

THE STRUCTURE OF *gauche*-BUTADIENE: INSIGHTS FROM THE CENTIMETER, MILLIMETER, AND FIR- INFRARED HIGH RESOLUTION SPECTRA

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Recent investigation of the centimeter spectrum of *gauche*-butadiene has unambiguously established a non-planar conformation for this fundamental, archetypal diene for the Diels-Alder reaction [1]. We will present subsequent theoretical and experimental investigations aimed at determining a highly accurate molecular structure and the barrier height for interconversion between the two equivalent tunneling *gauche* forms.

[1] J. H. Baraban, M.-A. Martin-Drumel, *et al.*, *Angewandte Chemie*, **57**, 1821 (2018)

