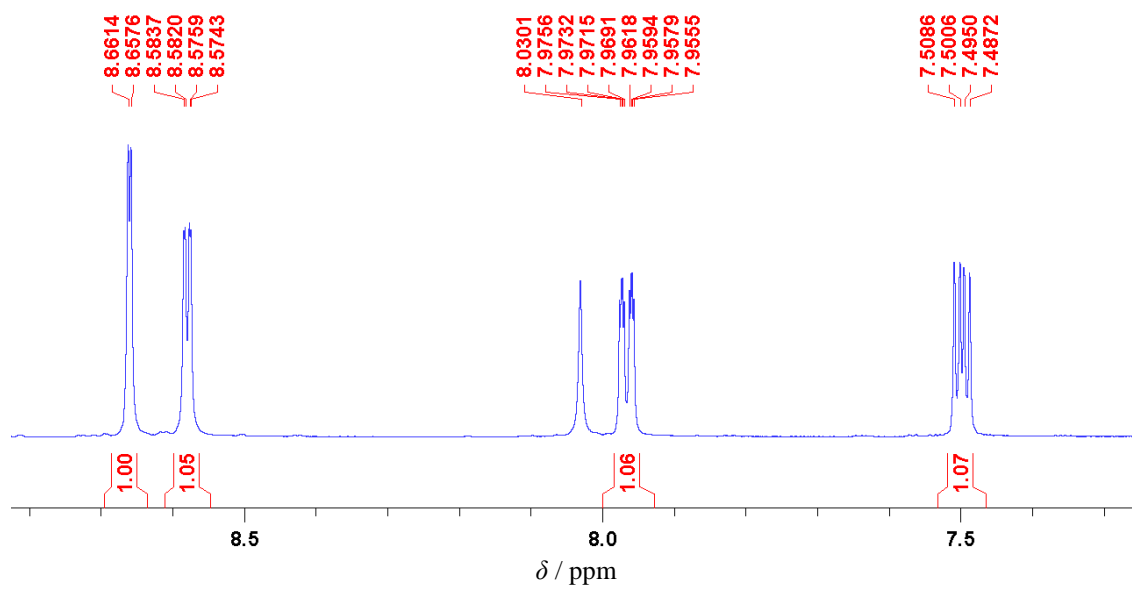
B



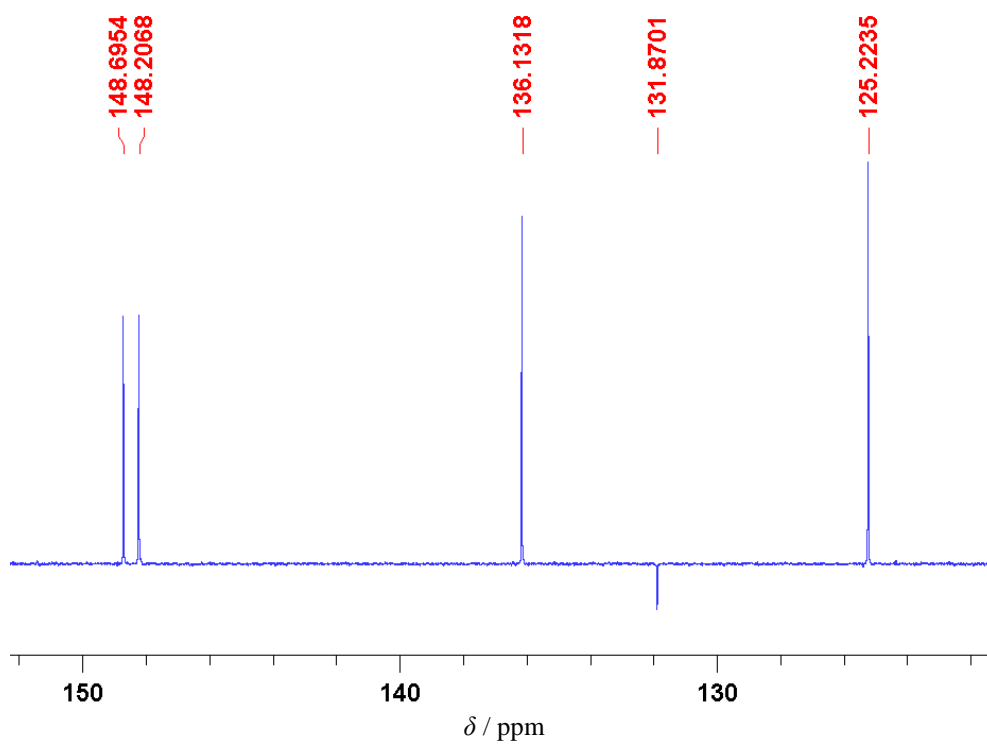
Slika D40. A) ^1H , B) ^{13}C i C) ^{109}Ag spektri spoja $[\text{Ag}(\text{NO}_3)(2\text{-Ipy})_2]$, (K3).



Slika D41. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2\text{-Ipy})_2]$, (K3).

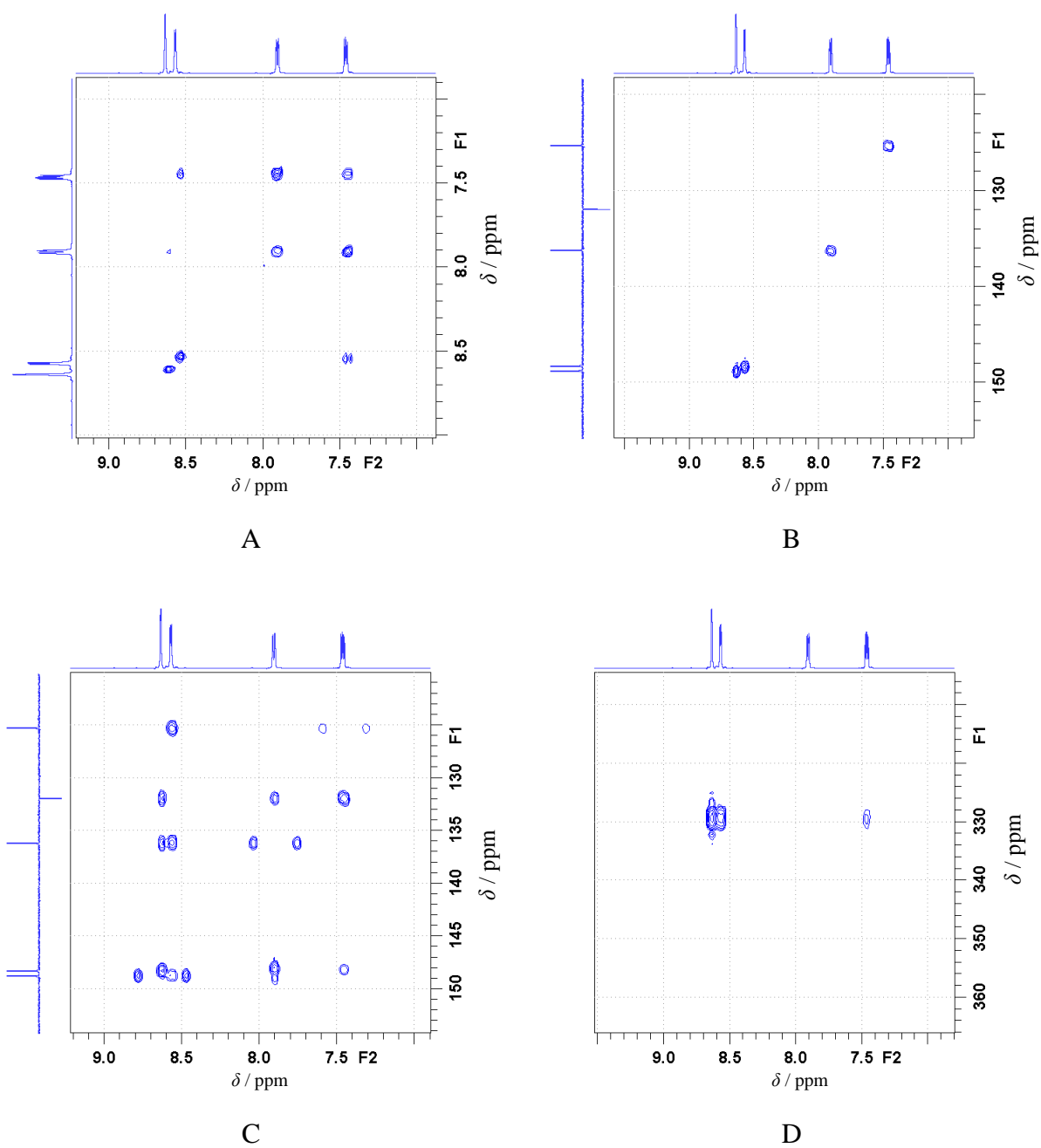


A

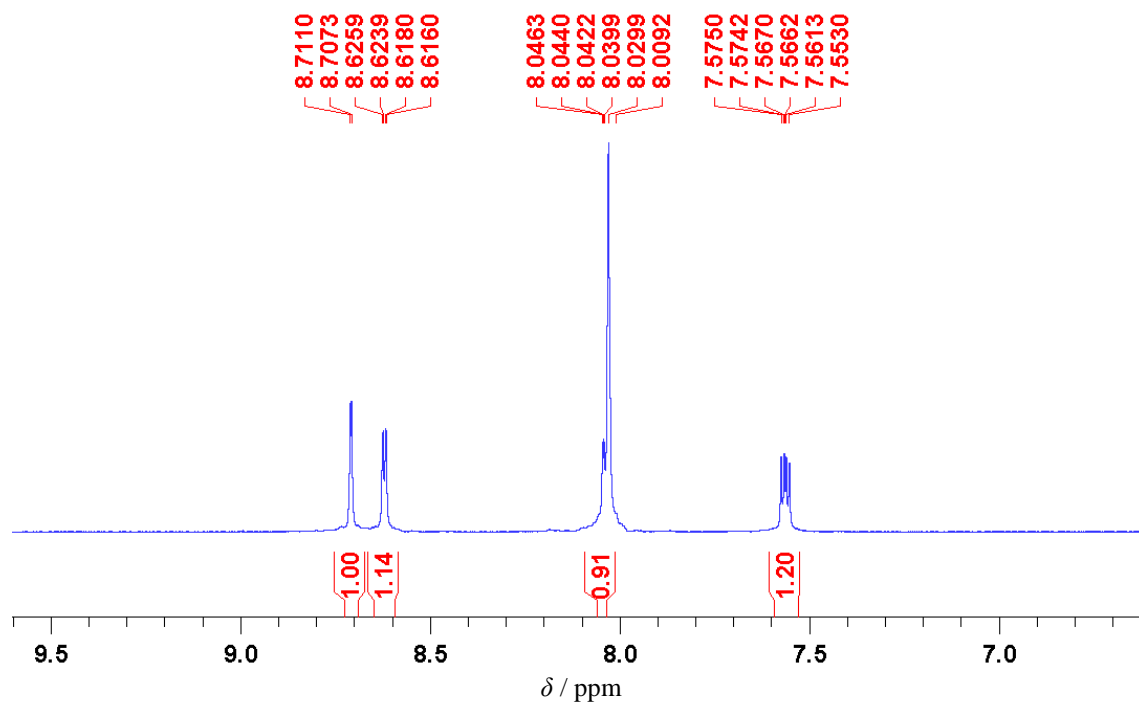


B

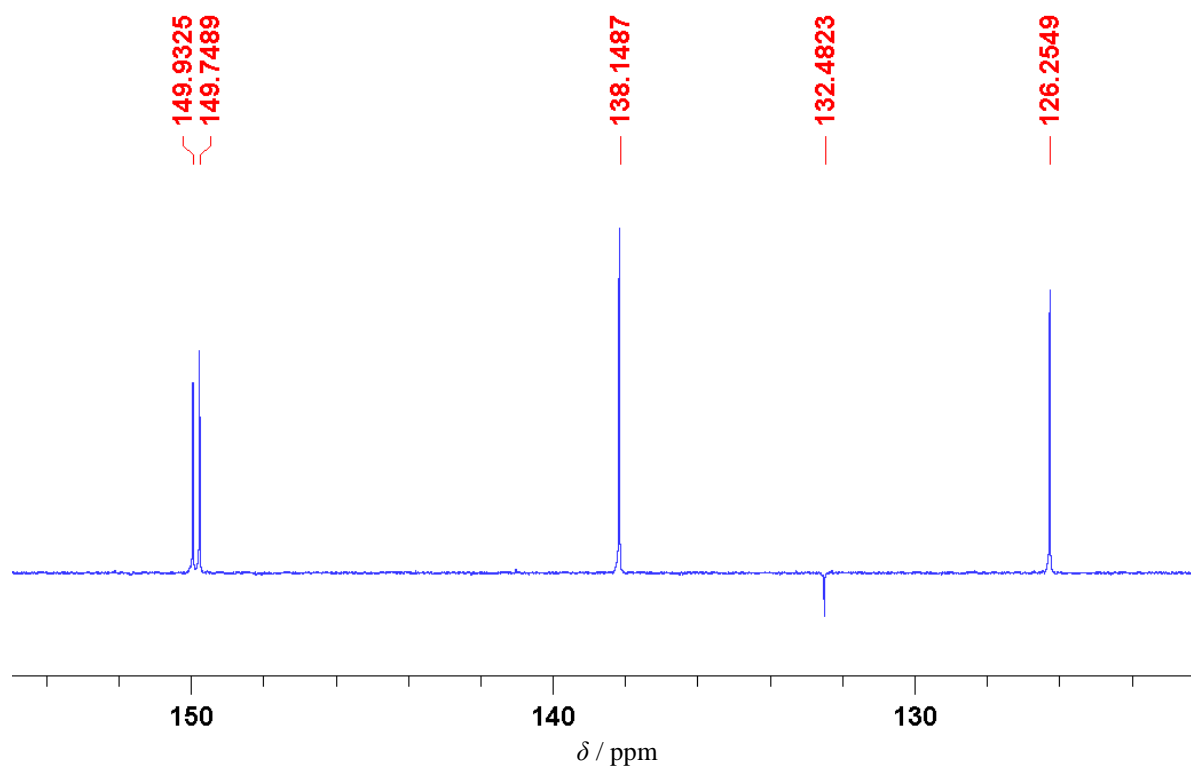
Slika D42. A) ^1H i B) ^{13}C spektri spoja 3-Clpy, (L4).



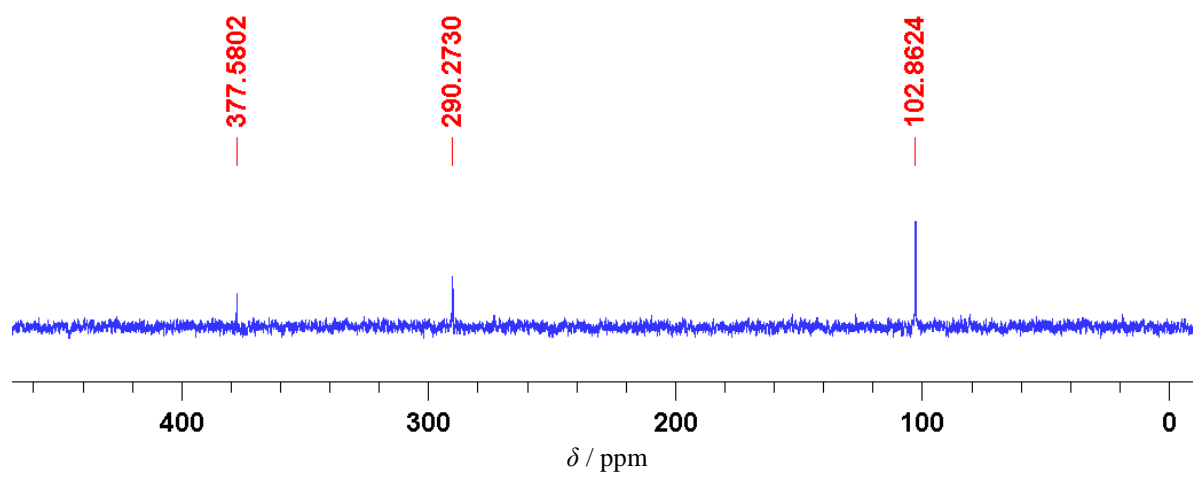
Slika D43. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR liganda 3-Clpy, (**L4**).



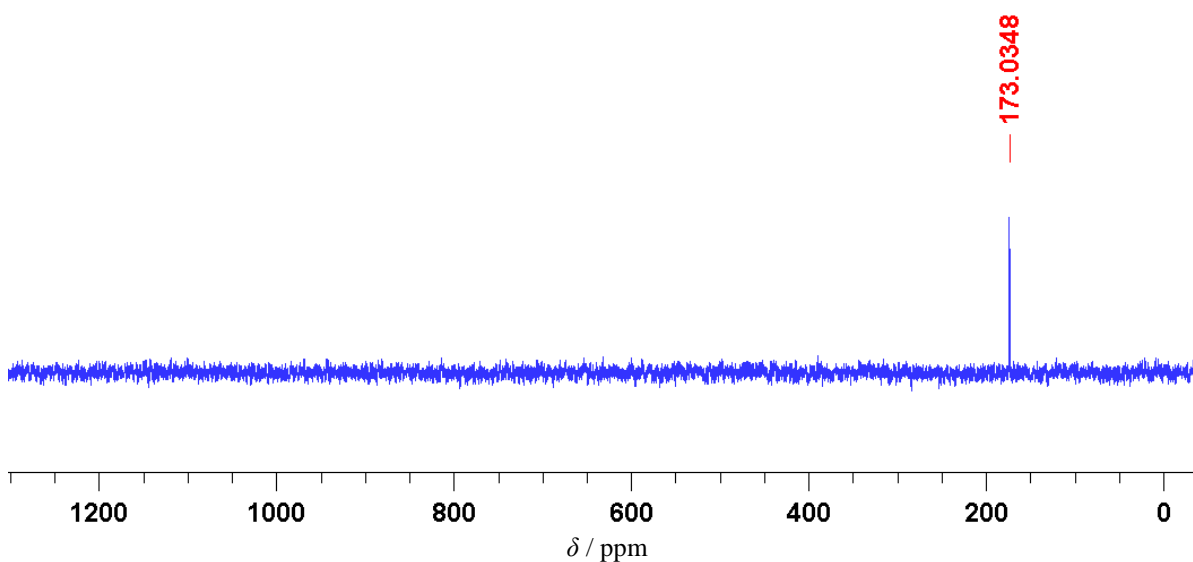
A



B

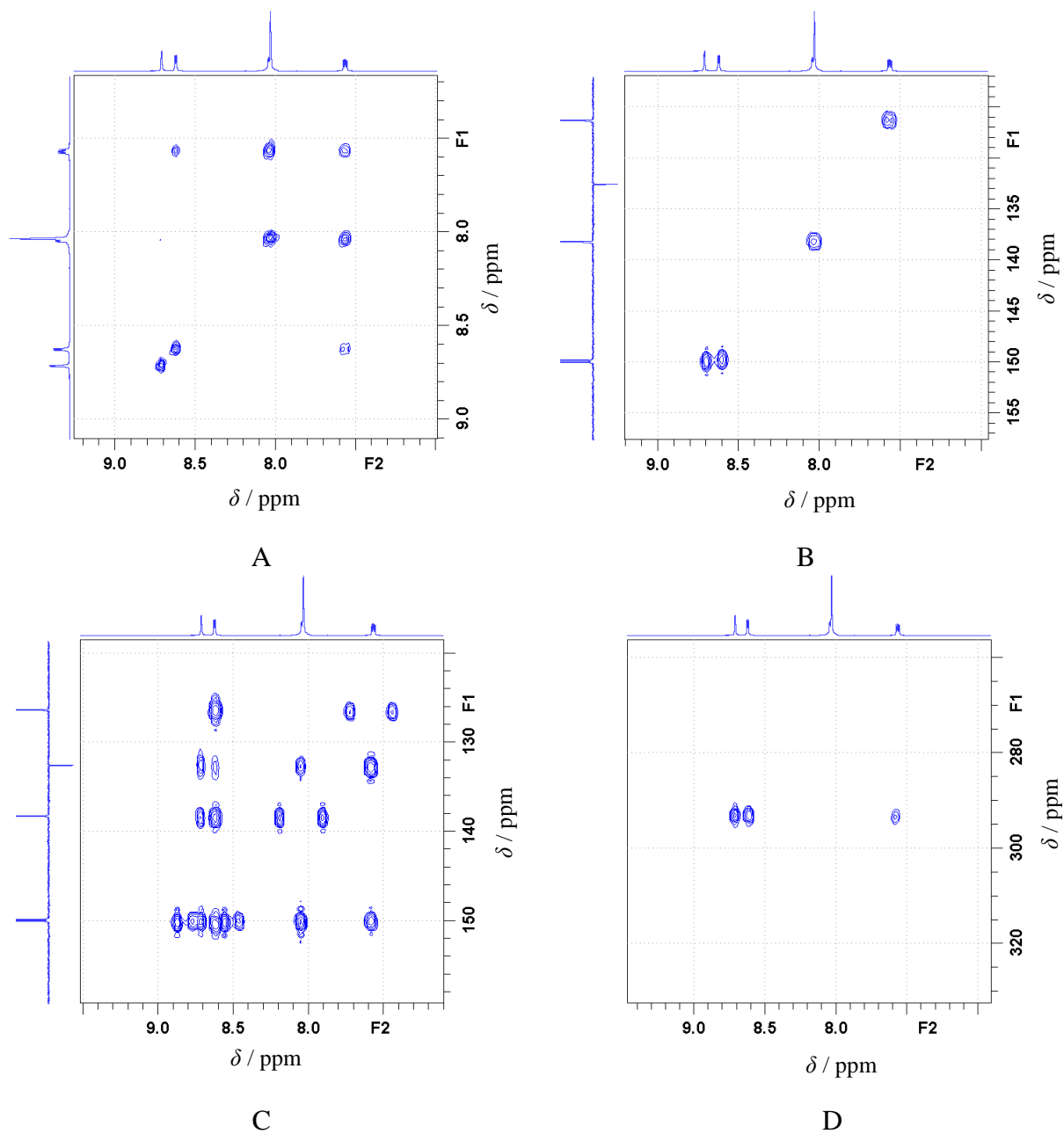


C

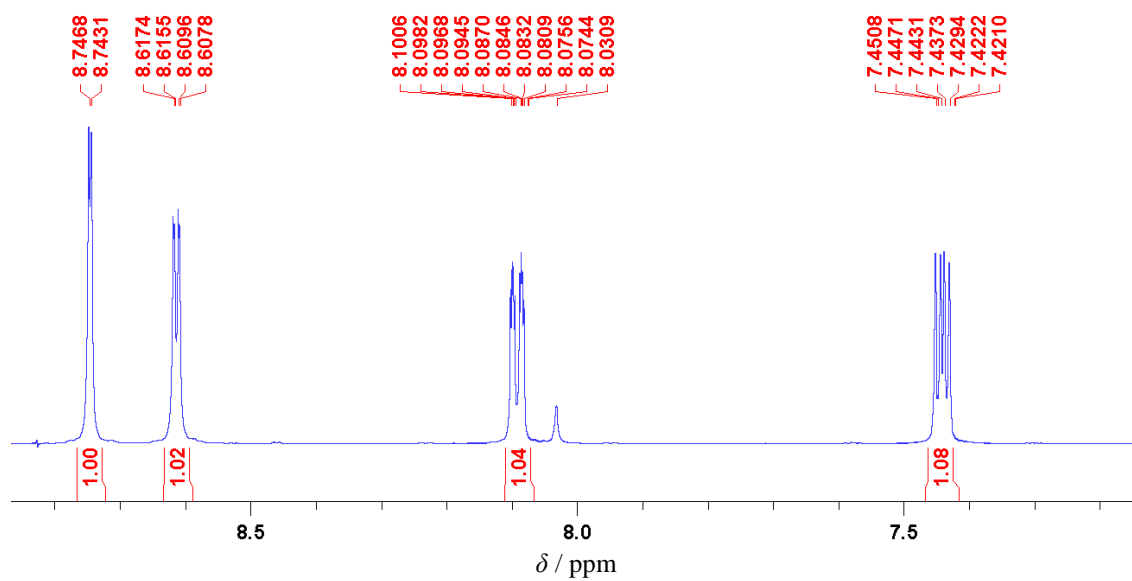


D

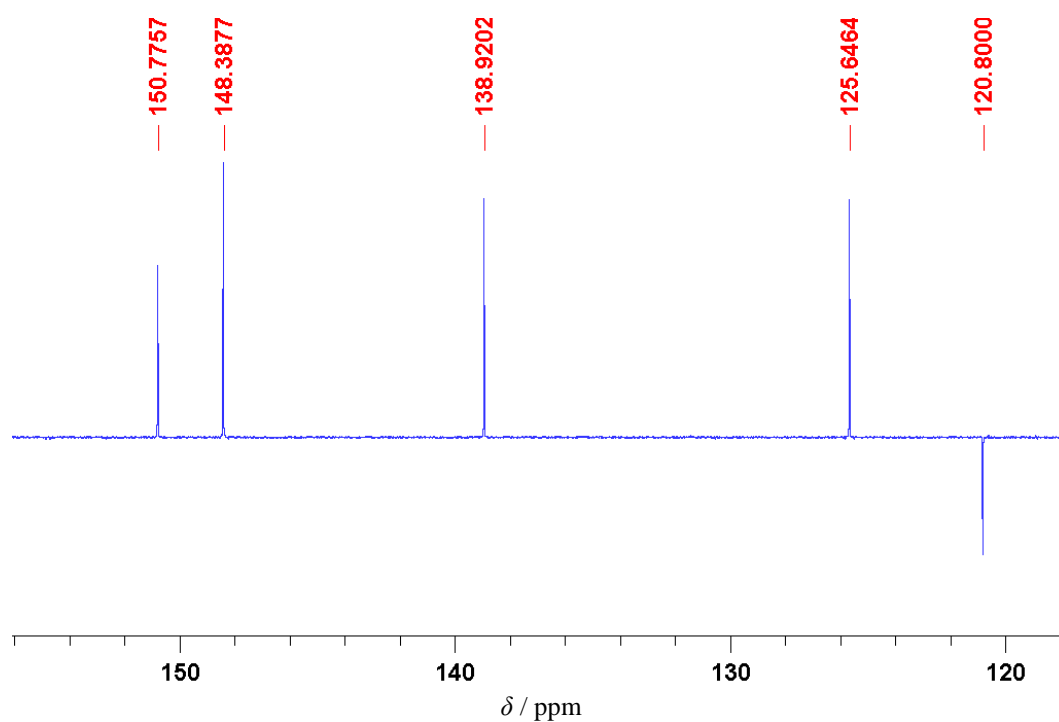
Slika D44. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(3\text{-Clpy})_2]$, (K4).



