

# Experimental Gas-phase Halogen Nuclear Quadrupole Coupling Constants; A Review\*

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As a prelude to a theoretical study of nuclear quadrupole coupling constants (NQCC), via the electric field gradients at equilibrium, we review the current state of knowledge of gas-phase data for a diverse set of axially symmetric inorganic and organic molecules with symmetries  $C_{3v}$ ,  $C_{\infty v}$ ,  $D_{\infty h}$  in particular, where the heavy elements are Cl, Br and I with C, Si and Ge hydrides. In most of the cases, the latter elements are in an approximately tetrahedral environment.

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