

**The Agostic interaction in transition metal and actinide  
methylidene complexes**

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**Abstract**

The lecture will discuss the agostic interaction that takes place between the methylene hydrogen and the metal in complexes of the type  $H_2MCH_2$ , where M is a transition metal or an actinide. CASSCF/CASPT2 optimizations of the geometry have been performed for a number of such complexes. The analysis is made in terms of the natural orbitals and other properties of these compounds.