HIGH ORDER CORRECTIONS TO ROTATIONAL CONSTANTS BY VIBRATION-ROTATION PERTURBATION THEORY

JUANA VÁZQUEZ and JOHN F. STANTON, *Institute for Theoretical Chemistry, Department of Chemistry, University of Texas, Austin,Tx 78721*.

Vibrational corrections to rotational constants due to second vibration-rotation interaction constants, i.e. γ_{ij}^{α}, are presented under the framework of fourth order Rayleigh-Schödinger perturbation theory. Applications to some asymmetric top molecules are analyzed and compared with corrections resulting from the first vibration-rotation constants, α_i^{α}.