Slika D45. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(3\text{-Clpy})_2]$, (**K4**).

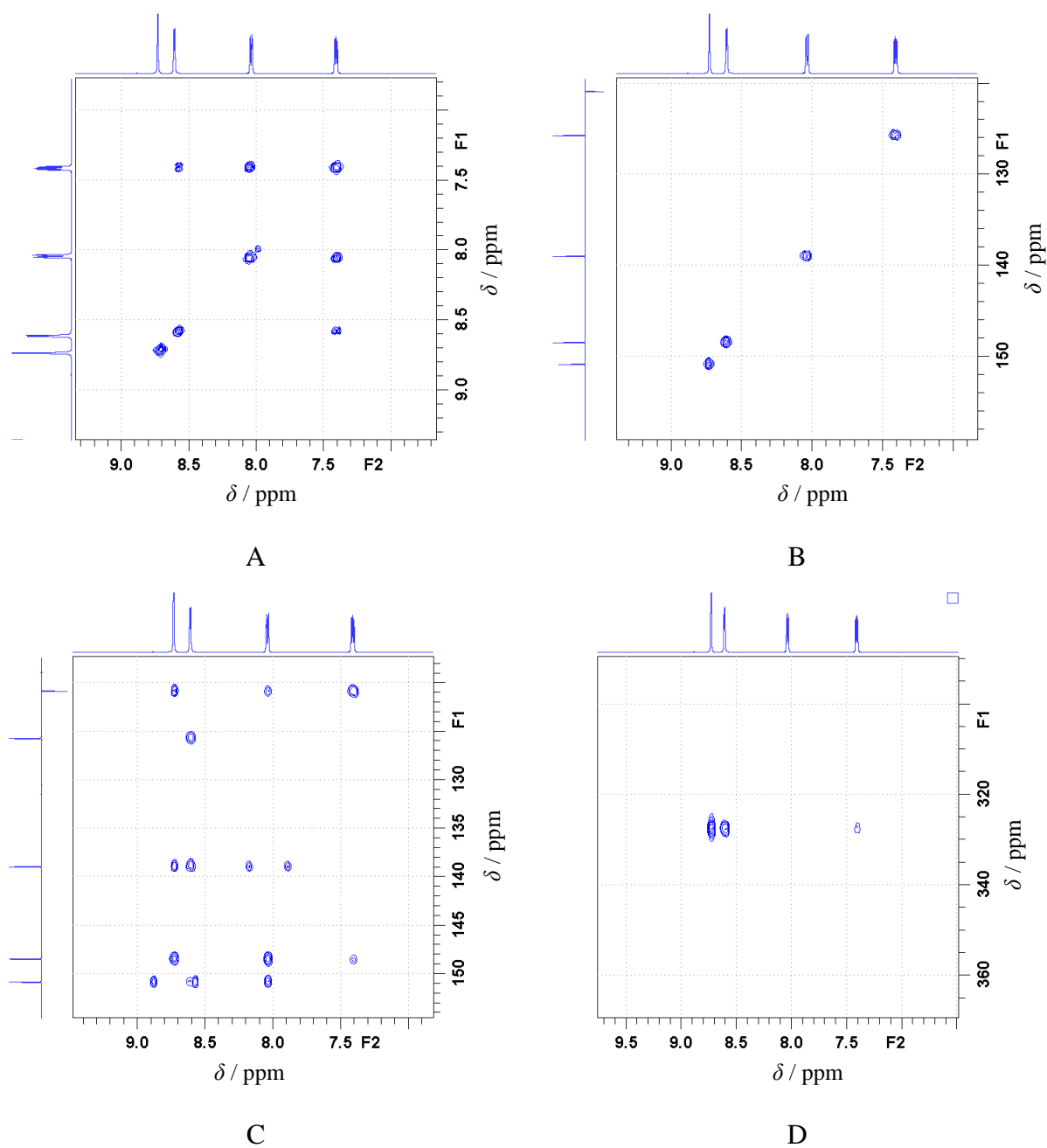


A

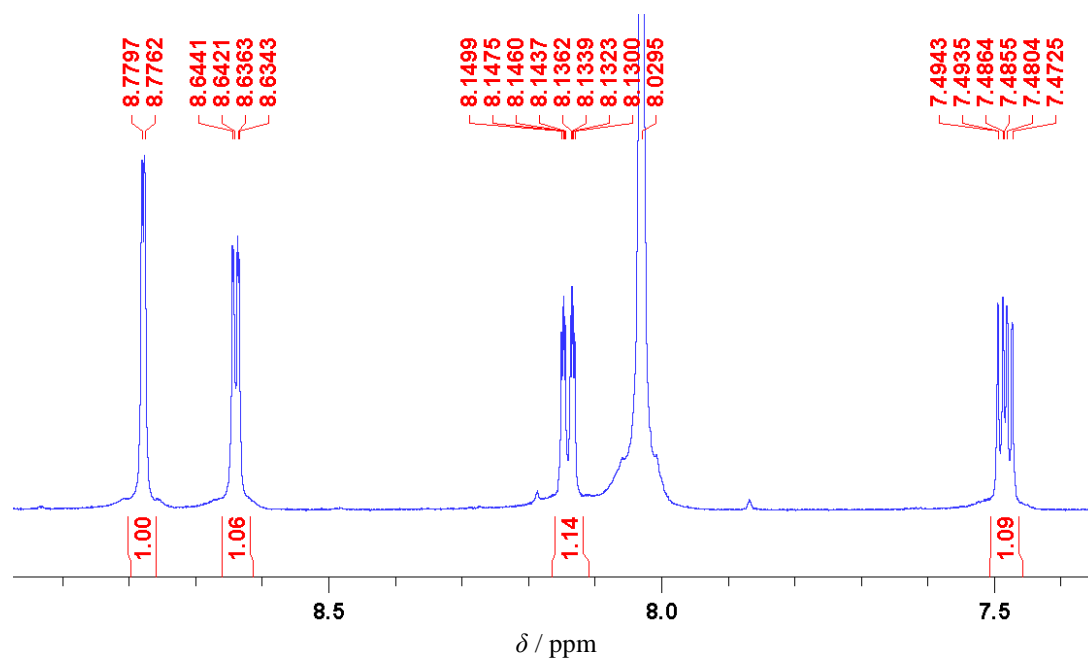


B

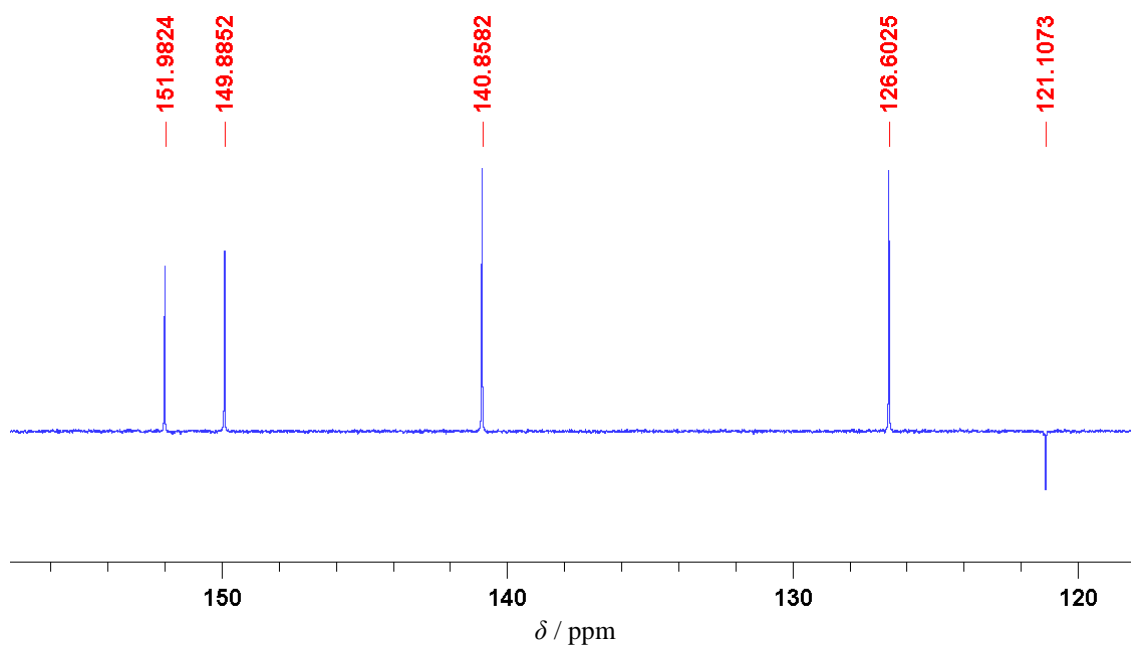
Slika D46. A) ^1H i B) ^{13}C spektri spoja 3-Brpy, (L5).



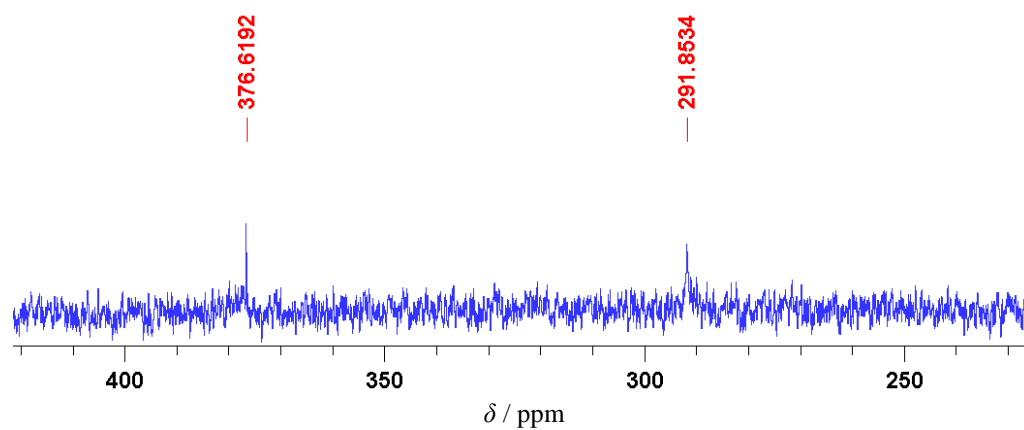
Slika D47. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 3-Brpy, (L5).



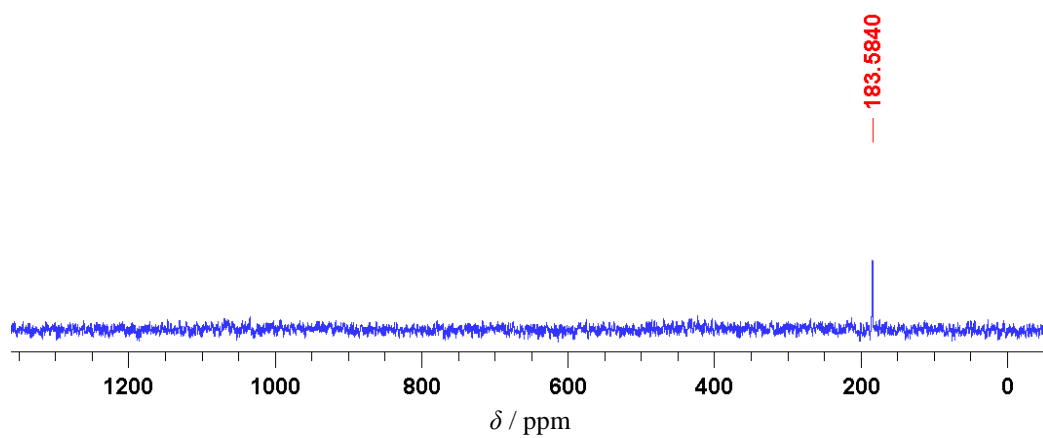
A



B

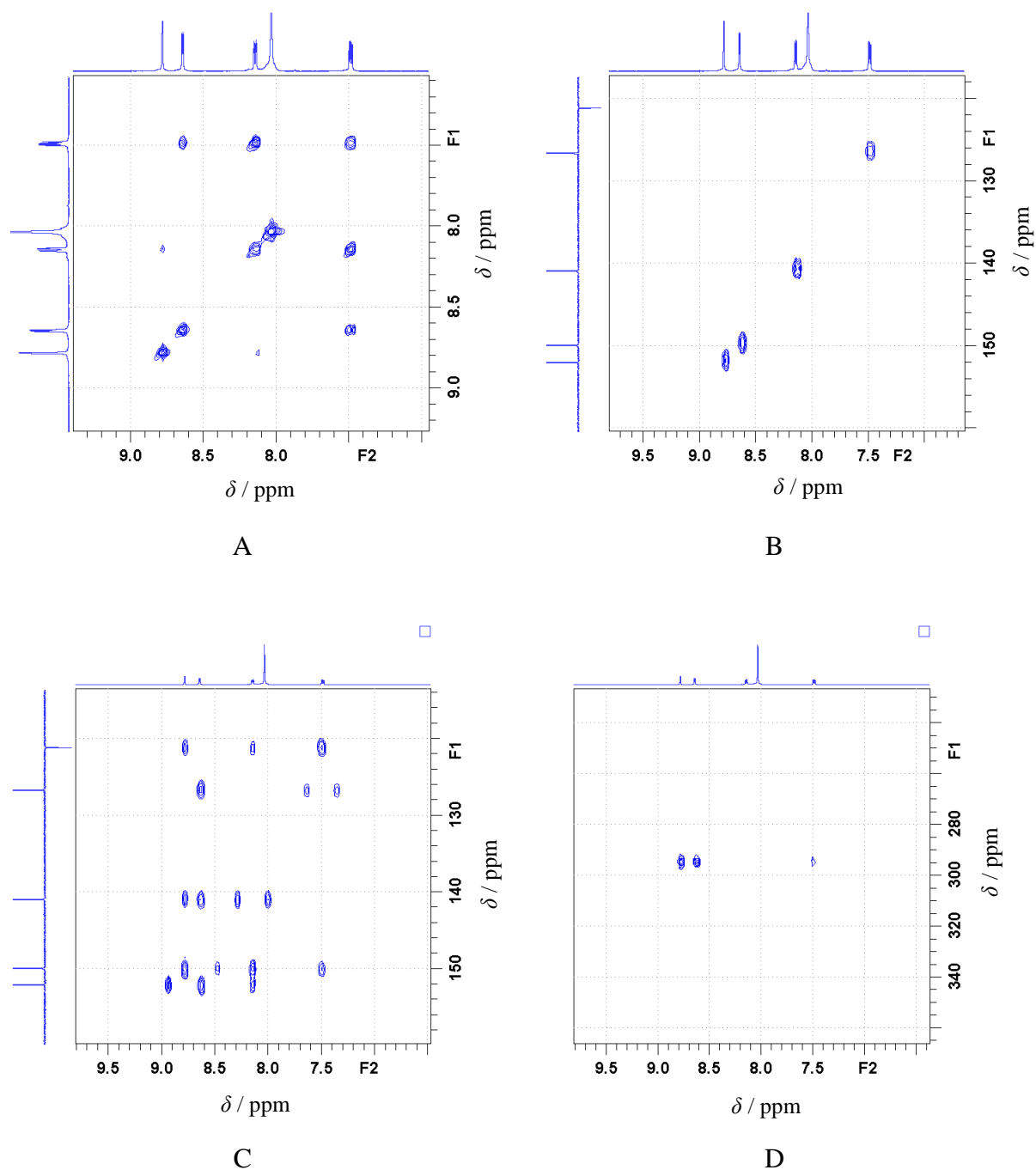


C

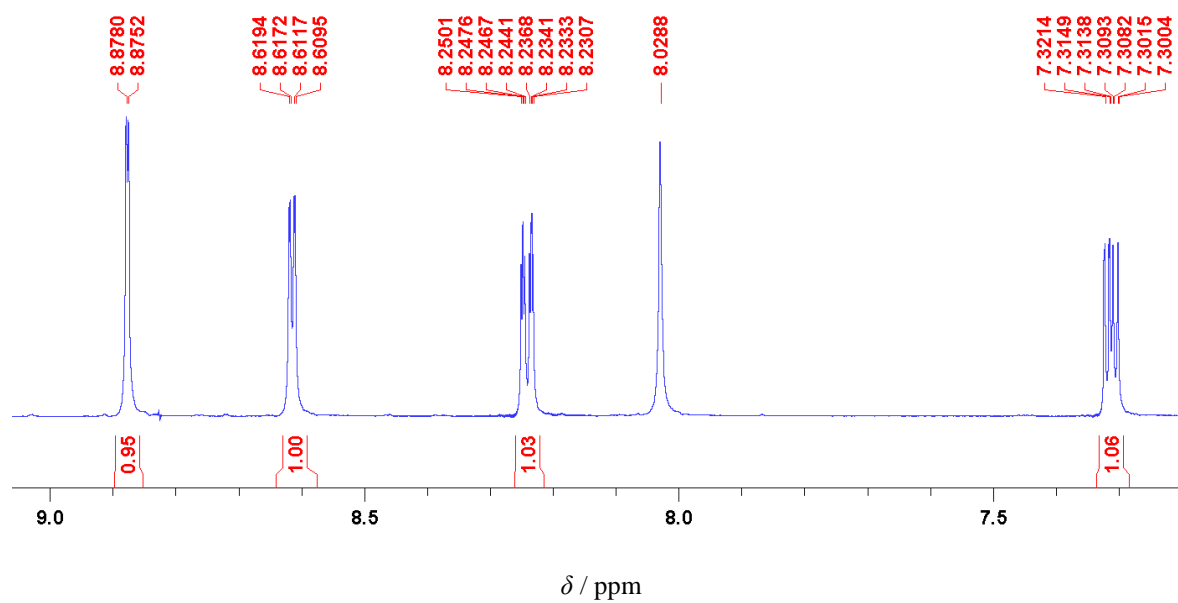


D

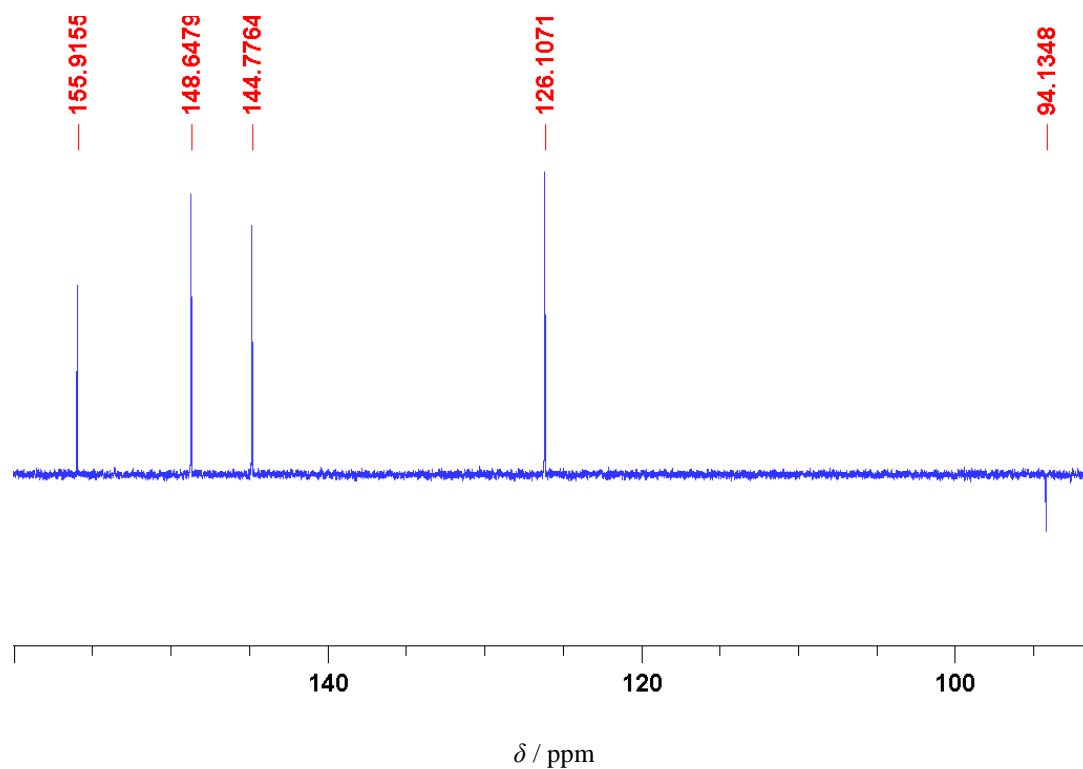
Slika D48. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri spoja $[\text{Ag}(\text{NO}_3)(3\text{-Brpy})_2]$, (K5).



Slika D49. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(3\text{-Brpy})_2]$, (K5).

