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Abstract

In this work, we provide recommended normal melting points, binary eutectic melting points, and heats of fusion for the metal halides. Recommended melting points are provided for about 320 compounds. Recommended temperatures are provided for about 750 individual binary eutectic transitions for about 540 binary pairs. A eutectic point is a temperature where a liquid phase is in equilibrium with two solid phases (Liquid → A + B). Eutectics are minimums in the equilibrium phase diagrams – melting at lower temperatures than the individual components.

Keywords

metal halides; binary eutectics; melting points; heats of fusion.

Contents

1. Introduction

In this work, we provide recommended normal (1 atm) melting points, binary eutectic melting points, and heats of melting/fusion (where available) for the metal halides. Recommended melting points are provided for about 320 compounds. Recommended temperatures are provided for about 750 individual binary eutectic transitions for about 540 binary pairs (many systems have more than one eutectic transition).

A eutectic point is a temperature where a liquid phase is in equilibrium with two solid phases (Liquid $\rightarrow$ A + B). Eutectics are minimums in the equilibrium phase diagrams – melting at lower temperatures than the individual components: for example, the eutectic melting point of LiF–LiCl at 774 K is lower than the melting points of LiF and LiCl at 1118.9 K and 879.8 K, respectively.

Dissolved salts and phase equilibrium in solid-state ionic systems are important to many applications including a) molten salt reactors (MSRs) which are nuclear reactors where the mixture is used as a coolant or fuel that allows the reactors to operate at lower operating temperatures and with better heat transfer; b) metallurgical processes where metal halide mixtures are used to recover precious metals; c) batteries where solid electrolytes are used as high ionic conductivity phases; and d) optoelectronic devices where ionic liquids are used to create specialized phases.

2. Compilation and Evaluation

The selected melting points (for about 320 compounds) are taken from our compilation of about 900 values extracted from the literature (only the selected values are provided here) and these data were taken from about 140 different references. However, about one half of the 900 values are from reviews and evaluations, and the recommended values come from about 50 different sources. About 70 % of the melting points for the roughly 320 compounds come from just 8 research groups: Pankratz, Robertson, Kelley, Dworkin and coworkers, Gibson and coworkers, Spedding and coworkers, Gaune-Escard, Rycerz and coworkers, and Brewer and coworkers. See bibliography for the many references for this set. About 60 of the 140 different references are after the 1987 comprehensive evaluation by Sangster and Pelton [1987SAN].

We provide about 750 eutectic melting points for about 540 metal halide pairs (along with heats of fusion, where available) from about 130 different sources. About 60 % of these were taken from work by just 5 research groups: Robertson, Thoma, Janz, Sangster, and Gaune-Escard & Rycerz. The first four are evaluations, while the latter are experimental measurements. See the table and the bibliography in this work for the references for this set. Also see the evaluations for citations to the original sources (they were not abstracted in this work). These selected eutectic melting points values were taken from a larger compilation of about 1060 values in the literature taken from about 170 different sources of which about 60 % are after the latest (1987) comprehensive evaluation by Sangster and Pelton [1987SAN].

This evaluation is restricted to binary metal halide systems (MX–NY) where M and N are metal cations and X and Y are halogen anions. We provide combinations of salts containing fluoride

(F), chloride (Cl), bromide (Br), and iodide (I) anions with about 55 different metal cations. We do not include eutectic points for the much more complex ternary and quaternary systems. We also do not include data for intermediate compounds (*e.g.*, the KF–AlF_3 system has two eutectic melting points separated by a congruent melting point for the compound $3KF{\cdot}AlF_3$). The end points (melting points) are given in Table 5 (*e.g.*, KF and AlF_3).

Tables 5 and 6 are ordered in increasing complexity/molecular weight – first by the metal and then by the halogen (F through I). The chemical classes/groups for the metals in order are Alkali Metals, Alkaline Earth Metals, Main Groups 13-16, Transition Metals (1^{st}, 2^{nd}, and 3^{rd} row), Lanthanides, and Actinides.

In compilations by others, there are several different types of orderings for the eutectics A–B; some alphabetical, some arranged by molar percentage of the solvent (A), and some by molar percentage of the solute (B). We believe arranging the eutectics by the solute is the most standard and reasonable, for example the eutectic for LiF–LiCl is designated as LIF – 69.5 % LiCl, since LiCl has a higher molecular weight than LiF. See more discussion of which of the binary pairs is considered the solvent and which is considered the solute and how they are ordered in Section 5 for the eutectic points.

Auxiliary information is given in Table 1 (Column heading definitions), Table 2 (Notation for transitions), Table 3 (Notations for methods), and Table 4 (Chemical Abstracts Registry Numbers).

3. Notation Used

Table 1. Column headings definitions

Column Heading	Definition
Compound	Metal halide or metal halide eutectic (A–B)
% B	Mole fraction (molar) percentage of solute B in solvent A for eutectic (A–B)
T_{MP}**(K)**	Temperature of normal melting point or eutectic transition, in K
unc(T_{MP})	Uncertainty in temperature, in K, as reported in the original source where, generally, standard (*u*) or expanded (*U*) uncertainty are not provided. The latter can be interpreted as a maximum uncertainty or half the range of values – equivalent to an expanded uncertainty (*U*, 95 % confidence level). We have estimated some uncertainties, where unavailable in the original source
$\Delta_m H$	Heat of fusion or eutectic melting, in kJ mol^{-1}. No uncertainties have been provided since these are infrequently reported. In general, uncertainties in the heats of eutectic melting transitions are on the order of (2 to 3) %, based on our analysis of the data.

Table 2. Notation for transitions

Notation	Definition
[*value*]	Values in square brackets are estimates by us or others or are uncertain

Table 3. Notation for Methods

Notation	Definition
calor	Calorimetric method
Calphad	Calphad thermodynamic modeling
conduct	Electrical conductance
drop cal	Drop calorimetry
DSC	Differential scanning calorimetry
DTA	Differential thermal analysis
est	Estimated
eval	Critical evaluation
heat cap	Heat capacity
ice cal	Ice calorimetry
model	Thermodynamic modeling
MP	Melting point observation
quoted	Quoted value without reference
review	Limited review of data
therm	Thermal method
visual	Visual determination
VP	Vapor pressure

Table 4. Metal Salts Chemical Abstract Registry Numbers

Alkali Metals	
LiF	7789–24–4
LiCl	7447–41–8
LiBr	7550–35–8
LiI	10377–51–2
NaF	7681–49–4
NaCl	7647–14–5
NaBr	7647–15–6
NaI	7681–82–5
KF	7789–23–3
KCl	7447–40–7
KBr	7758–02–3
KI	7681–11–0
RbF	13446–74–7
RbCl	7791–11–9
RbBr	7789–39–1
RbI	7790–29–6
CsF	13400–13–0
CsCl	7647–17–8
CsBr	7787–69–1
CsI	7789–17–5
Alkaline Earth Halides	
BeF_2	7787-49-7
$BeCl_2$	7787–47–5
$BeBr_2$	7787–46–4
BeI_2	7787–53–3
MgF_2	7783–40–6
$MgCl_2$	7786–30–3
$MgBr_2$	7789–48–2
MgI_2	10377–58–9
CaF_2	7789–75–5
$CaCl_2$	10043–52–4
$CaBr_2$	7789–41–5
CaI_2	10102–68–8
SrF_2	7783–48–4
$SrCl_2$	10476–85–4
$SrBr_2$	10476–81–0
SrI_2	10476–86–5
BaF_2	7787-32-8
$BaCl_2$	10361–37–2
$BaBr_2$	10553–31–8
BaI_2	13718–50–8
Group 13 (Al to Tl)	
AlF_3	7784–18–1
Al_2Cl_6	13845-12-0
$AlCl_3$	7446–70–0
Al_2Br_6	18898-34-5
$AlBr_3$	7727–15–3
Al_2I_6	18898-35-6
AlI_3	7784–23–8
$GaCl_3$	13450-90-3
$GaBr_3$	13450–88–9
GaI_3	13450–91–4
InF_3	7783–52–0
InCl	13465–10–6
$InCl_3$	10025–82–8
$InBr_3$	13465–09–3
InI_3	13510–35–5
TlF	7789–27–7
TlCl	7791–12–0
TlBr	7789–40–4
TlI	7790–30–9
Group 14 (Si to Pb)	
Si_2F_6	13830-68-7
SiF_4	7783–61–1
Si_2Cl_6	13465-77-5
Si_3Cl_8	13596-23-1
$SiCl_4$	10026–04–7
$SiBr_4$	7789–66–4
SiI_4	13465–84–4
$GeCl_4$	10038–98–9
$GeBr_4$	13450–92–5
SnF_2	7783–47–3
SnF_4	7783–62–2
$SnCl_2$	7772–99–8
$SnCl_4$	7646–78–8
$SnBr_2$	10031–24–0
$SnBr_4$	7789–67–5
SnI_2	10294–70–9
SnI_4	7790–47–8
PbF_2	7783-46-2
$PbCl_2$	7758-95-4
$PbBr_2$	10031-22-8
PbI_2	10101–63–0
Group 15 (As to Bi)	
AsF_3	7784–35–2
AsF_5	7784–36–3
$AsCl_3$	7784–34–1
$AsBr_3$	7784–33–0
AsI_3	7784–45–4
SbF_3	7783–56–4
$SbCl_3$	10025–91–9
$SbCl_5$	7647–18–9
$SbBr_3$	7789–61–9
$SbBr_4$	13709-45-0
SbI_3	7790–44–5
$BiBr_3$	7787-58-8
$BiCl_3$	7787–60–2
BiF_3	7787–61–3
BiI_3	7787–64–6
Group 16 (Te)	
TeF_6	7783–80–4
$TeCl_2$	10025–71–5
$TeCl_4$	10026–07–0
Trans Metals 1st Row	
ScF_3	13709–47–2
$ScCl_3$	10361–84–9
$ScBr_3$	13465–59–3
ScI_3	14474–33–0
$TiCl_2$	10049–06–6
$TiCl_3$	7705–07–9
$TiCl_4$	7550–45–0
$TiBr_4$	7789–68–6
VBr_2	14890–41–6
VI_2	15513–84–5
CrF_2	10049–10–2
CrF_3	7788–97–8
$CrCl_2$	10049–05–5
$CrBr_2$	10049–25–9
CrI_2	13478–28–9
MnF_2	7782–64–1
$MnCl_2$	7773-01-5
$MnBr_2$	13446–03–2
MnI_2	7790–33–2
FeF_2	7789–28–8
Fe_2Cl_6	16480-60-7
$FeCl_2$	7758–94–3
$FeCl_3$	7705–08–0
$FeBr_2$	7789–46–0
FeI_2	7783–86–0
CoF_2	10026–17–2
$CoCl_2$	7646–79–9

$CoBr_2$	7789–43–7
CoI_2	15238–00–3
NiF_2	10028–18–9
$NiCl_2$	7718–54–9
$NiBr_2$	13462–88–9
NiI_2	13462-90-3
CuF	13478–41–6
CuF_2	7789–19–7
Cu_2Cl_2	12258-96-7
CuCl	7758–89–6
$CuCl_2$	7447–39–4
CuBr	7787–70–4
CuI	7681–65–4
ZnF_2	7783–49–5
$ZnCl_2$	7646–85–7
$ZnBr_2$	7699–45–8
ZnI_2	10139-47-6
Trans Metals 2nd Row	
YF_3	13709–49–4
YCl_3	10361–92–9
YBr_2	na
YBr_3	13469–98–2
YI_3	13470–38–7
ZrF_2	13842-94-9
ZrF_4	7783–64–4
$ZrCl_2$	13762–26–0
$ZrCl_4$	10026–11–6
$ZrBr_2$	24621-17-8
$ZrBr_4$	13777–25–8
ZrI_2	15513–85–6
ZrI_4	13986–26–0
NbF_5	13842–88–1
$NbCl_4$	13569–70–5
$NbCl_5$	10026–12–7
$NbBr_5$	13478–45–0
MoF_6	7783–77–9
$MoCl_4$	13478–18–7
$MoCl_5$	10241-05-1
AgF	7775–41–9
AgCl	7783–90–6
AgBr	7785–23–1
AgI	7783–96–2
CdF_2	7790–79–6
$CdCl_2$	10108–64–2
$CdBr_2$	7789–42–6
CdI_2	7790–80–9

Trans Metals 3rd Row	
LuF_3	13760–81–1
$LuCl_3$	10099–66–8
$LuBr_3$	14456–53–2
LuI_3	13813–45–1
HfF_4	13709–52–9
$HfCl_4$	13499–05–3
$HfBr_4$	13777–22–5
HfI_4	13777-23-6
$TaCl_5$	7721-01-9
TaI_5	14693–81–3
WF_6	7783–82–6
WCl_5	13470–14–9
WCl_6	13283–01–7
WBr_5	13470–11–6
$ReCl_3$	13569-63-6
$ReCl_5$	13596-35-5
OsF_8	18432–81–0
HgF_2	7783–39–3
$HgCl_2$	7487–94–7
$HgBr_2$	7789–47–1
Hg_2I_2	15385–57–6
HgI_2	7774–29–0
Lanthanides	
LaF_3	13709–38–1
$LaCl_3$	10099–58–8
$LaBr_3$	13536–79–3
LaI_2	71626-98-7
LaI_3	13813–22–4
CeF_3	7758-88-5
$CeCl_3$	7790–86–5
$CeBr_3$	7790–86–5
CeI_2	19139–47–0
CeI_3	7790–87–6
PrF_3	13709–46–1
$PrCl_3$	10361–79–2
$PrBr_3$	13536–53–3
PrI_2	65530–47–4
PrI_3	13813–23–5
NdF_3	13709–42–7
$NdCl_3$	10024–93–8
$NdCl_3$	10024–93–8
$NdBr_3$	13536–80–6
NdI_3	13813–24–6
PmF_3	13709-45-0
$PmCl_3$	13779–10–7

$PmBr_3$	14325–78–1
PmI_3	13818-73-0
SmF_2	15192–17–3
SmF_3	13765–24–7
$SmCl_2$	13874–75–4
$SmCl_3$	10361–82–7
$SmBr_2$	50801–97–3
$SmBr_3$	13759–87–0
SmI_2	32248–43–4
SmI_3	13813–25–7
EuF_2	14077–39–5
EuF_3	13765–25–8
$EuCl_2$	13769–20–5
$EuCl_3$	10025–76–0
$EuBr_2$	13780–48–8
$EuBr_3$	13759–88–1
EuI_2	22015–35–6
EuI_3	13759–90–5
GdF_3	13765–26–9
$GdCl_3$	10138–52–0
$GdBr_3$	13818–75–2
GdI_3	13572–98–0
TbF_3	13708-63-9
$TbCl_3$	10042–88–3
$TbBr_3$	14456–47–4
TbI_3	13813–40–6
DyF_3	13569–80–7
$DyCl_2$	13767–31–2
$DyCl_3$	10025–74–8
$DyBr_3$	14456–48–5
DyI_3	15474–63–2
HoF_3	13760-78-6
$HoCl_3$	10138–62–2
$HoBr_3$	13825–76–8
HoI_3	13813-41-7
ErF_3	13760–83–3
$ErCl_3$	10138–41–7
$ErBr_3$	13536–73–7
ErI_3	13813–42–8
TmF_3	13760–79–7
$TmCl_3$	13537–18–3
$TmCl_3$	13537–18–3
$TmBr_3$	14456–51–0
TmI_3	13813–43–9
YbF_2	15192–18–4
YbF_3	13760–80–0

$YbCl_2$	13874–77–6
$YbCl_3$	10361–91–8
$YbBr_2$	25502–05–0
$YbBr_3$	13759–89–2
YbI_2	19357–86–9
YbI_3	13813–44–0
Actinides	
ThF_4	13709-59-6
$ThCl_4$	10026–08–1
$ThBr_4$	13453–49–1
ThI_4	7790–49–0
UF_3	13775–06–9
UF_4	10049–14–6
UF_6	7783–81–5
UCl_3	10025–93–1
UCl_4	10026–10–5
UBr_3	13470–19–4
UBr_4	13470–20–7
UI_3	13775–18–3
UI_4	13470–22–9
NpF_3	16852–37–2
NpF_6	14521–05–2
$NpCl_3$	20737–06–8
PuF_3	13842-83-6
PuF_4	13709-56-3
PuF_6	13693–06–6
$PuCl_3$	13569–62–5
$PuBr_3$	15752–46–2
PuI_3	13813–46–2
AmF_3	13708-80-0
$AmCl_3$	13464–46–5

4. Melting Points for the Metal Halides

In Table 5, we provide normal melting points and heats of fusion (melting), where available, for about 320 metal halides. A normal melting point is the temperature where the solid and liquid phases are in thermodynamic equilibrium at standard pressure (1 atm = 101.325 kPa).

Uncertainties are provided in this table – in general, however, the uncertainties in the melting points (as reported) have a range of about (1 to 6) K and median/averages of about (4 to 4.5) K. In some cases, where no uncertainty is provided in the literature, but where a range of values was found, we used this range to estimate the uncertainty. In most cases, we have assigned an estimated uncertainty in T_{MP} as 0.3 % of the temperature, based on our analysis of uncertainties that are available. Similarly, for heats of fusion we assigned estimated uncertainties assuming they are 2 % of the heat of fusion ($\Delta_m H$). About 90 % of the metal halides have reported heats of fusion, of those about 25 % have reported uncertainties and about 70 % have estimated uncertainties.

We arranged the metal halides by chemical class/group in increasing complexity/molecular weight: Alkali Metals, Alkaline Earth Metals, Main Groups 13-16, Transition Metals (1st, 2nd, and 3rd row), Lanthanides, and Actinides. Note that not all elements in particular group have known metal halides. For example, the only known metal halides (that we could find) are TeF_6, $TeCl_2$, and $TeCl_4$.

Table 5 lists the metal halides, the melting temperature (T_{MP}) and its uncertainty (reported or estimated), the heat of fusion ($\Delta_m H$), where available, and its uncertainty, the method used to determine the melting point and heat of fusion, and a reference. Estimated values are shown in square brackets "[]".

Note: The stable forms of $AlBr_3$, AlI_3, and $FeCl_3$ are the dimers Al_2Br_6, Al_2I_6, and Fe_2Cl_6. We report melting points for the dimers. However, in Table 6 for the eutectics the notation utilizes the monomers to reflect molar percentages.

