# DETERMINATION OF THE PREFERRED STRUCTURE, DYNAMICS, AND PLANARITY OF SUBSTITUTED ANHYDRIDES BY CP-FTMW

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The planarity of five-membered rings is derived from a competition between ring-angle strain and stability of the torsional angles. The planar form maximizes the already stressed, smaller-than-normal, C-C bond angles, while puckering reduces the unfavorable eclipsed interactions. The structure, dynamics, and planarity of three anhydrides, succinic, methylsuccinic, and methylene (itaconic) anhydride, were studied and compared using chirped-pulse Fourier transform microwave spectroscopy.