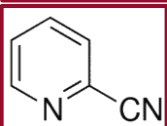


P5022: Brief Summary of the Millimeter-Wave Rotational Spectra of 2-, 3-, and 4-Cyanopyridine: their Vibrational Ground States and the Coriolis-Coupled Dyad of their Lowest-Energy vibrationally excited states

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2-Cyanopyridine



$\mu_a = 5.47$ D
 $\mu_b = 1.87$ D

Ground State Constants

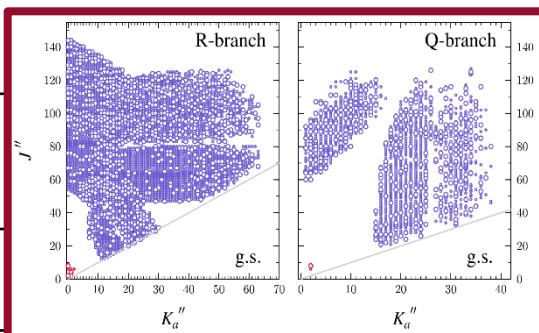
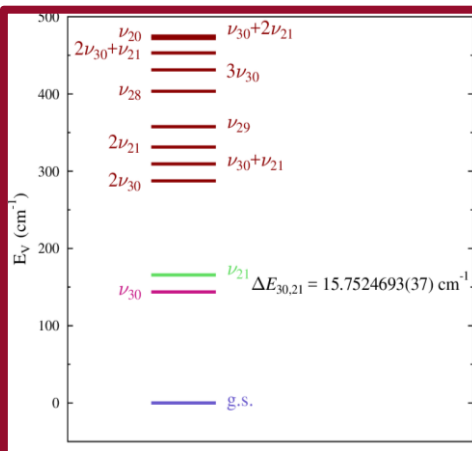
$A_0^{(S)}$ (MHz)	5837.00123 (22)
$B_0^{(S)}$ (MHz)	1598.233346 (41)
$C_0^{(S)}$ (MHz)	1254.457194 (46)

D_J (kHz)	0.0473597 (56)
D_{JK} (kHz)	0.986439 (24)
D_K (kHz)	0.30866 (37)
d_1 (kHz)	0.0114808 (14)
d_2 (kHz)	0.638845 (35)

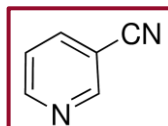
$N_{\text{ring}} \chi_{aa}$ (MHz)	
$N_{\text{ring}} \chi_{bb}$ (MHz)	
$N_{\text{CN}} \chi_{aa}$ (MHz)	
$N_{\text{CN}} \chi_{bb}$ (MHz)	

N_{lines}	6480
σ_{fit} (MHz)	0.040
Δ_I ($\text{u}\text{\AA}^2$)	0.073695 (11)

ΔE (cm^{-1})	26.47884 (11)
G_a (MHz)	9930.0(34)
G_a^J (MHz)	-0.004977(32)
F_{bc} (MHz)	-0.3989(19)
F_{bc}^K (kHz)	
G_b (MHz)	-41.55(34)
G_b^J (kHz)	
G_b^K (kHz)	