Table 5. Melting Points and Heats of Fusion for the Metal Halides

Compound	T_{MP}	*unc*(T_{MP})	$\Delta_m H$	*unc*($\Delta_m H$)	Method	Reference
	------ K ------		---- kJ mol^{-1} ----			
Alkali Metals						
LiF	1118.9	3	27.9	0.8	DSC	2013CAP
LiCl	879.8	1.4	19.9	[0.4]	DSC	2023YIN
LiBr	823.0	[4]	17.7	[0.4]	drop cal	1960DWO
LiI	742	[1.5]	14.6	[0.4]	drop cal	1960DWO
NaF	1270	[2]	33.1	[0.7]	drop cal	1960DWO
NaCl	1075.2	0.9	28.0	[0.6]	DSC	2023YIN
NaBr	1021	[2]	26.1	[0.5]	drop cal	1960DWO
NaI	939	[5]	23.6	[0.5]	conduct	2006DAN
KF	1132	[2]	28.2	[0.6]	drop cal	1960DWO
KCl	1044.5	1.7	26.5	[0.5]	DSC	2023YIN
KBr	1007	[2]	25.5	[0.5]	drop cal	1960DWO
KI	954	[2]	24.0	[0.5]	drop cal	1960DWO
RbF	1069	[2]	25.7	[0.5]	drop cal	1960DWO
RbCl	995	[2]	23.7	[0.5]	drop cal	1960DWO
RbBr	965	[2]	23.3	[0.5]	drop cal	1960DWO
RbI	920	[2]	22.0	[0.4]	drop cal	1960DWO
CsF	976	[5]	21.9	0.8	DSC	1997ABD
CsCl	918	[2]	20.3	[0.4]	drop cal	1960DWO
CsBr	909	[2]	23.6	[0.5]	drop cal	1960DWO
CsI	903.7	[2]	24.0	[0.5]	DSC	1985COR
Alkaline Earths						
BeF_2	825	[5]	4.76	[0.8]	ice cal	1965TAY
$BeCl_2$	688	5	8.7	0.3	calor	1965MCD
$BeBr_2$	781	[10]	[10]	[8]	MP	1963SEM
BeI_2	753	[2]	20.9	[0.6]	eval	1984PAN
MgF_2	1537	[5]	58.2	[1.2]	drop cal	1945NAY
$MgCl_2$	978.5	0.1	44	1	DSC	2022PAR
$MgBr_2$	984	[15]	35	[0.7]	review	1963BRE
MgI_2	923	[10]	26.0	[3]	eval	1966ROB1

CaF_2	1690	[5]	[30]	[0.6]	conduct	2001VOR
$CaCl_2$	1046	[1.5]	28.4	[0.6]	drop cal	1963DWO1
$CaBr_2$	1016	[1.5]	29.1	[0.6]	drop cal	1963DWO1
CaI_2	1057	[1.5]	41.8	[0.8]	drop cal	1963DWO1
SrF_2	1740	[5]	[30]	[1]	conduct	2001VOR
$SrCl_2$	1147	[2]	16.2	[0.4]	drop cal	1963DWO1
$SrBr_2$	930	[1.5]	10.5	[0.4]	drop cal	1963DWO1
SrI_2	811	[1.5]	19.7	[0.4]	drop cal	1963DWO1
BaF_2	1620	[10]	[27]	[1]	conduct	2001VOR
$BaCl_2$	1236	[2]	16.3	[0.3]	drop cal	1963DWO1
$BaBr_2$	1131	[2]	31.9	[0.6]	drop cal	1963DWO1
BaI_2	984	[1.5]	26.5	[0.5]	drop cal	1963DWO1
Group 13 (Al to Tl)						
$AlCl_3$	465.7	0.2	35.4	[0.8]	MP	1950FOS
Al_2Br_6	371.2	[1]	22.7	[0.5]	melt	1964THO
Al_2I_6	461.47	0.02	33.3	[0.7]	melt	1964THO
$GaCl_3$	349.6	[1.5]	46.5	0.4	DSC	2007CHU
$GaBr_3$	395.5	[3]			conduct	1957GRE
GaI_3	485	[3]			conduct	1957GRE
InF_3	1445	[4]	64	[1]	eval	1984PAN
InCl	484	[1.5]	21.3	[0.4]	eval	1984PAN
$InCl_3$	858	[3]			therm	1945VOV
$InBr_3$	693	[2]			eval	1990OKA
InI	638	[2]			MP	1956PER
InI_2	497.8	[1.5]			MP	1956PER
InI_3	480	[10]			MP	1956PER
TlF	595.4	[2]	13.9	[0.3]	calor	1965CUB
TlCl	704	[2]	15.6	[0.3]	calor	1965CUB
TlBr	733	3	[16.4]	[1]	DSC	2025SAL1
TlI	714.8	[2.0]	14.7	[1]	calor	1965CUB
Group 14 (Si to Pb)						
Si_2F_6	254.7	[1.0]	16.3	[0.3]	eval	1936KEL
SiF_4	178.4	[1.0]	25.6	[0.5]	eval	1936KEL
Si_2Cl_6	272	[1.0]	0.58	[0.02]	eval	1936KEL

Si_3Cl8	484.6	[1.5]			eval	1936KEL
$SiCl_4$	205.6	[1.0]	7.72	[0.16]	eval	1936KEL
$SiBr_4$	278.4	1			MP	1930POH
SiI_4	396.85	0.06	19.7	2.1	MP	1960MCC
$GeCl_4$	221.7	0.1	8.52	[0.18]	therm	1986DEV
$GeBr_4$	299.27	0.01	12.85	0.03	calor	1999BER
GeI_2	701.2	0.3	33.3	0.2	drop cal	2003ZEL
GeI_4	419	[1]	19.2	0.2	drop cal	2003ZEL
SnF_2	486	[2]	10.5	[0.2]	therm	2008DVO1
$SnCl_2$	520	[3]	14.6	[0.3]	MP	1911HER
$SnCl_4$	239.9	[3]	9.2	0.2	calor	1922LAT
$SnBr_2$	504	[2]	17.2	[0.3]	therm	1971SEV
$SnBr_4$	303	[2]	12.6	[0.3]	eval	1936KEL
SnI_2	593	[2]	18.0	[0.4]	therm	1971SEV
SnI_4	418	[2]	19.2	[0.4]	eval	1984PAN
PbF_2	1103	[3]	14.7	[0.3]	calor	1970LIN
$PbCl_2$	772.7	1	23.9	[0.5]	therm	1985GAB
$PbBr_2$	644	[4]	16.4	[0.3]	calor	1970LIN
PbI_2	683	[2]	23.4	[0.5]	calor	1970LIN
Group 15 (As to Bi)						
AsF_3	264.5	[1.0]			eval	1966ROB1
AsF_5	192.5	[1.0]	11.7	[0.2]	eval	1936KEL
$AsCl_3$	255	[1]	10.1	[0.2]	eval	1966ROB1
$AsBr_3$	306	[2]	11.8	[0.2]	eval	1966ROB1
AsI_3	413.6	0.3	22.3	[0.5]	MP	1965CUB
SbF_3	560	[2]	22.8	[0.5]	MP	1969CUB
$SbCl_3$	346.6	[1.5]	[12.7]	[0.5]	MP	1980FON
$SbCl_5$	277	[1.0]	10.0	[0.2]	eval	1936KEL
$SbBr_3$	366.2	[4]	14.7	[0.3]	therm	1912BER
$SbBr_4$	303.2	[1.0]			eval	1966ROB1
SbI_3	444	[5]	22.76	0.21	MP	1965CUB
BiF_3	922	2	21.6	0.6	therm	1968CUB
$BiCl_3$	506.7	[1.5]	23.8	0.3	drop cal	1960TOP1
$BiBr_3$	491.7	[2]	20.8	[0.4]	therm	1967CUB

BiI_3	681.8	[5]	39.1	[0.8]	MP	1965CUB
Group 16 (Te)						
TeF_6	234.6	[1.0]	28.0	[0.6]	eval	1936KEL
$TeCl_2$	482	[10]			quoted	1957BRA
$TeCl_4$	497	[1.5]	18.9	[0.4]	eval	1984PAN
Transition Metals 1st Row						
ScF_3	1825	[5]	62.6	2.1	drop cal	1974SPE
$ScCl_3$	1240	[4]	64.7	[1.5]	therm	1971DWO1
$ScBr_3$	1242	3			therm	1973MCC
ScI_3	1218	[4]			DTA	1991MET
$TiCl_2$	1309	[4]			review	1963BRE
$TiCl_4$	248.64	0.2	9.4	[0.2]	MP	1955NEF
$TiBr_4$	311.4	[1.0]	12.9	[0.3]	heat cap	1971DWO1
VBr_2	1101	[3]			review	1963BRE
VI_2	1051	[3]			review	1963BRE
CrF_2	1168	6			therm	1962STU
CrF_3	1679	20			therm	1962STU
$CrCl_2$	1088	[3]	32.2	[0.6]	therm	1942MAI
$CrBr_2$	1156	[3]			review	1963BRE
CrI_2	1124	[3]	37.7	[0.8]	review	1963BRE
MnF_2	1173	20	29.3	[0.6]	DTA	1980RIM
$MnCl_2$	923	[3]	37.7	0.2	heat cap	1943MOO
$MnBr_2$	971	[3]	42.0	[0.8]	review	1963BRE
MnI_2	911	[3]	42.0	[0.8]	review	1963BRE
FeF_2	1373	[4]	51.9	[1]	eval	1998CHA
Fe_2Cl_6	577	[2]	86	[2]	eval	1936KEL
$FeCl_2$	950	[5]	43.0	0.2	heat cap	1943MOO
$FeBr_2$	962	2	46	13	DTA	1955MAC
FeI_2	860	[3]	45	[1]	eval	1984PAN
CoF_2	1400	[4]	44.9	0.9	drop cal	1967BIN
$CoCl_2$	999.0	2.2	46.0	2.0	DSC	2007WOJ
$CoBr_2$	949.7	0.2	27.2	0.2	DSC	2007WOJ
CoI_2	790	[2]			review	1963BRE
NiF_2	1629	5	69	[2]	DSC	2018OCA

$NiCl_2$	1304	[4]	77	[2]	eval	1984PAN
$NiBr_2$	1237	[4]			review	1963BRE
NiI_2	1071	[3]			review	1963BRE
CuF	[1181]	[3]			eval	1966ROB1
CuF_2	1109	[3]	55	[1]	DSC	1977EHL
Cu_2Cl_2	703	[2]	20.5	[0.4]	eval	1936KEL
CuCl	696	[2]	7.08	[0.14]	eval	1984PAN
$CuCl_2$	640	[2]			review	1963BRE
CuBr	757	[2]	5.10	[0.10]	therm	1911HER
CuI	875	[3]	7.93	[0.16]	therm	1930LUN
ZnF_2	1220	[4]	39.9	2.5	drop cal	1976KLE
$ZnCl_2$	588.7	1.5	10.3	[0.2]	drop cal	1964CUB
$ZnBr_2$	685.2	0.5	15.7	[0.3]	drop cal	1964CUB
ZnI_2	719	[2]			review	1963BRE
Transition Metals 2nd Row						
YF_3	1428	[4]	28.0	0.42	drop cal	1971SPE
YCl_3	994	[5]	31.5	[0.6]	heat cap	1971DWO1
YBr_2	955	[3]	19.1	[0.4]	DSC	2014KRA
YBr_3	1178	[4]	37.7	[0.8]	eval	1966GIB
YI_3	1274	[5]	50	[1]	eval	1966GIB
ZrF_2	1175	[150]	38	8	eval	1998CHA
ZrF_4	1206	2	64	[1]	drop cal	1962MCD
$ZrCl_2$	1000	3	27.0	[1.0]	eval	1998CHA
$ZrCl_4$	584	[2]	106	[2]	eval	1936KEL
$ZrBr_2$	900	[3]	63	[1]	eval	1984PAN
$ZrBr_4$	630	[2]	108	[2]	eval	1936KEL
ZrI_2	700	[2]	25.1	[0.5]	eval	1984PAN
ZrI_4	704	[2]	121	[2]	eval	1936KEL
NbF_5	350.7	[1.5]	12.22	0.06	drop cal	1960BRA
$NbCl_5$	478.9	0.5	33.8	1.0	drop cal	1968KEN
$NbBr_5$	527	[2]	24.0	[0.4]	eval	1984PAN
MoF_6	291	0.02	4.3	0.10	calor	1966OSB
$MoCl_4$	590	[2]			quoted	1957BRA
$MoCl_5$	467	[1.5]	18.8	[0.4]	eval	1998CHA

AgF	708	[2]			DTA	1953ROY
AgCl	730	[4]	12.32	0.04	calor	1970PAN
AgBr	700	[2]	8.49	0.03	calor	1970PAN
AgI	831	[2]	9.41	[0.20]	heat cap	1969NOL
CdF_2	1323	2	[23]	[1]	MP	1951HAE
$CdCl_2$	841	[3]	31.8	0.8	drop cal	1968ALI
$CdBr_2$	841.2	[3]	33.3	0.3	drop cal	1960TOP2
CdI_2	661.2	[2]	20.7	0.4	drop cal	1960TOP2
Transition Metals 3rd Row						
LuF_3	1457	3	30.3	0.4	drop cal	1971SPE
$LuCl_3$	1166	[3]	33.5	[0.7]	eval	1966GIB
$LuBr_3$	1231	[4]	33.5	[0.7]	eval	1966GIB
LuI_3	1319	[4]	33.5	[0.7]	eval	1966GIB
HfF_4	1206	2	64.2	0.4	drop cal	1962MCD
$HfBr_4$	697	[2]			review	2024AME4
$TaCl_5$	489.7	1.5	35.1	2.1	eval	1998CHA
TaI_5	769	[2]	6.7	[0.2]	DSC	1949ALE
WF_6	264.7	[1.0]			MP	1964WES
WF_6	272.8	[1.0]	7.53	[0.15]	eval	1936KEL
WCl_5	526	[2]	20.6	[0.4]	eval	1984PAN
WCl_6	555	[2]	6.69	[0.15]	eval	1984PAN
WBr_5	559	[2]	17.2	[0.3]	eval	1984PAN
$ReCl_3$	1003	[3]			quoted	1957BRA
$ReCl_5$	533	[2]			quoted	1957BRA
OsF_8	320.6	[1.0]	28.6	[0.6]	eval	1936KEL
HgF_2	918	[3]	23.0	[0.5]	eval	1984PAN
$HgCl_2$	553.7	0.5	18.8	0.8	drop cal	1966CUB
$HgBr_2$	511.3	0.1	17.9	0.3	calor	1959JAN
Hg_2I_2	563	[2]	27.2	[0.6]	eval	1984PAN
HgI_2	530	[2]	19.0	[0.4]	eval	1984PAN
Lanthanides						
LaF_3	1766	3	50.2	0.4	drop cal	1971SPE
$LaCl_3$	1124	3	55.7	1.1	DSC	1994GAU2
$LaBr_3$	1062	[1.5]	54.4	[1]	drop cal	1963DWO2

LaI_2	1104	[3]			eval	1965THO1
LaI_3	1051	[3]	55	[1]	heat cap	1971DWO1
CeF_3	1703	[5]	55.2	0.4	drop cal	1974SPE
$CeCl_3$	1086	[4]	55.5	1.1	DSC	1994GAU2
$CeBr_3$	1005	[3]	52	[2]	drop cal	1971DWO1
CeI_2	1073	[3]			DTA	1999KON
CeI_3	1033	[3]	51.9	[1]	drop cal	1963DWO1
PrF_3	1672	3	57.3	0.4	drop cal	1971SPE
$PrCl_3$	1061	[3]	52.1	1.0	DSC	1994GAU2
$PrBr_3$	966	[1.5]	47.2	[1]	drop cal	1963DWO2
PrI_2	1029	[1.5]	53.1	[1]	drop cal	1963DWO1
PrI_3	1012	[1.5]	53.1	[1]	drop cal	1963DWO1
NdF_3	1650	3	54.7	0.4	drop cal	1971SPE
$NdCl_3$	1032	[3]	48.1	1.0	DSC	1994GAU2
$NdBr_3$	955	[1.5]	45.2	[1]	drop cal	1963DWO2
NdI_3	1061	[1.5]	40.6	[1]	drop cal	1963DWO1
PmF_3	1682	[5]	[33]	[1]	eval	1966GIB
$PmCl_3$	1011	[3]	[33]	[1]	eval	1966GIB
$PmBr_3$	950	[3]	[33]	[1]	eval	1966GIB
PmI_3	1071	[3]	[33]	[1]	eval	1966GIB
SmF_2	[1652]	[5]	[21]	[1]	eval	1966GIB
SmF_3	1571	[5]	52.47	0.4	drop cal	1974SPE
$SmCl_2$	1014	[3]	[21]	[1]	eval	1966GIB
$SmCl_3$	950	[3]	48	[1]	DSC	2008RYC2
$SmBr_2$	973	[3]	[25]	[1]	eval	1966GIB
$SmBr_3$	937	[3]	[33]	[1]	eval	1966GIB
SmI_2	[800]	[3]	[33]	[1]	eval	1966GIB
SmI_3	1094	[3]	[38]	[1]	eval	1966GIB
EuF_2	[1652]	[5]	[21]	[1]	eval	1966GIB
EuF_3	[1535]	[5]	[48]	[1]	drop cal	1974SPE
$EuCl_2$	1125	[3]	18.7	[0.4]	DSC	2001SIL
$EuCl_3$	894	[3]	45	[1]	DSC	2008RYC2
$EuBr_2$	956	[3]	25.1	[0.5]	MP	1959JAN
$EuBr_3$	[975]	[3]	[33]	[1]	eval	1966GIB

EuI_2	[800]	[2]	[21]	[1]	eval	1966GIB
EuI_3	[1151]	[4]	[38]	[1]	eval	1966GIB
GdF_3	1505	[3]	52.43	0.4	drop cal	1974SPE
$GdCl_3$	873	[2]	41	[1]	DSC	2008RYC2
$GdBr_3$	955	[1.5]	36.4	[0.5]	drop cal	1963DWO2
GdI_3	1204	[4]	51	[1]	heat cap	1971DWO1
TbF_3	1450	[4]	58.53	0.4	drop cal	1974SPE
$TbCl_3$	854	[3]	20.8	0.4	DSC	2002RYC
$TbBr_3$	1103	[2]	37.4	0.5	DSC	2004RYC1
TbI_3	1228	[4]	57	[1]	heat cap	1971DWO1
DyF_3	1430	[4]	58.6	0.4	drop cal	1974SPE
$DyCl_3$	909	[3]	22.8	0.5	DSC	1994GAU2
$DyBr_3$	1155	[3]	37.7	[0.8]	eval	1966GIB
DyI_3	1229	[4]	42	[1]	eval	1966GIB
HoF_3	1416	3	56.3	0.4	drop cal	1971SPE
$HoCl_3$	993	[2]	29.3	[0.6]	drop cal	1963DWO2
$HoBr_3$	1192	[4]	50	[1]	heat cap	1971DWO1
HoI_3	1284	[4]	42	[1]	eval	1966GIB
ErF_3	1419	[4]	27.5	0.4	drop cal	1974SPE
$ErCl_3$	1048	[3]	31.1	0.6	DSC	1994GAU2
$ErBr_3$	1224	[4]	42	[1]	eval	1966GIB
ErI_3	1294	[4]	42	[1]	eval	1966GIB
TmF_3	1431	[4]	28.9	0.4	drop cal	1974SPE
$TmCl_3$	1092	[3]	35.6	0.7	DSC	1994GAU2
$TmBr_3$	1229	[4]	42	[1]	eval	1966GIB
TmI_3	1289	[4]	42	[1]	eval	1966GIB
YbF_2	1652	[5]	12.6	[0.3]	eval	1966GIB
YbF_3	1435	[4]	29.7	0.4	drop cal	1974SPE
$YbCl_2$	1000	[3]	25.1	[0.8]	eval	1966GIB
$YbCl_3$	1128	[4]	37.7	[1.1]	eval	1966GIB
$YbBr_2$	950	[3]	25.1	[0.5]	eval	1966GIB
$YbBr_3$	1214	[4]	41.8	[1.3]	eval	1966GIB
YbI_2	800	[2]	25.1	[0.5]	eval	1966GIB
YbI_3	[1301]	[8]	41.8	[1.3]	eval	1966GIB

Actinides						
ThF_4	1386	[2]	41.9	2	DSC	2013CAP
$ThCl_4$	1042	[3]	62	1.3	calor	1966CHI
$ThBr_4$	970	[3]	63	[1]	VP	1980SIN
ThI_4	839	[3]	48.1	[1.0]	eval	1984PAN
UF_3	1768	[5]			eval	2022SMI
UF_4	1309	5	44.8	[1]	calor	1972DWO
UF_6	328.3	[1.0]	42	[1]	eval	1936KEL
UCl_3	1108.2	0.1	52	1	DSC	2022PAR
UCl_4	863	[3]	46	[1]	eval	1984PAN
UBr_3	1003	[3]			quoted	2022FAU
UBr_4	792	[2]	49	[1]	eval	1984PAN
UI_3	1039	[3]			quoted	2022FAU
UI_4	779	[2]	38.5	[0.8]	eval	1984PAN
NpF_3	1735	30	36.1	5	eval	2020CAP
NpF_6	327.90	0.02	17.52	0.02	calor	1970OSB
$NpCl_3$	1070	3	50	8	eval	2020CAP
PuF_3	1699	[5]	54	[1]	MP	1951WES
PuF_4	1310	[4]	43	[1]	MP	1951WES
PuF_6	324.73	[1.0]	18.6	[0.4]	MP	1951WES
$PuCl_3$	1033	[3]	64	[1]	MP	1951WES
$PuBr_3$	954	[3]	56	[1]	MP	1951WES
PuI_3	930	[3]			quoted	2022FAU
AmF_3	1666	20	34.7	5	MP	1966BUR
$AmCl_3$	991	1	48.1	0.5	eval	1985WEI

5. Eutectic Points for the Metal Halides

In Table 6, we provide about 750 selected eutectic points and heats of melting transitions (where available) for about 540 binary metal halide pairs. The eutectic points given are at standard pressure. Uncertainties are provided in this table (where reported or estimated by us) – in general, the uncertainties in the eutectic melting points (as reported) have an overall range of about (2 to 10) K and median/ averages of about (5 to 7) K. About 15 % of the selected points have heats of fusion ($\Delta_m H$) reported in the literature, and of those about 25 % have reported (or estimated) uncertainties.

