K-6a, In

KGa_2Br_7

1973

90468w Vibrational spectra of the heptabromodigallate and heptachlorodigallate ions. Grodzicki, A.; Potier, A. (Lab. Acides Miner., Univ. Sci. Tech. Languedoc, Montpellier, Fr.). *J. Inorg. Nucl. Chem.* 1973, 35(1), 61–6 (Fr). The vibrational spectra of KGa_2Br_7 in the solid state are given. Bands and lines were assigned with ref. to Cl_2O_7. The symmetry of the ion is C_{2v} (or C_s). Assignments for the bridge are ν_s(Ga-Br-Ga) = 195 cm^{-1}, ν_{as}(Ga-Br-Ga) = 222 cm^{-1}. Consequently the following reassignments for $[Ga_2Cl_7]^-$ for the bridge (Ga-Cl-Ga) are proposed: ν_s(Ga-Cl-Ga) = 276 cm^{-1}, ν_{as}(Ga-Cl-Ga) = 286 cm^{-1}.

ν_i

$[Ga_2Cl_7]^-$ ν_i

(+1)

C.A. 1973. 78 N 14

КGaH4 40771

1973

1326

Shirk A.E., Shriver D.F.
Raman and infrared spectra of tetrahydroaluminate, AlH_4^-, and tetrahydrogallate, GaH_4^-, salts.

"J.Amer.Chem.Soc.", 1973, 95, N 18, 5904-5912 (англ.)

0977 ВИНИТИ

962 963

ВИНИТИ

K_3InF_6

1973

Reisfeld Martin J.,

Спектры ИК. Spectrochim. acta, 1973,

VI A29(10), 1923-1926.

● (see. K_3AlF_6, III)

$K_2InCl_5 \cdot H_2O$

Оттиски 9648 | 1980

и.к. Раман спектр

Di

кристал. и мол. структ

Wignacourt J. P. et al.

Spectrochim. acta, 1980, A36, 401–411.

$K_3InCl_6 \cdot H_2O$ | Оттиск 13366 | 1981

Раман. спектр, Di.

Lorriaux-Rubbens A., Wallart F., et al.,

Spectrochim. acta, 1981, A37, N 12, 1021-1027.

KGaCl$_4$ 1982

Hvistendahl Jan.

UK Avh. Inst. uorg. kjemi,

спектры 1982, N39, X, 80pp.

(см. LiAlCl$_4$; III)

$K_3B_3O_6$ 1983

Ивин Ю.М., Кравченко В.В. и др.

Колебай. спектр., строение

Моск. ин-т цветн. металлов и золота. М., 1983. 13 с., ил. Библиогр. 18 назв. (Рукопись деп. в ОНИИТЭХИМ г. Черкассы 10 нояб. 1983 г., № 1112 хп-Д83.) (См. $Na_3B_3O_6$, III)

K In Cl$_4$ (Ст. 19309) 1984

ИК эмиссион. спектр

Kristendahl Z., Klaeboe P., et al.,

Inorg. Chem., 1984, 23, N 6, 706-715.

K6a Cly

Оп. 1930 9

1984

ИК эмиссион. спектры

Kristendahl Z., Klaeboe P., et al., Inorg. Chem., 1984, 23, N 6, 706-715.

$KF-GaF_3$ 1985

Zhuravleva L.V.,
Nikitin M.I., et al.

ионно-
молекул.
равновес.

Int. J. Mass Spectrom
Ion Processes 1985, 65
(3) 253-61.

(ст. AlF_4^-, III)

$K_2In(OH)(SO_4)_2$ 1986

19 Б1292. Колебательный спектр и пространственная группа симметрии $K_2In(OH)(SO_4)_2$. The vibrational spectrum and space group of $K_2In(OH)(SO_4)_2$. Botto I. L., Baran E. J., Garcia A. C. «J. Mol. Struct.», 1986, **143**, 59—62 (англ.)

ИК- и КР-спектры

Исследованы ИК- и КР-спектры $K_2In(OH)(SO_4)_2$. Проведен факторгрупповой анализ внутр. кол. иона SO_4^{2-}. Ранее установлена равновероятность двух структур: с пространственной группой C_c или $C2/c$. Согласие ИК- и КР-частот свидетельствует об отсутствии центра симметрии, т. е. о пространственной симметрии C_c. К симм. вал. кол. SO отнесен дублет линий КР при 1012 и 981 $см^{-1}$; в ИК-спектре оказалась расщепленной полоса при 1149 $см^{-1}$ (ν_3). ИК-полоса средн. интенсивности при 722 $см^{-1}$ отнесена к либрац. кол. OH. Сделан вывод, что поведение SO_4^{2-} в данном соединении мало отличается от поведения в др. структурах, т. е. присутствие In(3+) несущественно влияет на связи S—O.

