A REINVESTIGATION OF THE ELECTRONIC PROPERTIES OF 2-BROMOPYRIDINE WITH HIGH-RESOLUTION MICROWAVE SPECTROSCOPY

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The rotational spectrum of 2-bromopyridine (C_5H_4BrN) was reinvestigated in the frequency range of 10-15.5 GHz by high-resolution Fourier transform microwave (FTMW) spectroscopy. The new observations of ^{14}N hyperfine splittings in previously studied transitions[a] belonging to both bromine isotopologues ($C_5H_4{}^{79}BrN$ and $C_5H_4{}^{81}BrN$) led to improved measurements of the rotational constants and bromine nuclear quadrupole coupling constants. The full nuclear quadrupole coupling (NQC) tensor of ^{14}N was resolved for the first time, in addition to five centrifugal distortion constants. A comparison of the two ^{14}N NQC tensors of $C_5H_4{}^{79}BrN$ and $C_5H_4{}^{81}BrN$ will be presented.

[a]Caminati, W.; Forti, P. *Chemical Physics Letters* **1972**, *15*(3), 343–349.