We arranged the eutectics by chemical class/group in increasing complexity/molecular weight, ordering them by the solute (B), then by the solvent (A), and then by the molar percentage of solute (% B). Here, we identify one of the compounds in the binary mixture as the solvent and the other the solute with the solute designated as having a higher priority/more complex/ rarer/less common/higher molecular weight. For example, the eutectic for LiCl–ThF_4 is identified as LICl – 34.3 % ThF_4 where LiCl is the solvent and ThF_4 is the solute since thorium is rarer (and higher molecular weight) than lithium. Additionally, for example, the eutectic for LiF–LiCl is designated as LIF – 69.5 % LiCl, since LiCl, in this case, is considered the solute and LiF is the solvent and LiCl is considered the solute since it has a higher molecular weight than LiF.

The chemical classes/groups in order are Alkali Metals, Alkaline Earth Metals, Main Groups 13-16, Transition Metals (1st, 2nd, and 3rd row), Lanthanides, and Actinides. Note that not all elements in particular group have known metal halides. For example, in group 16, the only known metal halide binary eutectic (that we could find) is TlCl-$TeCl_4$.

Table 6 lists the metal halide eutectic pairs, the melting temperature (T_{MP}) and its uncertainty (reported or estimated), the heat of fusion ($D_m H$), where available, and its uncertainty, the method used to determine the melting point and heat of fusion, and a reference. Estimated values are shown in square brackets "[]".

Table 6. Melting Points and Heats of Fusion of the Binary Eutectic Metal Halides

Compound (A-B)	% B	T_{MP}	*unc*(T_{MP})	$\Delta_m H$	*unc*($\Delta_m H$)	Method	Reference
		------ K ------		---- kJ mol^{-1} ----			
MX-Alkali Metal Eutectics							
MX-Lithium Eutectics							
LiF-LiCl	69.5	774	2			MP	1959HAE
LiF-LiBr	69	726				therm	1933BOC
LiCl-LiBr	60	795				therm	1933BOC
LiF-LiI	83.5	684.1	[0.5]			therm	1971JOH
LiCl-LiI	65.4	641.4	[0.5]			therm	1971JOH
LiBr-LiI	60	690	15			DTA	1981FLO
MX-Sodium Eutectics							
LiF-NaF	39	922	[3]			DTA	1965HOL
LiF-NaCl	58.5	953	2			MP	1959HAE
LiCl-NaCl	27	826				eval	1966ROB2
NaF-NaCl	67	953.6	[0.5]			therm	1971JOH
LiBr-NaBr	17	780				eval	1966ROB2
LiBr-NaBr	26	783	10			eval	1987SAN
NaF-NaBr	73	928				eval	1966ROB2
NaCl-NaBr	72	1004				DTA	2007ISK
LiI-NaI	80	722.8	[4]			DSC	2025DIX
NaF-NaI	82	870.3	[0.5]			therm	1971JOH
NaCl-NaI	61.5	846.1	[0.5]			therm	1971JOH
NaBr-NaI	70	914				eval	1966ROB2
MX-Potassium Eutectics							
LiF-KF	49	765	5			eval	1987SAN
NaF-KF	60	994	3			DTA	1965HOL
LiF-KCl	80	987	4			therm	1978PES
LiCl-KCl	40.5	615.9	0.2	14.24	0.28	DSC	2022PAR
NaCl-KCl	50.6	922.0	0.2	18.25	0.33	DSC	2022PAR
KF-KCl	54	878				eval	1966ROB2
LiCl-KBr	40	633				eval	1979JAN2

LiBr-KBr	40	601	10	eval	1987SAN
NaBr-KBr	51	917	10	eval	1987SAN
KF-KBr	60	849		eval	1966ROB2
KCl-KBr	[60]	[989]		eval	1966ROB2
LiI-KI	36	556.5	13	DSC	2025DIX
NaI-KI	42	854.8		DSC	2025DIX
KF-KI	67	816		eval	1987SAN
KCl-KI	55	873		eval	1966ROB2
KBr-KI	62	939		eval	1966ROB2
MX-Rubidium Eutectics					
LiF-RbF	56	743	10	eval	1987SAN
NaF-RbF	67.2	940	[5]	DTA	1965HOL
KF-RbF	84	1066	15	eval	1987SAN
LiCl-RbCl	42.2	586	10	eval	1987SAN
NaCl-RbCl	56	823	5	eval	1987SAN
KCl-RbCl	60	988		eval	1966ROB2
RbF-RbCl	54	819		DTA	2008DVO2
CsCl-RbCl	11.5	908		eval	1966ROB2
LiBr-RbBr	41.1	533	10	eval	1987SAN
NaBr-RbBr	55	770	10	eval	1987SAN
KBr-RbBr	76	962	15	model	1987SAN
RbF-RbBr	50	793		DTA	2008DVO2
RbCl-RbBr	58	955	15	eval	1987SAN
LiI-RbI	37.5	524	10	eval	1987SAN
NaI-RbI	50	778	10	model	1987SAN
KI-RbI	74	916	10	model	1987SAN
RbF-RbI	64	766		DTA	2008DVO2
RbCl-RbI	58	840		DTA	2008DVO2
RbBr-RbI	52	891		eval	1987SAN
MX-Cesium Eutectics					
LiF-CsF	47.5	763	20	eval	1987SAN
LiF-CsF	60	752	10	eval	1987SAN
NaF-CsF	76	883	5	eval	1987SAN
NaI-CsF	12	846.5		DSC	2025DIX

KF-CsF	57	898	10			eval	1987SAN
RbF-CsF	27.4	947	5			DSC	2009BEN
LiCl-CsCl	42	587	[5]	13.5	0.4	DSC	2018RED
NaCl-CsCl	65	759	10			eval	1987SAN
KCl-CsCl	64	888	5			eval	1987SAN
CsF-CsCl	50	713				eval	1987SAN
LiBr-CsBr	38	556		10.2	0.3	Eval	2018RED
NaBr-CsBr	58.7	739	10			eval	1987SAN
KBr-CsBr	60	844	10			eval	1987SAN
CsF-CsBr	51.5	709				eval	1987SAN
LiF-CsI	0.5	1116.6				DSC	2025DIX
LiF-CsI	99.2	902.4				DSC	2025DIX
LiI-CsI	36.6	503	[15]			DSC	2025DIX
NaF-CsI	95.4	884.1	[3]			DSC	2025DIX
NaI-CsI	51	705.5	3			DSC	2024SCU
KI-CsI	59	827.1	[2]			DSC	2025DIX
RbI-CsI	50.7	853	20			eval	1987SAN
CsF-CsI	53	704				eval	1987SAN
CsCl-CsI	48	775				eval	1987SAN
CsBr-CsI	49	851				eval	1987SAN

MX-Alkaline Earth Eutectics

MX-Beryllium Eutectics

LiF-BeF_2	32.8	732.1	0.2			MP	1972ROM
LiF-BeF_2	53.1	636.7	0.5			MP	1972ROM
NaF-BeF_2	31	843				DTA	1953ROY
NaF-BeF_2	43	613				DTA	1953ROY
NaF-BeF_2	55	638				DTA	1953ROY
KF-BeF_2	19	993				eval	1959THO
KF-BeF_2	27	1003				eval	1959THO
KF-BeF_2	59	603				eval	1959THO
KF-BeF_2	72.5	596				eval	1959THO
RbF-BeF_2	16	948				eval	1959THO
RbF-BeF_2	27	993				eval	1959THO

$RbF-BeF_2$	61	656				eval	1959THO
$RbF-BeF_2$	81	670				eval	1959THO
$CsF-BeF_2$	14	871				eval	1966ROB1
$CsF-BeF_2$	48	722				eval	1966ROB1
$CsF-BeF_2$	58.4	666				eval	1966ROB1
$CsF-BeF_2$	77.5	640				eval	1966ROB1
$LiCl-BeCl_2$	56	573				eval	1966ROB1
$NaCl-BeCl_2$	55	483				eval	1966ROB1
$KCl-BeCl_2$	84	636				review	1978JAN1
BeF_2-BeCl_2	27.5	579				eval	1966ROB1
MX-Magnesium Eutectics							
$LiF-MgF_2$	30	998				eval	1966ROB2
$NaF-MgF_2$	22.6	1089				eval	1966ROB2
$NaF-MgF_2$	62.5	1259				eval	1966ROB2
$NaCl-MgF_2$	95.5	1059	3			DTA	1969SHA
$KF-MgF_2$	14	1056				eval	1966ROB2
$KF-MgF_2$	69	1292				eval	1966ROB2
$RbF-MgF_2$	22	973				eval	1966ROB2
$RbF-MgF_2$	35	1055				eval	1966ROB2
$RbF-MgF_2$	65	1149				eval	1966ROB2
BeF_2-MgF_2	5	[793]				eval	1966ROB1
$LaCl_3-MgF_2$	30	996	5			DTA	1996HA
$LiCl-MgCl_2$	40	843				eval	1966ROB2
$NaCl-MgCl_2$	43.1	709.1	0.2	20.36	0.37	DSC	2022PAR
$KCl-MgCl_2$	30.2	696.2	0.2	20.68	0.40	DSC	2022PAR
$KCl-MgCl_2$	60	743				eval	1966ROB2
$KCl-MgCl_2$	32	699	[5]			eval	1966ROB2
$RbCl-MgCl_2$	65	783				eval	1966ROB2
$CsCl-MgCl_2$	30.6	821				eval	1966ROB2
$CsCl-MgCl_2$	63	815				eval	1966ROB2
$CsCl-MgCl_2$	73.5	851				eval	1966ROB2
$CsCl-MgCl_2$	78.5	784				eval	1966ROB2
MgF_2-MgCl_2	78	901	2			DTA	1969SHA
$NaBr-MgBr_2$	61	704				eval	1966ROB2
$KBr-MgBr_2$	35	607				eval	1966ROB2

$NaI-MgI_2$	39	698				eval	1966ROB2
$KI-MgI_2$	39	528				eval	1966ROB2
MX-Calcium Eutectics							
$LiF-CaF_2$	21	1043				eval	1966ROB1
$NaF-CaF_2$	33	1084				eval	1966ROB1
$KF-CaF_2$	13.5	1056				eval	1966ROB1
$KF-CaF_2$	54	1332				eval	1966ROB1
$RbF-CaF_2$	9	1034				eval	1966ROB1
$RbF-CaF_2$	57	1364				eval	1966ROB1
BeF_2-CaF_2	11	768				eval	1966ROB1
MgF_2-CaF_2	43	1219				eval	1966ROB1
$LiCl-CaCl_2$	[39]	[753]				eval	1966ROB1
$NaCl-CaCl_2$	52	773				eval	1966ROB1
$KCl-CaCl_2$	[26]	[893]				eval	1966ROB1
$KCl-CaCl_2$	[72]	[863]				eval	1966ROB1
$RbCl-CaCl_2$	[18]	[868]				eval	1966ROB1
$RbCl-CaCl_2$	[82]	[963]				eval	1966ROB1
$CsCl-CaCl_2$	11	885				eval	1966ROB1
$CsCl-CaCl_2$	89	978				eval	1966ROB1
MgF_2-CaCl_2	87.5	967	2			DTA	1969SHA
$MgCl_2-CaCl_2$	47	887				eval	1966ROB1
CaF_2-CaCl_2	18.3	921.8	3.6	26.1	0.18	DSC	2023JAC
$NaBr-CaBr_2$	60	783				eval	1966ROB1
$KBr-CaBr_2$	35	817				eval	1966ROB1
$KBr-CaBr_2$	67.5	836				eval	1966ROB1
CaF_2-CaI_2	82.5	941.1	2			eval	1966ROB1
$CaCl_2-CaI_2$	48.6	823				eval	1966ROB1
MX-Strontium Eutectics							
$LiF-SrF_2$	21	1035				eval	1966ROB2
$NaF-SrF_2$	33	1130				eval	1966ROB2
$KF-SrF_2$	22	1017				eval	1966ROB2
BeF_2-SrF_2	25	1048				eval	1966ROB1
BeF_2-SrF_2	60	1157				eval	1966ROB1
$LiCl-SrCl_2$	48	745				eval	1966ROB2

$NaCl\text{-}SrCl_2$	51	835	eval	1966ROB2
$KCl\text{-}SrCl_2$	45	848	eval	1966ROB2
$RbCl\text{-}SrCl_2$	29	815	eval	1966ROB2
$RbCl\text{-}SrCl_2$	69	896	eval	1966ROB2
$CsCl\text{-}SrCl_2$	14	847	eval	1966ROB2
$CsCl\text{-}SrCl_2$	80	1060	eval	1966ROB2
$MgCl_2\text{-}SrCl_2$	49.4	808	eval	1966ROB2
$CaCl_2\text{-}SrCl_2$	[35]	[933]	eval	1966ROB1
$SrF_2\text{-}SrCl_2$	37.5	1224	eval	1966ROB2
$SrF_2\text{-}SrCl_2$	89.5	1029	eval	1966ROB2
$CdCl_2\text{-}SrCl_2$	42	775	eval	1966ROB1
$LiBr\text{-}SrBr_2$	32.5	726	eval	1966ROB2
$NaBr\text{-}SrBr_2$	61	759	eval	1966ROB2
$KBr\text{-}SrBr_2$	29	829	eval	1966ROB2
$KBr\text{-}SrBr_2$	50	807	eval	1966ROB2
$KBr\text{-}SrBr_2$	82	835	eval	1966ROB2
$SrBr_2\text{-}SrI_2$	67.5	748	eval	1966ROB2
MX-Barium Eutectics				
$LiF\text{-}BaF_2$	18	1039	eval	1966ROB1
$NaF\text{-}BaF_2$	36	1091	eval	1966ROB1
$KF\text{-}BaF_2$	25	993	eval	1966ROB1
$RbF\text{-}BaF_2$	22	928	eval	1966ROB1
$BeF_2\text{-}BaF_2$	3	873	eval	1966ROB1
$BeF_2\text{-}BaF_2$	72	1194	eval	1966ROB1
$MgF_2\text{-}BaF_2$	[63]	1186	eval	1966ROB1
$CaF_2\text{-}BaF_2$	50	1296	eval	1966ROB1
$SrF_2\text{-}BaF_2$	40	1449	eval	1966ROB1
$LiCl\text{-}BaCl_2$	29	785	eval	1966ROB1
$NaCl\text{-}BaCl_2$	39	1195	eval	1966ROB1
$KCl\text{-}BaCl_2$	34	926	eval	1966ROB1
$RbCl\text{-}BaCl_2$	20	902	eval	1966ROB1
$RbCl\text{-}BaCl_2$	42	913	eval	1966ROB1
$CsCl\text{-}BaCl_2$	33	816	eval	1975JAN3
$CsCl\text{-}BaCl_2$	56	855	eval	1975JAN3
$BeCl_2\text{-}BaCl_2$	13	645	eval	1966ROB1

$MgCl_2$-$BaCl_2$	36	829		eval	1966ROB1
$CaCl_2$-$BaCl_2$	38	878		eval	1966ROB1
$SrCl_2$-$BaCl_2$	32	1126		eval	1966ROB1
BaF_2-$BaCl_2$	26	1212		eval	1966ROB1
BaF_2-$BaCl_2$	82	1119		eval	1966ROB1
LiBr-$BaBr_2$	25	756		eval	1966ROB1
NaBr-$BaBr_2$	40	873		eval	1966ROB1
KBr-$BaBr_2$	22.5	905		eval	1966ROB1
KBr-$BaBr_2$	51.5	885		eval	1966ROB1
$CaCl_2$-$BaBr_2$	[60]	1008		eval	1966ROB1
SrI_2-$BaBr_2$	11	[723]		eval	1966ROB1
BaF_2-$BaBr_2$	91	1079		eval	1966ROB1
SrI_2-BaI_2	23	713		eval	1966ROB1
BaF_2-BaI_2	92	943		eval	1966ROB1
$BaCl_2$-BaI_2	91	973		eval	1966ROB1
NaCl-$RaCl_2$	29.1	969		model	2019GAR

MX-Group 13 (Al to Tl) Eutectics

MX-Aluminum Eutectics

LiF-AlF_3	14.3	983		eval	1966ROB1
LiF-AlF_3	36.5	973		eval	1966ROB1
NaF-AlF_3	15.2	[1179]		eval	1966ROB1
NaF-AlF_3	46.6	958		eval	1966ROB1
KF-AlF_3	6.3	1112		eval	1966ROB1
KF-AlF_3	42.5	840		eval	1966ROB1
CaF_2-AlF_3	37.5	1109	3	DTA	1977CRA
LiCl-$AlCl_3$	57	383		DTA	1984SAT
NaCl-$AlCl_3$	61.2	381.9	[1]	eval	2004ROB
NaBr-$AlCl_3$	59.3	340		DTA	1995MUR
KCl-$AlCl_3$	65.5	403.3		eval	2004ROB
CsCl-$AlCl_3$	45.7	617		eval	1966ROB1
CsCl-$AlCl_3$	74.7	421		eval	1966ROB1
$AlCl_3$-$AlBr_3$	58	348		eval	1966ROB1
KI-AlI_3	69	370		eval	1966ROB1

MX-Gallium Eutectics

$CsCl-GaCl_3$	42	651		review	1978JAN1

MX-Indium Eutectics

$NaCl-InCl_3$	39	977		eval	1966ROB2
$NaCl-InCl_3$	78	589		eval	1966ROB2

MX-Thallium Eutectics

LiCl-TlCl	61.5	615		eval	1966ROB2
NaCl-TlCl	85	685		eval	1966ROB2
KCl-TlCl	93	700		eval	1966ROB2
CsCl-TlCl	75	663		eval	1966ROB2
CsBr-TlCl	72	656		review	1978JAN1
$BeCl_2$-TlCl	82	643		review	1978JAN1
$MgCl_2$-TlCl	72.5	634		eval	1966ROB2
$CaCl_2$-TlCl	32	918		eval	1966ROB1
$CaCl_2$-TlCl	92.5	693		eval	1966ROB1
$SrCl_2$-TlCl	87.5	689		eval	1966ROB2
$InCl_3$-TlCl	52	533		eval	1966ROB2
$InCl_3$-TlCl	93.6	663		eval	1966ROB2
NaBr-TlBr	75	725		eval	1966ROB2
KBr-TlBr	87.5	732		eval	1966ROB2
TlCl-TlBr	29.8	695.9		eval	1966ROB2
KI-TlI	90	711		eval	1966ROB2
TlCl-TlI	48	588		eval	1966ROB2
TlBr-TlI	54.3	686.9		eval	1966ROB2

MX-Group 14 (Ge to Pb) Eutectics

MX-Germanium Eutectics

$NaI-GeI_2$	33	659	4	conduct	2006DAN

MX-Tin Eutectics

$NaF-SnF_2$	30	528	1	therm	2008DVO1
$NaF-SnF_2$	42	511		therm	2008DVO1
$NaF-SnF_2$	56	519	1	therm	2008DVO1
$NaF-SnF_2$	82	464	4	therm	2008DVO1
$KF-SnF_4$	47.2	648		review	1978JAN1