Е. Разумова

Х. 1986, 19, № 19

$KInF_4$

1996

125: 311182s **FT–IR study of alkali fluoride complexes.** Chen, Rong; Li, Weihong; Zhang, Qiyun (Coll. Chem. Mol. Eng., Peking Univ., Beijing, Peop. Rep. China 100871). *Guangpuxue Yu Guangpu Fenxi* **1996**, 16(4), 41–44 (Ch). Far–IR and Mid–IR spectra of alkali fluoride complexes such as $KInF_4$, $KAlF_4$, $RbAlF_4$, $CsAlF_4$, $RbGaF_4$, $CsGaF_4$ were studied by FTIR spectroscopy. Some vibration bands were assigned. The structures of these complexes were discussed.

(ик спектр)

45

C.A. 1996, 125, N24

KGaF$_4$ 1996

Сизых В.В., Соломонник В.Г.

и. п. 1 Регион. межвуз. конф. "Актуал. пробл. химии, хим. технол. и хим. образ.": "Химия 96," Иваново 22-26 апр. 1996.: Тез. докл. Иваново, 1996. С. 28-29.

(сеч. LiAlF$_4$; III)

1999

F: KGaF4
P: 3
132:142110 Ab initio study of the molecular structure, isomerism, and vibrational spectra of MAF4 (M = Li, Na, K; A = Al, Ga). Solomonik, V. G. Sliznev, V. V. Ivanovo State Chemical Engineering Academy Russia J. Struct. Chem., 40(3), 368-379 (English) 1999 The equil. geometrical parameters, force consts., vibration frequencies, IR intensities, and isomerization and dissocn. energies of M mols. are calcd. by Hartree-Fock and 2nd-order Moller-Plessett perturbati theory methods in the Li(9s3p1d/4s3p1d), Na,Al(12s8p1d/6s4p1d), K(14s11p3d/9s8p3d),

C-A-2000, 132

F(9s5p1d/4s2p1d), and Ga(13s10p5d/6s5p2d) bases of grouped Gaussian functions. The calcns. show that the structures corresponding to the bi- (b) and tridentate (t) coordinations of the M+ cation by the AF4- anion are isomers. The b configuration is energetical most favorable for LiAF4 mols. The b and t structures of NaAF4 have clos energies, and the t configuration is basic for KAF4 mols. Simple empiric relations between the mol. consts. in the series LiAF4.fwdarw.NaAF4.fwdarw.KAF4 are found and the mol. parameters of RbAF4 CsAF4 are estd. A combined anal. of the ab initio and exptl. data availa in the literature for MAF4 mols. is carried out. A no. of bands obsd. in IR spectrum of the matrix-isolated MAlF4 mols. are assigned to their tridentate isomer.

F: KGaF4
P: 3

1999

132:142110 Ab initio study of the molecular structure, isomerism, and vibrational spectra of MAF4 (M = Li, Na, K; A = Al, Ga). Solomonik, V. G. Sliznev, V. V. Ivanovo State Chemical Engineering Academy Russia J. Struct. Chem., 40(3), 368-379 (English) 1999 The equil. geometrical parameters, force consts., vibration frequencies, IR intensities, and isomerization and dissocn. energies of MAF4 mols. are by Hartree-Fock and 2nd-order Moller-Plessett perturbation theory methods Li(9s3p1d/4s3p1d), Na,Al(12s8p1d/6s4p1d), K(14s11p3d/9s8p3d), F(9s5p1d/4s and Ga(13s10p5d/6s5p2d) bases of grouped Gaussian functions. The calcns. that the structures corresponding to the bi- (b) and tridentate (t) coordinations of the M+ cation by the AF4- anion are

C-A-2000, 132

isomers. The b configuration is energetically most favorable for LiAF4 mols. The b and structures of NaAF4 have close energies, and the t configuration is basic KAF4 mols. Simple empirical relations between the mol. consts. in the se LiAF4.fwdarw.NaAF4.fwdarw.KAF4 are found and the mol. parameters of RbAF4 CsAF4 are estd. A combined anal. of the ab initio and exptl. data availa the literature for MAF4 mols. is carried out. A no. of bands obsd. in th spectrum of the matrix-isolated MA1F4 mols. are assigned to their trident isomer.