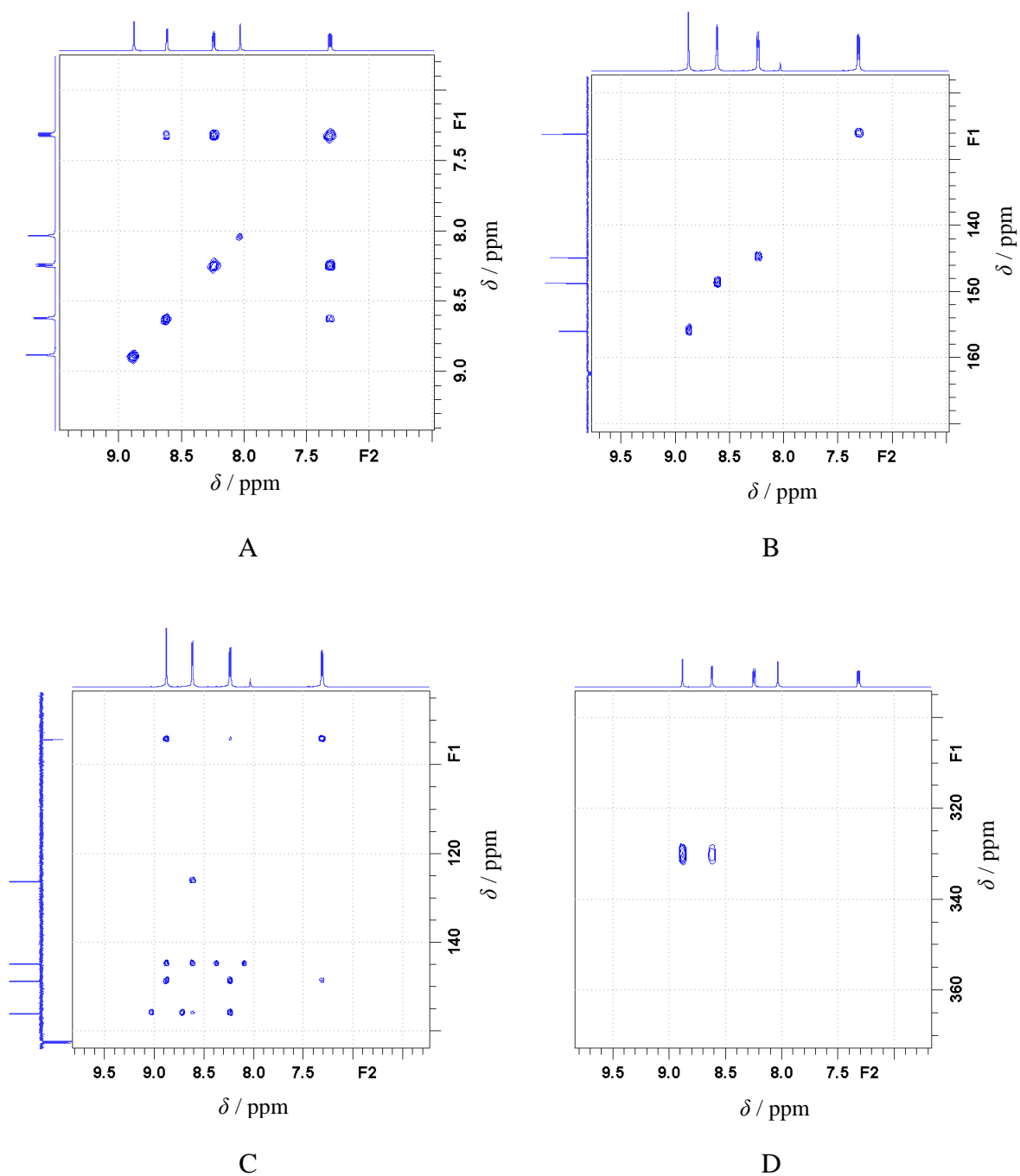


A

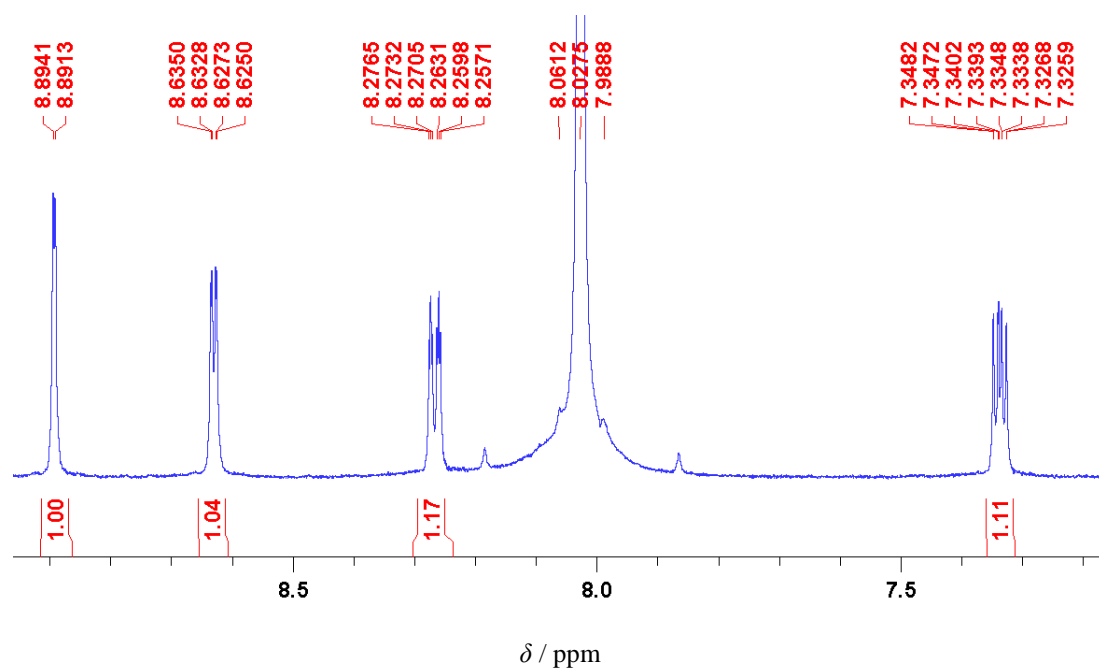


B

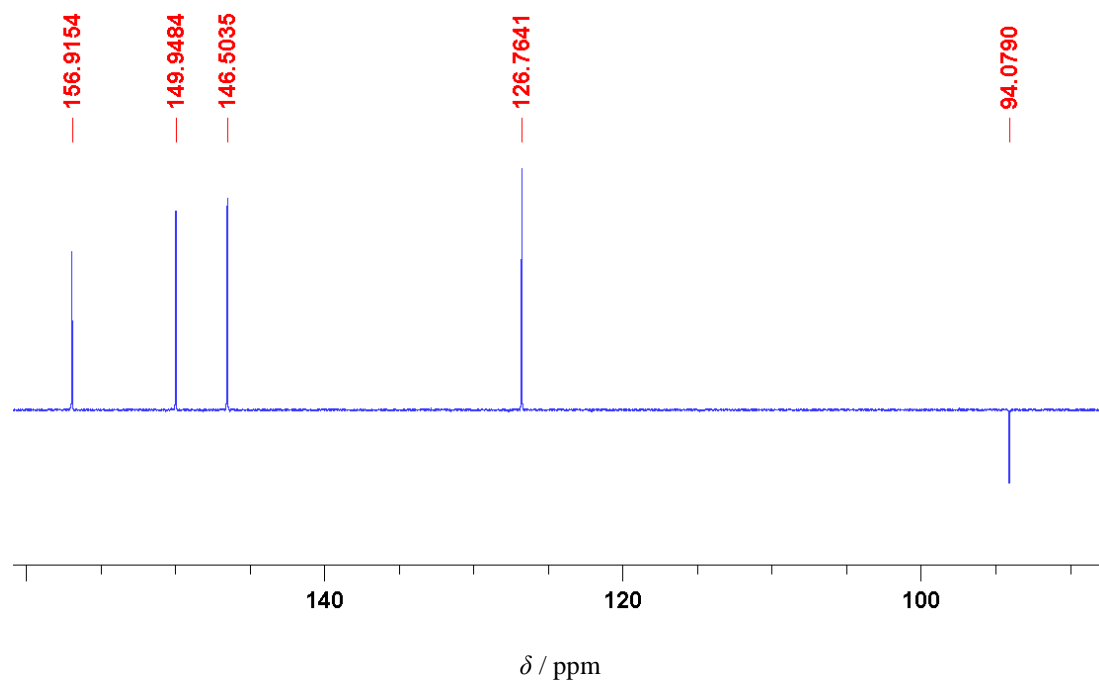
Slika D50. A) ^1H i B) ^{13}C spektri spoja 3-Ipy, (L6).



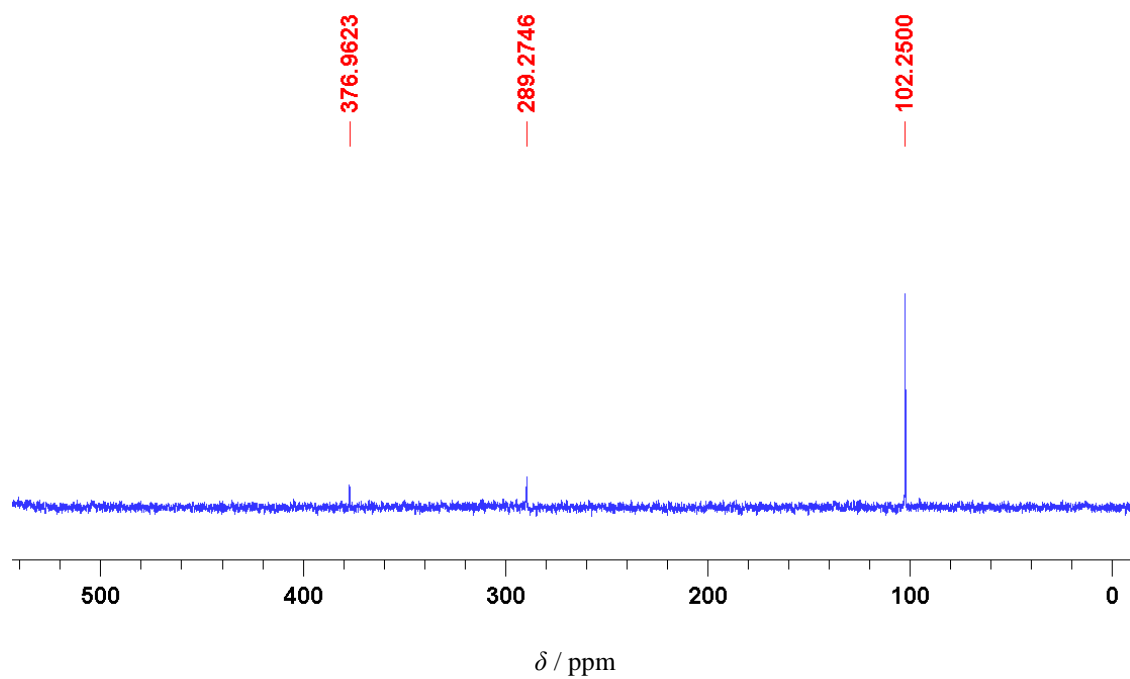
Slika D51. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 3-Ipy, (L6).



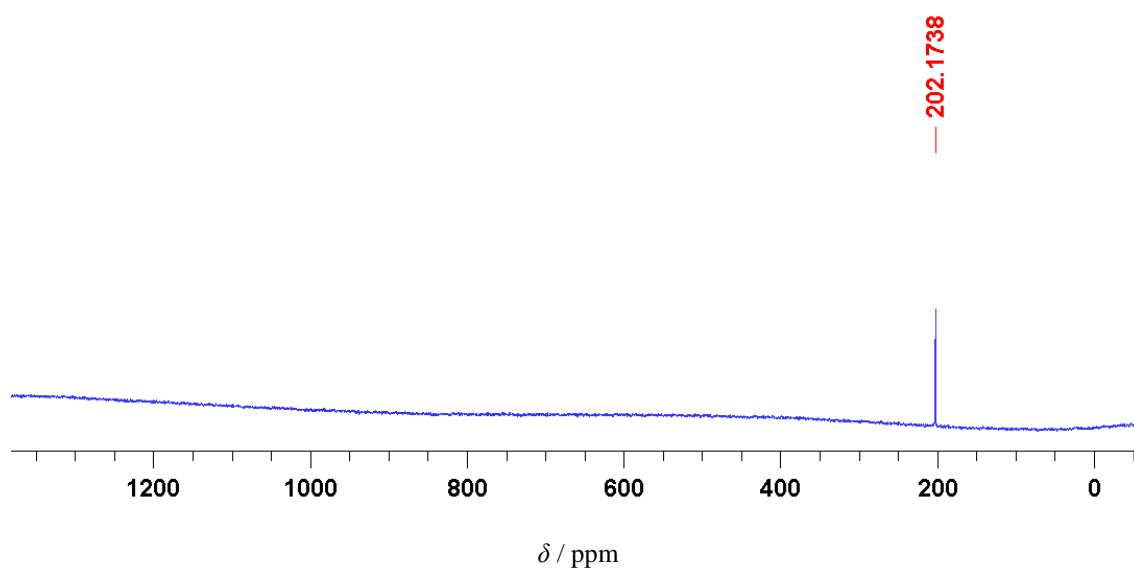
A



B

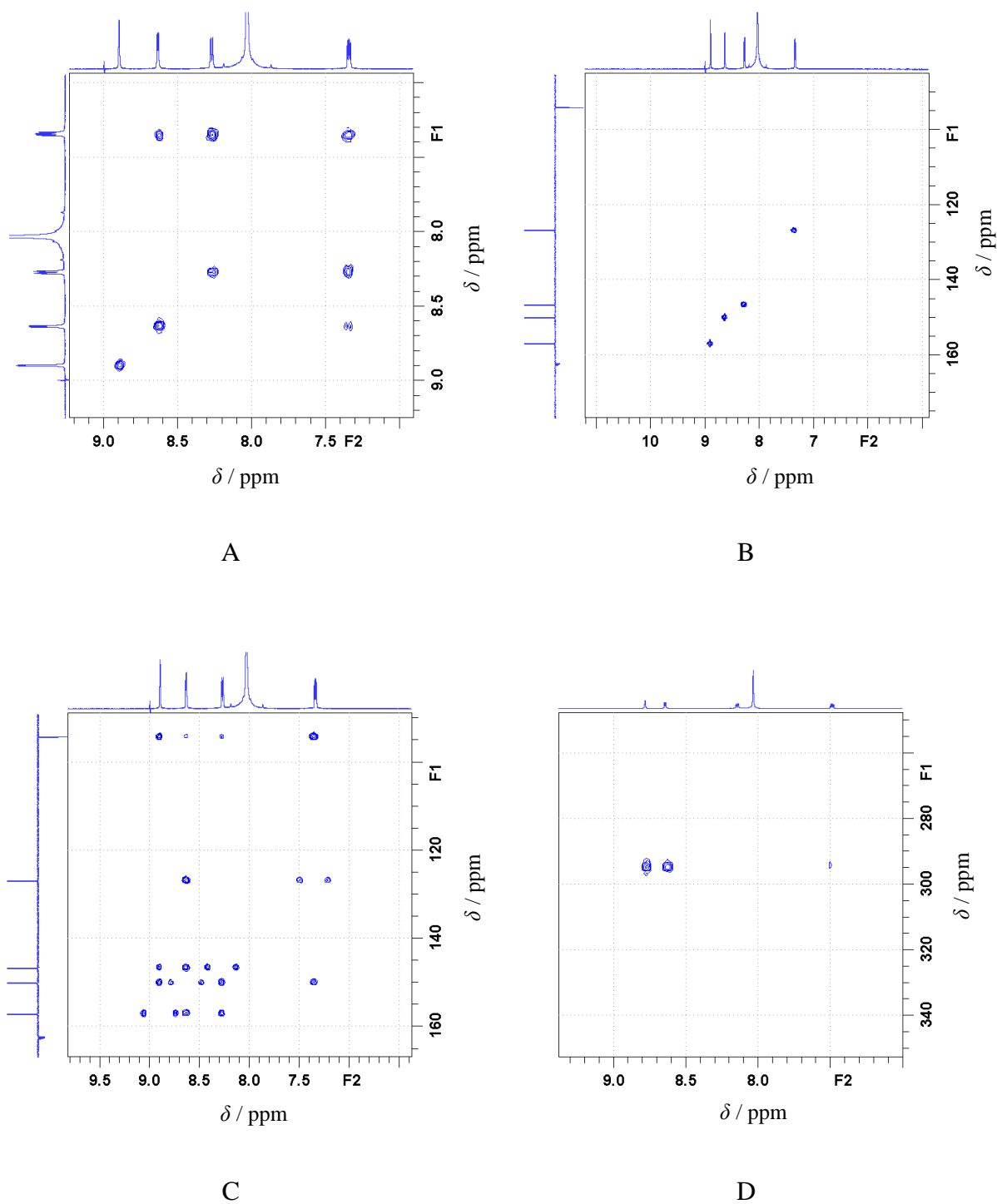


C

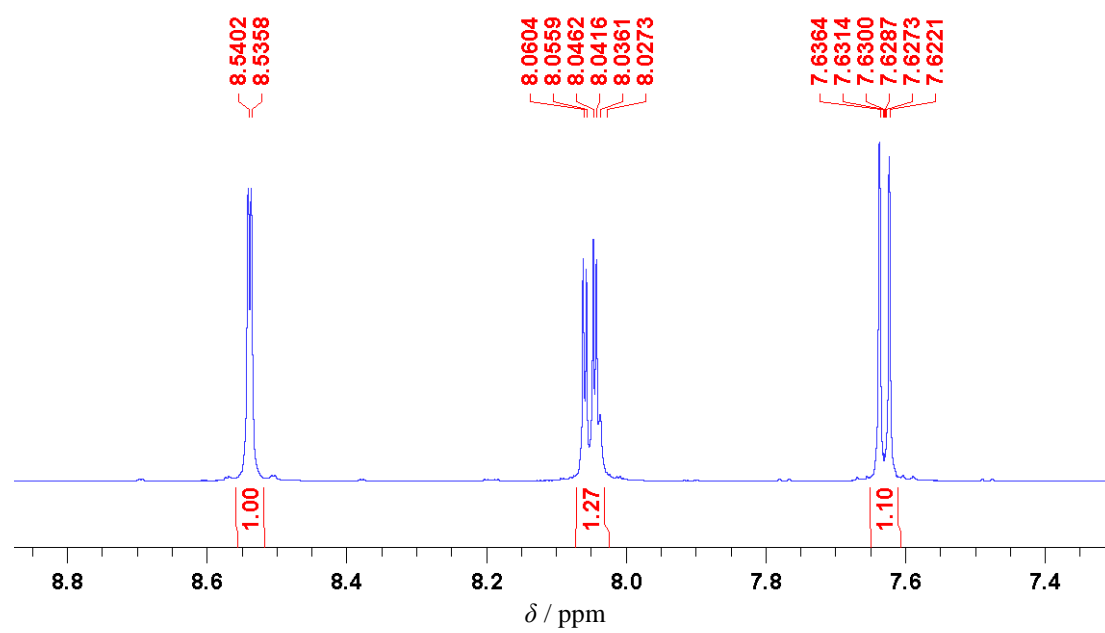


D

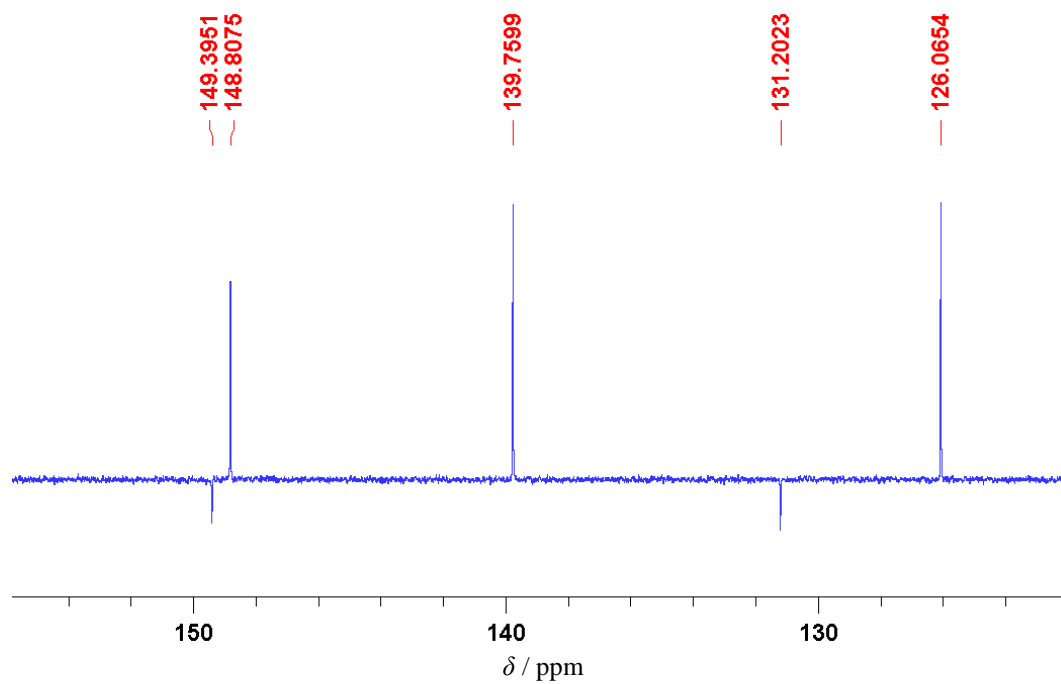
Slika D52. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(3\text{-Ipy})_2]$, (K6).



Slika D53. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(3\text{-Ipy})_2]$, (**K6**).

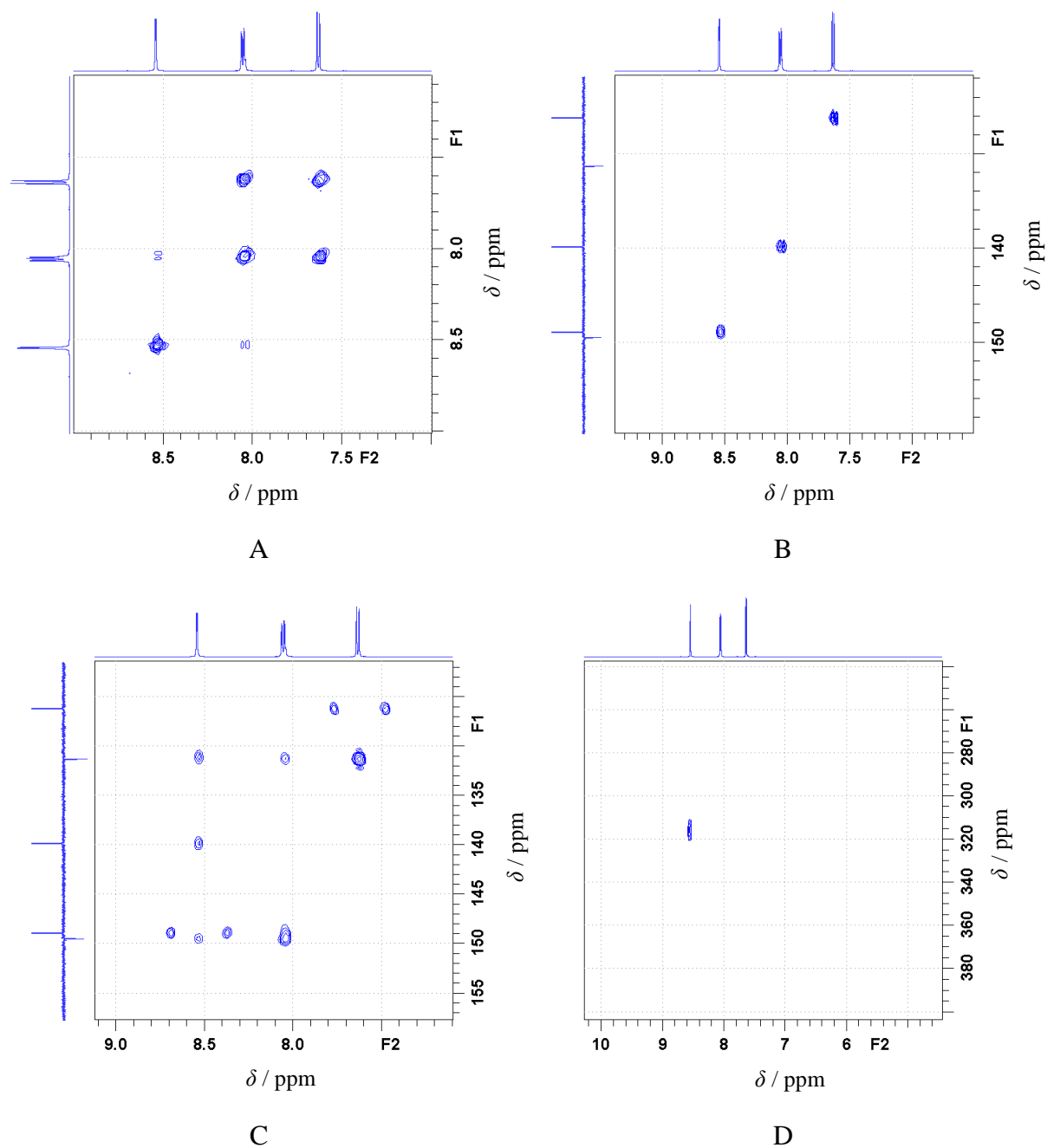


A

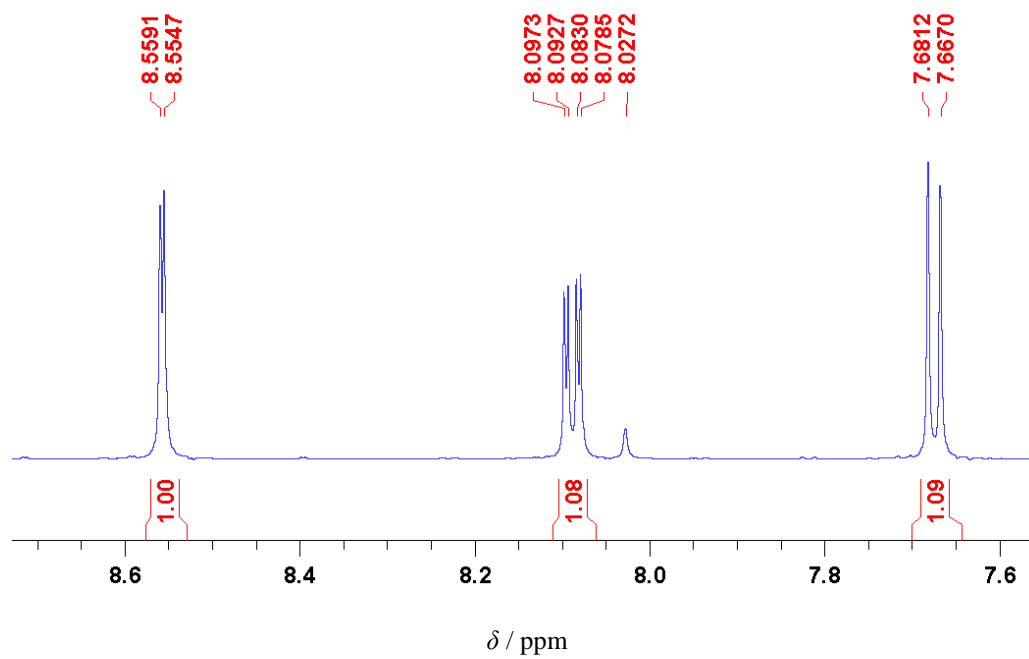


B

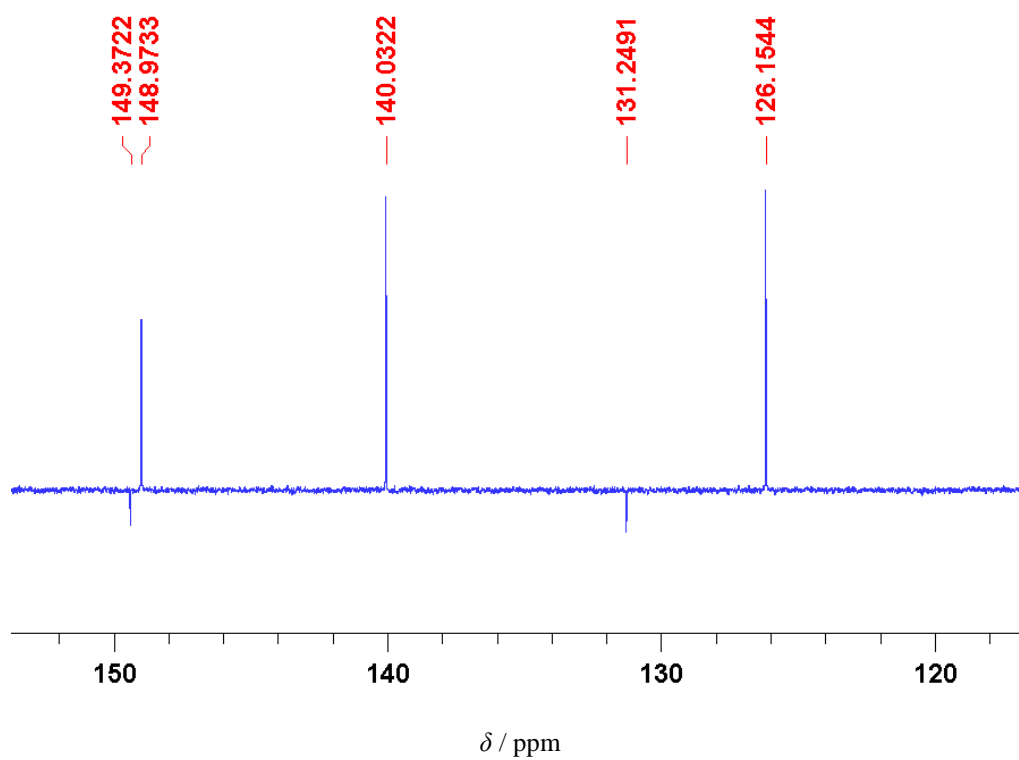
Slika D54. A) ^1H i B) ^{13}C spektri spoja 2,5-Cl₂py, (L7).