$LiCl\text{-}SnCl_2$	85	488		eval	1966ROB2
$InCl_3\text{-}SnCl_2$	90	491		eval	1966ROB2
$AlBr_3\text{-}SnBr_4$	78	293		eval	1966ROB1
$AlI_3\text{-}SnI_4$	60	386.7		eval	1966ROB1
$InI_3\text{-}SnI_2$	19.8	383		eval	1966ROB2
$SnBr_4\text{-}SnI_4$	22.5	292.4		eval	1966ROB2
MX-Lead Eutectics					
$NaF\text{-}PbF_2$	66.7	803		eval	1966ROB2
$KF\text{-}PbF_2$	57.5	733		eval	1966ROB2
$RbF\text{-}PbF_2$	72	758		eval	1966ROB2
$CsF\text{-}PbF_2$	28	773		eval	1966ROB2
$CsF\text{-}PbF_2$	71	838		eval	1966ROB2
$LiCl\text{-}PbCl_2$	55	683		eval	1966ROB2
$NaCl\text{-}PbCl_2$	69.3	682	2	therm	1985GAB
$KCl\text{-}PbCl_2$	42.5	682	2.5	therm	1985GAB
$KCl\text{-}PbCl_2$	77.5	693	2.5	therm	1985GAB
$RbCl\text{-}PbCl_2$	41	687		eval	1966ROB2
$RbCl\text{-}PbCl_2$	61	680		eval	1966ROB2
$RbCl\text{-}PbCl_2$	76	683		eval	1966ROB2
$CsCl\text{-}PbCl_2$	43.5	749		eval	1966ROB2
$CsCl\text{-}PbCl_2$	91	695		eval	1966ROB2
$CsI\text{-}PbCl_2$	28.2	649		review	1978JAN1
$MgCl_2\text{-}PbCl_2$	81.6	731		eval	1966ROB2
$CaCl_2\text{-}PbCl_2$	[74.5]	741		eval	1966ROB1
$InCl_3\text{-}PbCl_2$	64	650	[5]	eval	1966ROB2
$TlCl\text{-}PbCl_2$	12.8	650		eval	1966ROB2
$TlCl\text{-}PbCl_2$	42	644		eval	1966ROB2
$TlCl\text{-}PbCl_2$	74	691		eval	1966ROB2
$ZnCl_2\text{-}PbCl_2$	23	559		therm	1974UME
$NaBr\text{-}PbBr_2$	82.8	597		eval	1966ROB2
$KBr\text{-}PbBr_2$	55.2	627		eval	1966ROB2
$KBr\text{-}PbBr_2$	85	603		eval	1966ROB2
$TlBr\text{-}PbBr_2$	15	657		eval	1966ROB2
$TlBr\text{-}PbBr_2$	46	629		eval	1966ROB2

$TlBr-PbBr_2$	90	625	eval	1966ROB2
$PbCl_2-PbBr_2$	35	653	eval	1966ROB2
$NaCl-PbI_2$	84.3	653	review	1978JAN1
$NaBr-PbI_2$	79.4	632	review	1978JAN1
$NaI-PbI_2$	83	651	eval	1966ROB2
$KI-PbI_2$	47.1	631	review	1978JAN1
$CsCl-PbI_2$	45.5	655	review	1978JAN1
InI_3-PbI_2	22.5	413	eval	1966ROB2
PbF_2-PbI_2	90	656	review	1978JAN1
$PbCl_2-PbI_2$	42	633	eval	1966ROB2
$PbCl_2-PbI_2$	74	607	eval	1966ROB2

MX-Group 15 (As to Bi) Eutectics

MX-Arsenic Eutectics

$AlBr_3-AsBr_3$	78	300	eval	1966ROB1
$SnBr_4-AsBr_3$	45	276.7	eval	1966ROB1
AlI_3-AsI_3	59	389	eval	1966ROB1

MX-Antimony Eutectics

$KCl-SbCl_3$	[78]	[453]	eval	1966ROB2
$AlCl_3-SbCl_3$	92.5	343.1	eval	1966ROB1
$AlBr_3-SbBr_3$	29.3	348.0	eval	1966ROB1
$AlBr_3-SbBr_3$	69	345.4	eval	1966ROB1
$SnBr_4-SbBr_3$	6	300	eval	1966ROB2
$SbCl_3-SbBr_3$	65	328	eval	1966ROB2
AlI_3-SbI_3	34	413	eval	1966ROB1
AlI_3-SbI_3	60	408	eval	1966ROB1
$SbCl_3-SbI_3$	18.2	314.5	eval	1966ROB2
$SbBr_3-SbI_3$	15	357	eval	1966ROB2

MX-Bismuth Eutectics

$KCl-BiCl_3$	[82]	[443]	eval	1966ROB1
$TlCl-BiCl_3$	87.5	633	review	1978JAN1
$PbCl_2-BiCl_3$	88.7	492	eval	1966ROB1
$AlBr_3-BiBr_3$	65.6	410.5	eval	1966ROB1
$PbBr_2-BiBr_3$	76.5	478	eval	1966ROB1

MX-Group 16 (Te) Eutectics

$TlCl$-$TeCl_4$	12	648		review	1978JAN1

MX-Transition Metals 1st Row Eutectics

MX-Titanium Eutectics

$TlCl$-$TiCl_3$	25.6	639		review	1978JAN1

MX-Chromium Eutectics

CrF_3-CrF_2	14	1105	5	therm	1962STU

MX-Iron Eutectics

NaF-FeF_2	30	953		eval	1959THO
NaF-FeF_2	63	1018		eval	1959THO
$LiCl$-$FeCl_2$	42	813		DTA	1957BEU
$NaCl$-$FeCl_2$	56	647		review	1978JAN1
KCl-$FeCl_2$	38.2	624.2	1	therm	1957PIN
KCl-$FeCl_2$	54.2	666	1	therm	1957PIN

MX-Cobalt Eutectics

$NaCl$-$CoCl_2$	62.6	639		Calphad	2016WAN
KCl-$CoCl_2$	50	633		review	1978JAN1
$InCl_3$-$CoCl_2$	51	798.6		Calphad	2016WAN

MX-Nickel Eutectics

NaF-NiF_2	23	1069		eval	1959THO
NaF-NiF_2	57	1314		eval	1959THO

MX-Copper Eutectics

$LiCl$-$CuCl$	80	[653]		eval	1966ROB2
$NaCl$-$CuCl$	77.9	[592]		eval	1966ROB2
KCl-$CuCl$	65.6	[416]		eval	1966ROB2
KCl-$CuCl_2$	46	633		review	1978JAN1
$RbCl$-$CuCl$	68	423		eval	1966ROB2
$CsCl$-$CuCl$	55	509		eval	1966ROB2
$CsCl$-$CuCl$	77	488		eval	1966ROB2
$MgCl_2$-$CuCl$	87.3	679		eval	1966ROB2
$CaCl_2$-$CuCl$	89.5	666		eval	1966ROB1
$TlCl$-$CuCl$	60	395		eval	1966ROB2

$SnCl_2$-CuCl	21.8	445		eval	1966ROB2
$PbCl_2$-CuCl	62.5	553		eval	1966ROB2
$CoCl_2$-$CuCl_2$	74.4	635		review	1978JAN1
$CuCl_2$-CuCl	13	651		review	1978JAN1
$ZnCl_2$-CuCl	12	556		eval	1966ROB2
KBr-CuBr	62.7	455		eval	1966ROB2
CuCl-CuI	25	557		eval	1966ROB2
CuBr-CuI	17.5	[723]		eval	1966ROB2
MX-Zinc Eutectics					
LiF-ZnF_2	[40]	[873]		eval	1966ROB2
NaF-ZnF_2	33	908	[5]	eval	1959THO
NaF-ZnF_2	69	958		eval	1959THO
KF-ZnF_2	25	953		eval	1966ROB2
KF-ZnF_2	80	1024		eval	1966ROB2
RbF-ZnF_2	22	869		eval	1966ROB2
RbF-ZnF_2	67.5	943		eval	1966ROB2
CsF-ZnF_2	44	813		eval	1966ROB2
CsF-ZnF_2	57	833		eval	1966ROB2
CsF-ZnF_2	80	803		eval	1966ROB2
NaCl-$ZnCl_2$	58.5	535		eval	1966ROB2
KCl-$ZnCl_2$	31	704		eval	1966ROB2
KCl-$ZnCl_2$	51.5	503		eval	1966ROB2
RbCl-$ZnCl_2$	25	783		eval	1966ROB2
RbCl-$ZnCl_2$	52.5	522		eval	1966ROB2
RbCl-$ZnCl_2$	63	550		eval	1966ROB2
CsCl-$ZnCl_2$	17.5	808		eval	1966ROB2
CsCl-$ZnCl_2$	57.5	536		eval	1966ROB2
CsCl-$ZnCl_2$	79.9	541		eval	1966ROB2
$InCl_3$-$ZnCl_2$	97.5	543		eval	1966ROB2
TlCl-$ZnCl_2$	22	607		eval	1966ROB2
TlCl-$ZnCl_2$	52	486		eval	1966ROB2
$SnCl_2$-$ZnCl_2$	44	445		eval	1966ROB2

MX-Transition Metals 2nd Row Eutectics

MX-Yttrium Eutectics

$LiF-YF_3$	19	968		eval	1959THO
$NaF-YF_3$	29	911		eval	1966GIB
$KF-YF_3$	12.6	1246		Calphad	2016KAN
$KF-YF_3$	41.3	1039		Calphad	2016KAN
$KF-YF_3$	80.3	1254		Calphad	2016KAN
$KCl-YCl_3$	14.5	942		Calphad	2016KAN
$KCl-YCl_3$	44.3	717		Calphad	2016KAN
$NaCl-YCl_3$	55	633		review	1978JAN1

MX-Zirconium Eutectics

$LiF-ZrF_4$	21	871		eval	1959THO
$LiF-ZrF_4$	29.5	843		eval	1959THO
$LiF-ZrF_4$	49	780		eval	1959THO
$NaF-ZrF_4$	20	1021		eval	1959THO
$NaF-ZrF_4$	40.5	773		eval	1959THO
$NaF-ZrF_4$	49.5	785		eval	1959THO
$KF-ZrF_4$	14	1039		eval	1959THO
$KF-ZrF_4$	42	663		eval	1959THO
$KF-ZrF_4$	55	713		eval	1959THO
$RbF-ZrF_4$	10	983		eval	1959THO
$RbF-ZrF_4$	42	683		eval	1959THO
$RbF-ZrF_4$	48	663		eval	1959THO
$RbF-ZrF_4$	54	673		eval	1959THO
$CsF-ZrF_4$	9	913		eval	1959THO
$CsF-ZrF_4$	40	693		eval	1959THO
$CsF-ZrF_4$	59	743		eval	1959THO
$NaCl-ZrCl_4$	28.5	798	5	eval	1959THO
$NaCl-ZrCl_4$	63	585	5	eval	1959THO
$KCl-ZrCl_4$	23	873	5	eval	1959THO
$KCl-ZrCl_4$	65	498	4	eval	1959THO
$ZrCl_4-ZrI_4$	[42]	641		review	1978JAN1

MX-Niobium Eutectics

$KCl-NbCl_4$	[44]	641		review	1978JAN1

MX-Silver Eutectics

ZnF_2-AgF	42	903		eval	1966ROB1
ZnF_2-AgF	86	653		eval	1966ROB1
KCl-AgCl	70	585	6	eval	1966ROB1
RbCl-AgCl	60	526		eval	1966ROB1
CsCl-AgCl	72	531		eval	1966ROB1
$MgCl_2$-AgCl	87	725		eval	1966ROB1
$CaCl_2$-AgCl	71	721		eval	1966ROB1
$InCl_3$-AgCl	60	592		eval	1966ROB1
$InCl_3$-AgCl	61.9	639.3		Calphad	2016WAN
$InCl_3$-AgCl	79.5	654.7		Calphad	2016WAN
TlCl-AgCl	59	483		eval	1966ROB1
$PbCl_2$-AgCl	59.5	583		eval	1966ROB1
$CoCl_2$-AgCl	80.5	271	2	DSC	2008KRZ
CuCl-AgCl	52	528	5	eval	1966ROB1
$ZnCl_2$-AgCl	53.5	504		DSC	2004WOJ
KBr-AgBr	63	560		eval	1966ROB1
KI-AgBr	80.3	537		eval	1966ROB1
RbBr-AgBr	68	501		eval	1966ROB1
TlBr-AgBr	63	499		eval	1966ROB1
$CoBr_2$-AgBr	83	653	2	DSC	2008KRZ
CuBr-AgBr	40	573		eval	1966ROB1
$ZnBr_2$-AgBr	59.4	551		DSC	2004WOJ
AgCl-AgBr	65	685		eval	1966ROB1
LiI-AgI	20	700	[5]	DTA	1981FLO
NaI-AgI	60	662.5	4	eval	1966ROB1
KI-AgI	67	516		eval	1966ROB1
RbI-AgI	75	469		eval	1966ROB1
PbI_2-AgI	40	[628]		eval	1966ROB1
CuI-AgI	50	[753]		eval	1966ROB1
AgCl-AgI	55.2	508		eval	1966ROB1
AgBr-AgI	23	637	[5]	DTA	1981FLO

MX-Cadmium Eutectics

LiF-$CdCl_2$	87	818	5	eval	1966ROB1

$NaF-CdCl_2$	50	588.7	5	eval	1966ROB1
$NaCl-CdCl_2$	56	663	8	eval	1966ROB1
$KCl-CdCl_2$	37.2	660.0	4	eval	1966ROB1
$KCl-CdCl_2$	66.2	662	5	eval	1966ROB1
$RbCl-CdCl_2$	36	715		eval	1966ROB1
$RbCl-CdCl_2$	68.5	694	20	eval	1966ROB1
$CsCl-CdCl_2$	24	718		eval	1966ROB1
$CsCl-CdCl_2$	75	713		eval	1966ROB1
$CaCl_2-CdCl_2$	85	813		eval	1966ROB1
$BaCl_2-CdCl_2$	65	753		eval	1966ROB1
$InCl_3-CdCl_2$	49.5	699		eval	1966ROB1
$TlCl-CdCl_2$	24.1	575.1		eval	1966ROB1
$TlCl-CdCl_2$	67.8	679		eval	1966ROB1
$SnCl_2-CdCl_2$	10	506		eval	1966ROB1
$PbCl_2-CdCl_2$	37	653	5	eval	1966ROB1
$AgCl-CdCl_2$	37	708		eval	1966ROB1
CdF_2-CdCl_2	70	753	5	eval	1966ROB1
$NaBr-CdBr_2$	47	641		eval	1966ROB1
$KBr-CdBr_2$	37	578		eval	1966ROB1
$KBr-CdBr_2$	55	618		eval	1966ROB1
$CsCl-CdBr_2$	31.9	634		review	1978JAN1
$CsBr-CdBr_2$	61.9	646		review	1978JAN1
$CsBr-CdBr_2$	64	657		review	1978JAN1
$TlBr-CdBr_2$	45	649		review	1978JAN1
$PbCl_2-CdBr_2$	72	640		review	1978JAN1
$PbBr_2-CdBr_2$	15	613		eval	1966ROB1
$CuBr-CdBr_2$	[50]	[723]		eval	1966ROB1
$ZnBr_2-CdBr_2$	22.5	637		eval	1966ROB1
$CdCl_2-CdBr_2$	60	823		eval	1966ROB1
$NaI-CdI_2$	53	559		eval	1966ROB2
$KI-CdI_2$	52.5	458		eval	1966ROB2
InI_3-CdI_2	1.5	469		eval	1966ROB2
InI_3-CdI_2	62.5	463		eval	1966ROB2
PbI_2-CdI_2	70	633		eval	1966ROB2
CdF_2-CdI_2	92	613		eval	1966ROB2

$CdCl_2$-CdI_2	70	633				eval	1966ROB1

MX-Transition Metals 3rd Row Eutectics

MX-Lutetium Eutectics

LiF-LuF_3	22	695				MP	1969THO
LiF-LuF_3	54	810				MP	1969THO
NaF-LuF_3	29	868				MP	1966THO1
NaF-LuF_3	72	1146				MP	1966THO1
GdF_3-LuF_3	45	1363				DTA	2000FED
NaF-HfF_4	18.5	968				eval	1959THO
NaF-HfF_4	43	783				eval	1959THO
NaF-HfF_4	53	808				eval	1959THO
$CsCl$-$HfCl_4$	22	863				DSC	2020KRA
$CsCl$-$HfCl_4$	64	575				DSC	2020KRA

MX-Tantalum Eutectics

KCl-$TaCl_5$	48	643				review	1978JAN1

MX-Mercury Eutectics

$LiCl$-$HgCl_2$	98.4	551				eval	1966ROB2
$NaCl$-$HgCl_2$	86	537				eval	1966ROB2
KCl-$HgCl_2$	68	455				eval	1966ROB2
$TlCl$-$HgCl_2$	32	478				eval	1966ROB2
$TlCl$-$HgCl_2$	64	456				eval	1966ROB2
$SbCl_3$-$HgCl_2$	4	345				eval	1966ROB2
$PbBr_2$-$HgBr_2$	95	505				eval	1966ROB2
KI-HgI_2	61.6	405				eval	1966ROB2
AlI_3-HgI_2	35	393				eval	1966ROB1
AlI_3-HgI_2	58	405				eval	1966ROB1
$AgCl$-HgI_2	48	409				eval	1966ROB1

MX-Lanthanides Eutectics

MX-Lanthanum Eutectics

LiF-LaF_3	20	1043				therm	1969THO
NaF-LaF_3	23.4	1008	5	24.0	[0.5]	DSC	1997ABD
KF-LaF_3	22	892				DSC	1997ABD

$RbF-LaF_3$	21	873				DSC	1997ABD
$CsF-LaF_3$	10.8	880				DSC	1997ABD
$CsF-LaF_3$	12.5	873				DSC	1997ABD
$CsF-LaF_3$	37.8	986		10.7	[0.2]	DSC	1997ABD
$LaCl_3-LaF_3$	31	927	4			DTA	1996HA
$LiCl-LaCl_3$	23	783				Calphad	2024HAO
$NaCl-LaCl_3$	33	813	2			DTA	1985SEI
$KCl-LaCl_3$	22	853	2			DTA	1985SEI
$KCl-LaCl_3$	51	851	2			DTA	1985SEI
$RbCl-LaCl_3$	15.5	880	2			DTA	1985SEI
$RbCl-LaCl_3$	49	806	2			DTA	1985SEI
$CsCl-LaCl_3$	10.5	855	2			DTA	1985SEI
$CsCl-LaCl_3$	43	819	2			DTA	1985SEI
$CaCl_2-LaCl_3$	28	903				MP	1952DER
$TbCl_3-LaCl_3$	49.7	827	5	17.7	[0.4]	DSC	2025PIL
$LiBr-LaBr_3$	23	727	2			DSC	2006GAU2
$NaBr-LaBr_3$	38	730	5			DSC	2006GAU2
$KBr-LaBr_3$	18	819	5			DSC	2006GAU2
$TlBr-LaBr_3$	8.8	687	2	8.2	0.5	DSC	2019SAL
$TlBr-LaBr_3$	49.1	788	2	19.6	0.6	DSC	2019SAL
$RbI-LaI_3$	17.7	789		12	[0.2]	DSC	2020RYC
$RbI-LaI_3$	47.2	773		27	[0.5]	DSC	2020RYC

MX-Cerium Eutectics

$LiF-CeF_3$	19	1029	5			eval	1959THO
$NaF-CeF_3$	27	1003	5			DTA	2000FED
$LiCl-CeCl_3$	27	767				Calphad	2015HE
$NaCl-CeCl_3$	30	773	2			DSC	2015SOO
$KCl-CeCl_3$	20	873				DTA	1986SEI
$KCl-CeCl_3$	30	890				DTA	1986SEI
$KCl-CeCl_3$	55	807				DTA	1986SEI
$RbCl-CeCl_3$	15.5	892				DTA	1986SEI
$RbCl-CeCl_3$	51.5	808				DTA	1986SEI
$CsCl-CeCl_3$	13	856				DTA	1986SEI

