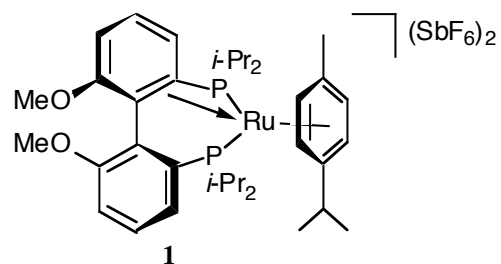


X-ray Crystallography and NMR Spectroscopy: Two Partners Separated by a Solvent.

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The lecture will be presented in two parts: In the first of these, unexpected and still quite rare, π -bonding interactions, e.g., as in 1, will be discussed. The molecular distortions necessary to convert the chelate from a four electron to a six electron donor will be presented.



In the second half, ^1H and ^{19}F (and time permitting ^{31}P and ^7Li) pulsed gradient spin diffusion (PGSE) NMR measurements will be used to demonstrate how solvents can strongly affect molecular structure of a variety of salts. A method for quantifying ion-pairing will be suggested.

- (1) Geldbach, T. J.; Pregosin, P. S. *Eur. J. Inorg. Chem.* 2002, 1907-1918.
- (2) Martinez-Viviente, E.; Pregosin, P. S. *Inorg. Chem.* 2003, 42, 2209-2214.