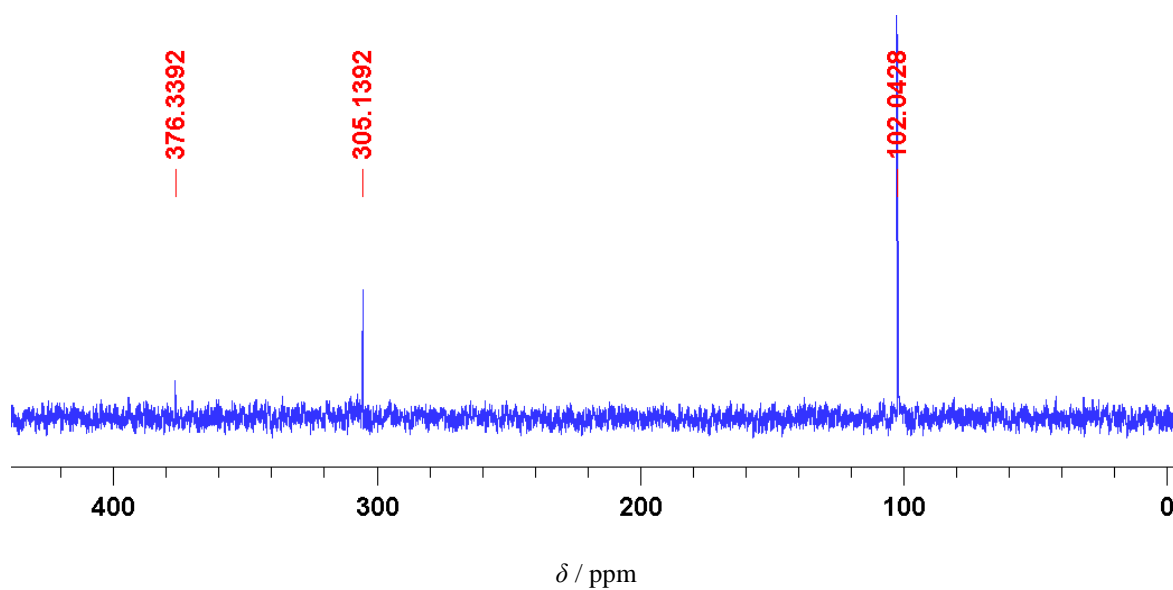
Slika D55. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 2,5- Cl_2py , (L7).



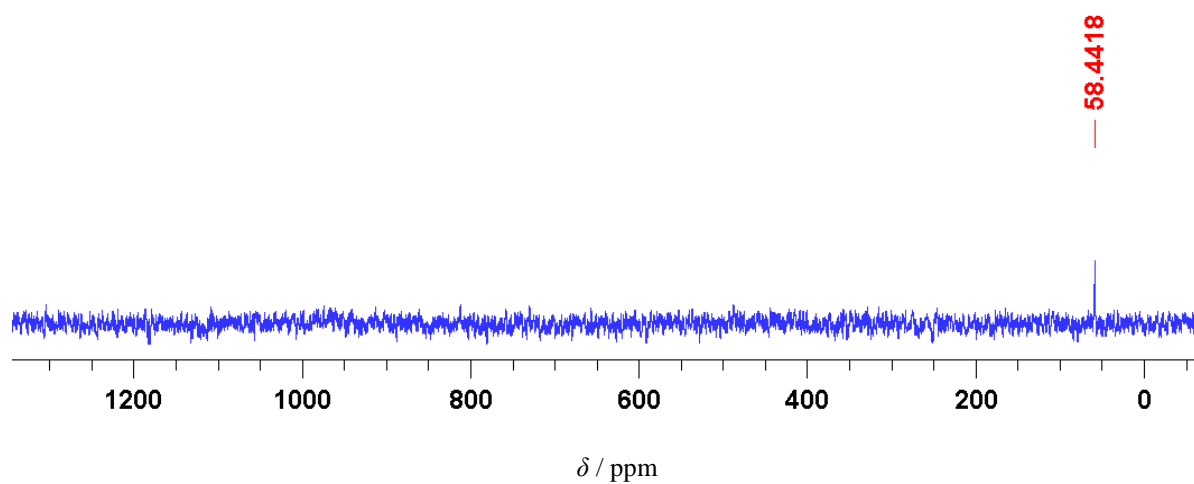
A



B

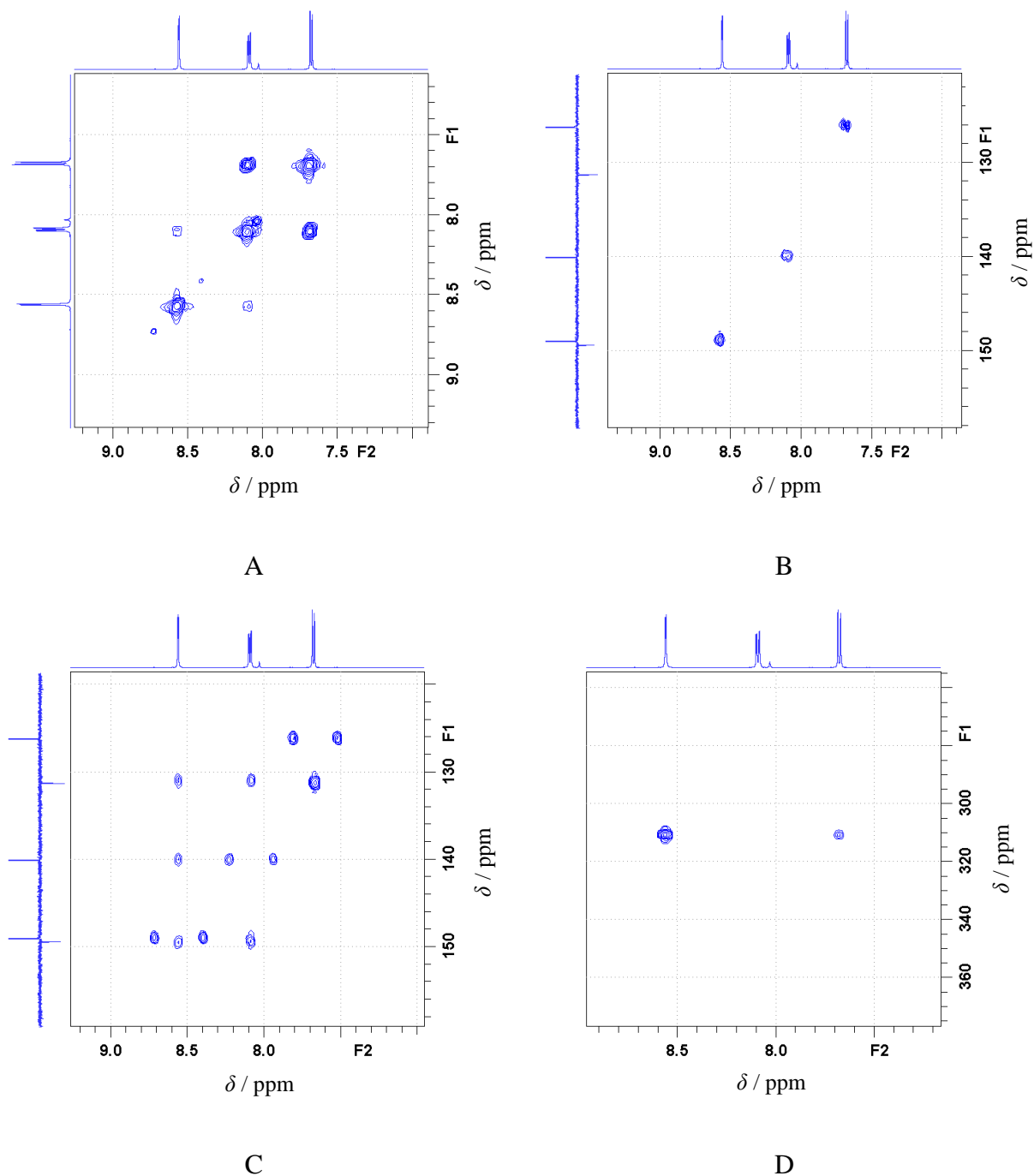


C

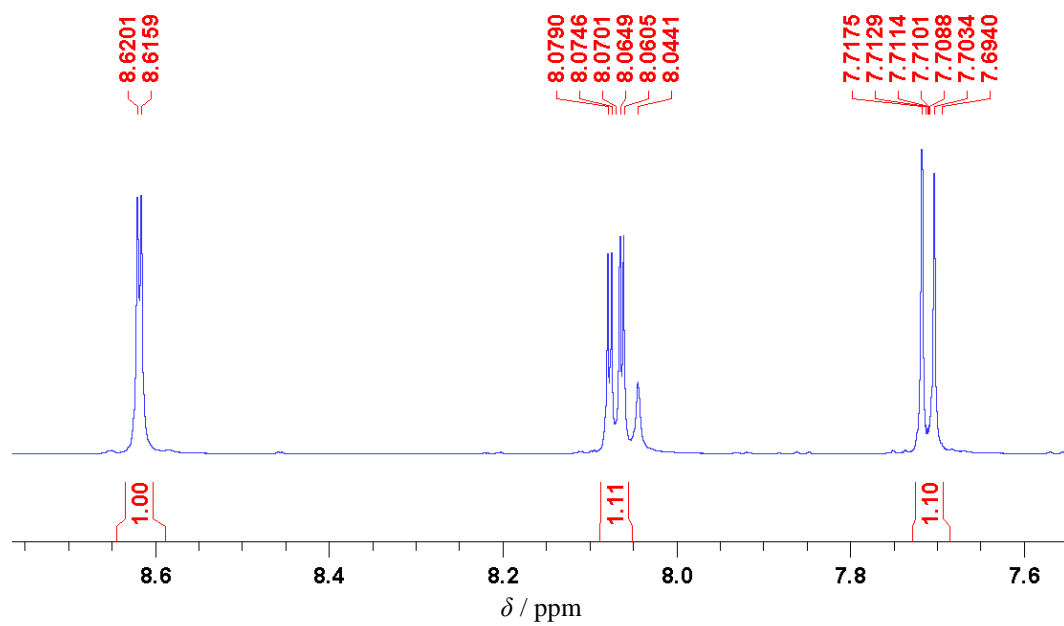


D

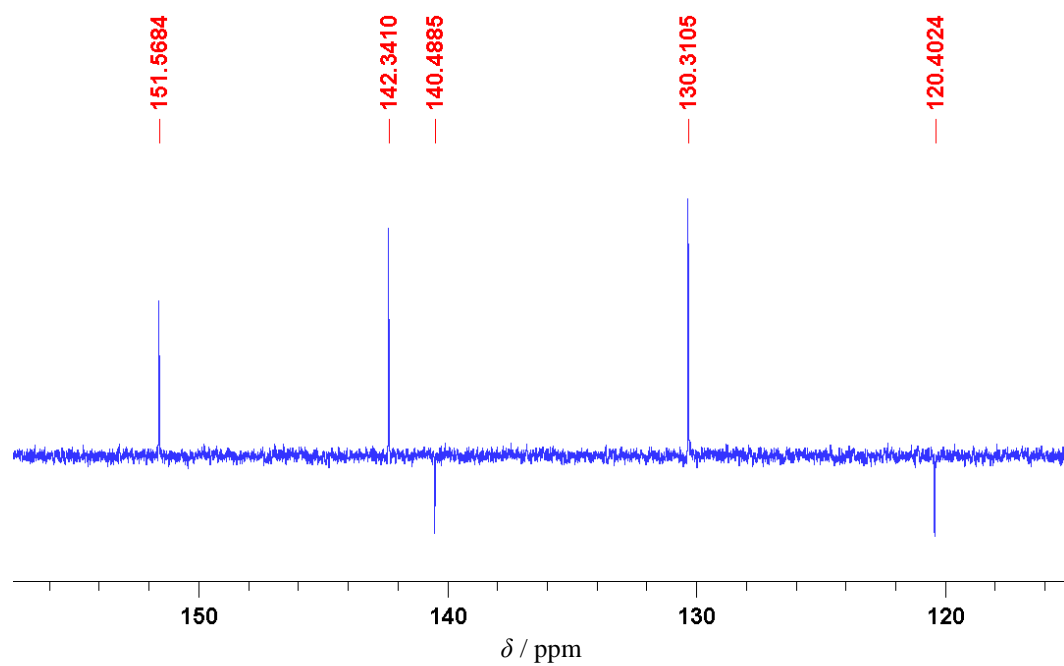
Slika D56. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri NMR kompleksa $[\text{Ag}(\text{NO}_3)(2,5\text{-Cl}_2\text{py})_2]$, (K7).



Slika D57. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2,5\text{-Cl}_2\text{py})_2]$, (**K7**).

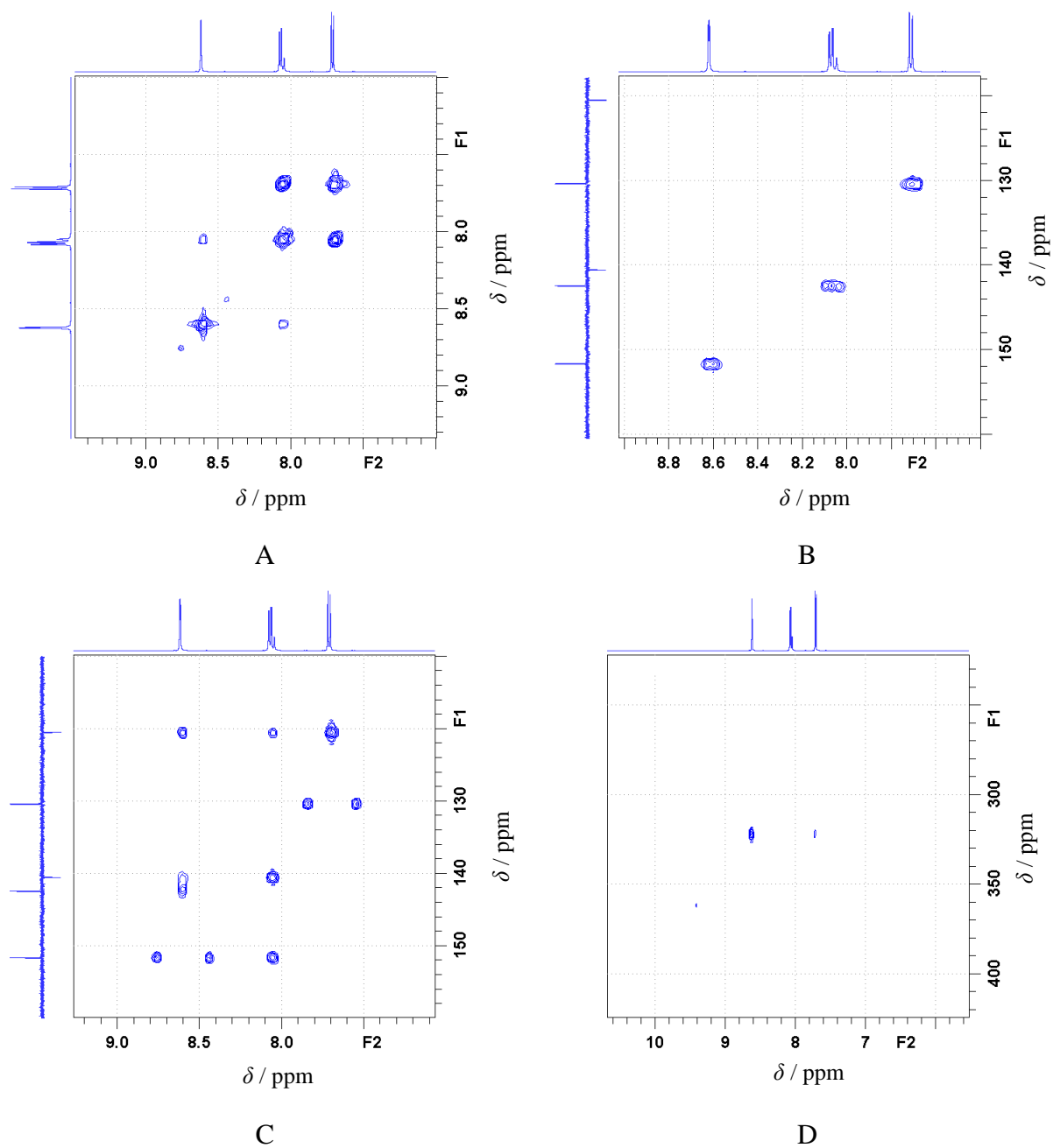


A

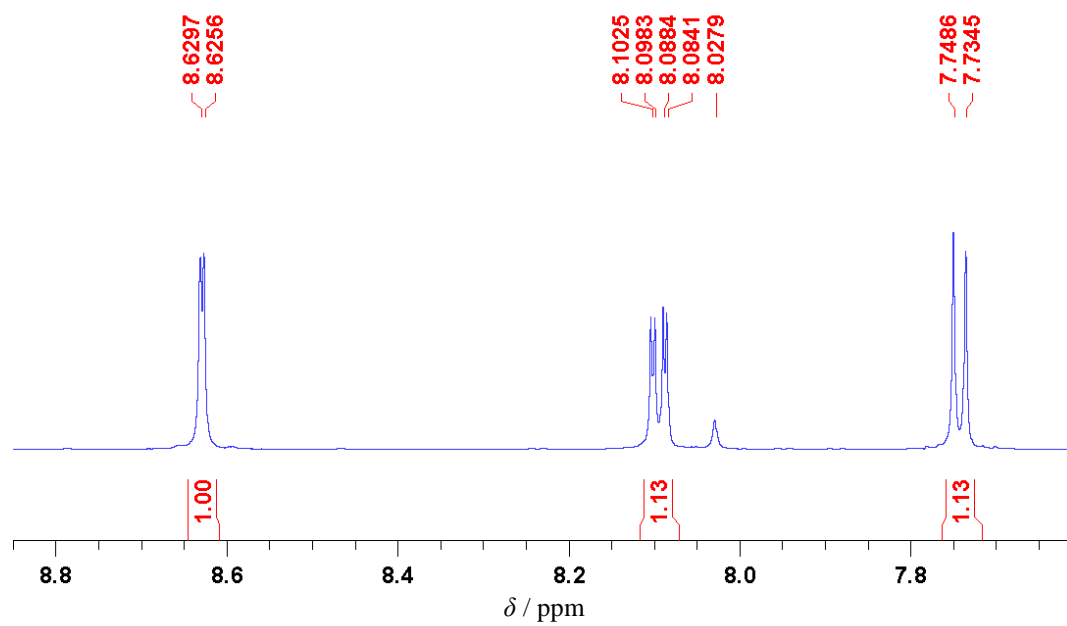


B

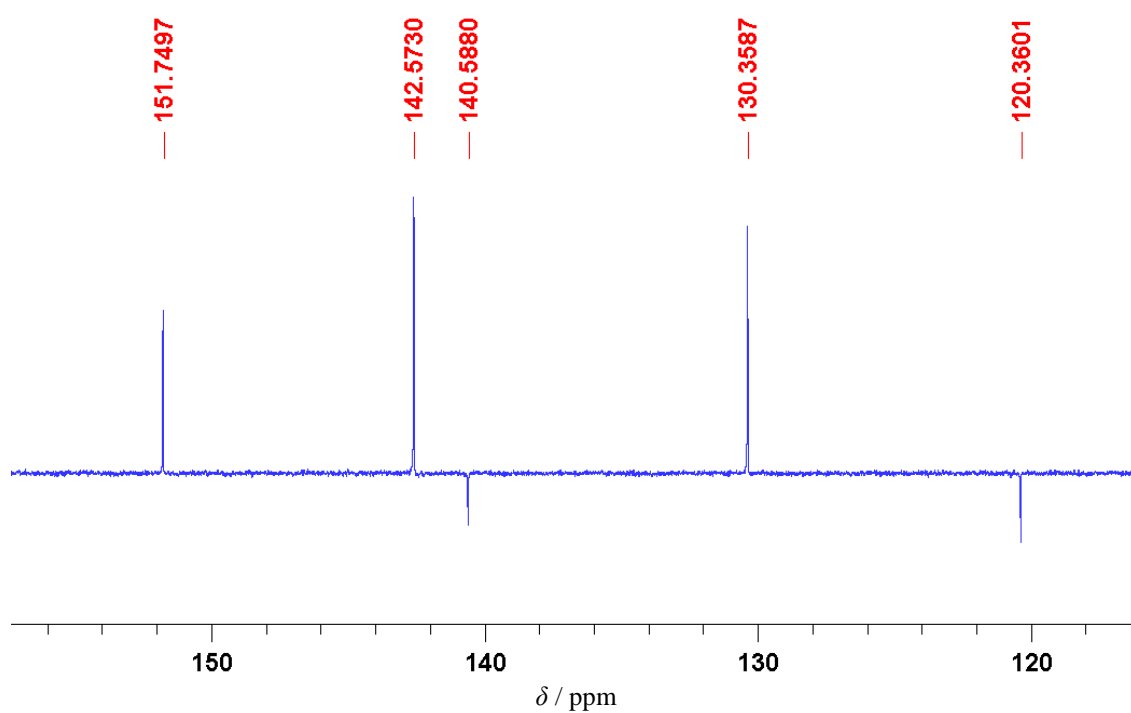
Slika D58. A) ^1H i B) ^{13}C spektri spoja 2,5-Br₂py, (L8).



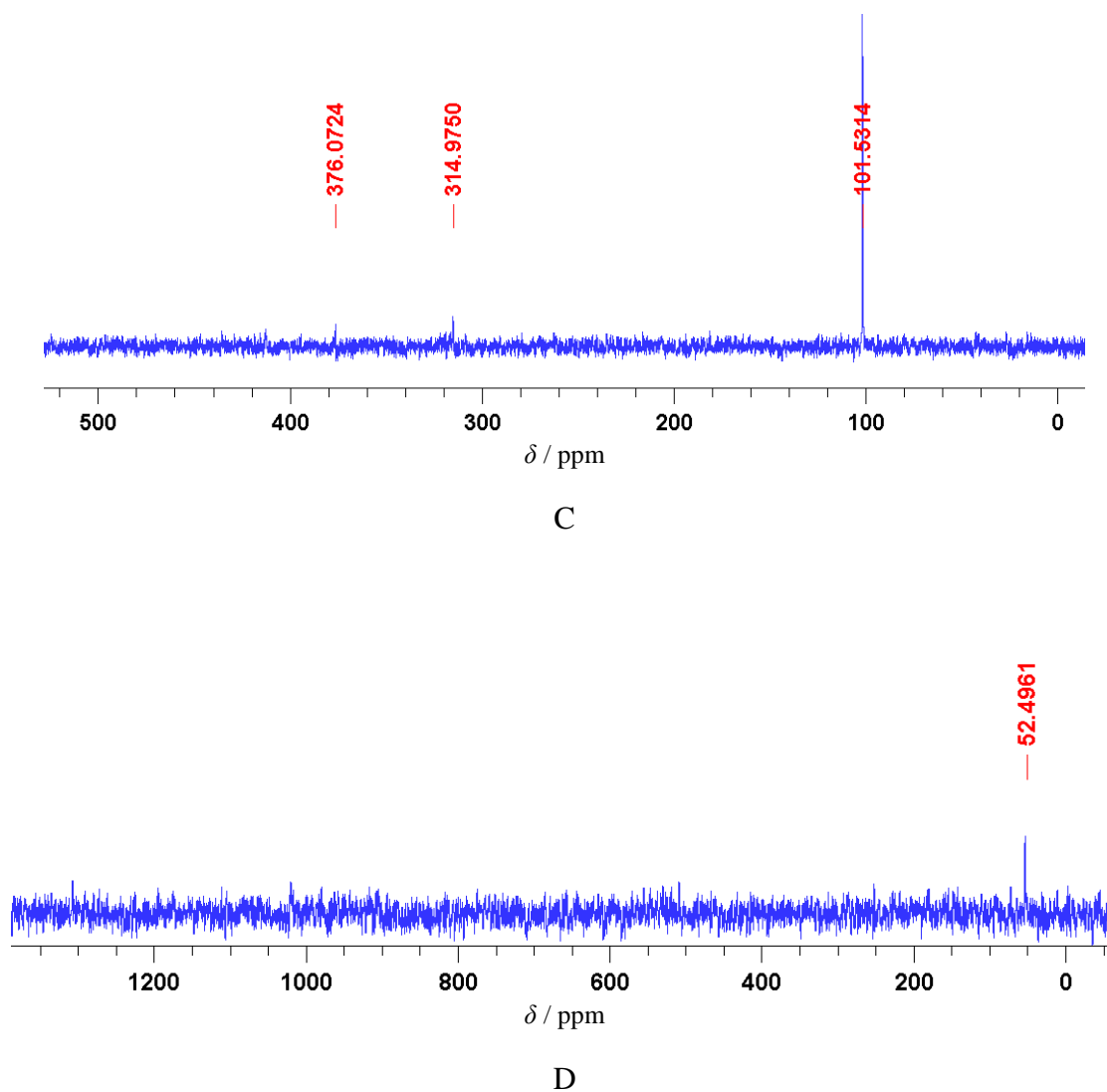
Slika D59. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 2,5- Br_2py , (**L8**).