$CsCl$-$CeCl_3$	42.5	808				DTA	1986SEI
$CsCl$-$CeCl_3$	74	952				DTA	1986SEI
MgF_2-$CeCl_3$	74	963	3			DTA	1996HA
$MgCl_2$-$CeCl_3$	30	923				eval	1965THO1
$ZnCl_2$-$CeCl_3$	1	570				therm	1992PER
$AgCl$-$CeCl_3$	9.5	700	2	1.0	1.6	DTA	2019CHO
CeF_3-$CeCl_3$	31.5	893	3			DTA	1996HA
$LiBr$-$CeBr_3$	24.9	709		21.7	0.7	DSC	2008ING
$NaBr$-$CeBr_3$	37.2	692	[3]	19.8	0.5	DSC	2008ING
KBr-$CeBr_3$	19.3	837		12.8	0.3	DSC	2007RYC4
KBr-$CeBr_3$	29.5	855		18.8	2.0	DSC	2007RYC4
KBr-$CeBr_3$	55.5	766		25.3	0.6	DSC	2007RYC4
$RbBr$-$CeBr_3$	14.1	858	1	15.6	0.3	DSC	2008RYC3
$RbBr$-$CeBr_3$	52.8	762	1	19.2	0.4	DSC	2008RYC3
$CsBr$-$CeBr_3$	12.5	842		15.0	[0.3]	DSC	2009RYC2
$CsBr$-$CeBr_3$	45.0	750		15.1	[0.3]	DSC	2009RYC2
$CsBr$-$CeBr_3$	70.0	856		14.3	[0.3]	DSC	2009RYC2
CsI-CeI_3	12.7	823	1	14.4	0.8	DSC	2019DAN
CsI-CeI_3	48.5	737	1	12.88	0.21	DSC	2019DAN
MX-Praseodymium Eutectics							
LiF-PrF_3	19	750				MP	1969THO
NaF-PrF_3	27	1017	5			DTA	2000FED
KF-PrF_3	18	883				MP	1952DER
RbF-PrF_3	12	913				MP	1952DER
RbF-PrF_3	37	933				MP	1952DER
CsF-PrF_3	8	927				MP	1952DER
CsF-PrF_3	39	1057				MP	1952DER
$LiCl$-$PrCl_3$	30	739	2			model	2005GON2
$NaCl$-$PrCl_3$	35	743	[2]			DTA	1992SHA
KCl-$PrCl_3$	16.5	640				DSC	1999GAU
KCl-$PrCl_3$	56	772				DSC	1999GAU
$CaCl_2$-$PrCl_3$	42	878	[2]			DTA	1992SHA
$LiBr$-$PrBr_3$	26.5	689		20.5	0.9	DSC	2009ING
$NaBr$-$PrBr_3$	40.9	658		20.8	0.3	DSC	2009ING

$KBr-PrBr_3$	18.2	849	1	12.9	0.3	DSC	2010REJ
$KBr-PrBr_3$	55.2	753	1	15.1	0.5	DSC	2010REJ
$RbBr-PrBr_3$	13.6	865	1	15.3	0.3	DSC	2010RYC1
$RbBr-PrBr_3$	48.8	765	1	20.5	0.7	DSC	2010RYC1
$RbBr-PrBr_3$	67.9	834	1	28.5	0.7	DSC	2010RYC1
$CsBr-PrBr_3$	10.8	850		15.9	0.6	DSC	2010RYC4
$CsBr-PrBr_3$	45.3	767		16.7	0.7	DSC	2010RYC4
$CsBr-PrBr_3$	75.7	870		15.0	0.9	DSC	2010RYC4
$TlBr-PrBr_3$	10.7	673	3	11.0	0.6	DSC	2024SAL
$TlBr-PrBr_3$	52.4	742	3	29.3	1.5	DSC	2024SAL
MX-Neodymium Eutectics							
$LiF-NdF_3$	31.6	1004.7	0.5			DSC	2023LIA
$NaF-NdF_3$	28	1003				DTA	2000FED
$NdCl_3-NdF_3$	29	888	5			DTA	1996HA
$LiCl-NdCl_3$	27.7	733	[2]			model	2005GON2
$NaCl-NdCl_3$	32	712	2	18.7		DSC	1992SHA
$RbCl-NdCl_3$	12	905				eval	2002SEI
$RbCl-NdCl_3$	49.5	784				eval	2002SEI
$CsCl-NdCl_3$	9	863				eval	2002SEI
$CsCl-NdCl_3$	45	785				eval	2002SEI
$CsCl-NdCl_3$	72.5	891				eval	2002SEI
MgF_2-NdCl_3	26.5	928	3			DTA	1996HA
$CaCl_2-NdCl_3$	40	873	[2]			DTA	1992SHA
$AgCl-NdCl_3$	17.2	668	1	15.7	0.7	DSC	2008SZY
$LiBr-NdBr_3$	28.8	678		24.0	[0.5]	DSC	2006GAU1
$NaBr-NdBr_3$	44.3	644	1	14.9	0.1	DSC	2018BOU
$KBr-NdBr_3$	19.2	849	1	13.6	0.1	DSC	2018BOU
$KBr-NdBr_3$	53.2	754	1	18.3	0.2	DSC	2018BOU
$KBr-NdBr_3$	68.9	802	1	21.7	0.2	DSC	2018BOU
$TlBr-NdBr_3$	12.2	670	3	8.5	0.6	DSC	2025SAL1
$TlBr-NdBr_3$	50.4	744	3	12.0	0.7	DSC	2025SAL1
$AgBr-NdBr_3$	15.5	647				DSC	2009KOL
$RbI-NdI_3$	17.7	810	1	12.1	0.5	DSC	2015SAL
$RbI-NdI_3$	42.1	706	1	12.7	1.7	DSC	2015SAL

MX- Promethium Eutectics							
$NaF-PmF_3$	[27]	[1003]				est	2000FED
MX-Samarium Eutectics							
$LiF-SmF_3$	27	698				MP	1969THO
$NaF-SmF_3$	25	1004				DTA	2000FED
$KF-SmF_3$	10	1032				therm	1957MOR
$KF-SmF_3$	40	1074		14.5	[0.3]	MP	1952DER
RbF_3-SmF_3	9	973				MP	1952DER
RbF_3-SmF_3	37	1074				MP	1952DER
$CsF-SmF_3$	5	918				MP	1952DER
$CsF-SmF_3$	34	1129				MP	1952DER
$NaCl-SmCl_3$	44	680				eval	2002SEI
$RbCl-SmCl_3$	14	912				eval	2002SEI
$RbCl-SmCl_3$	46.5	755				eval	2002SEI
$RbCl-SmCl_3$	73.5	838				eval	2002SEI
$CsCl-SmCl_3$	7	861				eval	2002SEI
$CsCl-SmCl_3$	47	792				eval	2002SEI
$CsCl-SmCl_3$	78.7	867				eval	2002SEI
$TlCl-SmCl_3$	12	641	2	13.6	0.3	DSC	2016SAL
$TlCl-SmCl_3$	50	726	5	15.5	0.6	DSC	2016SAL
$AgCl-SmCl_3$	22.8	644	2	15.2	1.0	DTA	2019CHO
MX-Europium Eutectics							
$LiF-EuF_3$	27	688				MP	1969THO
$NaF-EuF_3$	25	991				MP	1966THO1
$NaCl-EuCl_2$	49	847	2	22.86	0.5	DSC	2001SIL
$KCl-EuCl_3$	17.5	917				eval	2002SEI
$KCl-EuCl_3$	53.5	752				eval	2002SEI
$KCl-EuCl_3$	74	797				eval	2002SEI
$LiBr-EuBr_2$	31.9	723	1	16.4	[0.3]	DSC	2005GAD
$NaBr-EuBr_2$	54.6	762	2	16.5	0.7	DSC	2005ING
$KBr-EuBr_2$	31.8	829		16.8	0.3	DSC	2008RYC1
$KBr-EuBr_2$	43.3	811		9.9	0.2	DSC	2008RYC1
$KBr-EuBr_2$	78.9	854		19.4	0.4	DSC	2008RYC1
$RbBr-EuBr_2$	31.6	776		16.2	[0.3]	DSC	2010RYC2

$RbBr\text{-}EuBr_2$	79.7	859		25.1	[0.5]	DSC	2010RYC2
$CsBr\text{-}EuBr_2$	19.7	812	1	16.9	0.9	DSC	2021RYC1
$CsBr\text{-}EuBr_2$	82.1	864	1	19.4	0.9	DSC	2021RYC1
$AgBr\text{-}EuBr_2$	15.2	657	2	4.97	[0.25]	DSC	2023RYC
MX-Gadolinium Eutectics							
$LiF\text{-}GdF_3$	25	973				DTA	2004RAN
$NaF\text{-}GdF_3$	25	985				MP	1966THO1
$NaF\text{-}GdF_3$	68	1331				MP	1966THO1
$NaCl\text{-}GdCl_3$	45	689				eval	2002SEI
$NaCl\text{-}GdCl_3$	55	702				eval	2002SEI
$AgCl\text{-}GdCl_3$	28.8	609	5	20.7	1.4	DTA	2019CHO
$CsBr\text{-}GdBr_3$	11	847	1	15.7	0.2	DSC	2020HAR
$CsBr\text{-}GdBr_3$	52	798	1	15.0	0.2	DSC	2020HAR
$CsBr\text{-}GdBr_3$	72	859	1	23.3	0.2	DSC	2020HAR
MX-Terbium Eutectics							
$LiF\text{-}TbF_3$	24	700				MP	1969THO
$LiF\text{-}TbF_3$	53.5	840				MP	1969THO
$NaF\text{-}TbF_3$	28	958				DTA	1996FED
$NaF\text{-}TbF_3$	66.5	1328				DTA	1996FED
$LiCl\text{-}TbCl_3$	52.1	665	1	11.7	0.6	DSC	2017DAN
$NaCl\text{-}TbCl_3$	45	655				review	1978JAN1
$LiBr\text{-}TbBr_3$	14.5	776	2	2.0	0.1	DSC	2013RYC1
$LiBr\text{-}TbBr_3$	31.8	774	8	14.9	0.3	DSC	2013RYC1
$NaBr\text{-}TbBr_3$	39.5	699	1	16.1	0.3	DSC	2003RYC1
$KBr\text{-}TbBr_3$	16.3	885		15.8	0.3	DSC	2004RYC3
$KBr\text{-}TbBr_3$	43.3	697		13.8	0.3	DSC	2004RYC3
$RbBr\text{-}TbBr_3$	11.7	887		16	[0.3]	DSC	2007RYC1
$RbBr\text{-}TbBr_3$	44.9	718		14.5	[0.3]	DSC	2007RYC1
$CsBr\text{-}TbBr_3$	9.5	865	1	17.3	0.4	DSC	2012RYC
$CsBr\text{-}TbBr_3$	55.2	808	1	14.7	0.3	DSC	2012RYC
MX-Dysprosium Eutectics							
$LiF\text{-}DyF_3$	24	[700]				MP	1969THO
$NaF\text{-}DyF_3$	26	923				DTA	1996FED
$NaF\text{-}DyF_3$	72	1328				DTA	1996FED

$LiCl\text{-}DyCl_3$	20.6	746		13.24	1.55	DSC	2016DAN
$LiCl\text{-}DyCl_3$	54.2	674		11.03	0.49	DSC	2016DAN
$NaCl\text{-}DyCl_2$	59.7	643	2			review	1978JAN1
$NaCl\text{-}DyCl_3$	55	651				review	1978JAN1
$LiBr\text{-}DyBr_3$	15.6	787	1	12.4	0.2	DSC	2009GAU
$LiBr\text{-}DyBr_3$	32.1	791	1	15.8	0.3	DSC	2009GAU
$NaBr\text{-}DyBr_3$	40.9	711		6.98	0.14	DSC	2014CHO2
$RbBr\text{-}DyBr_3$	11.6	886		17	[0.3]	DSC	2012CHO
$RbBr\text{-}DyBr_3$	45.8	702		17	[0.3]	DSC	2009RYC2
$CsBr\text{-}DyBr_3$	10.2	862		16.1	0.3	DSC	2014CHO1
$CsBr\text{-}DyBr_3$	57.9	795		18.1	0.4	DSC	2014CHO1
MX-Holmium Eutectics							
$LiF\text{-}HoF_3$	24	[710]				MP	1969THO
$NaF\text{-}HoF_3$	27	936				MP	1966THO1
$NaF\text{-}HoF_3$	71	1235				MP	1966THO1
$KBr\text{-}HoBr_3$	16.3	875		14.6	1.0	DSC	2016PIL
$KBr\text{-}HoBr_3$	45.5	699		13.8	0.2	DSC	2016PIL
MX-Erbium Eutectics							
$LiF\text{-}ErF_3$	21	700				MP	1969THO
$NaF\text{-}ErF_3$	28	903				DTA	1996FED
$NaF\text{-}ErF_3$	73	1253				DTA	1996FED
$KF\text{-}ErF_3$	12	1030				therm	1957MOR
$KF\text{-}ErF_3$	32	1064				MP	1952DER
$RbF\text{-}ErF_3$	12	1005				MP	1952DER
$RbF\text{-}ErF_3$	34	1074				MP	1952DER
$CsF\text{-}ErF_3$	5	916				MP	1952DER
$CsF\text{-}ErF_3$	42	1074				MP	1952DER
MX-Thulium Eutectics							
$LiF\text{-}TmF_3$	21	692				MP	1969THO
$LiF\text{-}TmF_3$	53	824				MP	1969THO
$NaF\text{-}TmF_3$	27	865				MP	1966THO1
$NaF\text{-}TmF_3$	70	1178				MP	1966THO1
MX-Ytterbium Eutectics							

$LiF-YbF_3$	19.9	960	Calphad	2023KAN
$LiF-YbF_3$	56	1087	Calphad	2023KAN
$NaF-YbF_3$	26	867	MP	1966THO1
$NaF-YbF_3$	[70]	[1178]	MP	1966THO1
$LiCl-YbCl_2$	41.5	733	DSC	2023CHO
$NaCl-YbCl_2$	55.9	764	DSC	2023CHO
$KCl-YbCl_2$	33	839	DSC	2023CHO
$KCl-YbCl_2$	73	833	DSC	2023CHO

MX-Actinides Eutectics

MX-Thorium Eutectics

$LiF-ThF_4$	23.8	832	therm	1959THO4
$LiF-ThF_4$	29.4	826	DSC	2013CAP
$LiCl-ThF_4$	34.3	695	Calphad	2021FLO
$NaF-ThF_4$	22.5	891	therm	1959THO4
$NaF-ThF_4$	37	963	therm	1959THO4
$NaF-ThF_4$	41	978	therm	1959THO4
$NaCl-ThF_4$	25.1	657	Calphad	2021FLO
$NaCl-ThF_4$	45.7	654	Calphad	2021FLO
$KF-ThF_4$	14	967	therm	1952ASK
$KF-ThF_4$	31	964	therm	1952ASK
$KF-ThF_4$	56	1149	therm	1952ASK
$KF-ThF_4$	78	1254	therm	1952ASK
$KCl-ThF_4$	20.6	894	Calphad	2021FLO
$KCl-ThF_4$	46.7	697	Calphad	2021FLO
$KCl-ThF_4$	53.6	699	Calphad	2021FLO
$RbF-ThF_4$	15	937	MP	1948DER1
$RbF-ThF_4$	37	1036	MP	1948DER1
$RbF-ThF_4$	54	1122	MP	1948DER1
$RbF-ThF_4$	80	1274	MP	1948DER1
BeF_2-ThF_4	2	800	therm	1960THO
MgF_2-ThF_4	25	1189	therm	1951BLO
MgF_2-ThF_4	40	1199	therm	1951BLO
$NaCl-ThCl_4$	30.5	634	review	1978JAN1

$KCl-ThCl_4$	42.8	657				review	1978JAN1
MX-Uranium Eutectics							
$LiF-UF_3$	27	1044				eval	1959THO
$LiF-UF_4$	27	763				DTA	1958BAR
$NaF-UF_3$	27	988				eval	1959THO
$NaF-UF_4$	21.5	891				DTA	1958BAR
$NaF-UF_4$	28	896				DTA	1958BAR
$NaF-UF_4$	56	953				DTA	1958BAR
$KF-UF_4$	15	1008				therm	1958THO
$KF-UF_4$	38.5	1013				therm	1958THO
$KF-UF_4$	54.5	1008				therm	1958THO
$RbF-UF_4$	10	983				therm	1958THO
$RbF-UF_4$	43.5	948				therm	1958THO
$RbF-UF_4$	55	987				therm	1958THO
$CsF-UF_4$	7.5	923				eval	1959THO
$CsF-UF_4$	41	968				eval	1959THO
$CsF-UF_4$	53	998				eval	1959THO
BeF_2-UF_4	0.5	808	2			eval	1959THO
BeF_2-UF_4	0.8	813.6				model	2005MEE
SnF_2-UF_4	0.5	485				eval	1959THA
PbF_2-UF_4	35	1109				eval	1959THO
PbF_2-UF_4	62	1036	10			eval	1959THO
ZrF_4-UF_4	23	1039				DTA	1958BAR2
UF_3-UF_4	75	1134				therm	1963BRI
$LiCl-UCl_3$	25.4	764.9	[2.5]			DSC	2023YIN
$LiCl-UCl_3$	47	694				DTA	1966THA
$LiCl-UCl_4$	29	688				eval	1959THO
$LiCl-UCl_4$	48	678				eval	1959THO
$NaCl-UCl_3$	34	787.4	0.2	20.24	0.78	DSC	2022PAR
$NaCl-UCl_4$	47	643	5			eval	1959THO
$KCl-UCl_3$	19	832	9	12.2	5	DSC	2022PAR
$KCl-UCl_3$	57	814	6	15.53	1.14	DSC	2022PAR
$KCl-UCl_4$	25	823				eval	1959THO
$KCl-UCl_4$	44	603				eval	1959THO

$RbCl\text{-}UCl_3$	15	883				eval	1959THO
$RbCl\text{-}UCl_3$	45.5	786	5			eval	1959THO
$RbCl\text{-}UCl_4$	58	643				review	1978JAN1
$CsCl\text{-}UCl_4$	20	778	5			eval	1959THO
$CsCl\text{-}UCl_4$	58	643	5			eval	1959THO
$PbCl_2\text{-}UCl_3$	11	743				therm	1971BOR
$PbCl_2\text{-}UCl_4$	32.1	638				review	1978JAN1
$PbCl_2\text{-}UCl_4$	50	619				therm	1971BOR
MX-Plutonium Eutectics							
$LiF\text{-}PuF_3$	19.5	1016				eval	1959THO
$NaCl\text{-}PuCl_3$	32.6	726	3	21.8	1.6	eval	2025STR
$NaCl\text{-}PuCl_3$	36	724	3	23.0	1.4	DSC	2023KAR

6. References

1911HER G. Hermann; "Über die Verbindungsfähigkeit der Chloride von Cu, Pb, Fe, Zn, Sn und Bi und über die Verbindungsfähigkeit der Chloride, Bromide und Jodide von Cu und Cd und die Lichtempfindlichkeit ihrer Mischkristalle," Z. Anorg. Chem. 71, 257-302 (1911) https://doi.org/10.1002/zaac.19110710125

1911MEN O. Menge, "Die binären Systeme von MgCl2 und CaCl2 mit den Chloriden der Metalle K, Na, Ag, Pb, Cu', Zn, Sn und Cd," Z. Anorg. Chem. 72, 162-212 (1911). https://doi.org/10.1002/zaac.19110720113

1912BER G. B. Bernardis, Atti accad. Lincei 21, 438-441 (1912). URL: na

1917RIC T. W. Richards, W. B. Meldrum, "The melting points of the chlorides of lithium, rubidium and caesium, and the freezing points of binary and ternary mixtures of these salts, including also potassium and sodium chloride, " J. Am. Chem. Soc. 39, 1816–1828 (1917). https://doi.org/10.1021/ja02254a004

1922LAT W. M. Latimer; "The distribution of thermal energy in the tetrachlorides of carbon, silicon, titanium and tin," J. Am. Chem. Soc. 44, 90-97 (1922). https://doi.org/10.1021/ja01422a010

1929LUN G. Lunde and P. Rosband, "Über die Kristallstruktnr der Mischkristallreihe CuJ — AgJ," Z. physik. chem., Abt B, 6, 115-117 (1929). https://doi.org/10.1515/zpch-1929-0613

1931FIS Fischer, W.; Heat of fusion and molecular heat of aluminum halide, Z. Anorg. Allgem. Chem. 200, 332-342 (1931) https://doi.org/10.1002/zaac.19312000129

