

N-11 (D,D)

$N\bar{D}_4$ Cl (C_p ; T_{tr})

2708-11

1937

Nitta J., Suenaga K

Sci. Papers Inst. Phys. Chem. Research (Tokyo)
1937, 32, 83-6 + O

The anomalous specific heat of
deutriioammonium chloride, $N\bar{D}_4$ Cl in the

6.

V (g)

C.A. 1937, 7323³

$N\bar{D}_4 Cl$ (T_{tr})

2719-II

1937

Smits a., Muller g. y.

Nature 1937, 139, 804

"The low - temperature transformation
of heavy ammonium chloride".

2

Feb 6

✓ (g) 

Feb. 1937, 52526
EOTB

NH_4Cl (T_{tr})

2456-III

1937

Smits A., Muller G.J., Kröger F.A.

Z. physik. Chem. 1937, B 38, 177-86

The low-temperature transition of
a ammonium - d_4 chloride

ЕСТЬ В. И.

Б

✓ (op)

c. a. 1938, 1171⁵

N Dy Cl (Ttr)

2758-II 1937

Weigle J., Saini H.

Compt. rend. soc. phys. hist. nat. Genève
54, 28-9 (in Arch. sci. phys. nat. 19,
(Mar.-apr. 1937))

Естество. кн.

Б

✓ (9P)

C.A. 1938, 3683 1

"Transformation of heavy ammonium
chloride".

2830-III 1939

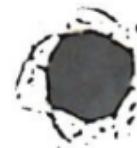
ND₄Cl (T_{tr})

Grillet L.

Bull.soc.sci.Bretagne; Sci.math.,
phys., nat. 1939, 16, 119-22

Thermal transformations of
ammonium salts at low temperature

C.A., 1946, 2703³



Есть ф. №

5

NH₄Cl (C_p, T_{t_2}) 909-IV
ND₄Cl

1952

Stephenson C.C., Blue R.W., Stout J.W.

J. Chem. Phys. 1952, 20, 1046-7

Nature of the gradual transition in
ammonium chloride and ammonium-dy
chloride." 9

5.K

C.A. 1952 10837 a

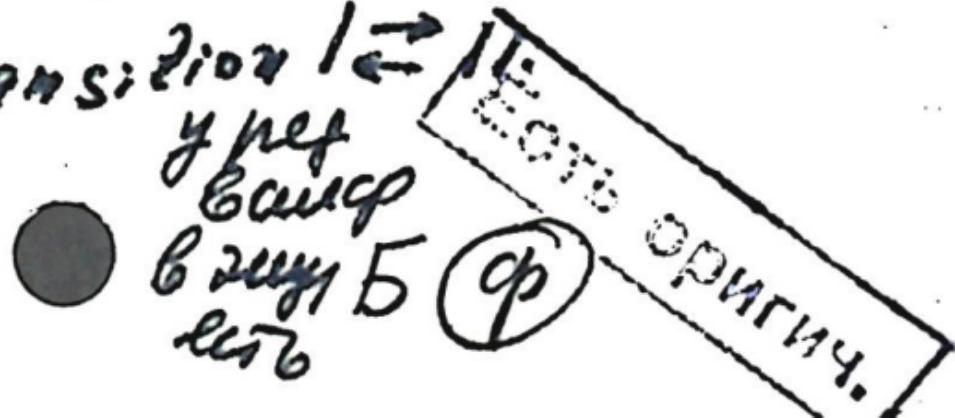
<u>NH₄Cl</u>	<u>ND₄(R)</u> , NH ₄ Br, NH ₄ I (T_b , T_f)	1969
<u>NH₄I</u>)	13	XIII 1780 516
	P. storius C.W.F.T.	
J.	Chem. Phys., 1969, 50, 1/3, 1435-1442 (aure)	
Sketching curves and phase transitions of the ammonium halides to 40 K-Sq.		
	8	
	5 (C ₇)	
Printed, 1969	Braxton Dallman	
166733	O	

ND₄Cl, ND₄Br (ΔH₂₂) 13
XIV 752 1970

Azell R., Roihola M., Salonen M.
Phys. kondens. Mater., 1970, 12, N2,
87-89 (auzu)

Transition energies of ND₄Cl and
ND₄Br in the transition I \leftarrow II

CA 71
PH Khim, 1971
116837



NCl_3 ; NCl_2F ; NCl_2H ; NCl_2D ; XIII 2138 1973
 NCl_2F ; NF_2Cl ; NF_2H ; NF_2D ; NF_2T ; $NClH_2$;
 NCl_2D ; $NClT_2$; NFH_2 ; $NClFH$; $NClFD$; $NClFT$;
 $NClDH$; $NClHT$; $NClTD$; $NFDH$; $NFTD$; NfH .

Рябченко Б.В.

Изб. бывш. учёд. забег., журн. хим.
технол., 1973, 16, № 2, 210-13 (русск.)

10(9)

JF Dy Cl (T_{tr}). XII 2628 1973.

Teh H.C., Brockhouse B.N.

Phys. Rev. B 1973, 8 (8), 3928-38.