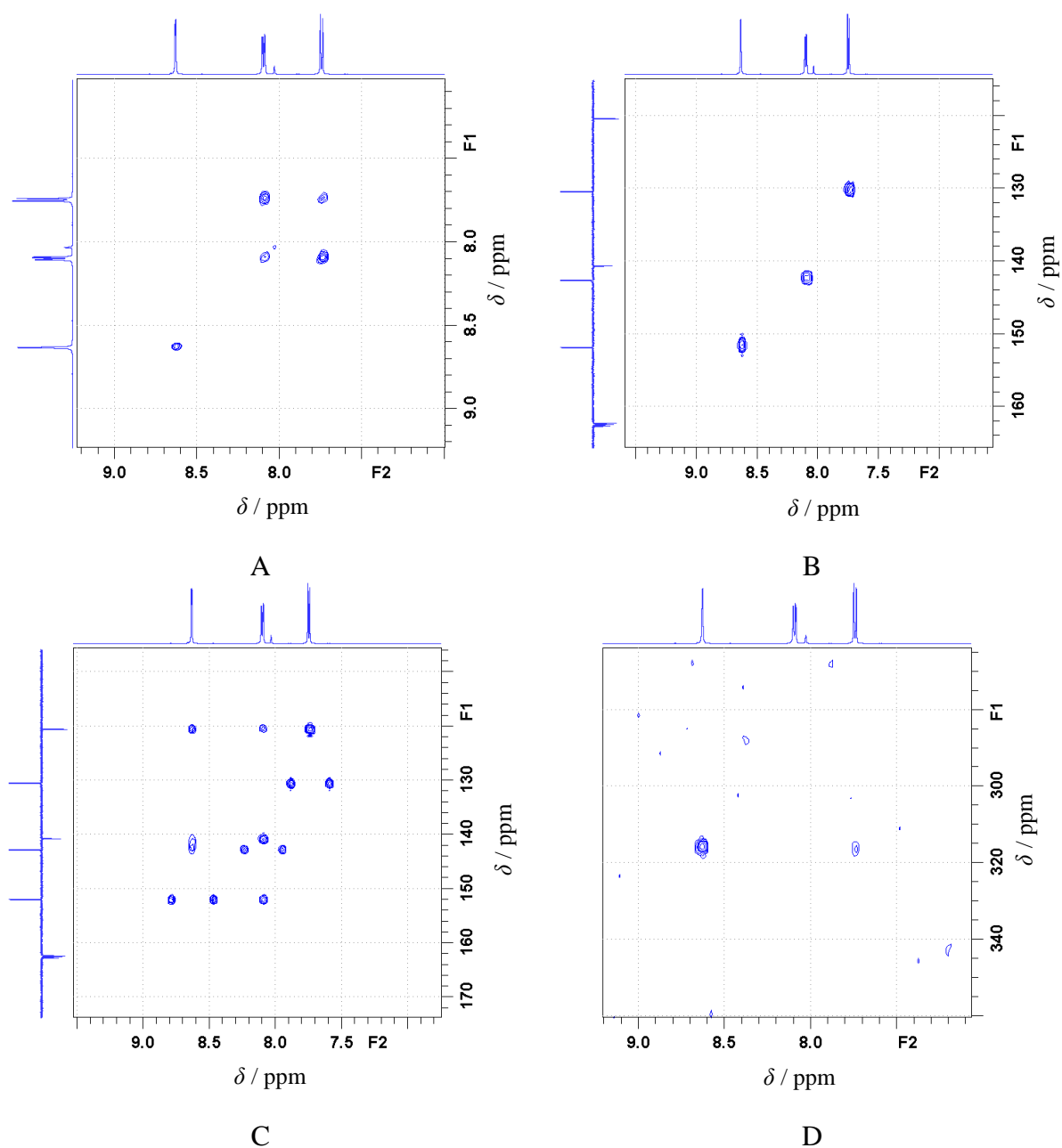
A



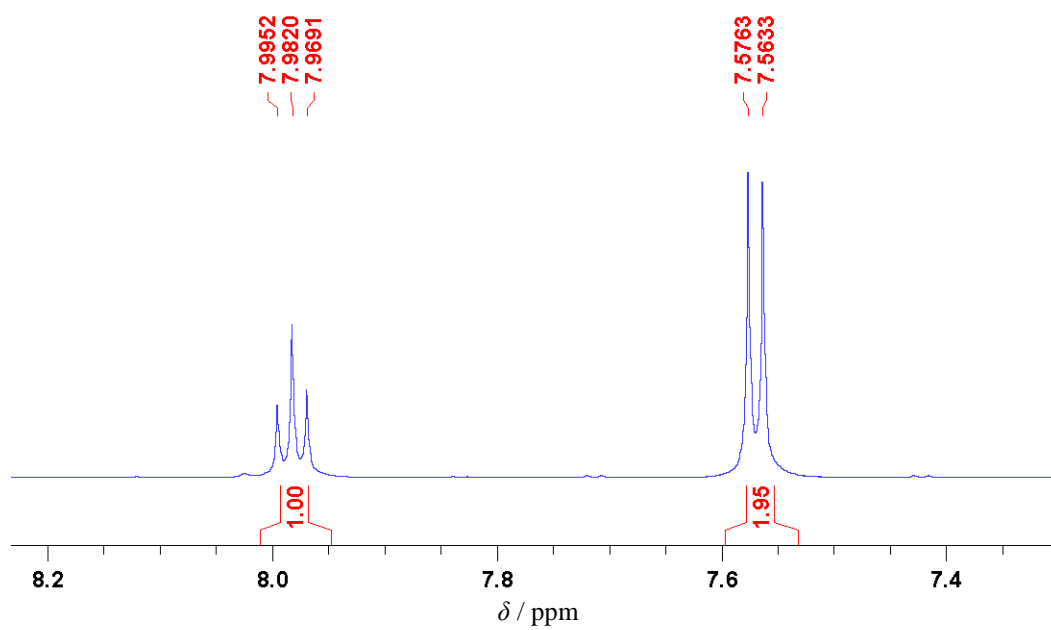
B



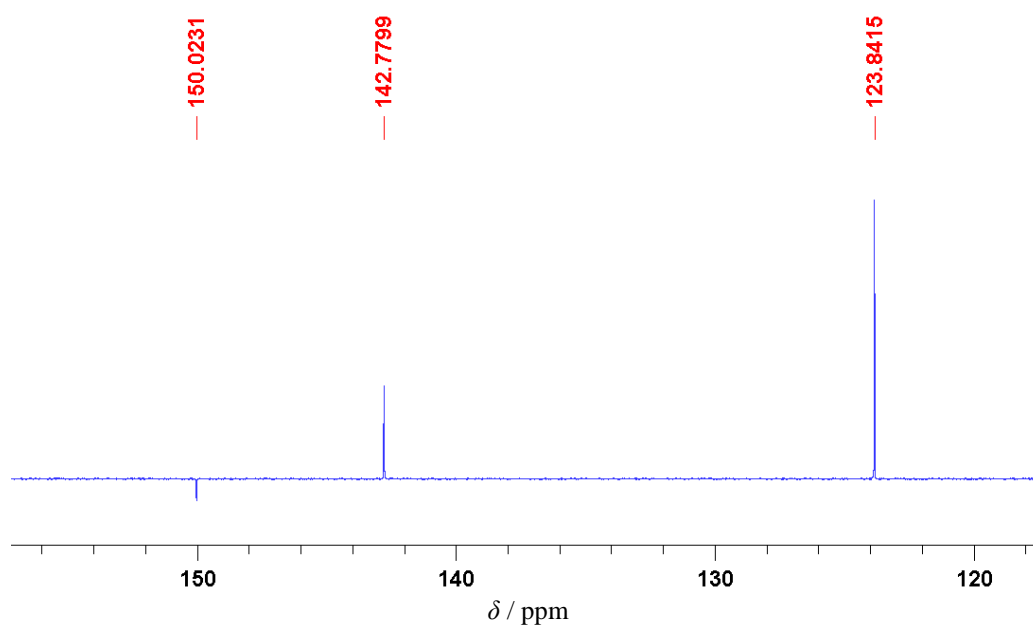
Slika D60. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(2,5\text{-Br}_2\text{py})_2]$, (K8).



Slika D61. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2,5\text{-Br}_2\text{py})_2]$, (**K8**).

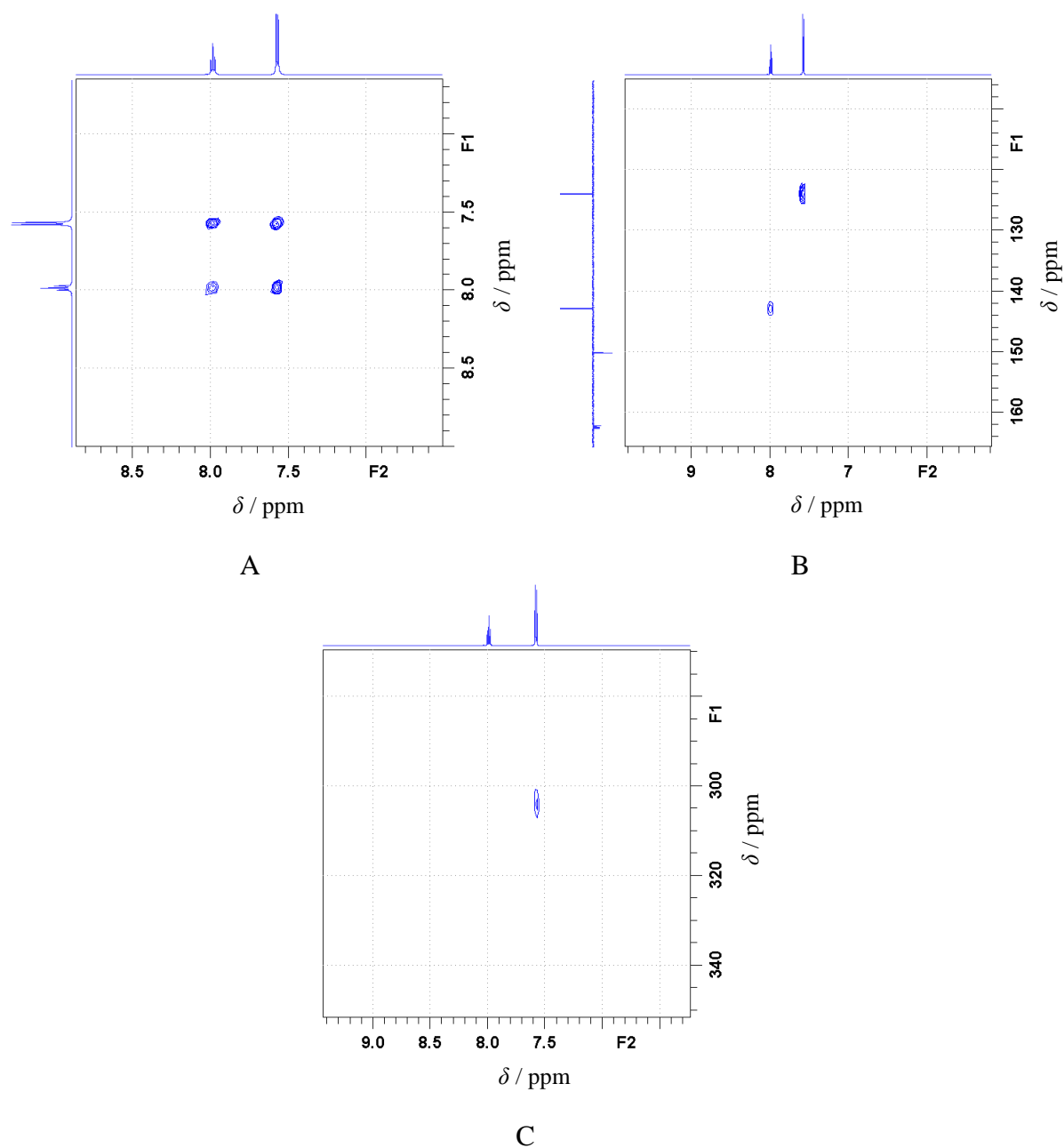


A

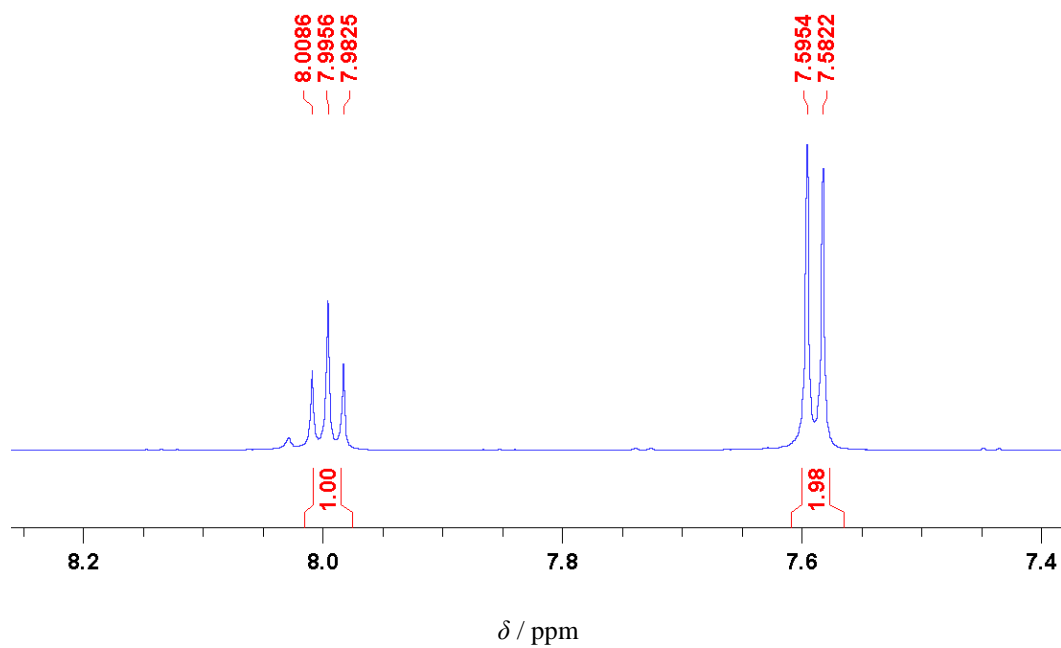


B

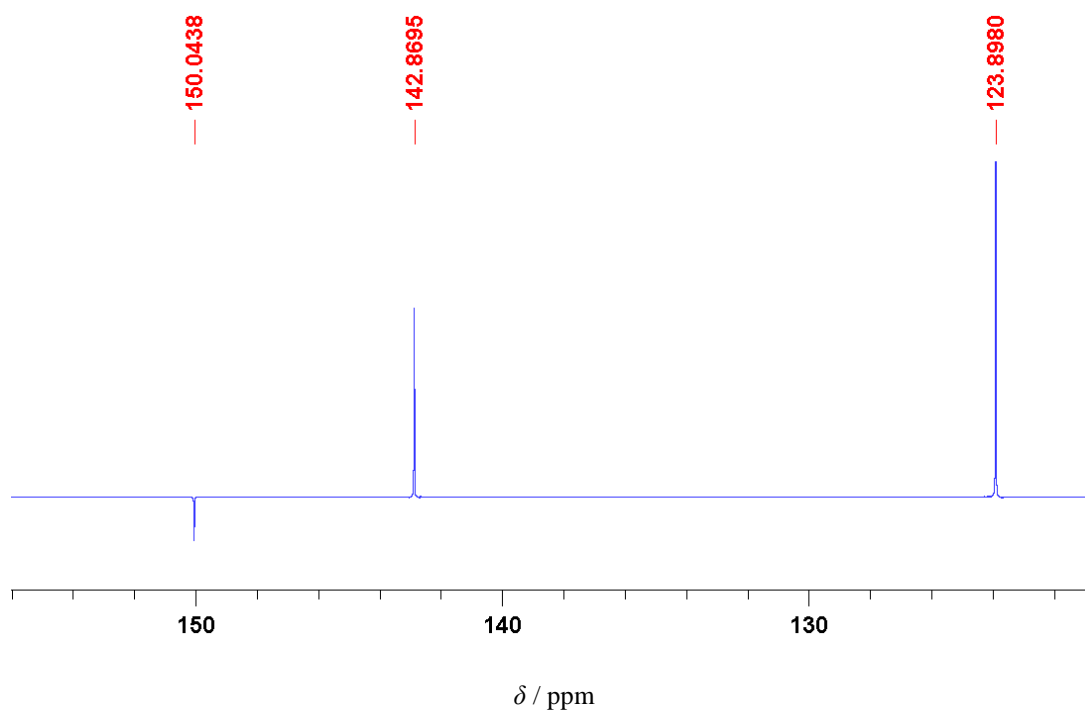
Slika D62. A) ^1H i B) ^{13}C spektri spoja 2,6- Cl_2py , (L9).



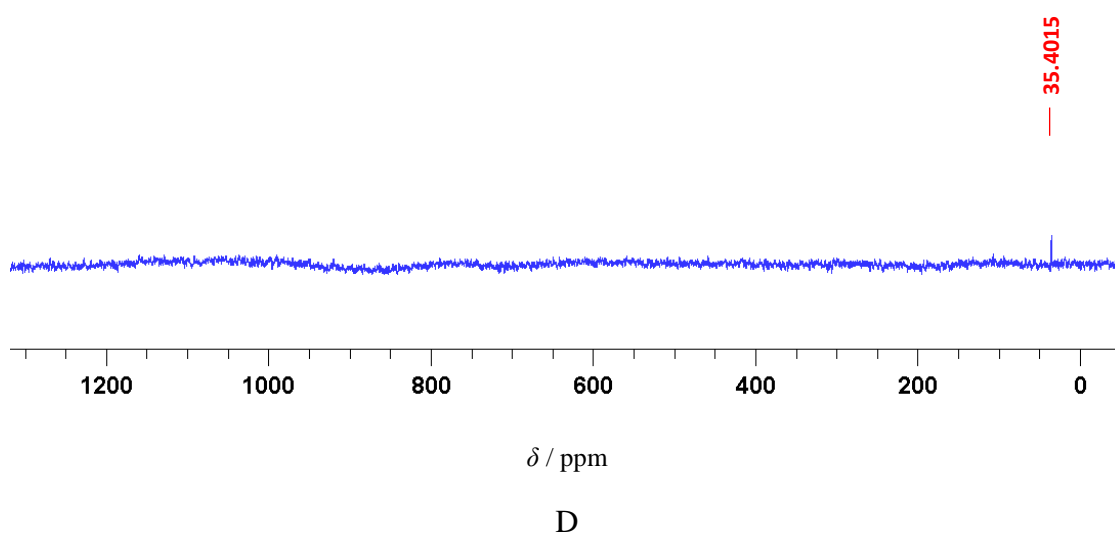
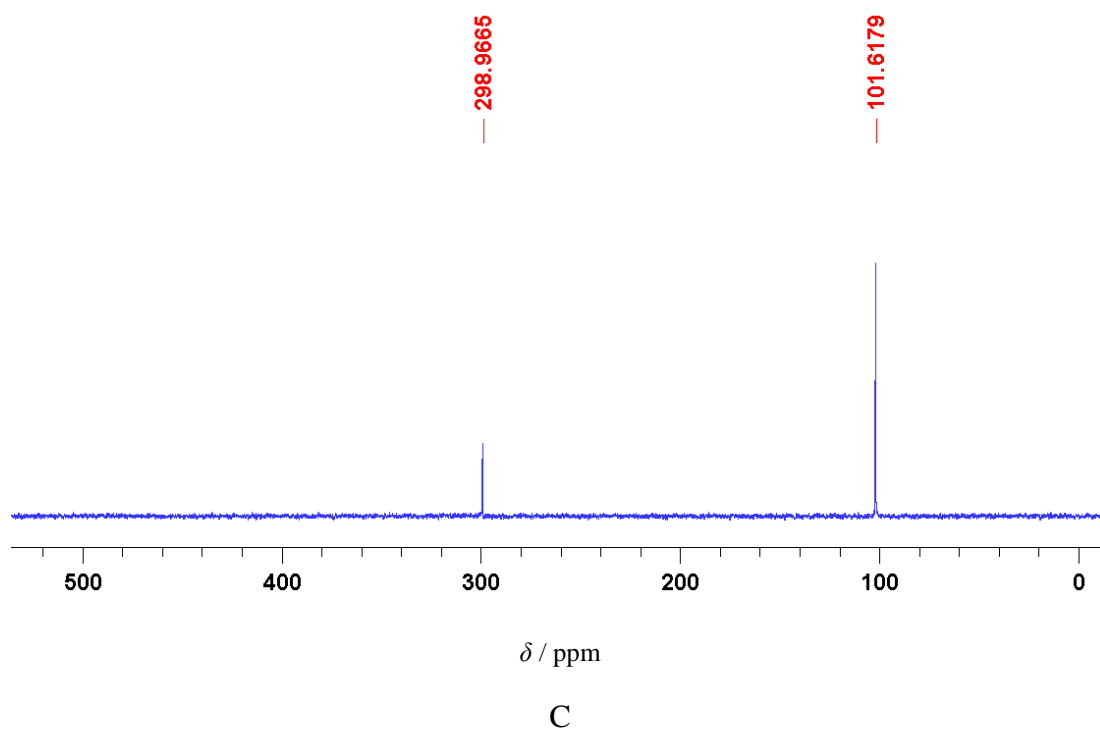
Slika D63. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC i C) ^1H - ^{15}N HMBC spektara NMR spoja 2,6- Cl_2py , (**L9**).



