Determination of the Interaction Potential and Rovibrational Structure of the Ground Electronic State of MgAr+ Using PFI-ZEKE Photoelectron Spectroscopy

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- Precision measurements with cold molecules: Rydberg states, ions and photoionization ()
- Cold Ion Chemistry - Experiments within a Rydberg Orbit ()

TABLE I. Supplementary material: Calculated vibrational term values and rotational constants for $^{24}MgAr^+$, $^{25}MgAr^+$, and $^{26}MgAr^+$. All values are in cm^{-1}.

v^+	T_{v^+}			B_{v^+}		
	$^{24}MgAr^+$	$^{25}MgAr^+$	$^{26}MgAr^+$	$^{24}MgAr^+$	$^{25}MgAr^+$	$^{26}MgAr^+$
0	0.0	0.0	0.0	0.141	0.137	0.134
1	100.2	99.0	97.9	0.137	0.133	0.130
2	195.3	193.1	190.9	0.132	0.129	0.126
3	285.5	282.3	279.3	0.128	0.125	0.122
4	370.8	366.8	363.0	0.124	0.121	0.119
5	451.4	446.6	442.2	0.120	0.117	0.115
6	527.4	522.0	516.9	0.116	0.113	0.111
7	598.8	592.9	587.4	0.112	0.109	0.107
8	665.9	659.6	653.6	0.108	0.105	0.103
9	728.5	721.9	715.7	0.103	0.101	0.099
10	787.0	780.1	773.7	0.099	0.097	0.096
11	841.2	834.3	827.7	0.095	0.093	0.092
12	891.5	884.5	877.9	0.091	0.089	0.088
13	937.7	930.7	924.2	0.087	0.085	0.084
14	980.0	973.2	966.8	0.082	0.081	0.080
15	1018.6	1012.0	1005.8	0.078	0.077	0.076
16	1053.6	1047.2	1041.2	0.074	0.073	0.072
17	1085.0	1079.0	1073.3	0.069	0.068	0.068
18	1112.9	1107.4	1102.0	0.065	0.064	0.063
19	1137.6	1132.5	1127.6	0.060	0.060	0.059
20	1159.2	1154.6	1150.1	0.056	0.055	0.055
21	1177.9	1173.8	1169.7	0.051	0.051	0.051
22	1193.8	1190.2	1186.7	0.046	0.047	0.047
23	1207.1	1204.1	1201.1	0.042	0.042	0.042
24	1218.2	1215.6	1213.1	0.037	0.038	0.038
25	1227.1	1225.1	1223.1	0.033	0.034	0.034
26	1234.3	1232.7	1231.1	0.029	0.029	0.030
27	1239.9	1238.7	1237.5	0.025	0.026	0.026
28	1244.2	1243.4	1242.6	0.021	0.022	0.023
29	1247.4	1246.9	1246.4	0.018	0.019	0.019
30	1249.8	1249.6	1249.3	0.015	0.015	0.016
31	1251.6	1251.5	1251.5	0.013	0.013	0.013
32	1253.6	1253.4	1253.2	0.014	0.013	0.013
33			1255.2			0.014