

Silver (I) coordination chemistry: From 1-D chains to molecular rectangles

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Supporting Information

Table of contents

General experimental details.....	S3
¹ H NMR spectra of 1	S4
¹ H NMR spectra of 2	S4
¹ H NMR spectra of 3	S5
¹ H NMR spectra of 4-PyIm	S5

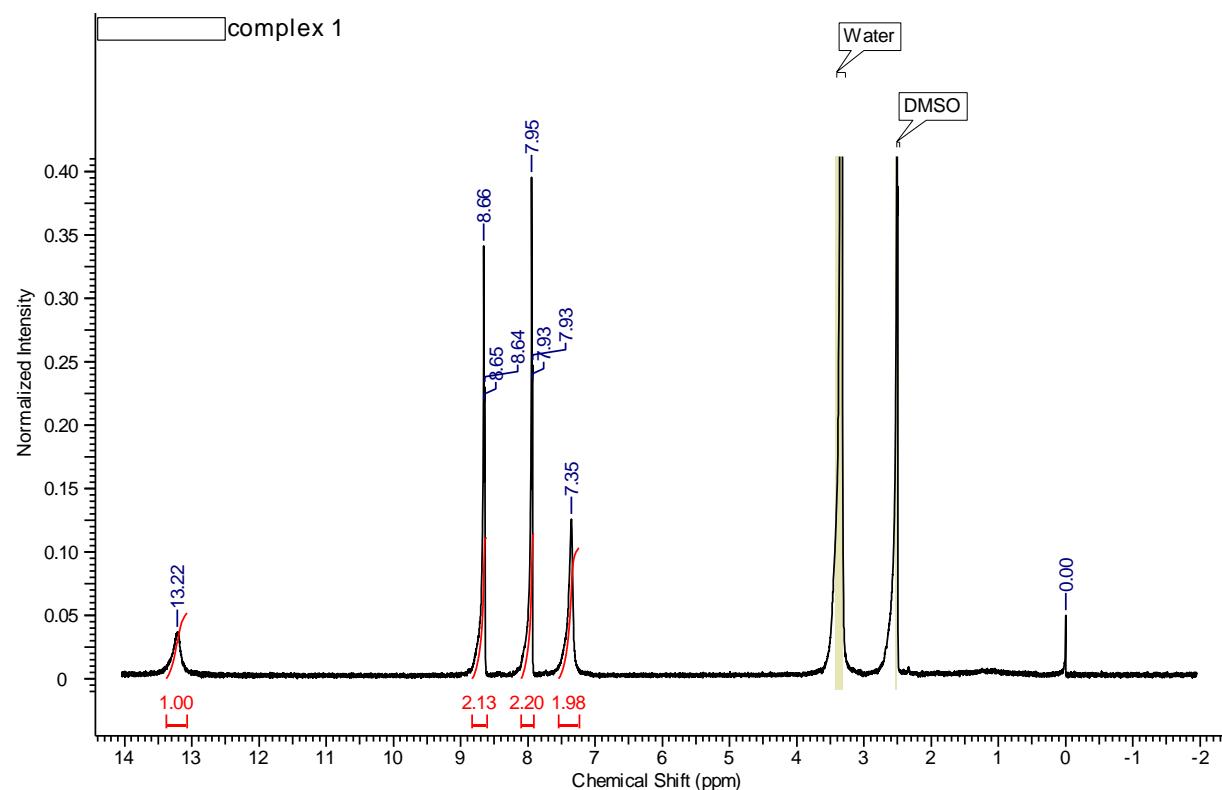
General experimental details

¹H NMR spectra were recorded on a Varian Unity plus 400 MHz spectrometer in DMSO-d6. Data is expressed in parts per million (ppm) downfield shift from tetramethylsilane or residual protosolvent as internal reference and are reported as position (in ppm), multiplicity (s = singlet, d = doublet, t = triplet, m= multiplet), coupling constant (J in Hz) and integration (number of protons). Melting points were recorded on a Fisher-Johns melting point apparatus and are uncorrected. Infrared spectroscopy (IR) was done on a Nicolet 380 FT-IR. All the chemicals were purchased from Aldrich and used without further purification, unless otherwise noted.