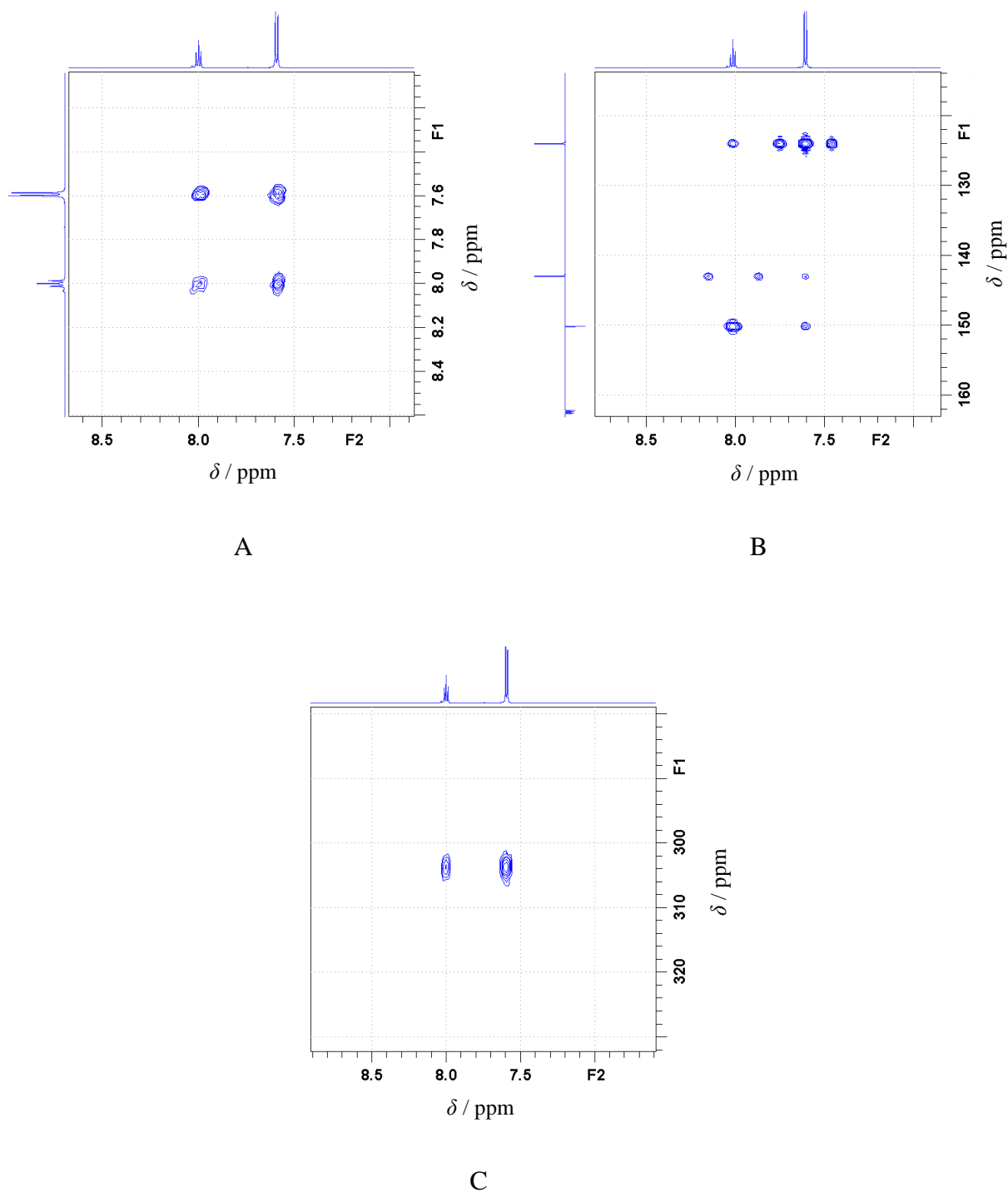
A



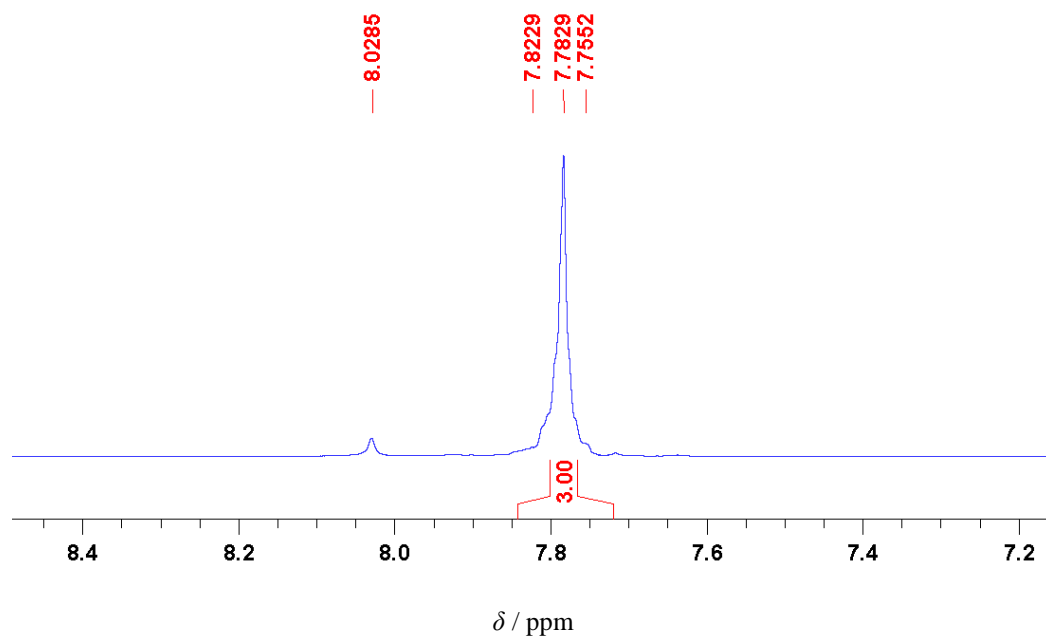
B



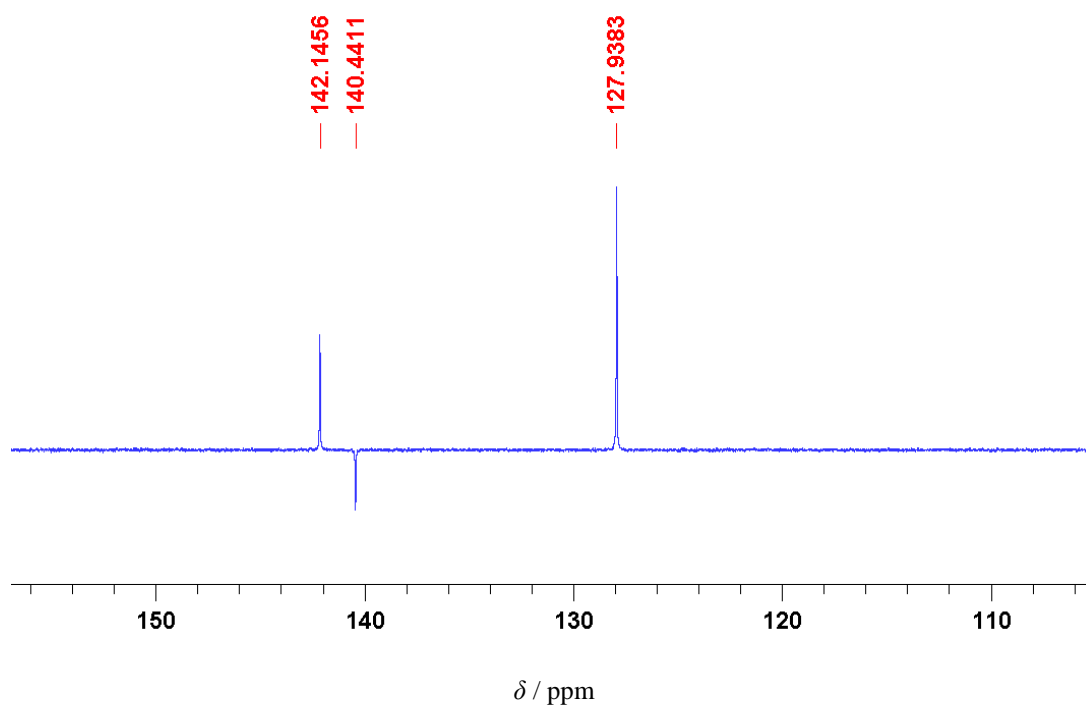
Slika D64. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(2,6\text{-Cl}_2\text{py})_2]$, (K9).



Slika D65. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMBC i C) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2,6\text{-Cl}_2\text{py})_2]$, (**K9**).

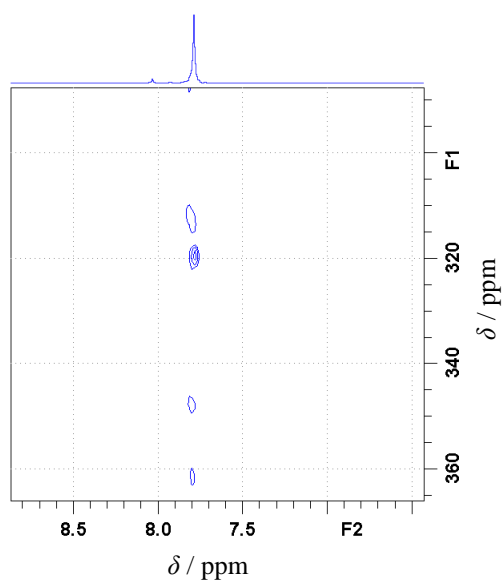


A

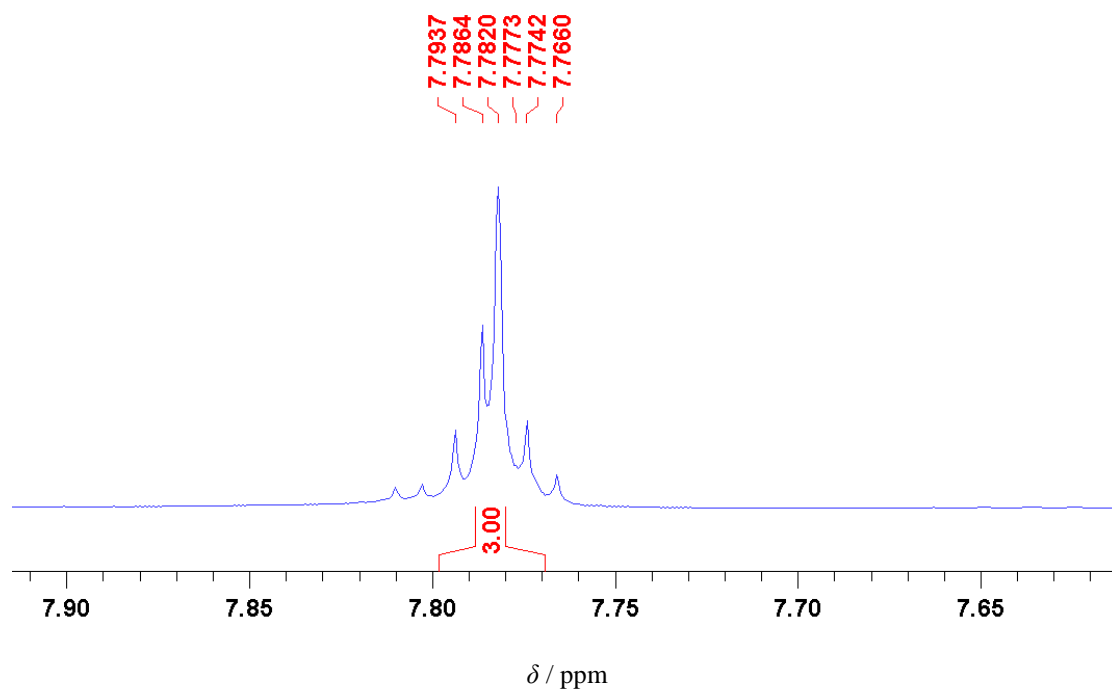


B

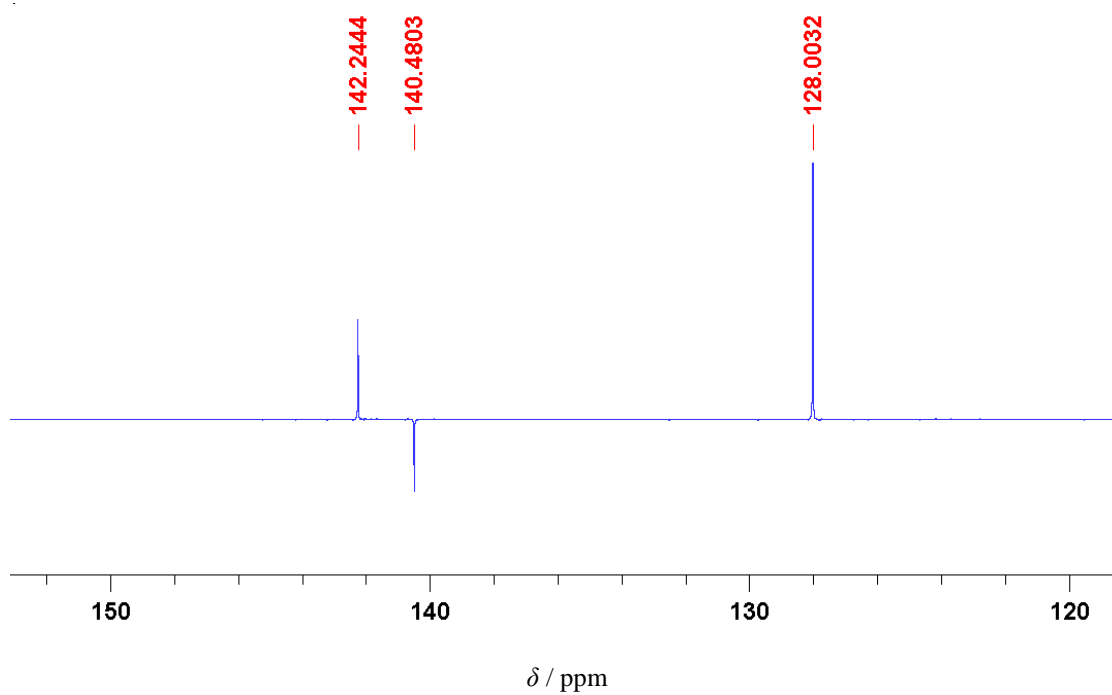
Slika D66. A) ^1H i B) ^{13}C spektri spoja 2,6- Br_2py , (L10).



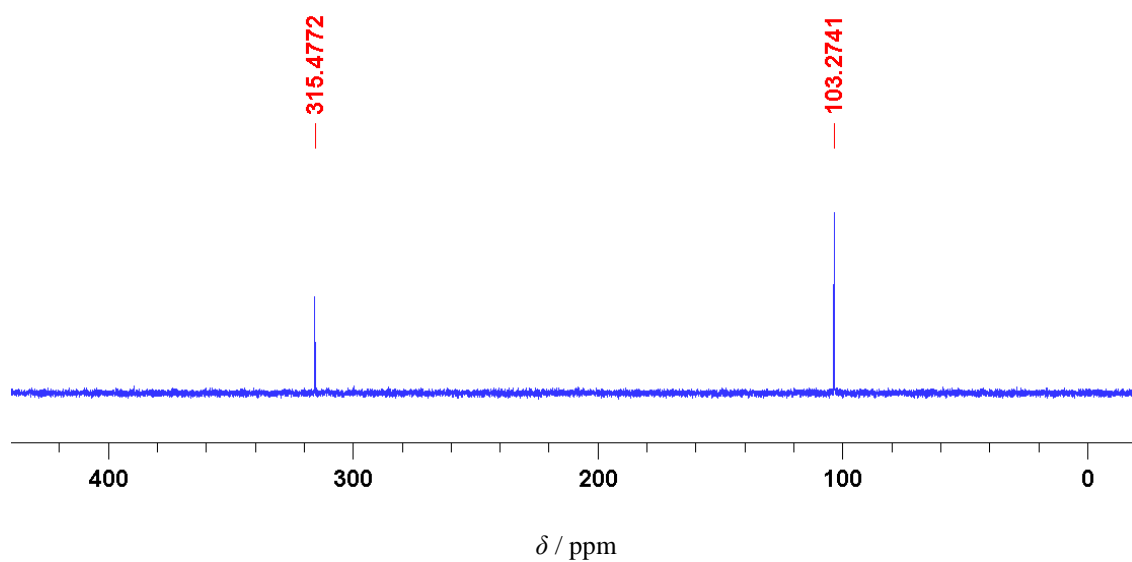
Slika D67. Uvećani prikaz ^1H - ^{15}N HMBC spektra NMR spoja 2,6- Br_2py (L10).



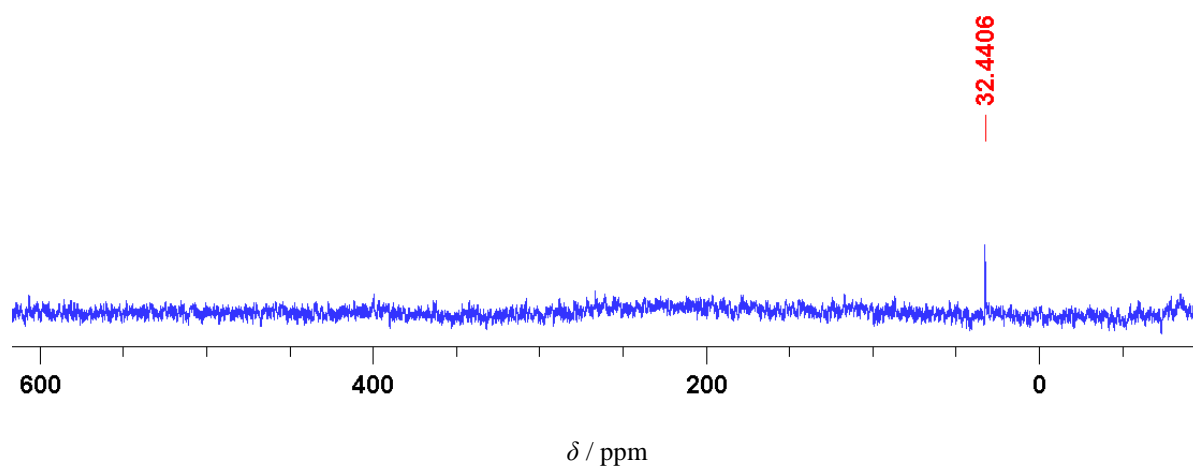
A



B

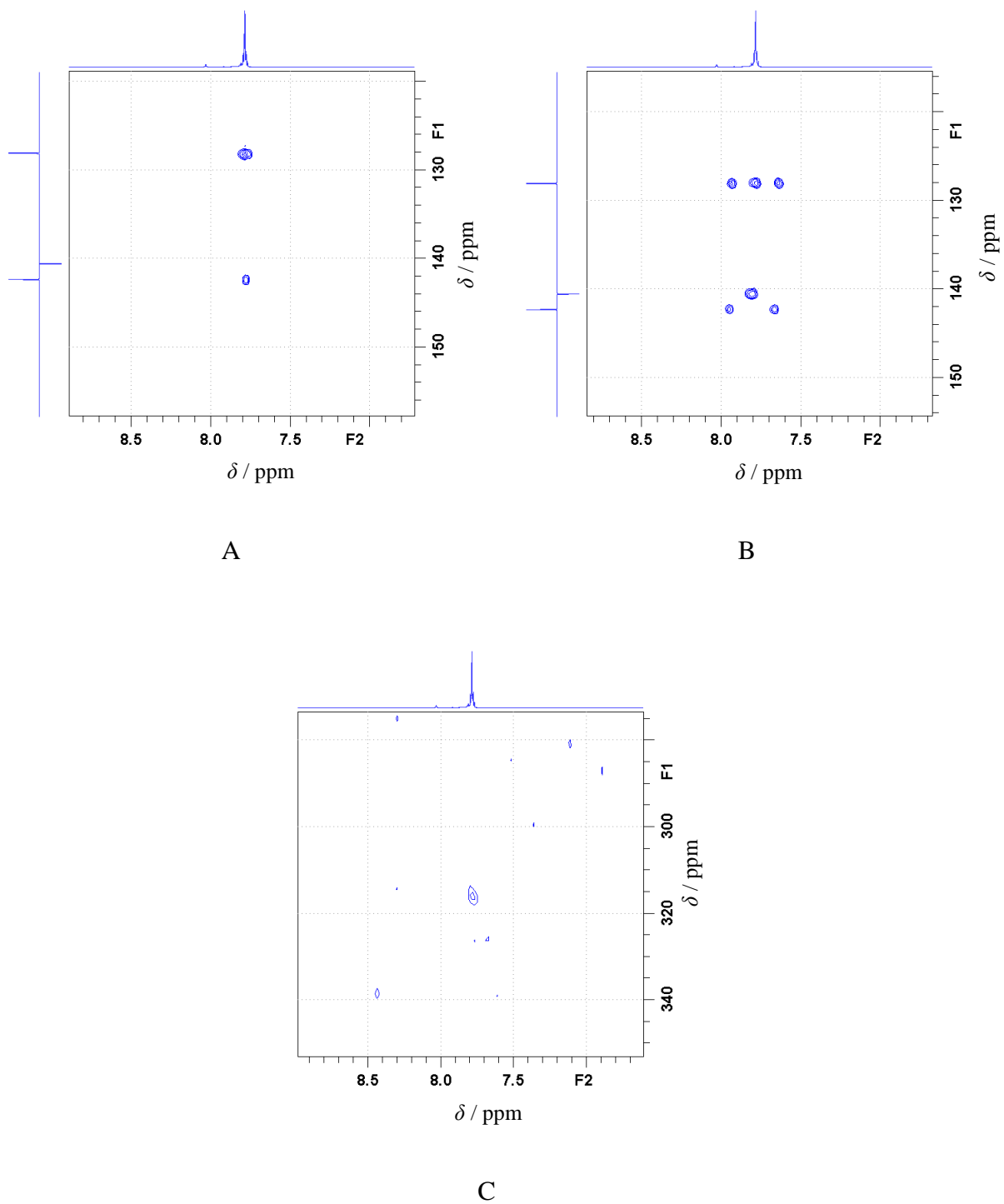


C

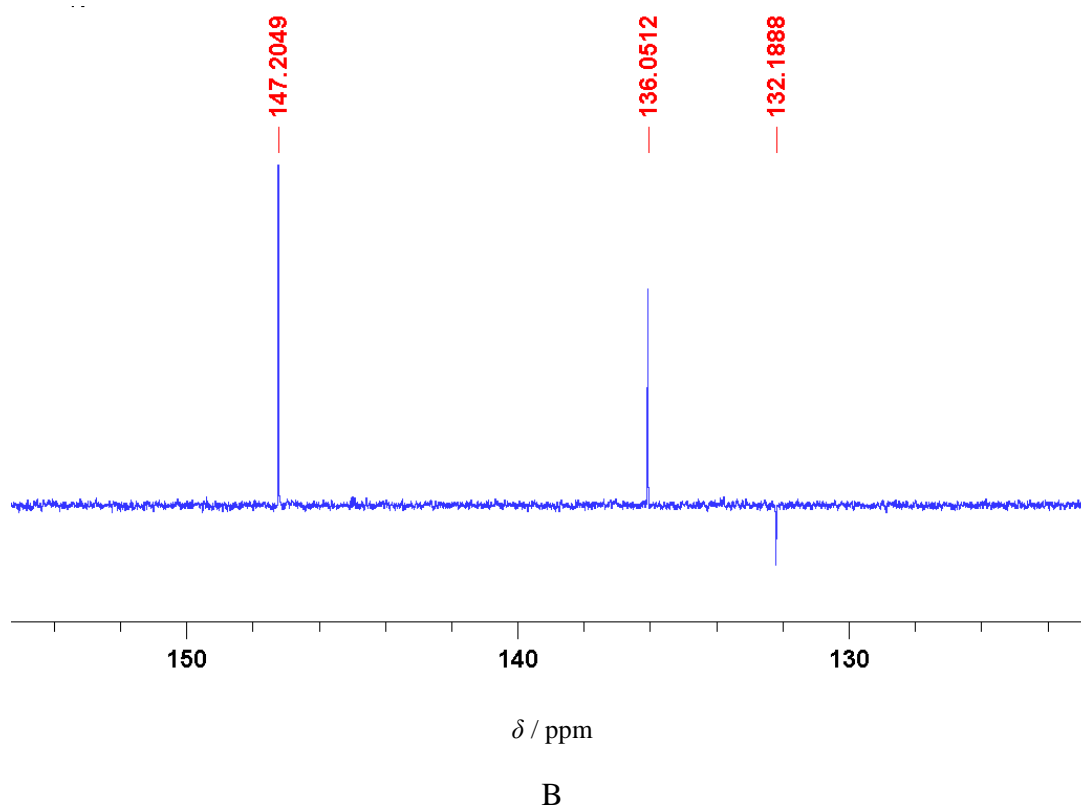
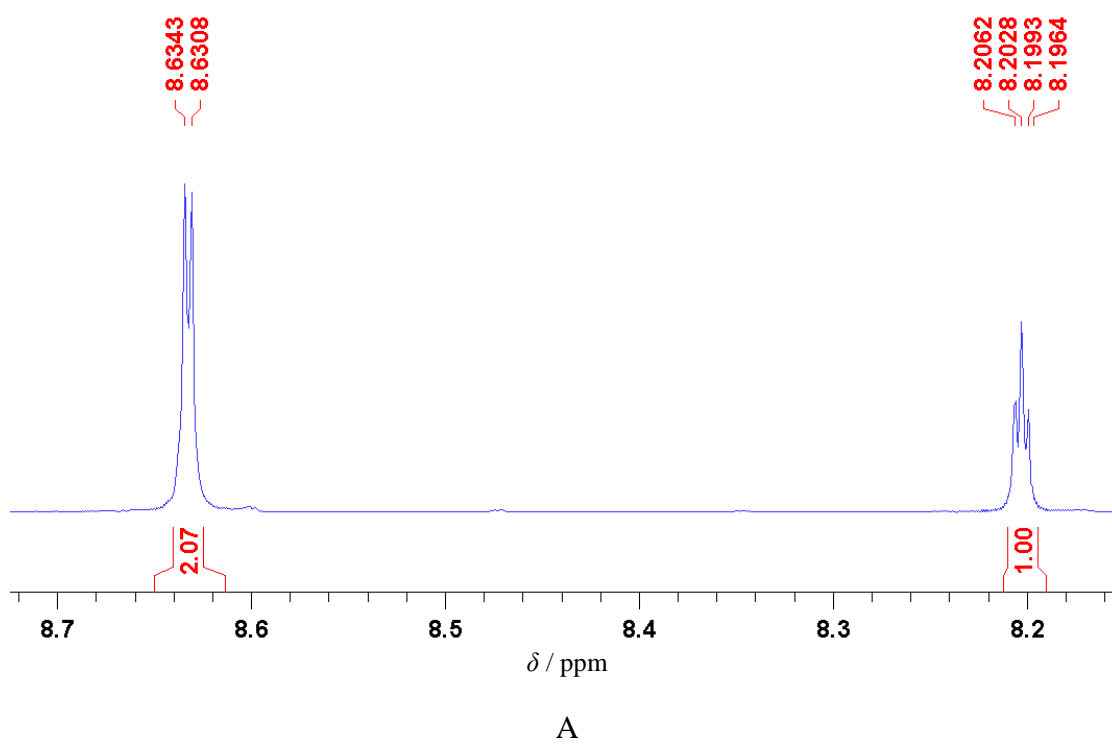


D

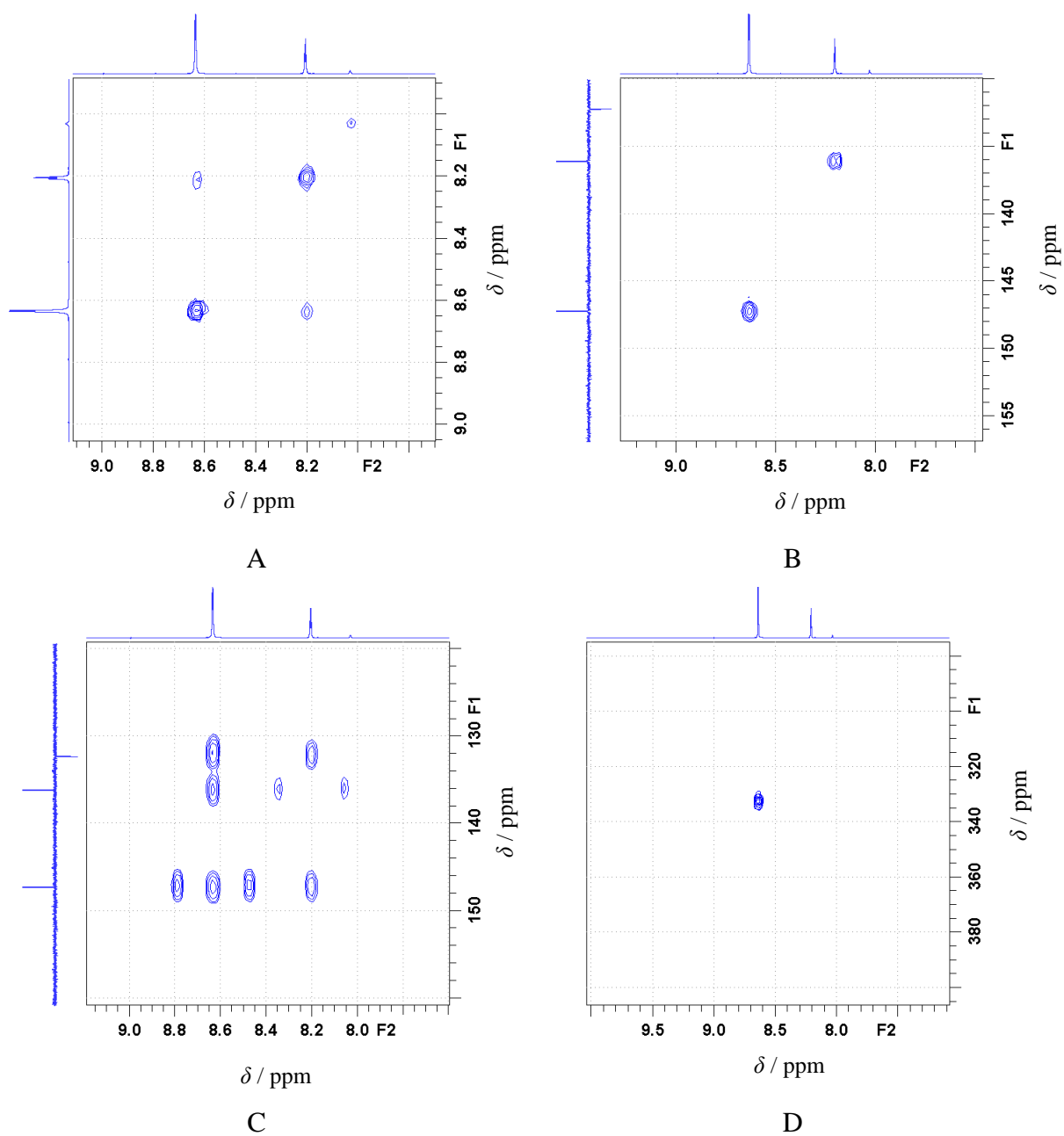
Slika D68. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(2,6\text{-Br}_2\text{py})_2]$, (K10).