3-Cyanopyridine

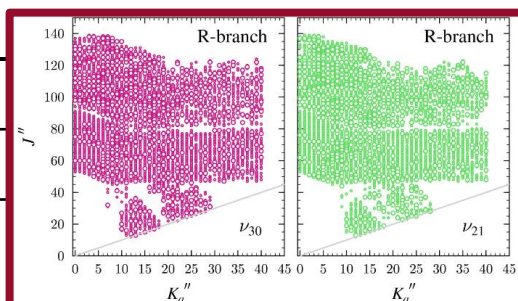


3.13 D
1.9 D

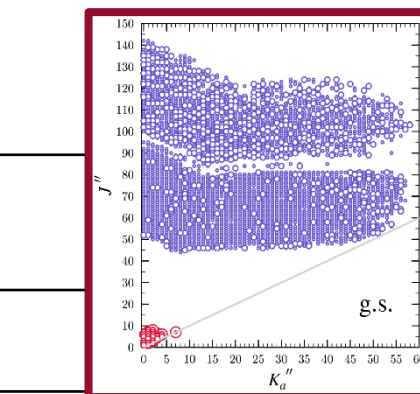
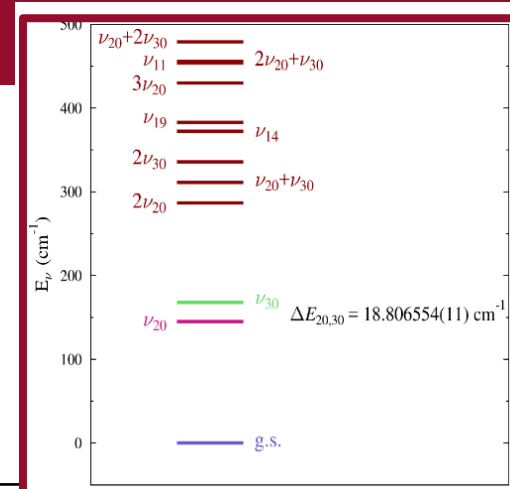
$A_0^{(S)}$ (MHz)	5823.05832 (12)
$B_0^{(S)}$ (MHz)	1571.351896 (31)
$C_0^{(S)}$ (MHz)	1237.169980 (23)

D_J (kHz)	0.0464884 (31)
D_{JK} (kHz)	1.063741 (28)
D_K (kHz)	0.23365 (16)
d_1 (kHz)	0.0110955 (13)
d_2 (kHz)	0.673714 (35)

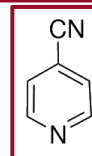
N_{lines}	6704
σ_{fit} (MHz)	0.043
Δ_I ($\text{u}\text{\AA}^2$)	0.086225 (10)



ΔE (cm^{-1})	15.7524693 (37)
G_a (MHz)	9708.1023 (44)
G_a^J (MHz)	-0.0050152 (79)
F_{bc} (MHz)	-0.40297 (19)
F_{bc}^K (kHz)	-0.01113 (24)
G_b (MHz)	-56.8014 (77)
G_b^J (kHz)	0.05652 (67)
G_b^K (kHz)	-0.154 (18)



4-Cyanopyridine

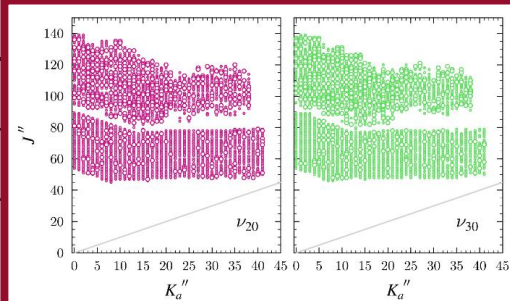


1.96 D

$A_0^{(S)}$ (MHz)	6000.67161 (95)
$B_0^{(S)}$ (MHz)	1541.178763 (12)
$C_0^{(S)}$ (MHz)	1226.000929 (12)

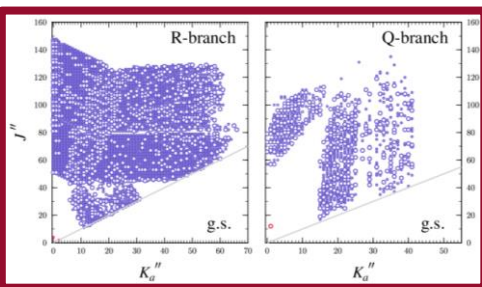
D_J (kHz)	0.0359881 (14)
D_{JK} (kHz)	1.043442 (39)
D_K (kHz)	0.2792 (27)
d_1 (kHz)	-0.01103528 (36)
d_2 (kHz)	-0.0055044 (15)

$N_{\text{ring}} \chi_{aa}$ (MHz)	-5.0315 (14)
$N_{\text{ring}} \chi_{bb}$ (MHz)	1.39985 (96)
$N_{\text{CN}} \chi_{aa}$ (MHz)	-4.3321 (15)
$N_{\text{CN}} \chi_{bb}$ (MHz)	2.21243 (61)
N_{lines}	4203
σ_{fit} (MHz)	0.035
Δ_I ($\text{u}\text{\AA}^2$)	0.079879 (14)



ΔE (cm^{-1})	18.799391 (10)
G_a (MHz)	10136.164 (24)
G_a^J (MHz)	-0.004687 (16)
F_{bc} (MHz)	-0.41065 (31)
F_{bc}^K (kHz)	-0.00784 (38)

Ground States



Excited Vibrational States