1931POH E. Pohland, "Über Nichtmetall-Halogenverbindungen. I. Zur Kenntnis des Siliciumtetrabromids," Z. Anorg. Allgem. Chem. 201, 265 (1930). https://doi.org/10.1002/zaac.19312010124

1933BOT A.A. Botschwar, "Die Zustandsdiagramme einiger Lithiumsalzschmelzen," Z. Anorg. Chem., 210, 163 (1933) https://doi.org/10.1002/zaac.19332100207

1936KEL K. K. Kelley, "Heats of Fusion of Inorganic Compounds," U.S. Bur. Mines Bull. 393 (1936). https://digital.library.unt.edu/ark:/67531/metadc12560/m1/2/

1938PUS N. A. Pushin and J. Makuc; "Die Schmelzdiagramme binärer Mischungen der Halogenide des Schwefels, Phosphors, Arsens, Antimons, Wismuts, Zinns und Aluminiums," Z. Anorg. Allgem. Chem. 237, 177-82 (1938). https://doi.org/10.1002/zaac.19382370208

1942MAI Maier, C. G. Sponge Chromium. Washington, D.C.: U.S. Dept. of the Interior, Bureau of Mines, 1942. https://digital.library.unt.edu/ark:/67531/metadc12596/

1943MOO G. E. Moore; "Heat Contents at High Temperatures of the Anhydrous Chlorides of Calcium, Iron, Magnesium and Manganese," J. Am. Chem. Soc. 65, 1700-1703 (1943). https://doi.org/10.1021/ja01249a014

1945NAY B. F. Naylor; "Heat Contents at High Temperatures of Magnesium and Calcium Fluorides," J. Am. Chem. Soc. 67, 150-152. https://doi.org/10.1021/ja01217a052

1945VOV A.P. Vovkogon and Ya A. Fialkovj; J. Gen. Chem. (U.S.S.R.) 15, 903-910 (1945). URL: na

1948DER1 E. P. Dergunov and A. G. Bergman, "Complex Formation Between Alkali Metal Fluorides and Fluorides of Metals of the Fourth Group," Dokl. Akad. Nauk S.S.S.R. 60, 391-394 (1948). URL: na

1949ALE K. M. Alexander; F. Fairbrother; "The halides of columbium (Niobium) and tantalum. Part II. The vapour pressure of tantalum pentaiodide," J. Chem. Soc., 2472-2476 (1949). https://doi.org/10.1039/JR9490002472

1950FOS L. M. Foster; "The Alleged Complexity of Solid Aluminum Chloride," J. Am. Chem. Soc. 72, 1902–1905 (1950). https://doi.org/10.1021/ja01161a013

1951BLO J. O. Blomeke, An Investigation of the ThF4-Fused Salt Solutions for Homogeneous Breeder Reactors, ORNL-1030 (June 19, 1951). URL: na

1951HAE H. M. Haendler and W. J. Bernard; "The Reaction of Fluorine with Cadmium and Some of its Binary Compounds. The Crystal Structure, Density and Melting Point of Cadmium Fluoride," J. Am. Chem. Soc. 73, 5218-5219 (1951). https://doi.org/10.1021/ja01155a064

1951TOD S. S. Todd and J. P. Coughlin; "Low-temperature Heat Capacity, Entropy at 298.16°K., and High-temperature Heat Content of Ferric Chloride," J. Am. Chem. Soc. 73, 4184-4185 (1951). https://doi.org/10.1021/ja01153a040

1951WES Westrum, E. F., Jr., and Wallmann, J. C., "The Melting Point and the Heat of Sublimation of Plutonium Trifluoride," J. Am. Chem. Soc. 73, 3530 (1951). https://doi.org/10.1021/ja01151a535

1952ASK W. J. Asker, E. R. Segnit, and A. W. Wylie, "The Potassium Thorium Fluorides," J . Chem. Soc., 4470-4479 (1952). https://doi.org/10.1039/JR9520004470

1952DER E. P. Dergunov, Dokl. Akad. Nauk SSSR, 85, 1025 (1952). URL: na

1953ROY D. M. Roy, R. Roy, and E. F. Osborn, "Fluoride Model Systems: III, The System NaF–BeF2 and the Polymorphism of Na2BeF4 and BeF2, " J . Am. Ceram. Soc. 36, 185 (1953). https://doi.org/10.1111/j.1151-2916.1953.tb12864.x

1954ROY D. M. Roy, R. Roy, and E. F. Osborn, "Fluoride Model Systems: IV, The Systems LiF-BeF2 and PbF2-BeF2," J Am. Ceram. Soc. 37, 300 (1954). https://doi.org/10.1111/j.1151-2916.1954.tb14042.x

1955MAC R. O. MacLaren and N. W. Gregory; "The Vapor Pressure of Iron(II) Bromide," J. Phys. Chem. 59, 184-186 (1955). https://doi.org/10.1021/j150524a022

1955NEF Neff, J.A.; Hickman, J.B.; "Total Pressure of Certain Binary Liquid Mixtures," J. Phys. Chem. 59, 42-45 (1955). https://doi.org/10.1021/j150523a013

1956PER E. A. Peretti; "Thermal Analysis of the Indium-Iodine System," J. Am. Chem. Soc. 78, 5745-5746 (1956). https://doi.org/10.1021/ja01603a008

1957BEU C. Beusman, Activities in the KCl—FeCl- and LiCl—FeCl2 Systems, ORNL-2323 (May 15, 1957). URL: na

1957BRA D. Bradley, "The preparation and properties of the chlorides of uranium, plutonium, and thorium and of the fission product chlorides," Atomic Energy Research Establishment, Harwell, Berkshire, UK, 1957. https://www.osti.gov/servlets/purl/4321371

1957GRE N. N. Greenwood; I. J. Worrall; "Ionic and covalent forms of the gallium trihalides," J. Inorg. Nucl. Chem. 3, 357-364 (1957). https://doi.org/10.1016/0022-1902(57)80041-4

1957MOR I. S. Morozov, Z. N. Shevtsova, and L. V. KLyukina, "A Study of the Diagram of State of the System NdCl3-CaCl2 NaCl," Zh. Neorg. Khim. 2, 1639 (1957). URL: na

1957PIN H. L. Pinch and J. M. Hirshon, "Thermal Analysis of the Ferrous Chloride-Potassium Chloride System," J Am. Chem. Soc. 79, 6149-50 (1957). https://doi.org/10.1021/ja01580a012

1958BAR C. J. Barton, H. A. Friedman, W. R. Grimes, H. Insley, R. E. Moore, and R. E. Thoma, "Phase Equilibria in the Alkali Fluoride—Uranium Tetrafluoride Fused Salt Systems: I. The Systems LiF-UF4 and NaF-UF4," J. Am. Ceram. Soc. 41, 63-69 (1958). https://doi.org/10.1111/j.1151-2916.1958.tb13520.x

1958BAR2 C. J. Barton, W. R. Grimes, H. Insley, R. E. Moore, and R. E. Thoma, "Phase Equilibria in the Systems NaF-ZrF4 , UF4-ZrF4,and NaF-ZrF4-UF4," J Phys Chem. 62, 665-676 (1958). https://doi.org/10.1021/j150564a008

1958THO R. E. Thoma, H. Insley, B. S. Landau, H. A. Friedman, and W. R. Grimes, "Phase Equilibria in the Alkali Fluoride-Uranium Tetrafluoride Fused Salt Systems: II. The Systems KF-UF4 and RbF-UF4," J. Am. Ceram. Soc. 41, 538-544 (1958). https://doi.org/10.1111/j.1151-2916.1958.tb12912.x

1959BEN R. Benz, M. Kahn, and J. A. Leary, "Phase Equilibria of the Binary System PuCl3−KCl," J. Phys. Chem. 63, 1983-1984 (1959). https://doi.org/10.1021/j150581a052

1959HAE H. M. Haendler, P. S. Sennett and C. M. Wheeler Jr.; "The System LiF - LiCl , LiF - NaCl , LiF - KCl," J. Electrochem. Soc. 106, 264 (1959). https://doi.org/10.1149/1.2427319

1959JAN G. J. Janz and J. Goodkin; "Heat and Entropy of Fusion of Mercuric Bromide," J. Phys. Chem. 63, 1975-1976 (1959). https://doi.org/10.1021/j150581a045

1959THA B. J. Thamer and G. E. Meadows, "The Systems UF4-SnF2 and PuF3-SnF2," LA-2286, Los Alamos National Laboratory, Los Alamos, NM, 1959. URL: na

1959THO R. E. Thoma, "Phase Diagrams of Nuclear Reactor Materials," ORNL-2548, Oak Ridge National Laboratory, Oak Ridge, TN (1959). https://digital.library.unt.edu/ark:/67531/metadc1016322/m2/1/high_res_d/4234144.pdf

1959THO4 R. E. Thoma, H. Insley, B. S. Landau, H. A. Friedman, and W. R. Grimes, "Phase Equilibria in the Fused Salt Systems LiF-ThF4 and NaF-ThF4," J. Phys. Chem. 63, 1266-74 (1959). https://doi.org/10.1021/j150578a013

1960BRA A. P. Brady, O. E. Myers, J. K. Clauss, "Thermodynamic properties of higher fluorides. I. the heat capacity, entropy, and heats of transition of molybdenum hexafluoride and niobium pentafluoride," J. Phys. Chem. 64, 558 (1960). https://doi.org/10.1021/j100834a018

1960DEA Deadmore, D.L. and Machin, J.S., "Phase Relations in Some Halide Systems," J. Am. Chem. Soc. 43, 592-594 (1960). https://doi.org/10.1111/j.1151-2916.1960.tb13622.x

1960DWO Dworkin A, Bredig M.; "The heats of fusion of the alkali metal halides," J Phys Chem. 64, 269–272 (1960). https://doi.org/10.1021/j100831a023

1960MCC L. V. McCarty, L. C. Landauer, and J. M. Binkowski; "Silicon Tetraiodide. Freezing Point and Solubility in Common Organic Solvents," J. Chem. Eng. Data 5, 365-366 (1960). https://doi.org/10.1021/je60007a035

1960THO R. E. Thoma; H. Insley; H. A. Friedman; C. F. Weaver; "Phase Equilibria in the Systems BeF2-ThF4 and LiF-BeF2-ThF4," J. Phys. Chem. 64, 865 (1960). https://doi.org/10.1021/j100836a010

1960TOP1 L. E. Topol, S. W. Mayer, and L. D. Ransom; "The heat of fusion of bismuth trichloride — a comparison of calorimetric and cryoscopic determinations," J. Phys. Chem. 64, 862-865 (1960). https://doi.org/10.1021/j100836a009

1960TOP2 L. E. Topol and L. D. Ransom; "The heats of fusion of the cadmium halides, mercuric chloride and bismuth bromide," J. Phys. Chem. 64, 1339-1340 (1960). https://doi.org/10.1021/j100838a508

1961THO Thoma, R.E., C.F. Weaver, H.A. Friedman, H. Insley and L.A. Harris, "Phase equilibria in the system LiF-YF3," J. Chem. Phys. 65, 1096 (1961). https://doi.org/10.1021/j100825a003

1962MCD R. A McDonald; G. C. Sinke; D. R. Stull; "High temperature enthalpy, heat capacity, heat of fusion, and melting point of zirconium tetrafluoride," J. Chem. Eng. Data 7, 83 (1962). https://doi.org/10.1021/je60012a026

1962STU B. J. Sturm, Phase Equilibria in the System Chromium(II) Fluoride-Chromium (III) Fluoride, Inorg. Chem. 1, 665-672 (1962). https://doi.org/10.1021/ic50003a043

1963BRE L. Brewer, G. R. Somayajulu; E. Brackett, "Thermodynamic Properties of Gaseous Metal Dihalides." Chem. Rev. 63, 111-121 (1963). https://doi.org/10.1021/cr60222a002

1963BRI R. B. Briggs; "Molten-salt reactor program semiannual progress report," ORNL-3419, Oak Ridge National Laboratory, 1963. https://digital.library.unt.edu/ark:/67531/metadc1032886/m2/1/high_res_d/4692918.pdf

1963DWO1 Dworkin A, Bredig M. The heats of fusion and transition of alkali earth and rare earth metal halides. J Phys Chem. 67, 697–698 (1963). https://doi.org/10.1021/j100797a038

1963DWO2 A. S. Dworkin and M. A. Bredig, "The heats of fusion of some rare earth metal halides," J. Phys. Chem. 67, 2499 (1963). https://doi.org/10.1021/j100805a511

1963SEM K. N. Semenenko and T. N. Naumova, Russ. J. Struct. Chem. 4, 59 (1963). URL: na

1963WIC Wicks, C.E. and F.E. Block, Thermodynamic Properties of 65 Elements - Their Oxides, Halides, Carbides and Nitrides, U.S. Bureau of Mines Bulletin 605, (1963). https://digital.library.unt.edu/ark:/67531/metadc12759/

1964CUB D. Cubicciotti; H. Eding; "Heat Contents of Molten Zinc Chloride and Bromide and the Molecular Constants of the Gases," J. Chem. Phys. 40, 978–982 (1964). https://doi.org/10.1063/1.1725291

1964THO J. Thonstad; "The aluminium – aluminium bromide and aluminium – aluminium iodide systems," Can. J. Chem. 42, 2739-2743 (1964). https://doi.org/10.1139/v64-405

1964WES Westrum, E. F., "Progress in the calorimetry and thermodynamics of phase and ordering transitions," Pure Appl. Chem. 8, 187-214 (1964). https://doi.org/10.1351/pac196408020187

1965CUB D. Cubicciotti, The Vapor Pressure and Enthalpy of Arsenic Triiodide and Its Absolute Entropy at 298°K J Phys Chem 69, 2743-2746 (1965). https://doi.org/10.1021/j100892a043

1965HOL J. L. Holm, "Phase Relations in the Systems NaF-LiF, NaF-KF, and NaF-RbF," Acta Chem. Scand. 19, 638 (1965). https://doi.org/10.3891/acta.chem.scand.19-0638

1965KUR T. Kurosawa, R. Hasegawa, T. Yagihashi; "Molar Heat Capacity and Heat of Fusion of Silicon Tetraiodide," Trans. Jpn. Inst. Metals 6, 229-233 (1965). https://doi.org/10.2320/matertrans1960.6.22

1965MCD R. A. McDonald; F. L. Oetting; "The Thermodynamic Properties and Allotropy of Beryllium Chloride between 13 and 715°K," J. Phys. Chem 69, 3839-3845 (1965). https://doi.org/10.1021/j100895a033

1965STE F. D. Stevenson and C. E. Wicks; "Vapor Pressure of Hafnium (IV) Iodide," J. Chem. Eng. Data 10, 33-36 (1965). https://doi.org/10.1021/je60024a013

1965TAY A. R. Taylor Jr.; T. E. Gardner; "Some Thermal Properties Of Beryllium Fluoride From 8° To 1,200° K," US Bur Mines RI-6664 (1965). URL: na

1965THO1 R. E. Thoma, "Rare-earth halides", ORNL 3804, Oak Ridge National Laboratories, 1965. https://www.osti.gov/servlets/purl/4631187

1965THO2 Thoma, R.E., H. Insley and G.M. Hebert, "The Sodium Fluoride-Lanthanide Trifluoride Systems," Inorg. Chem. 5, 1222 (1965). https://doi.org/10.1021/ic50041a032

1966BUR Burnett, J.L., "Melting points of CmF3 and AmF3," J. Inorg. Nucl. Chem. 28, 2454–2456 (1966). https://doi.org/10.1016/0022-1902(66)80158-6

1966CHI P. Chiotti, G. J. Gartner, E. R. Stevens, and Y. Saito; "Heats of Fusion and Transformation for Some Metals and Compounds," J. Chem. Eng. Data 11, 571-574 (1966). https://doi.org/10.1021/je60031a031

1966CUB D. Cubicciotti, H. Eding, and J. W. Johnson; "The Saturation Thermodynamic Functions for Mercuric Chloride from 298°K to the Critical Point," J.Phys. Chem. 70, 2989-2995 (1966). https://doi.org/10.1021/j100881a045

1966GIB J. A. Gibson, G. S. Harvey, "Properties of the rare earth metals and compounds," Battelle Memorial Institute Tech Rept AFML-TR-65-430, 1966. https://apps.dtic.mil/sti/trecms/pdf/AD0479391.pdf

1966OSB D. W. Osborne, F. Schreiner , J. G. Malm, H. Selig, L Rochester, "Heat Capacity and Other Thermodynamic Properties of MoF6 between 4° and 350°K," J. Chem. Phys 44, 2802 (1966). https://doi.org/10.1063/1.1727128

1966ROB1 W. D. Robertson, "Binary phase diagrams of halide salts," Report No. Yale -2723-1 (Vol 1), Yale University, New Haven, Conn., 1966. https://www.osti.gov/servlets/purl/4513889

1966ROB2 W. D. Robertson, "Binary phase diagrams of halide salts," Report No. Yale -2723-1 (Vol 2), Yale University, New Haven, Conn., 1966. https://doi.org/10.2172/4520071

1966THA Thamer, B. J.; "Freezing Points of Some Ternary Mixtures Derived from 55 Mole % UClg - 45 Mole % KC1," LA-3579, Los Alamos Scientific Laboratory, 1966. https://www.osti.gov/servlets/purl/4474451

1966THO1 R.E. Thoma, H. Insley, and G.M. Hebert, "The Sodium Fluoride-Lanthanide Trifluoride Systems," Inorg. Chem., 5, 1222 (1966). https://doi.org/10.1021/ic50041a032

1966THO2 Thoma, R.E., "The Rare Earth Halides," in: Eyring, L., ed., Progress in Science and Technology of the Rare Earths, Vol. 2(Pergamon Press, New York), pp. 90-121 (1966). https://www.osti.gov/servlets/purl/4631187

1967BIN J. S. Binford Jr., J. M. Strohmenger, and T. H. Hebert; "A modified drop calorimeter. The heat content of aluminum carbide and cobalt(II) fluoride above 25.degree," J. Phys. Chem. 71, 2404-2408 (1967). https://doi.org/10.1021/j100867a004

1967CUB D. Cubicciotti; H. Eding; "Enthalpy and entropy increments above 298 K for bismuth(III) bromide, bismuth(III) oxide, thallium(III) oxide, and thallium(I) oxide," J. Chem. Eng. Data 12, 548-551 (1967). https://doi.org/10.1021/je60035a021

1967GRJ Grjotheim, K, Halvorsen, T., Holm, J. L., "The Phase Diagram of the System NaF-NaCl and Thermodynamic Properties of Fused Mixtures," Acta Chem. Scand. 21, 2300-2301 (1967). https://doi.org/10.3891/acta.chem.scand.21-2300

1967OET F. L. Oetting, "The Chemical Thermodynamic Properties of Plutonium Compounds," Chem. Rev. 67, 261-297 (1967). https://doi.org/10.1021/cr60247a002

1968ALI A. S. Alim, P. Kurtz, W. D. Van Vorst; "Thermodynamic properties of molten mixtures of cadmium chloride and lead(II) chloride," J. Chem. Eng. Data 13, 24-28 (1968). https://doi.org/10.1021/je60036a008

1968BRO Brown, D.; Canterford, J. H; Colton, R.; "Halides of the transition elements," London, New York Wiley, 1968. https://archive.org/details/halidesoftransit0000unse/page/n9/mode/2up

1968CUB Cubicciotti, D.; "Thermodynamic properties of bismuth trifluoride," J. Electrochem. Soc. 115, 1138 (1968). https://doi.org/10.1149/1.2410925

1968KEN F. J. Keneshea, D. Cubicciotti, G. Withers, and H. Eding; "Enthalpy and entropy increments above 298K. and a Σ-plot treatment of vaporization data for niobium pentachloride," J. Phys. Chem. 72, 1272-1277 (1968). https://doi.org/10.1021/j100850a034

1969CUB Cubicciotti, D., Some thermodynamic properties of antimony trifluoride, High Temp. Sci. 1, 268 (1969). URL: na

1969NOL Nölting, J. and Rein, D.. "Die spezifische Wärme von Silberjodid" , Z. Physik. Chem. 66, 150-160 (1969). https://doi.org/10.1524/zpch.1969.66.1_3.150