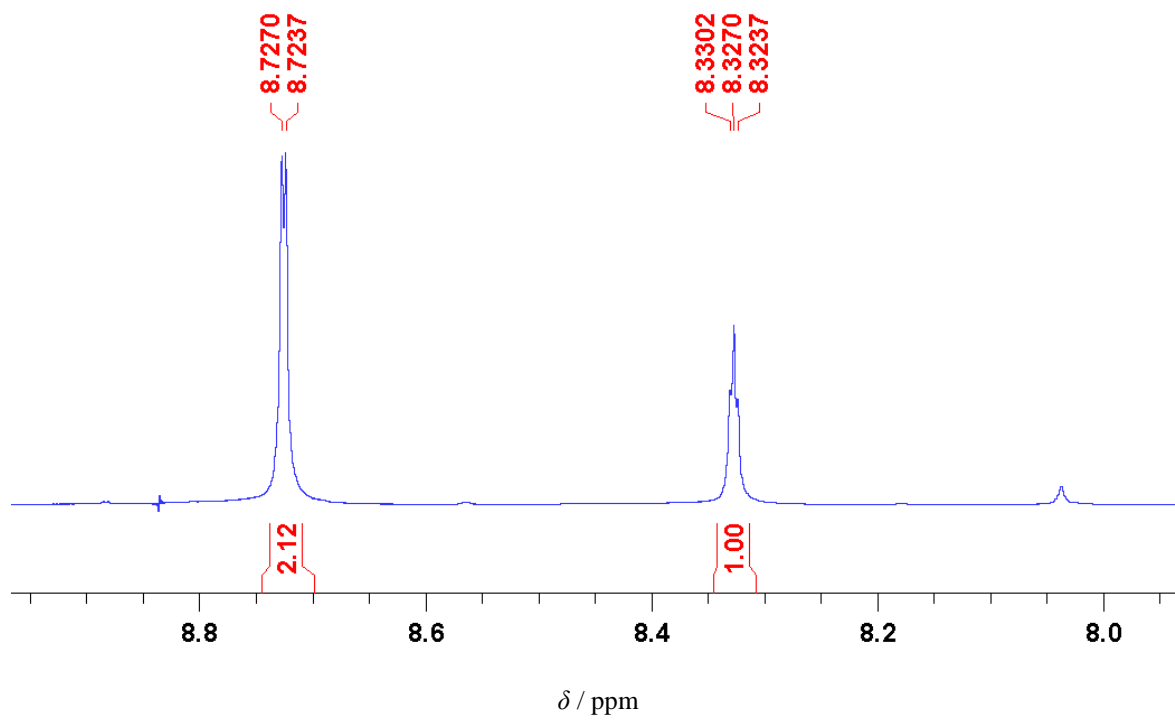
Slika D69. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMBC i C) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(2,6\text{-Br}_2\text{py})_2]$, (**K10**).



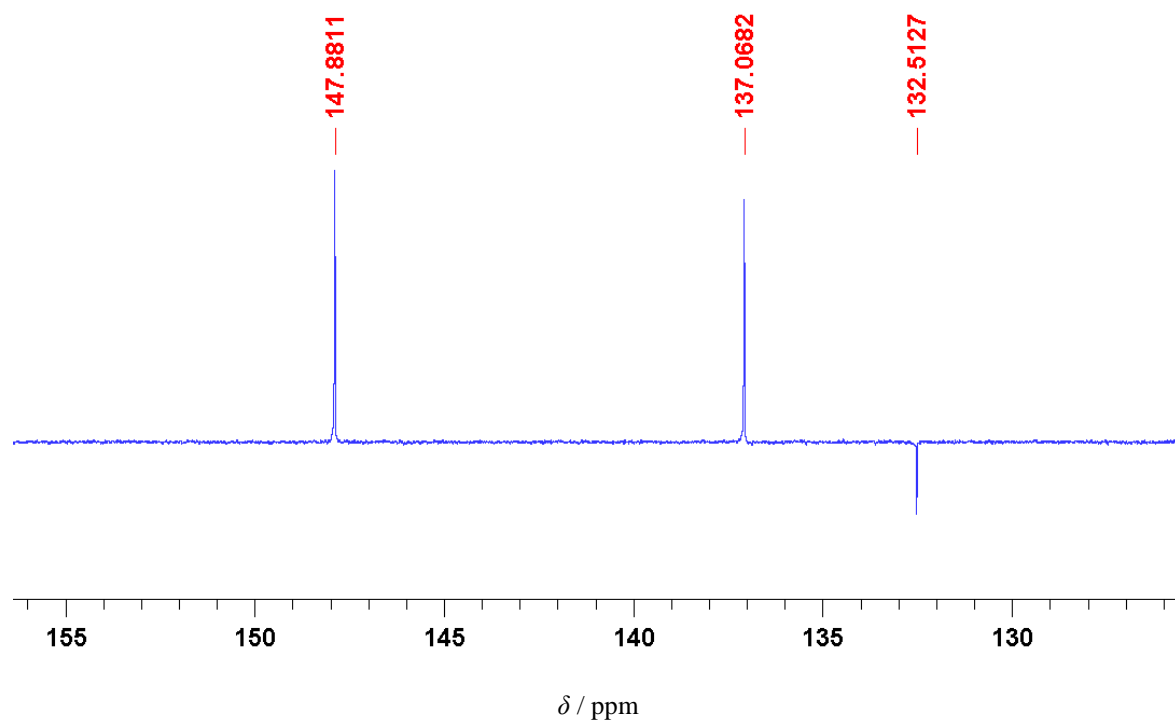
Slika D70. A) ^1H i B) ^{13}C spektri spoja 3,5- Cl_2py , (L11).



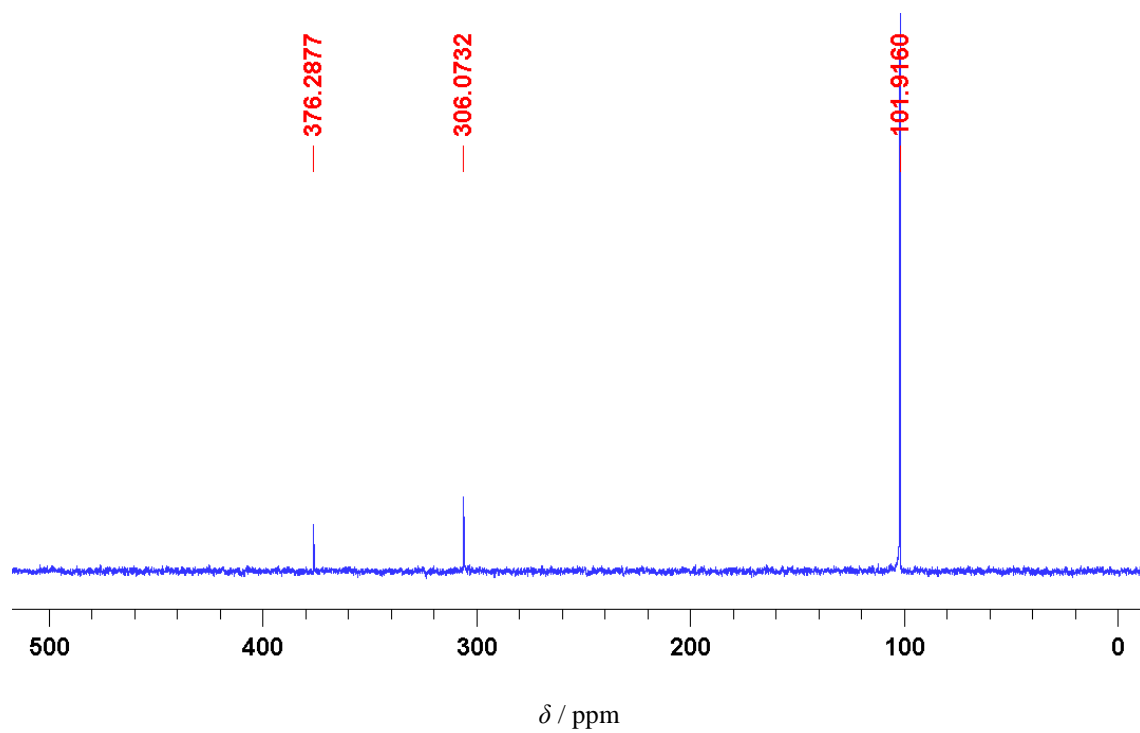
Slika D71. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 3,5- Cl_2py , (L11).



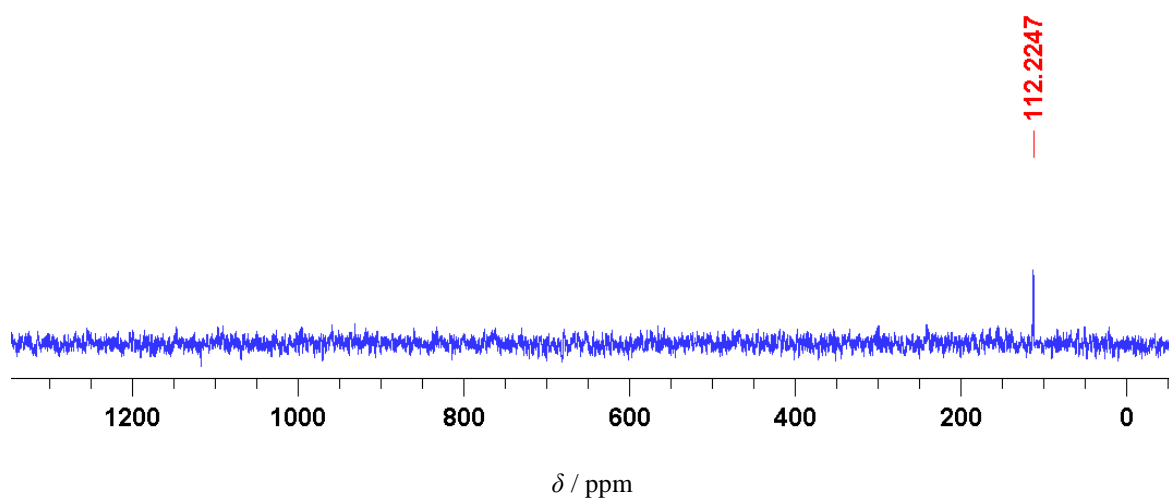
A



B

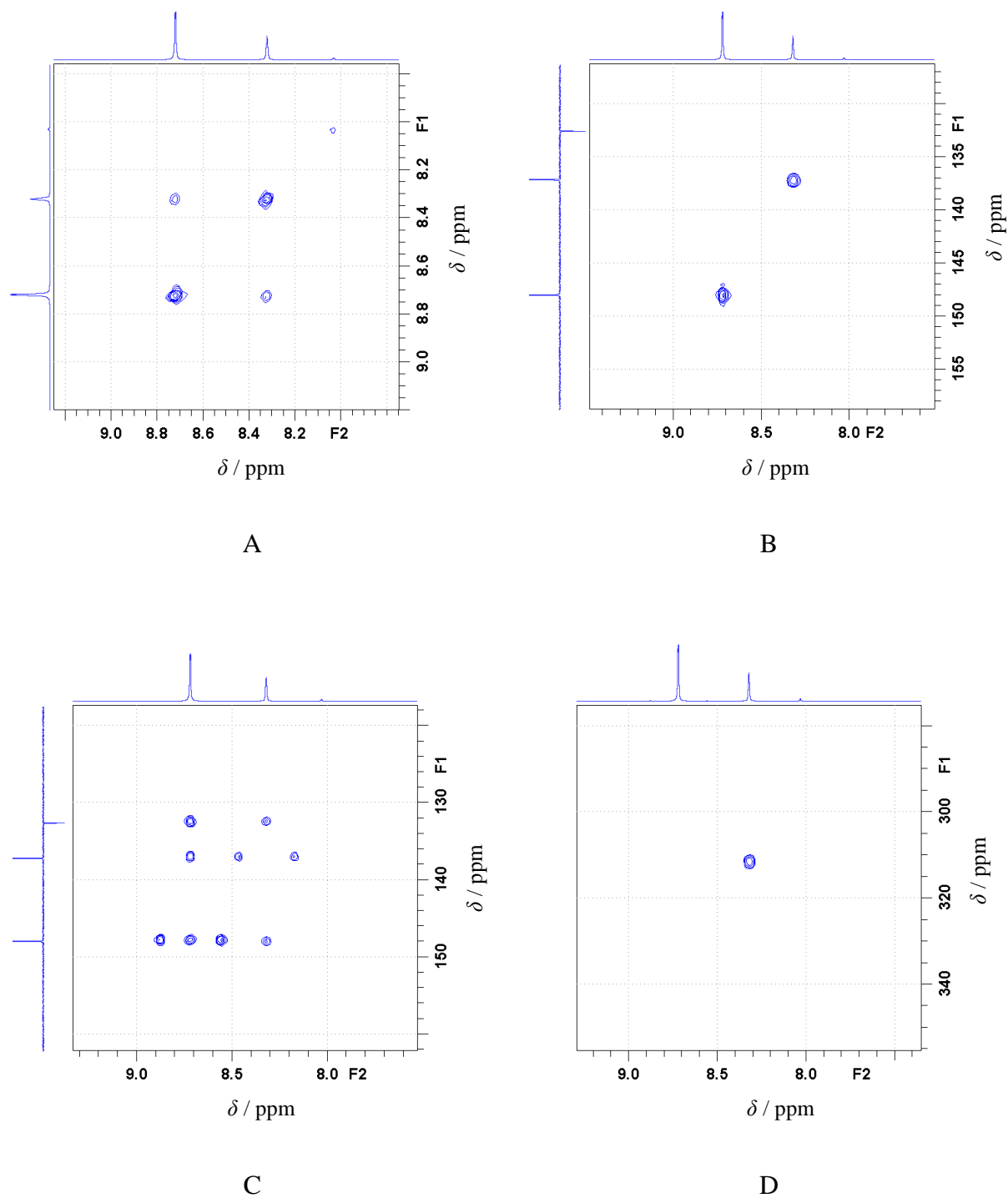


C

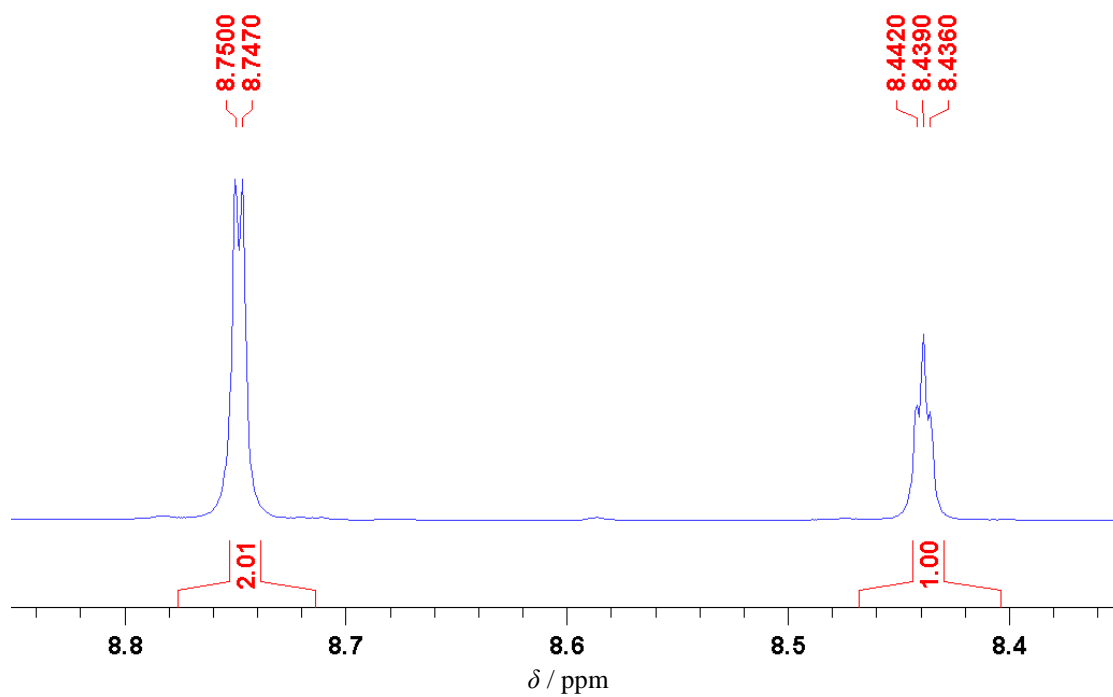


D

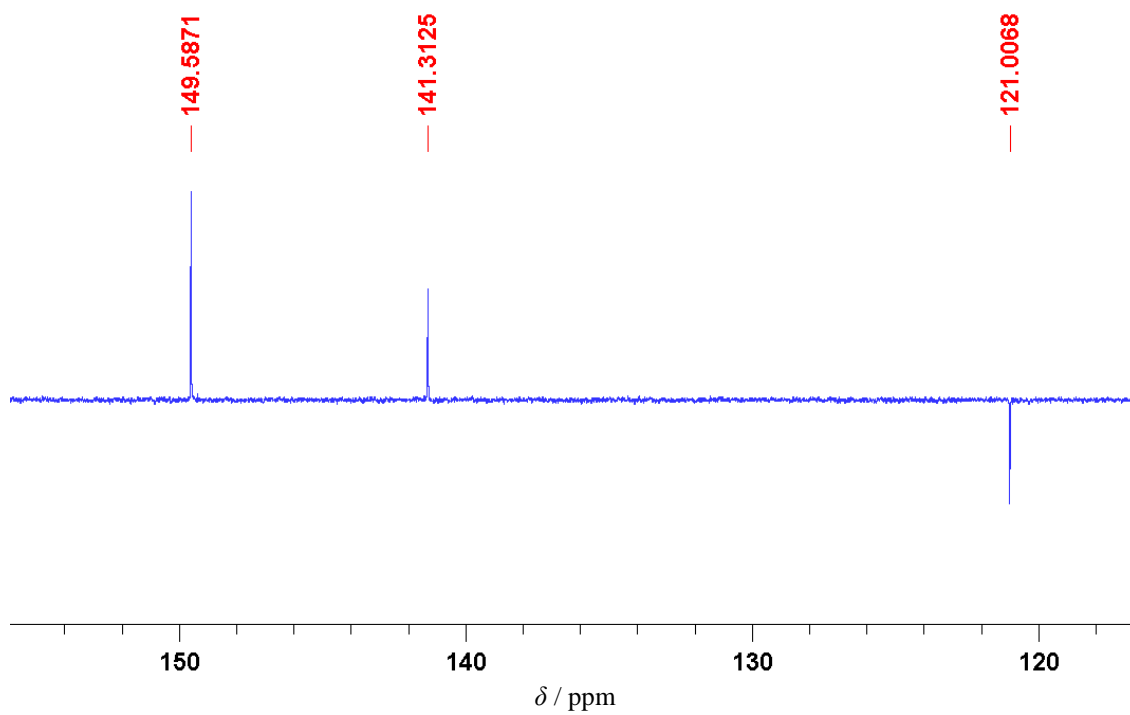
Slika D72. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(3,5\text{-Cl}_2\text{py})_2]$, (K11).



Slika D73. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(3,5\text{-Cl}_2\text{py})_2]$, (**K11**).