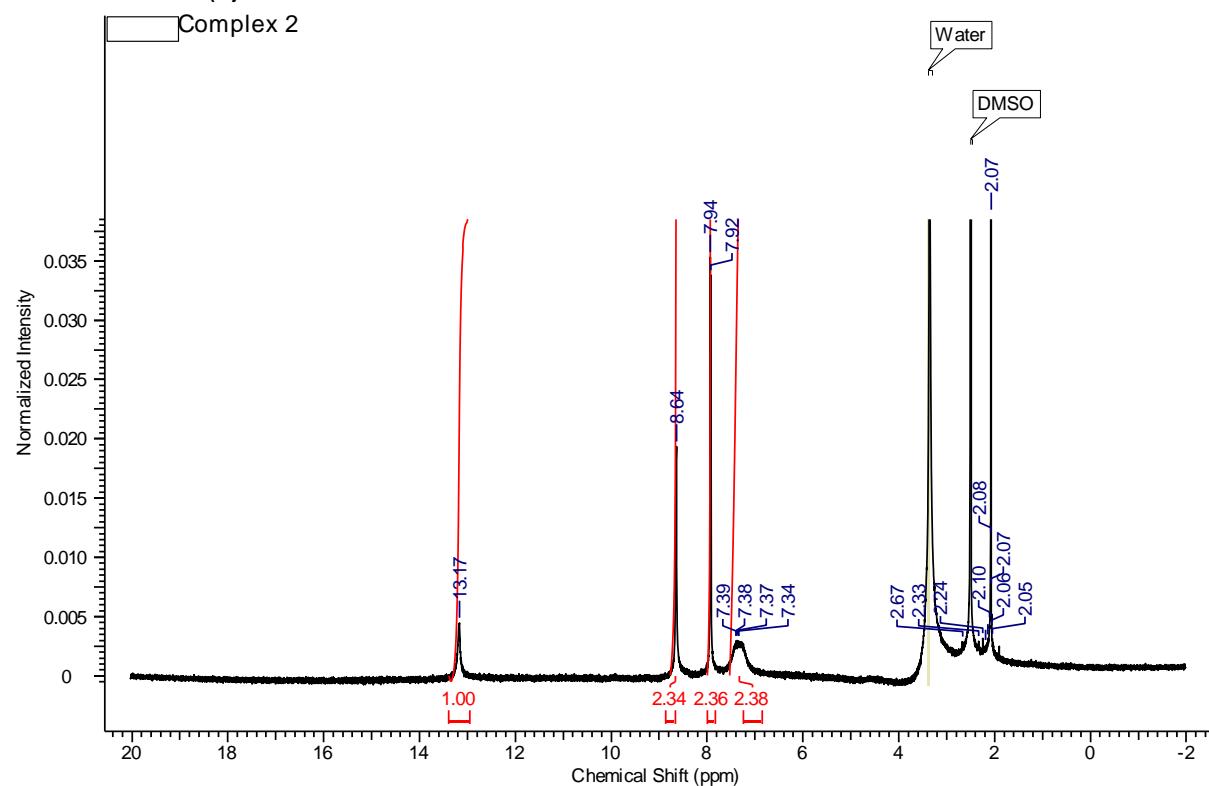
Synthesis of 2-(4-pyridyl)imidazole 4-PyIm

