

# **Extrapolation Methods for Getting High Accuracy Correlation Energies of Both Ground and Excited**

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Obtaining highly accurate correlation energies is often a very computationally intensive process, especially when multi-configurational wavefunctions are involved. These complex wavefunctions are often needed for dissociative and photochemical (excited state) processes where the potential energy surface can change significantly. This talk will cover the importance of the correlation energy in general, multi-configurational processes, the correlation energy extrapolation by intrinsic scaling (CEEIS) method, the use of the CEEIS method to obtain the singlet ground and excited state potential energy surfaces and properties for C<sub>2</sub>, and an extension of the method for use with the larger ozone system.