

## INTERACTIONS BETWEEN RELATIVISTIC QUANTUM CHEMISTS AND NMR EXPERIMENTALISTS: SOME RESULTS

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The electric field gradients of uranyl, at the uranium nucleus and oxygen nuclei, in carbonate complexes have been calculated. The calculated results are used to estimate the  $T_1$  spin-lattice relaxation times and first-order nuclear spin transition energies in uranium and oxygen nuclei. These parameters are then used as a guideline for possible NMR experiments on uranyl compounds. Future plans for calculations of NMR properties and further interaction between theory and experiment will be discussed.