1969SHA R. A. Sharma; I. Johnson; "Phase Diagrams for the Systems MgCl2-MgF2, CaCl2-MgF2, and NaCl-MgF2," J. Am. Ceram. Soc. 52, 612-615 (1969). https://doi.org/10.1111/j.1151-2916.1969.tb15851.x

1969THO R.E. Thoma, G.D. Brunton, A. Penneman, and T.K. Keenan "Equilibrium relations and crystal structure of lithium fluorolanthanate phases," Inorg. Chem. 9, 109 (1969). https://doi.org/10.1021/ic50087a019

1969WEB D.U Webb, B.H Justice, H Prophet, Thermodynamic properties and far infrared spectra of aluminum tribromide, J. Chem. Thermodyn. 1, 227-239 (1969). https://doi.org/10.1016/0021-9614(69)90043-3

1970HAS J. M. Haschke, H. A. Eick, "The preparation and some properties of europium bromides and hydrated bromides," J. Inorg. Nucl. Chem. 32, 2153-2158 (1970). https://doi.org/10.1016/0022-1902(70)80492-4

1970HEN D. C. Henderson, "The preparation and some high temperature properties of the rare earth trifluorides," Ph.D. Thesis, Iowa State University, Ames, IA, 1970. https://doi.org/10.31274/rtd-180813-2750

1970LIN Linsey, C.; "High temperature enthalpies of the lead halides: enthalpies and entropies of fusion," PhD Thesis, N. Texas State Univ., Denton, TX, 1970. https://digital.library.unt.edu/ark:/67531/metadc164404/

1970OSB D. W. Osborne, B. Weinstock, J. H. Burns; "Heat Capacity, Enthalpy of Fusion, and Thermodynamic Properties of NpF6 from 7 to 350°K," J. Chem. Phys. 51, 1803-1810 (1970). https://doi.org/10.1063/1.1673221

1970PAN Pankratz, L. B.; "Thermodynamic Data for Silver Chloride and Silver Bromide," US Bur Mines, Rep. Invest. 7430, 1970. https://stacks.cdc.gov/view/cdc/201966

1970THO Thoma, R.E., G.D. Brunton, R.A. Penneman and T.K. Keenan, “Equilibrium relations and crystal structure of lithium fluorolanthanate phases,” Inorg. Chem. 9, 1096 (1970). https://doi.org/10.1021/ic50087a019

1971BOR Borowitz, J. L.; Rafaeloff, R.; Roy, A.; "The Phase Diagrams of the Systems PbCl-UCl4 and PbCl-UCl3," J. Electrochem. Soc. 118, 1358-1361 (1971). https://doi.org/10.1149/1.2408322

1971DWO1 Dworkin, A. S.; Bredig, M. A.; "Enthalpy of lanthanide chlorides, bromides, and iodides from 298-1300 degrees K - enthalpies of fusion and transition," High Temp. Sci. 3, 81 (1971). URL: na

1971DWO2 Dworkin, A.S. and M.A. Bredig, "Miscibility of liquid metals with salts. X. Various studies in alkaline earth metal-metal fluoride and rare earth metal-metal difluoride and trifluoride systems," J. Phys. Chem, 75, 2340 (1971). https://doi.org/10.1021/j100684a019

1971JOH C. E. Johnson and E. J. Hathaway; Solid-Liquid Phase Equilibria for the Ternary Systems Li(F,Cl,I) and Na(F,Cl,I), J. Electrochern. Soc. 118, 631 (1971). https://doi.org/10.1149/1.2408125

1971KUT Kutscher, J. and Schneider, A., Chemie der Seltenen Erden in geschmolzenen Alkalihalogeniden. VIII. Untersuchung der Zustandsdiagramme von Lanthaniden(III)-jodiden im Gemisch mit Alkalijodiden. Z. Anorg. Allgem. Chem. 386, 38-46 (1971). https://doi.org/10.1002/zaac.19713860105

1971SEV Sevastya, T. N.; Karpenko, N. V.; "Heats of fusion of tin dihalides," Russ. J. Phys. Chem. 45, 1044 (1971). URL: na

1971SPE F. H. Spedding; D. C. Henderson; "High-Temperature Heat Contents and Related Thermodynamic Functions of Seven Trifluorides of the Rare Earths: Y, La, Pr, Nd, Gd, Ho, and Lu," J. Chem. Phys. 54, 2476–2483 (1971). https://doi.org/10.1063/1.1675202

1972DWO A.S. Dworkin, "Enthalpy of uranium tetrafluoride from 298–1400°K: enthalpy and entropy of fusion," J. Inorg. Nucl. Chem. 34, 135-138 (1972). https://doi.org/10.1016/0022-1902(72)80370-1

1972ROM Romberger, K.A., Braustein, J., Thoma, R.E., "New electrochemical measurements of the liquidus in the lithium fluoride-beryllium fluoride system. Congruency of lithium beryllium fluoride (Li2BeF4)," J. Phys. Chem. 76, 1154–1159 (1972). https://doi.org/10.1021/j100652a012

1972VOG Vogel, G. , Chemie der Seltenen Erden in geschmolzenen Alkalihalogeniden. IX. Untersuchung der Zustandsdiagramme von Lanthanidenbromiden im Gemisch mit Alkalibromiden. Z. Anorg. Allgem. Chem. 388, 43-52 (1972). https://doi.org/10.1002/zaac.19723880105

1973CLA Clark, R., "Heat of fusion and heat capacities of lithium chloride potassium chloride eutectic and potassium nitrate," J Chem Eng Data 18, 67–70 (1973). https://doi.org/10.1021/je60056a023

1973DWO Dworkin, A.S. and M.A. Bredig, "Miscibility of Liquid Metals with Salts. XI. System Yttrium Metal-Yttrium Trichloride at High Temperatures," J. Chem. Eng. Data 18, 74 (1973). https://doi.org/10.1021/je60056a031

1973HOL Holm, J. L., Grønvold, F., Sæthre, L. J., Skaarup, S., Aaltonen, R., Swahn, C.-G. "The Enthalpy of Fusion of Magnesium Chloride," Acta Chem. Scand. 27, 370–371 (1973). https://doi.org/10.3891/acta.chem.scand.27-0370

1973MCC B. C. McCollum, M. J. Camp, and J. D. Corbett,"Rare earth metal-metal halide systems. XVI. Scandium sesquichloride and sesquibromide," Inorg. Chem. 12, 778-780 (1973). https://doi.org/10.1021/ic50122a014

1974SPE F.H. Spedding, B.J. Beaudry, D.C. Henderson, J. Moorman, "High temperature enthalpies and related thermodynamic functions of the trifluorides of Sc, Ce, Sm, Eu, Gd, Tb, Dy, Er, Tm, and Yb," J. Chem. Phys. 60, 1578-1588 (1974). https://doi.org/10.1063/1.1681233

1974UME K Y. Umetsu and T. Ejima; "Phase Diagram of the PbCl2–ZnCl2 Binary System and Density of the Binary Melt," Trans. J. Inst. Metals 15, 276-280 (1974). https://doi.org/10.2320/matertrans1960.15.276

1975JAN3 G. J. Janz; R. P. T. Tomkins; C. B. Allen; J. R. Downey, Jr.; G. L. Garner; U. Krebs; S. K. Singer; "Molten salts: Volume 4, part 2, chlorides and mixtures—electrical conductance, density, viscosity, and surface tension data," J. Phys. Chem. Ref. Data 4, 871-1178 (1975). https://doi.org/10.1063/1.555527

1976KLE O.J. Kleppa, M. Wakihara; "Enthalpies of mixing in the liquid mixtures of zinc fluoride with the fluorides of lithium, sodium and potassium," J. Inorg. Nucl. Chem. 38, 715-719 (1976). https://doi.org/10.1016/0022-1902(76)80343-0

1977CRA D. F. Craig; J. J. Brown, "Phase Equilibria in the System CaF2-AlF3," J. Am. Ceram. Soc. 60, 396-398 (1977). https://doi.org/10.1111/j.1151-2916.1977.tb15520.x

1977EHL T.C. Ehlert, J.S. Wang, "Thermochemistry of the copper fluorides," J. Phys. Chem. 81, 2069–2073 (1977). https://doi.org/10.1021/j100537a005

1977SOM J. A. Sommers, E. F. Westrum, "Thermodynamics of the lanthanide halides II. Heat capacities and Schottky anomalies of SmCl3, EuCl3, and GdCl3 from 5 to 350 K," J. Chem. Thermo. 9, 1-26 (1977). https://doi.org/10.1016/0021-9614(77)90193-8

1978JAN1 G. J. Janz, C. B. Allen, J. R. Downey, Jr., , R. P. T. Tomkins, "Physical Properties Data Compilations Relevant to Energy Storage. I. Molten Salts: Eutectic Data," NSRDS-NBS 61, Part I, National Bureau of Standards, Gaithersburg, MD (1978). https://www.nist.gov/system/files/documents/srd/NSRDS-61_Part-1.pdf

1978PES J. Peschl; M. Malinovsky; "Phase diagram of the system LiF-NaCl-KCl," Chem. Zvesti 32, 755-759 (1978). https://www.chemicalpapers.com/?id=7&paper=5238

1979BLA Blachnik, R. and Selle, D.; Zur Thermochemie von Alkalichlorid-Lanthanoid(III)-chloriden. Z. Anorg. Allgem. Chem., 454, 90-98 (1979). https://doi.org/10.1002/zaac.19794540114

1979JAN2 G. J. Janz, R. P. T. Tomkins, C. B. Allen; Molten Salts: Volume 4, Part 4 Mixed Halide Melts Electrical Conductance, Density, Viscosity, and Surface Tension Data. J. Phys. Chem. Ref. Data 8, 125-302 (1979). https://doi.org/10.1063/1.555590

1980BLA Blachnik, R. and Jäger-Kasper, A.; Zustandsdiagramme von Alkalibromid-Lanthanoid(III)-bromid-Mischungen. Z. Anorg. Allgem. Chem. 461, 74-86 (1980). https://doi.org/10.1002/zaac.19804610112

1980FIL T.G. Filatova, B.S. Zakharova, L.P. Reshetrikova, and A.W. Novoselova, Zh. Neorg. Khim. 25, 1427 (1980). URL: na

1980FIN Fink, H. and Seifert, H. J.; Über die Systeme des Europium(II)- und Strontiumchlorids mit Alkalimetallchloriden und Thalliumchlorid(I). Z. Anorg. Allgem. Chem. 466, 87-96 (1980). https://doi.org/10.1002/zaac.19804660111

1980FON Fontana, M., Maisano, G., Migliardo, P., Vasi, C., Wanderlingh, F., "Raman Scattering and Melting Point in SbCl3," Int. J. Optics 27, 1087-1093 (1980). https://doi.org/10.1080/713820376

1980RIM D. S. Rimai, J. Ito, J.C. Jamieson,"High tempera ture polymorphism in rutile structure fluorides," Mater. Res. Bull 15, 489-492 (1980). https://doi.org/10.1016/0025-5408(80)90055-0

1980SIN Z. Singh, R. Prasad, V. Venugopal, D.D. Sood; "Vaporisation thermodynamics of thorium tetrabromide," Thermochim. Acta 38, 235-239 (1980). https://doi.org/10.1016/0040-6031(80)87063-8

1981FLO G. Flor, C. Margheritis, and C. Sinistri; "Liquid-liquid and solid-liquid equilibriums in the reciprocal ternary system silver, lithium/bromine, iodine," J. Chem. Eng. Data 26, 152-154 (1981). https://doi.org/10.1021/je00024a017

1983ALI F. Aliotta , G. Maisano , P. Migliardo , C. Vasi , F. Wanderlingh , R. Triolo & G. P. Smith, Raman scattering studies of ionic → molecular transitions in AICI3, near the melting point, Phys. Chem. Liq. 12, 225-235 (1983), https://doi.org/10.1080/00319108308084556

1983ICH S. Ichiba, Y. Iwata; "The congruent melting compounds in the system KCl–SnCl2," Chem. Lett. 12, 1803-1806 (1983). https://doi.org/10.1246/cl.1983.1803

1984PAN L.B. Pankratz, "Thermodynamic Properties of Halides," Bulletin 674, Dept. of Interior, U.S. Bureau of Mines (1984). https://digital.library.unt.edu/ark:/67531/metadc12816/m2/1/high_res_d/Bulletin0674.pdf

1984SAT Y. Sato and T. Ejima, "Phase Diagram of LiCl-NaCl-AlCl3 Ternary System," ECS Proc. Vol. 1984-2, 121 (1984). https://doi.org/10.1149/198402.0121PV

1985COR E. H. P. Cordfunke; G. Prins; "The thermochemical properties of caesium iodide. I. Thermodynamic functions of solid CsI," Thermochim. Acta 90, 169-176 (1985). https://doi.org/10.1016/0040-6031(85)87094-5

1985GAB A. Gabriel and A. D. Pelton; "Phase diagram measurements and thermodynamic analysis of the PbCl2–NaCl, PbCl2–KCl, and PbCl2–KCl–NaCl systems," Can. J. Chem. 63, 3276-3282 (1985). https://doi.org/10.1139/v85-542

1985SEI H. J. Seifert; H. Fink; "Thermodynamic properties of double chlorides in the systems ACl/LaCl3 (A ≡ Na, K, Rb, Cs)," J. Less Common Metals 110, 139-147 (1985). https://doi.org/10.1016/0022-5088(85)90315-7

1985WEI Weigel, F.; Schuster, W.; "The vapor pressure of americium(III) chloride: An ultramicro apparatus for the determination of saturation vapor pressures of actinide halides." J. Less Common Metals 113, 157-176 (1985). https://doi.org/10.1016/0022-5088(85)90157-2

1986DEV Devyatykh, G.G.; Gusev, A.V.; Gibin, A.M.; Zhernenkov, N.V.; Kabanov, A.V., "Study of the heat-capacity of highly purified germanium tetrachloride," Zh. Neorg. Khim. 31, 2223-2226 (1986). URL: na

1986SEI H. Seifert, J. Sandrock, G. Thiel, "Thermochemical studies on the systems ACl/CeCl3 (A=Na-Cs)," J. Therm. Anal. 31 (1986) 1309–1318. https://doi.org/10.1007/BF01914643

1987SAN J. Sangster; A. D. Pelton; "Phase Diagrams and Thermodynamic Properties of the 70 Binary Alkali Halide Systems Having Common Ions," J. Phys. Chem. Ref. Data 16, 509-561 (1987). https://doi.org/10.1063/1.555803

1988SEI Seifert, H.J., Fink, H. and Uebach, J.; "Properties of double chlorides in the systems ACl/NdCl3 (A=Na-Cs)," J. Therm. Anal. 33, 625–632 (1988). https://doi.org/10.1007/BF02138565

1990OKA Okamoto, H.; "The Br-In (Bromine-Indium) system," Bull. Alloy Phase Diag. 11, 297–300 (1990). https://doi.org/10.1007/BF03029302

1991MET Metallinou M M, Nalbandian L, Papatheodorou G N, Voigt W and Emons H H, "Thermal analysis and Raman spectroscopic measurements on the scandium iodide-cesium iodide system," Inorg. Chem. 30, 4260-4264 (1991). https://doi.org/10.1021/ic00022a030

1992PER G. S. Perry, C. H. Hawthorn, "Phase studies of the CeCl3-KCl-ZnCl2 ternary system and of the component binary systems," Thermochim. Acta, 211, 323-330 (1992). https://doi.org/10.1016/0040-6031(92)87030-E

1992SHA Sharma, R. A.; Rogers, R. A.; "Phase Equilibria and Structural Species in NdCl3–NaCl, NdCl3–CaCl2, PrCl3–NaCl, and PrCl3–CaCl2 Systems," J. Am. Ceram. Soc. 75, 2484-2490 (1992). https://doi.org/10.1111/j.1151-2916.1992.tb05601.x

1994GAU2 Gaune-Escard, M; Rycerz, L; Szczepaniak, W; Bogacz, A; "Enthalpies of Phase-Transition in the Lanthanide Chlorides LaCl3, CeCl3, PrCl3, NdCl3, GdCl3, DyCl3, ErCl3 and TmCl3," J. Alloys Cpds. 204, 193-196 (1994). https://doi.org/10.1016/0925-8388(94)90091-4

1995MUR Y. Murakami; A. Sawata; "Phase Diagrams of NaCl-AlCl3-NaBr and NaBr-AlCl3 Systems," Denki Kagaku oyobi Kogyo Butsuri Kagaku 63, 759-760 (1995). https://doi.org/10.5796/kogyobutsurikagaku.63.759

1995TAN R. P. Tangri, D. K. Bose, C. K. Gupta; "Vapor Pressure of ZrCl4 and HfCl4 over Melt Systems KCl + AlCl3 (1:1.04 mol) + ZrCl4 and KCl + AlCl3 (1:1.04 mol) + HfCl4," J. Chem. Eng. Data 40, 823–827 (1995). https://doi.org/10.1021/je00020a019

1996FED P. Fedorov; I. I. Buchinskaya; O. S. Bondareva; L. L. Vistin; "Phase diagrams of the NaF-RF3 (R = Tb, Dy, Er) systems," Russ. J. Inorg. Chem. 41, 1633-1637 (1996). https://www.researchgate.net/publication/289016470_Phase_diagrams_of_the_NaF-RF3_R_Tb_Dy_Er_systems

1996GAU M. Gaune-Escard, A. Bogacz, L. Rycerz, W. Szczepaniak, "Heat capacity of LaCl3, CeCl3, PrCl3, NdCl3, GdCl3, DyCl3," J. Alloys Cpds. 235, 176-181 (1996). https://doi.org/10.1016/0925-8388(95)02071-3

1996HA Sharma, R.A.; "Phase Equilibria in Rare-Earth Chloride-Fluoride and Rare–Earth Chloride–Magnesium Fluoride Systems," J. Am. Ceram. Soc. 79, 2582-2586 (1996). https://doi.org/10.1111/j.1151-2916.1996.tb09019.x

1996KOV A. Kovács, A.S. Booij, E.H.P. Cordfunke, A. Kok-Scheele, R.J.M. Konings, "On the fusion and vaporisation behaviour of UCl3," J. Alloys Cpds. 241, 95-97 (1996). https://doi.org/10.1016/0925-8388(96)02315-8

1997ABD Abdoun, F., Gaune-Escard, A. & Hatem, G. Calorimetric and thermal analysis investigations of the MF-LaF3 mixtures (M = alkali metal). J. Phase Equil. 18, 6–20 (1997). https://doi.org/10.1007/BF02646755

1997KOY Y. Koyama, R. Takagi, Y. Iwadate, K. Fukushima, "Phase diagram and Raman spectroscopy of EuCl2-NaCl binary mixtures," J. Alloys Cpds. 260, 75-79 (1997). https://doi.org/10.1016/S0925-8388(97)00154-0

1997ROD M. Rodová, A. Cihlář, Z. Málková, K. Nitsch; "New differential thermal analysis study of lead halides," Chem. Phys. Lett. 268, 455-460 (1997). https://doi.org/10.1016/S0009-2614(97)00228-5

1998CHA Chase, M.W., Jr., NIST-JANAF Themochemical Tables, Fourth Edition, J. Phys. Chem. Ref. Data, Monograph 9, 1998. https://janaf.nist.gov

1998SHU T. Shujian; L. Qingfan; L. Shixiang; Z. Chaogui; "Phase diagram of the ternary system CeCl3–KCl–LiCl," J. Alloys Cpds. 274, 142-147 (1998). https://doi.org/10.1016/S0925-8388(98)00551-9

1999BER Berezovskii, G. A.; Zelenina, L. N.; Chusova, T. P.; Paukov, I. E.; "Thermodynamic functions of germanium tetrabromide over the temperature range 5-315 K," Russ. J. Phys. Chem. 73, 1347-1345 (1999). URL: na

1999GAU Gaune-Escard, M; Rycerz, L; "Thermodynamic properties of solid and liquid LnCl3 and LnCl3-MCL systems (Ln=lanthanide; M=alkali).," Proc. Molten Salts XII 99, 333-340 (1999). https://doi.org/10.1149/199941.0333PV