Temperature dependence of the
lattice vibrations in ammonium
-dy chloride.

5 (p)

C.I. 1974. 80. N6. 31275 Z.

ND₄Cl, NH₄Cl (T_{tr}). XII-3252 1974

Hueller A., Kane J.W., 13, 86.

J. Chem. Phys., 1974, 61(9),
3599-609.

Electrostatic model for the
rotational potential in ammonium
halides.

B ⑨

C.A. 1975. 82 n16. 103398 h.

ND₄CE (I_{tr}) X^{III} 2758 1974

Yelon W.B., Cox D.E., Kortman P.J.

Daniels W.B.

Phys. Rev. B: Solid State, 1974, 9, NII,
4843-4856 (ann)

Neutron-diffraction study of ND₄CE 14
the tricritical region.

PH.D. 1974

246500

Coll. 5 CP

ND_4Cl (Tet) XIII-3311

1975

Garland C. W., Brueins D. E.,
Greytak T. J.,

Phys. Rev. B, 1975, 12 (7),
2759-64.

Higher-order critical
phenomena in ND_4Cl .

C.A. 1975-83 n26 211192P B CP

$\text{ND}_4\text{Cl} [\text{T}_{f_2}]$

1979

Zahradník C., Garland C.W. XIII-5512

J. Chem. Phys., 1979, 70, n^o2, 1011.-1014

Ultrasonic study of critical behavior
in ND_4Cl .

$NH_4Cl(k)$

1986

Егоров Т.Ю.,
Королев В.Р. и др.
Ин-т химии нефти
и нефтепродуктов. АН СССР. Иваново,
1986. 11с. Ведущий ред. 8 № 36.
Рис. (Рукопись № 6 ВИИИ
ТУ 11.06. 86, № 4275-В).

(см. $NH_4Cl(k)$; I)

ND_4ClO_4

NH_4ClO_4

(C_p)

01132790

1989

III: 122021p The thermodynamics of perchlorates. I. Heat capacity of ammonium-d₄ perchlorate from 7 to 345 K and the analysis of heat capacities and related data of ammonium perchlorate and ammonium-d₄ perchlorate. Brown, R. J. C.; Weir, R. D.; Westrum, E. F., Jr. (Dep. Chem., Queen's Univ., Kingston, ON Can. K7L 3N6). *J. Chem. Phys.* 1989, 91(1), 399-407 (Eng). The heat capacity of the orthorhombic salt: deuterated ammonium perchlorate, ND_4ClO_4 , was measured from 7 to 345 K using adiabatic calorimetry. The heat capacity vs. temp. curve is smooth, continuous and without anomaly. Values of the std. molar thermodn. quantities are presented up to 340 K. The heat capacities of ND_4ClO_4 and NH_4ClO_4 were analyzed. The contributions to the vibrational heat capacity from the external optical modes of NH_4^+ or ND_4^+ , ClO_4^- and libration from the external modes of ClO_4^- along with those of vibration from the internal optical modes of NH_4^+ or ND_4^+ and ClO_4^- , and the acoustic lattice modes for these ions were calcd. The difference between the exptl. and calcd. heat capacity, called the residual heat capacity, equals the contribution from ammonium ion rotation and the thermal expansion of the lattice. With recent thermal expansion data, the correction from const. stress to const. strain has been applied and the derived rotational heat capacities of the NH_4^+ and ND_4^+ are detd. to be in qual. agreement with those derived from various rotational models.

C.A. 1989, III, N 14

ND₄ClO₄

DM 32790

1989

3 E276. Термодинамика перхлоратов. I. Теплоемкость ND₄ClO₄ от 7 до 345 К и анализ теплоемкости и связанных с ней величин для NH₄ClO₄ и ND₄ClO₄. The thermodynamics of perchlorates. I. Heat capacity of ND₄ClO₄ from 7 to 345 K and the analysis of heat capacities and related data of NH₄ClO₄ and ND₄ClO₄ / Brown R. J. C., Weir R. D., Westrum E. F., (Jr.) // J. Chem. Phys.— 1989.— 91, № 1.— С. 399—407.— Англ.

С помощью адиабатич. калориметра в интервале т-р от 7 до 345 К измерена теплоемкость ромбического дейтерированного перхлората аммония ND₄ClO₄. Образец массой 13,7197 г получен путем многократного растворения NH₄ClO₄ в D₂O. Результаты сравнивались с данными для NH₄ClO₄ и с теоретич. расчетами, учитывающими внутренние и внешние оптич. колебания ионов ND₄⁺ и ClO₄⁻, либрацию и акустич. колебания. Разность между экспериментальной и рассчитанной теплоемкостью, т. наз. остаточная теплоемкость, приписана вкладу от вращения аммония и теплового расширения решетки. Библ. 40.

В. Оскотский

cf. 1990, n3

Nd₄Cl

1992

Powell B.M., Weiz R. D.,

J. Chem. Thermodyn. 1992, 24(10),
119-20.

(T_{tz})

(Cu · Nd₄)₂ · 8nCl₆; Γ)