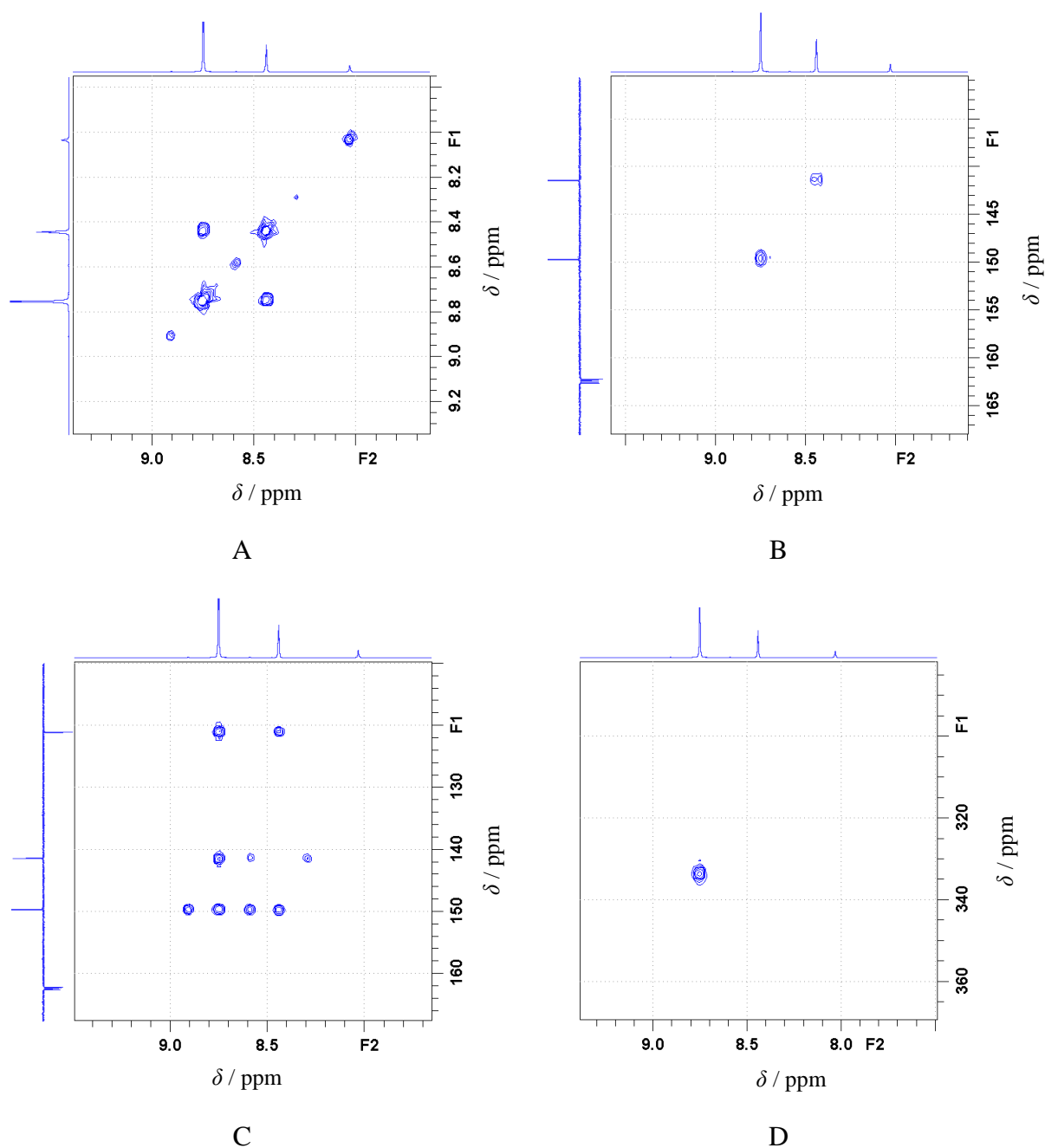


A

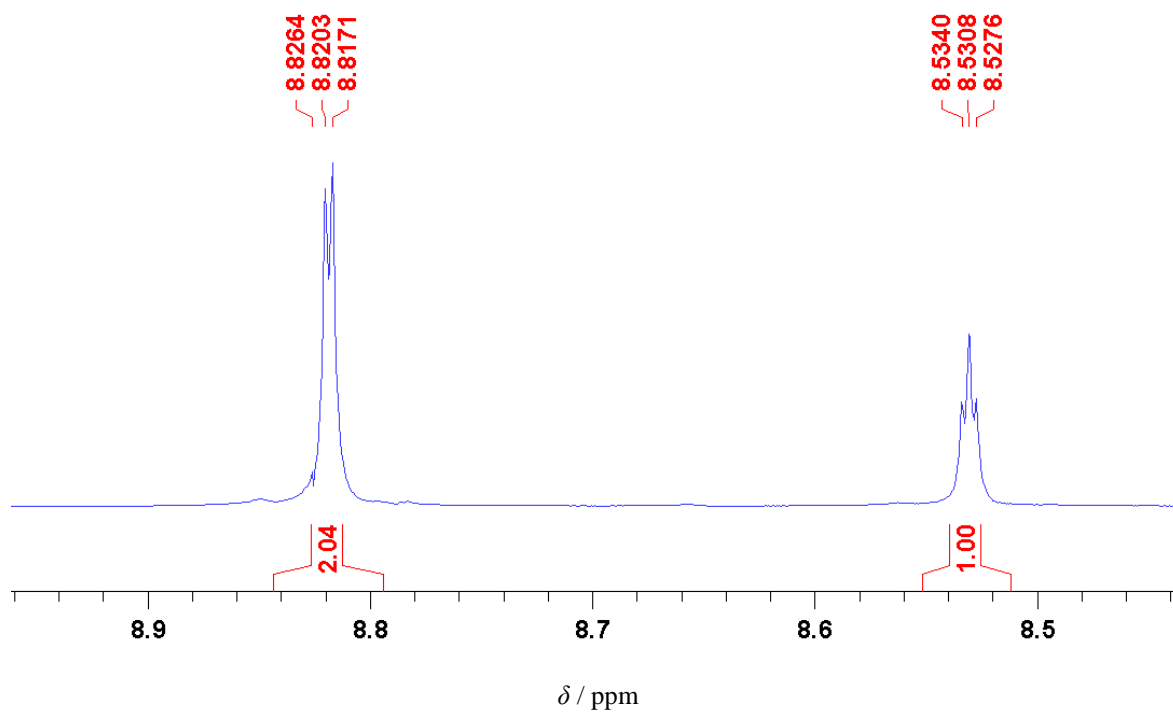


B

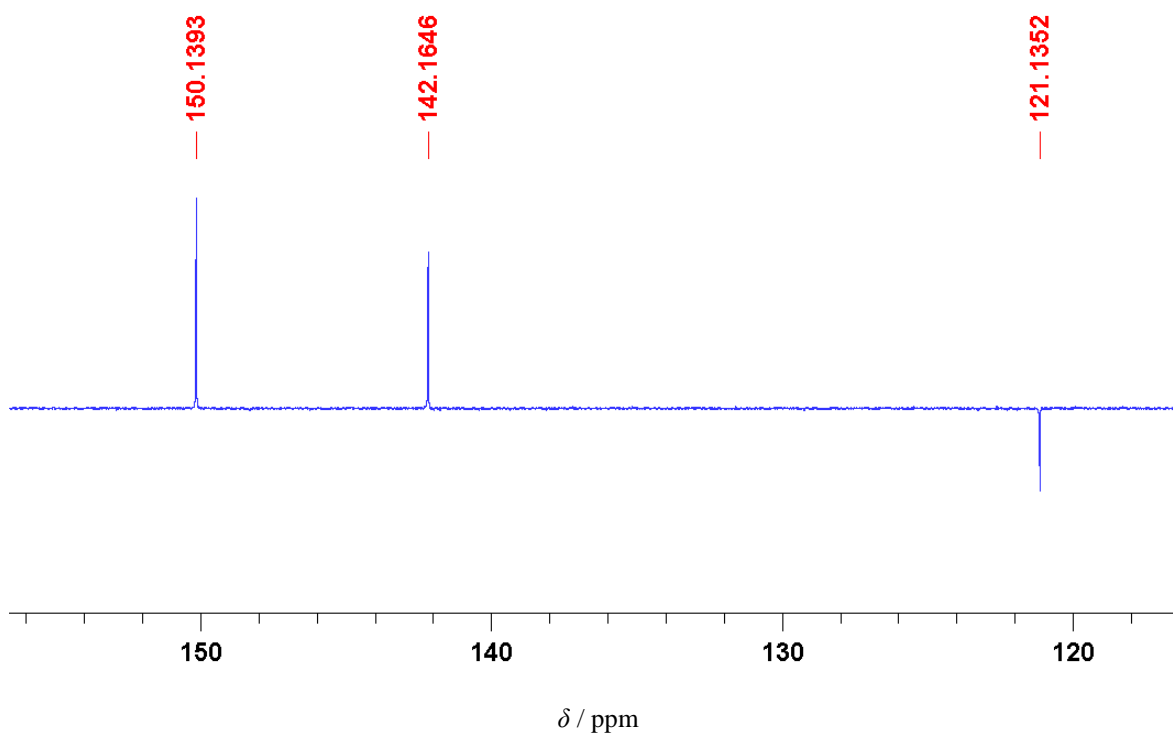
Slika D74. A) ^1H i B) ^{13}C spektri spoja 3,5- Br_2py , (L12).



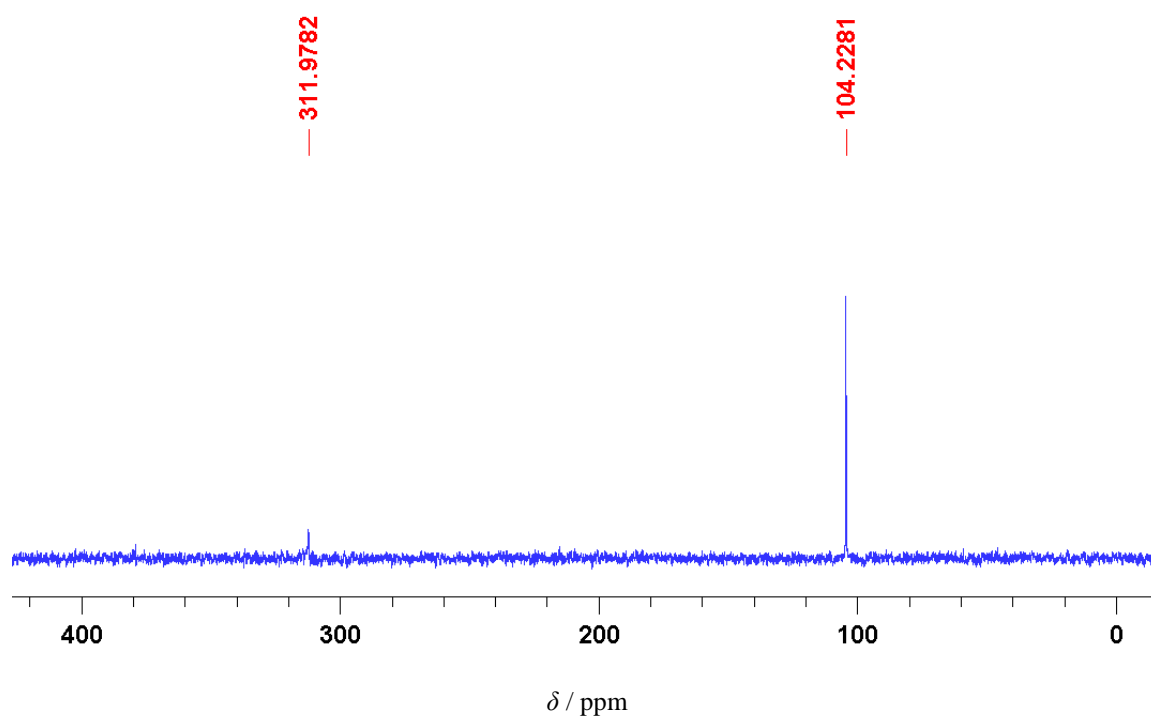
Slika D75. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC, C) ^1H - ^{13}C HMBC i D) ^1H - ^{15}N HMBC spektara NMR spoja 3,5- Br_2py (L12).



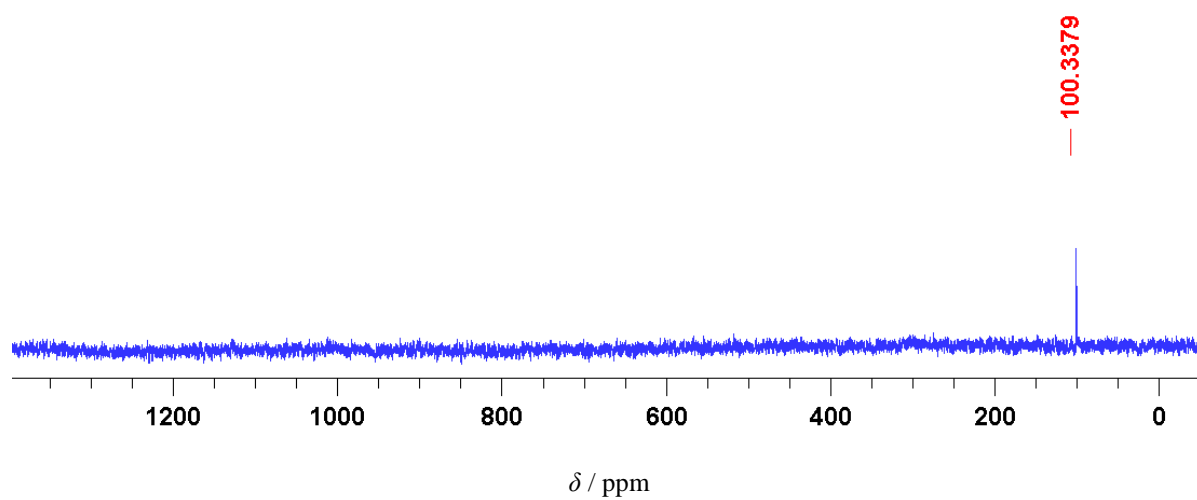
A



B

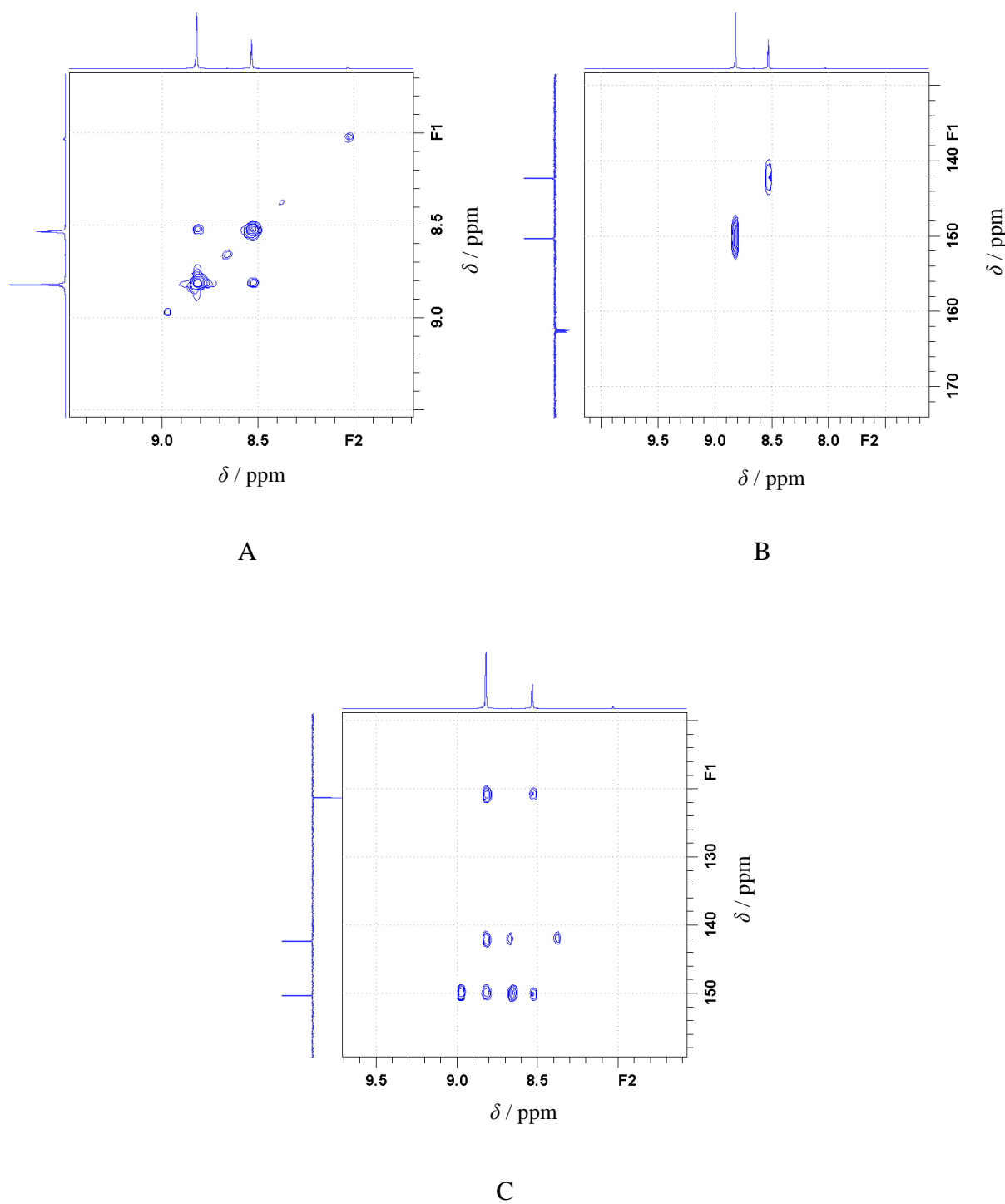


C



D

Slika D76. A) ^1H , B) ^{13}C , C) ^{15}N i D) ^{109}Ag spektri kompleksa $[\text{Ag}(\text{NO}_3)(3,5\text{-Br}_2\text{py})_2]$, (**K12**).



Slika D77. Uvećani prikaz A) ^1H - ^1H COSY, B) ^1H - ^{13}C HMQC i C) ^1H - ^{13}C HMBC spektara NMR kompleksa $[\text{Ag}(\text{NO}_3)(3,5\text{-Br}_2\text{py})_2]$, (K12).

Tablica D1. *Kemijski pomaci (δ / ppm) i konstante sprege (${}^nJ_{H,H}$ / Hz) signala jezgri 1H -atoma kod spojeva **K1** – **K6** te razlike u njihovom kemijskom pomaku nakon kompleksiranja ($\Delta\delta_{koord}$ / ppm) izračunate prema relaciji $\Delta\delta_{koord} = \delta_{kompleksa} - \delta_{liganda}$. (podaci u zagradi).*

Spoj	H-atom (δ / ppm, $\Delta\delta_{koord}$ / ppm, ${}^nJ_{H,H}$ / Hz)				
	2	3	4	5	6
K1	/	7,75 (+0,20) ^a ${}^3J_{3,4} = 8,03$ ${}^4J_{3,5} = 1,05$ ${}^5J_{3,6} = 0,70$	8,09 (+0,17) ${}^3J_{3,4} = 8,03$ ${}^3J_{4,5} = 7,39$ ${}^4J_{4,6} = 1,89$	7,62 (+0,17) ${}^3J_{4,5} = 7,39$ ${}^3J_{5,6} = 5,12$ ${}^4J_{3,5} = 1,05$	8,60 (+0,13) ${}^3J_{5,6} = 5,12$ ${}^4J_{4,6} = 1,89$
K2	/	7,75 (+0,06) ${}^3J_{3,4} = 8,07$ ${}^4J_{3,5} = 0,81$ ${}^5J_{3,6} = 0,60$	7,87 (+0,06) ${}^3J_{3,4} = 8,07$ ${}^3J_{4,5} = 7,31$ ${}^4J_{4,6} = 2,10$	7,54 (+0,05) ${}^3J_{4,5} = 7,31$ ${}^3J_{5,6} = 4,85$ ${}^4J_{3,5} = 0,81$	8,49 (+0,05) ${}^3J_{5,6} = 4,85$ ${}^4J_{4,6} = 2,10$ ${}^5J_{3,6} = 0,60$
K3	/	7,94 (+0,04) ${}^3J_{3,4} = 7,94$ ${}^4J_{3,5} = 0,99$ ${}^5J_{3,6} = 0,95$	7,60 (+0,03) ${}^3J_{3,4} = 7,94$ ${}^3J_{4,5} = 7,49$ ${}^4J_{4,6} = 2,09$	7,50 (+0,03) ${}^3J_{4,5} = 7,49$ ${}^3J_{5,6} = 4,82$ ${}^4J_{3,5} = 0,99$	8,44 (+0,02) ${}^3J_{5,6} = 4,82$ ${}^4J_{4,6} = 2,09$ ${}^5J_{3,6} = 0,95$
K4	8,71 (+0,05) ${}^4J_{2,4} = 2,53$ ${}^5J_{2,5} = 0,60$	/	8,04 (+0,08) ${}^3J_{4,5} = 8,14$ ${}^4J_{2,4} = 2,53$ ${}^4J_{4,6} = 1,36$	7,56 (+0,06) ${}^3J_{4,5} = 8,14$ ${}^3J_{5,6} = 4,80$ ${}^5J_{2,5} = 0,60$	8,62 (+0,04) ${}^3J_{5,6} = 4,80$ ${}^4J_{4,6} = 1,36$
K5	8,78 (+0,04) ${}^4J_{2,4} = 2,33$ ${}^5J_{2,5} = 0,76$	/	8,14 (+0,05) ${}^3J_{4,5} = 8,16$ ${}^4J_{2,4} = 2,33$ ${}^4J_{4,6} = 1,44$	7,48 (+0,04) ${}^3J_{4,5} = 8,16$ ${}^3J_{5,6} = 4,77$ ${}^5J_{2,5} = 0,76$	8,64 (+0,03) ${}^3J_{5,6} = 4,77$ ${}^4J_{4,6} = 1,44$
K6	8,97 (+0,09) ${}^4J_{2,4} = 2,18$ ${}^5J_{2,5} = 0,75$	/	8,36 (+0,12) ${}^3J_{4,5} = 8,03$ ${}^4J_{2,4} = 2,18$ ${}^4J_{4,6} = 1,48$	7,43 (+0,12) ${}^3J_{4,5} = 8,03$ ${}^3J_{5,6} = 4,75$ ${}^5J_{2,5} = 0,75$	8,70 (+0,09) ${}^3J_{5,6} = 4,75$ ${}^4J_{4,6} = 1,48$

Tablica D2. Kemijski pomaci (δ / ppm) i konstante sprege (${}^nJ_{H,H}$ / Hz) signala jezgri 1H -atoma kod spojeva **K7** – **K12** te razlike u njihovom kemijskom pomaku nakon kompleksiranja ($\Delta\delta_{koordin}$ / ppm) izračunate prema relaciji $\Delta\delta_{koordin} = \delta_{kompleksa} - \delta_{liganda}$ (podaci u zagradi).

Spoj	H-atom (δ / ppm, $\Delta\delta_{koordin}$ / ppm, ${}^nJ_{H,H}$ / Hz)				
	2	3	4	5	6
K7	/	7,69 (+0,15) ${}^3J_{3,4} = 8,62$	8,10 (+0,13) ${}^3J_{3,4} = 8,56$ ${}^4J_{4,6} = 2,75$	/	8,57 (+0,11) ${}^4J_{4,6} = 2,63$
K8	/	7,74 (+0,12) ${}^3J_{3,4} = 8,81$	8,09 (+0,10) ${}^3J_{3,4} = 8,81$ ${}^4J_{4,6} = 2,64$	/	8,63 (+0,09) ${}^4J_{4,6} = 2,20$
K9	/	7,59 (+0,02) ${}^3J_{3,4} = 7,83$	7,99 (+0,01) ${}^3J_{3(5),4} = 8,14$	7,59 (+0,02) ${}^3J_{4,5} = 7,83$	/
K10	/		7,80-7,77 (+0,01) m^a		/
K11	8,73 (+0,14) ${}^3J_{2(6),4} = 1,90$	/	8,33 (+0,14) ${}^3J_{4,4(6)} = 1,73$	/	8,73 (+0,14) ${}^3J_{2(6),4} = 1,90$
K12	8,82 (+0,12) ${}^3J_{2(6),4} = 1,94$	/	8,53 (+0,11) ${}^3J_{4,4(6)} = 1,92$	/	8,82 (+0,12) ${}^3J_{2(6),4} = 1,94$

^amultiplet

Tablica D3. *Kemijski pomaci (δ / ppm) signala jezgri ^{13}C -atoma kod spojeva **K1**–**K12** te razlika u njihovom kemijskom pomaku nakon kompleksiranja ($\Delta\delta_{\text{koord}}$ / ppm) izračunata prema relaciji $\Delta\delta_{\text{koord}} = \delta_{\text{kompleksa}} - \delta_{\text{liganda}}$ (podaci u zagradi).*

C-atom	Spoj (δ / ppm, $\Delta\delta_{\text{koord}}$ / ppm)											
	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
2	151,0	142,3	120,3	149,9	152,0	156,9	149,4	140,6	150,0	140,5	147,9	150,1
	<i>a</i>	+0,3	+1,7	+1,2	+1,2	+1,0	+0,9	+0,7	<i>a</i>	+0,1	+1,2	+1,1
3	125,4	128,9	135,7	132,5	121,1	94,1	126,1	130,3	123,9	128,0	132,5	121,1
	+0,7	+0,4	+0,3	+0,6	+0,3	<i>a</i>	+0,5	+0,5	+0,1	+0,1	+1,1	+0,5
4	141,5	140,6	139,4	138,1	140,8	146,5	140,0	142,6	142,9	142,2	137,1	142,2
	+1,7	+1,1	+0,8	+2,0	+1,9	+1,7	+0,7	+0,7	+0,1	+0,1	+1,4	+1,4
5	124,0	124,0	124,1	126,2	126,7	126,7	131,2	120,4	123,9	128,0	132,5	121,1
	+0,9	+0,5	+0,3	+1,0	+1,1	+0,6	+0,8	+0,5	+0,1	+0,1	+1,1	+0,5
6	151,6	151,7	152,6	149,7	149,9	149,9	149,0	151,7	150,0	140,5	147,9	150,1
	+1,4	+1,1	+1,2	+1,5	+1,5	+1,3	+0,8	+0,7	<i>a</i>	+0,1	+1,2	+1,1

^aNema promjene u kemijskom pomaku signala u spektru.

Tablica D4. *Kemijski pomaci (δ / ppm) signala jezgri ^{15}N -py-atoma kod spojeva **L1** – **L12** te razlika istih u odnosu na one u jezgri piridina ($\Delta\delta_{\text{koord}}$ / ppm) izračunata prema relaciji $\Delta\delta_{\text{koord}} = \delta_{\text{liganda}} - \delta_{\text{piridina}}$ (podaci u zagradi).*

Jezgra	Spoj (δ / ppm, $\Delta\delta_{\text{koord}}$ / ppm)											
	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
^{15}N -py	307,6 (-9,8)	316,3 (-1,1)	332,0 (+14,6)	322,3 (+4,9)	323,6 (+6,2)	323,2 (+5,8)	312,2 (-5,2)	321,3 (+3,9)	301,2 (-16,2)	319,4 (+2,0)	325,3 (+7,9)	326,0 (+8,6)

Tablica D5. *Kemijski pomaci (δ / ppm) signala jezgri ^{15}N -atoma kod spojeva **K1** – **K12** te razlika u pomacima tih signala nakon kompleksiranja ($\Delta\delta_{\text{koord}}$ / ppm) izračunata prema relaciji $\Delta\delta_{\text{koord}} = \delta_{\text{kompleksa}} - \delta_{\text{liganda}}$ (podaci u zagradi).*

Jezgra	Spoj (δ / ppm, $\Delta\delta_{\text{koord}}$ / ppm)											
	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
^{15}N -py	284,2 (-23,4)	299,2 (-17,1)	322,2 (-9,8)	289,0 (-33,3)	291,8 (-31,8)	289,3 (-33,9)	305,1 (-7,1)	315,7 (-5,6)	299,3 (-1,9)	315,7 (-3,7)	306,1 (-19,2)	312,0 (-14,0)
$^{15}\text{NO}_3^-$	378,6 (+2,4)	376,1 (-0,1)	<i>a</i>	376,3 (+0,1)	376,6 (+0,4)	376,9 (+0,7)	376,3 (+0,1)	376,8 (+0,6)	<i>a</i>	371,5 (-4,7)	376,3 (+0,1)	378,8 (+2,6)

^aSignal u spektru nije detektiran.

Tablica D6. *Kemijski pomaci (δ / ppm) signala jezgri ^{109}Ag -atoma u spektrima spojeva **K1** – **K12** te razlika u pomaku njihovih signala ($\Delta\delta_{\text{koord}}$ / ppm) u odnosu prema pomaku srebrova(I) iona u srebrovom nitratu (AgNO_3) izračunata prema relaciji $\Delta\delta_{\text{koord}} = \delta_{\text{kompleks}} - \delta_{\text{AgNO}_3}$ (podaci u zagradi).*

Jezgra	Spoj (δ / ppm, $\Delta\delta_{\text{koord}}$ / ppm)											
	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
^{109}Ag	101,4 (+95,2)	116,7 (+110,5)	106,3 (+100,1)	173,0 (+166,8)	181,6 (+175,4)	201,1 (+194,9)	58,4 (+52,2)	52,5 (+46,3)	36,6 (+30,4)	26,9 (+20,7)	112,2 (+106,0)	100,3 (+94,1)