5.2 grams of 4-cyanopyrimidine(50mmol) was added to 20 mL of methanol, 1.2 mL of 25%NaOCH₃ was added to the mixture and stirred for 8 hours at room temperature. 5.2mL (1 equivalent) of aminoacetal was added followed by adding 5.5mL of acetic acid dropwise. The mixture was refluxed for 30 minutes, cooled to room temperature, 30 mL of methanol and 25 ml of 6N HCl was added and refluxed for 3 hours. The solution was evaporated to dryness using rotavap at 50°C. A freshly prepared solution of 2705g of K₂CO₃ and 27.5 g of H₂O were added to bring pH to 10. The precipitate was filtered and recrystallized in 40 mL of boiling water, 5.6 grams of the 4PyIm was obtained (yield77%). M.P (208-210)°C

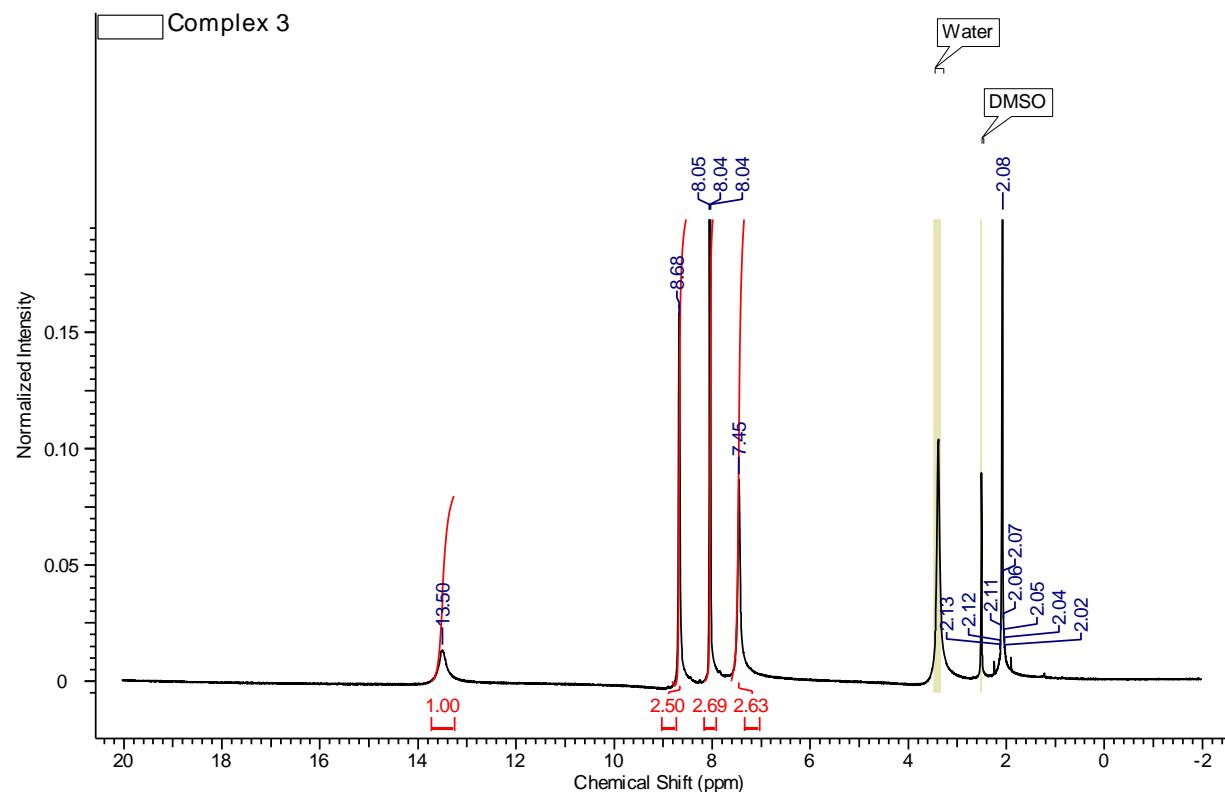
Proton NMR for (1)



Proton NMR for (2)



Proton NMR of (3)



Proton NMR for 4-PyIM