1999KON Konings, R. J. M.; Kok-Scheele, A.; "The phase diagram of the CeI3-Ce system," Thermochim. Acta 331, 45-48 (1999). https://doi.org/10.1016/S0040-6031(99)00012-X

2000FED Fedorov, P.; Buchinskaya, I.; Bondareva, O. S.; Bystrova, A. A.; Vistin, L. L.; Ershov, D. A.; Ivanov, S. P.; Stasyuk, V. A.; Sobolev, B. P.; "Phase diagrams of the NaF-RF3 (R = La, Ce, Pr, Nd, Sm) systems," Russ. J. Inorg. Chem. 45, 949-952 (2000). https://www.researchgate.net/publication/288995420_Phase_diagrams_of_the_NaF-RF3_R_La_Ce_Pr_Nd_Sm_systems

2001VOR B. M Voronin; S.V Volkov; "Ionic conductivity of fluorite type crystals CaF2, SrF2, BaF2, and SrCl2 at high temperatures," J. Phys. Chem. Solids 62, 1349-1358 (2001). https://doi.org/10.1016/S0022-3697(01)00036-1

2002RYC Rycerz, L; Gaune-Escard, M; "Enthalpies of phase transitions and heat capacity of TbCl3 and compounds formed in TbCl3-MCl systems (M=K, Rb, Cs)," J. Therm. Anal. Calorim. 68, 973-981 (2002). https://doi.org/10.1023/A:1016102925181

2002RYC2 Rycerz, L. and Gaune-Escard, M.. "Thermodynamics of SmCl3 and TmCl3: Experimental Enthalpy of Fusion and Heat Capacity. Estimation of Thermodynamic Functions up to 1300 K," Z. Naturforsch. A 57, 79-84 (2002). https://doi.org/10.1515/zna-2002-9-1012

2002SEI Seifert, H.J.; "Ternary Chlorides of the Trivalent Early Lanthanides. Phase diagrams, crystal structures and thermodynamic properties," J. Therm. Anal. Calorim. 67, 789–826 (2002). https://doi.org/10.1023/A:1014341829611

2003GRO C.P. Groen, E.H.P Cordfunke, M.E Huntelaar, "The thermodynamic properties of DyBr3(s) and DyI3(s) from T=5 K to their melting temperatures," J. Chem. Thermo. 35, 475-492 (2003). https://doi.org/10.1016/S0021-9614(02)00370-1

2003RYC1 Rycerz, L; Cieslak-Golonka, M; Ingier-Stocka, E; Gaune-Escard, M; "Phase diagram and electrical conductivity of TbBr3-NaBr binary system," J. Therm. Anal. Calorim. 72, 231-239 (2003). https://doi.org/10.1023/A:1023988207490

2003ZEL L.N. Zelenina, V.A. Titov, T.P. Chusova, Yu.G. Stenin, A.A. Titov; "On the thermodynamic properties of germanium-iodide compounds," J. Chem. Thermo. 35, 1601-1612 (2003). https://doi.org/10.1016/S0021-9614(03)00123-X

2004RAN I. M. Ranieri; A. H. A. Bressiani; S. P. Morato; S. L. Baldochi, "The phase diagram of the system LiF–GdF3," J. Alloys Cpds. 379, 95-98 (2004). https://doi.org/10.1016/j.jallcom.2004.02.010

2004ROB C. Robelin, P. Chartrand, A. D. Pelton,"Thermodynamic evaluation and optimization of the (NaCl+KCl+AlCl3) system," J. Chem. Thermodyn. 36, 683-699 (2004). https://doi.org/10.1016/j.jct.2004.04.011

2004RYC1 Rycerz, L; Gaune-Escard, M; "Heat capacity and thermodynamic functions of TbBr3," J. Chem. Eng. Data 49, 1078-1081 (2004). https://doi.org/10.1021/je049910c

2004RYC3 Rycerz, L; Gaune-Escard, M; "Phase diagram of the TbBr3-KBr binary system," Z. Naturforsch. A 59, 84-90 (2004). https://doi.org/10.1515/zna-2004-1-212

2004WOJ Wojakowska, A., Górniak, A., Wojakowski, A., Plińska, S., "Studies of phase equilibria in the systems ZnCl2-AgCl and ZnBr2-AgBr," J. Therm. Anal. Calorim. 77, 41–47 (2004). https://doi.org/10.1023/B:JTAN.0000033186.52150.8d

2005GAD Gadzuric, S; Ingier-Stocka, E; Rycerz, L; Gaune-Escard, M; "Phase diagram and electrical conductivity of EuBr2-LiBr binary system," J. Alloys Cpds. 397, 63-67 (2005). https://doi.org/10.1016/j.jallcom.2004.12.046

2005GON1 Gong, WP; Gaune-Escard, M; Rycerz, L; "Thermodynamic assessment of TbBr3 unary and NaBr-TbBr3 binary system," J. Alloys Cpds. 402, 58-65 (2005). https://doi.org/10.1016/j.jallcom.2005.04.156

2005GON2 Gong, WP; Gaune-Escard, M; Rycerz, L; "Thermodynamic assessment of LiCl-NdCl3 and LiCl-PrCl3 quasi-binary systems," J. Alloys Cpds. 396, 92-99 (2005). https://doi.org/10.1016/j.jallcom.2004.12.021

2005ING Ingier-Stocka, E; Gadzuric, S; Rycerz, L; Cieslak-Golonka, M; Gaune-Escard, M; "Phase diagram and electrical conductivity of the EuBr2-NaBr binary system," J. Nucl. Mater. 344, 120-123 (2005). https://doi.org/10.1016/j.jnucmat.2005.04.028

2005MEE J. van der Meer, R.J.M. Konings, M.H.G. Jacobs, H.A.J. Oonk, "Thermodynamic assessment of the LiF–BeF2–ThF4–UF4 system," J. Nucl. Mater. 344, 94-99 (2005). https://doi.org/10.1016/j.jnucmat.2006.05.042

2005RYC L. Rycerz, S. Gadzuric, E. Ingier-Stocka, R.W. Berg, M. Gaune-Escard, "Thermodynamic and structural properties of high temperature solid and liquid EuBr2," J. Nucl. Mater. 344, 115-119 (2005). https://doi.org/10.1016/j.jnucmat.2005.04.027

2006DAN Danilov, D.N., Leushina, A.P. and Zlomanov, V.P.; "T-x phase diagrams of the GeSe-GeI2 and NaI-GeI2 systems," Inorg Mater 42, 474–478 (2006). https://doi.org/10.1134/S0020168506050049

2006GAU1 W. Gong; M. Gaune-Escard; "Thermodynamic assessment of NdBr3 unary and LiBr–NdBr3 binary system," J. Alloys Cpds. 419, 328-333 (2006). https://doi.org/10.1016/J.JALLCOM.2005.10.007

2006GAU2 W. Gong; M. Gaune-Escard; "Thermodynamic assessment of LaBr3 unary and LiBr–LaBr3 binary system," Calphad 31, 186-191 (2007). https://doi.org/10.1016/j.calphad.2006.12.007

2007CHU Chusova, T.P., Zelenina, L.N., Stenin, Y.G., Semenova, Z. I., Titov, V. A.; "Thermodynamics of vaporization of gallium trichloride," Russ Chem Bull 56, 1313–1317 (2007). https://doi.org/10.1007/s11172-007-0200-3

2007ISK Iskenderov, E.G., Verdiev, N.N. and Vainshtein, S.I.; "Phase equilibria in the NaCl-NaBr-Na2MoO4 system," Russ. J. Inorg. Chem. 52, 427–430 (2007). https://doi.org/10.1134/S0036023607030229

2007PRA O. P. Prat; T. Cloitre; R. L. Aulombard, "Thermal and Mechanical Properties of Silicon Tetrachloride (SiCl4) and Germanium Tetrachloride (GeCl4) in Their Vapor and Liquid Phases," Chem. Vapor Deposit. 13, 199-203 (2007). https://doi.org/10.1002/cvde.200604242

2007RYC1 Rycerz, L; Gaune-Escard, M; "Phase diagram of the TbBr3-RbBr binary system:: Thermodynamic and transport properties of the Rb3TbBr6 compound," Inorg. Chem. 46, 2299-2306 (2007). https://doi.org/10.1021/ic0615978

2007RYC4 Rycerz, L; Ingier-Stocka, E; Gadzuric, S; Gaune-Escard, M; "Phase diagram and electrical conductivity of CeBr3-KBr," Z. Naturforsch. A 62, 197-204 (2007). https://doi.org/10.1515/zna-2007-3-413

2007WOJ Wojakowska, A., Krzyżak, E. & Plińska, S. Melting and high-temperature solid state transitions in cobalt(II) halides. J Therm Anal Calorim **88**, 525–530 (2007). https://doi.org/10.1007/s10973-006-8000-9

2008BAS Basin, A.S., Kaplun, A.B., Meshalkin, A.B. and Uvarov, N. F.; “The LiCl-KCl binary system,” Russ. J. Inorg. Chem. 53, 1509–1511 (2008). https://doi.org/10.1134/S003602360809026X

2008DVO1 Dvořák, V., Danielik, V., Matal, O., M. Chrenková, M. Boca; "Phase diagram of the system NaF-SnF2," J Therm Anal Calorim 91, 541–544 (2008). https://doi.org/10.1007/s10973-006-8320-9

2008DVO2 Dvoryanova, E.M., Kondratyuk, I.M. and Garkushin, I.K.; “Investigation of the RbF-RbCl-RbBr and RbF-RbCl-RbI ternary systems,” Russ. J. Inorg. Chem. 53, 1144–1148 (2008). https://doi.org/10.1134/S0036023608070279

2008ING Ingier-Stocka, E; Rycerz, L; Gadzuric, S; Gaune-Escard, M; "Thermal and conductometric studies of the CeBr3-MBr binary systems (M = Li, Na)," J. Alloys Cpds. 450, 162-166 (2008). https://doi.org/10.1016/j.jallcom.2006.11.034

2008KRZ Krzyżak, E., Wojakowska, A.; “Thermodynamics and phase equilibrium studies of silver halide-cobalt(II) halide systems,” J Therm Anal Calorim 93, 721–726 (2008). https://doi.org/10.1007/s10973-008-9135-7

2008RYC1 Rycerz, L; Ingier-Stocka, E; Cieslak-Golonka, M; Wojciechowska, A; Gadzuric, S; Gaune-Escard, M; "Physicochemical properties of the EuBr2-KBr binary system," J. Alloys Cpds. 450, 157-161 (2008). https://doi.org/10.1016/j.jallcom.2006.11.006

2008RYC2 Rycerz L, Gaune-Escard M.; "Lanthanide(III) halides: thermodynamic properties and their correlation with crystal structure," J. Alloy Compd. 450, 167-174 (2008). https://doi.org/10.1016/j.jallcom.2006.12.096

2008RYC3 Rycerz, L; Ingier-Stocka, E; Gadzuric, S; Gaune-Escard, M; "Phase diagram and electrical conductivity of the CeBr3-RbBr binary system," J. Alloys Cpds. 450, 175-180 (2008). https://doi.org/10.1016/j.jallcom.2006.12.134

2008RYC4 L. Rycerz, M. Szymanska-Kolodziej, P. Kolodziej, and M. Gaune-Escard, "Thermodynamic Properties of AgCl and AgBr," J. Chem. Eng. Data 53, 1116–1119 (2008). https://doi.org/10.1021/je700668b

2008SZY Szymanska-Kolodziej, M; Kolodziej, P; Rycerz, L; Gaune-Escard, M; "Phase diagram and electrical conductivity of the AgCl-NdCl3 binary system," Z. Naturforsch. A 63, 364-370 (2008). https://doi.org/10.1515/zna-2008-5-617

2009BEN O. Beneš, Ph. Zeller, M. Salanne, R. J. M. Konings; Density functional theory, molecular dynamics, and differential scanning calorimetry study of the RbF–CsF phase diagram. J. Chem. Phys. 130, 134716 (2009). https://doi.org/10.1063/1.3097550

2009BRU B. Brunetti, V. Piacente, and P. Scardala; "Torsion Vapor Pressures and Sublimation Enthalpies of Aluminum Trifluoride and Aluminum Trichloride," J. Chem. Eng. Data 54, 940–944 (2009) https://doi.org/10.1021/je8007167

2009GAU Kubikova, B., Rycerz, L., Chojnacka, I.; M. Gaune-Escard; "Phase Diagram and Thermodynamic and Transport Properties of the DyBr3-LiBr Binary System," J. Phase Equilib. Diffus. 30, 502–508 (2009). https://doi.org/10.1007/S11669-009-9574-2

2009ING Ingier-Stocka, E; Rycerz, L; Berkani, M; Gaune-Escard, M; "Thermodynamic and transport properties of the PrBr3-MBr binary systems (M = Li, Na)," J. Mol. Liq. 148, 40-44 (2009). https://doi.org/10.1016/j.molliq.2009.06.003

2009KOL P. Kolodziej, M. Szymanska-Kolodziej, I. Chojnacka, L. Rycerz, M. Gaune-Escard, Phase diagram and electrical conductivity of the AgBr–NdBr3 binary system, J. Alloys Cpds. 480, 834-838 (2009). https://doi.org/10.1016/j.jallcom.2009.02.083

2009RYC2 Rycerz, L., Ingier-Stocka, E. & Gaune-Escard, M. Phase diagram and electrical conductivity of the CeBr3–CsBr binary system. J Therm Anal Calorim 97, 1015–1021 (2009). https://doi.org/10.1007/s10973-009-0007-6

2010BEN O. Beneš, M. Beilmann, R.J.M. Konings, "Thermodynamic assessment of the LiF–NaF–ThF4–UF4 system," J. Nucl. Mater. 405, 186-198 (2010). https://doi.org/10.1016/j.jnucmat.2010.08.017

2010REJ Rejek, J; Rycerz, L; Ingier-Stocka, E; Gaune-Escard, M; "Thermodynamic and Transport Properties of the PrBr3-KBr Binary System," J. Chem. Eng. Data 55, 1871-1875 (2010). https://doi.org/10.1021/je900891s

2010RYC1 Rycerz, L; Ingier-Stocka, E; Berkani, M; Gaune-Escard, M; "Thermodynamic and transport properties of the PrBr3-RbBr binary system," J. Alloys Cpds. 501, 269-274 (2010). https://doi.org/10.1016/j.jallcom.2010.04.087

2010RYC2 Rycerz, L; Ingier-Stocka, E; Gadzuric, S; Gaune-Escard, M; "Review of the thermodynamic and transport properties of EuBr2-RbBr binary system," J. Therm. Anal. Calorim. 101, 455-461 (2010). https://doi.org/10.1007/s10973-010-0790-0

2010RYC4 Rycerz, L; Ingier-Stocka, E; Berkani, M; Gaune-Escard, M; "Phase Diagram and Electrical Conductivity of the PrBr3-CsBr Binary System," Z. Naturforsch. A 65, 859-864 (2010). https://doi.org/10.1515/zna-2010-1013

2011KAP J. Kapała; I. Rutkowska; I. Chojnacka; M. Gaune-Escard; "Modelling of the thermodynamic properties of the ABr–CeBr3 (A=Li–Cs) systems," Calphad 34, 15-19 (2011). https://doi.org/10.1016/j.calphad.2011.02.008

2001SIL Da Silva, F., Rycerz, L., Gaune-Escard, M.; "Thermodynamic Properties of EuCl2 and the NaCl-EuCl2 System," Z. Naturforsch. A 56, 647-652 (2001). https://doi.org/10.1515/zna-2001-0907

2012CHO Chojnacka, I., Rycerz, L., Berkani, M., Gaune-Escard, M.; "Phase diagram and electrical conductivity of the DyBr3–RbBr binary system," J Therm Anal Calorim 108, 481–488 (2012). https://doi.org/10.1007/s10973-011-2017-4

2012GAU W. Gong; Y. Wu; R. Zhang; M. Gaune-Escard; "Phase equilibrium in lanthanide halide systems: Assessment of CeBr3 and MBr–CeBr3 systems (M=Li,Na,K,Rb,Cs)," Calphad 36, 44-51 (2012). https://doi.org/10.1016/j.calphad.2011.11.001

2012RYC Rycerz, L; Chojnacka, I; Kapala, J; Gaune-Escard, M; "Phase diagram of the TbBr3-CsBr binary system. Thermodynamic and transport properties of the Cs3TbBr6 compound," Calphad 37, 108-115 (2012). https://doi.org/10.1016/j.calphad.2012.01.008

2013BEN O. Beneš, R.J.M. Konings, D. Sedmidubský, M. Beilmann, O.S. Valu, E. Capelli, M. Salanne, S. Nichenko, "A comprehensive study of the heat capacity of CsF from T=5K to T=1400K," J. Chem. Thermo. 57, 92-100 (2013). https://doi.org/10.1016/j.jct.2012.08.003

2013CAP E. Capelli, O. Beneš, M. Beilmann, R.J.M. Konings, Thermodynamic investigation of the LiF–ThF4 system, J. Chem. Thermo. 58, 110-116 (2013). https://doi.org/10.1016/j.jct.2012.10.013

2013GON W. Gong, "Phase diagram and ternary bromides of the CsBr–LaBr3 binary system," Thermochim. Acta 562, 105-108 (2013). https://doi.org/10.1016/j.tca.2013.03.038

2013OKA Okamoto, H., "Cl-Ga (Chlorine-Gallium)," J. Phase Equilib. Diffus. 34, 66–67 (2013). https://doi.org/10.1007/s11669-012-0132-y

2013RYC1 Rycerz, L; Gong, W; Gaune-Escard, M; "The TbBr3-LiBr binary system: Experimental thermodynamic investigation and assessment of phase diagram," J. Chem. Thermo. 56, 15-20 (2013). https://doi.org/10.1016/j.jct.2012.06.021

2014CHO1 Chojnacka, I; Rycerz, L; Berkani, M; Gaune-Escard, M; "Phase diagram and specific conductivity of the DyBr3-CsBr binary system," J. Alloys Cpds. 582, 505-510 (2014). https://doi.org/10.1016/j.jallcom.2013.07.209

2014CHO2 Chojnacka, I., Rycerz, L. & Gaune-Escard, M. Thermodynamic and transport properties of the DyBr3–NaBr binary system. J Therm Anal Calorim 116, 681–687 (2014). https://doi.org/10.1007/s10973-013-3608-z

2014KRA Krämer, K.W.; Keller, L.; "Phase Transitions of YbBr2," Z. Anorg. Allgem. Chem. 640, 3166-3171 (2014). https://doi.org/10.1002/zaac.201400165

2014PIL B. Pilarek, B. Salamon, J. Kapała, "Calculation and optimization of LaBr3–MBr (Li–Cs) phase diagrams by CALPHAD method," Calphad 47, 211-218 (2014). https://doi.org/10.1016/j.calphad.2014.10.005

2014ROK F.-Z. Roki, M.-N. Ohnet, S. Fillet, C. Chatillon, I. Nuta, "Critical assessment of thermodynamic properties of CsI solid, liquid and gas phases," J. Chem. Thermo. 70, 46-72 (2014). https://doi.org/10.1016/j.jct.2013.09.038

2015CAP E. Capelli, O. Beneš, R.J.M. Konings, "Thermodynamic assessment of the LiF–ThF4–PuF3–UF4 system," J. Nucl. Mater. 462, 43-53 (2015). https://doi.org/10.1016/j.jnucmat.2015.03.042

2015HE M. He; G. Lu; Z. Kang; Y,. Zhang; "Thermodynamic assessment of the LiCl–KCl–CeCl3 system," Calphad 49, 1-7 (2015). https://doi.org/10.1016/j.calphad.2015.01.006

2015SAL Salamon, B; Rycerz, L; Kapala, J; Gaune-Escard, M; "Phase diagram of NdI3-RbI pseudo-binary system. Thermodynamic properties of solid compounds," Fluid Phase Equil. 404, 9-16 (2015). https://doi.org/10.1016/j.fluid.2015.06.023

2015SER D. Sergeev, D. Kobertz, M. Müller, "Thermodynamics of the NaCl–KCl system," Thermochim. Acta 606, 25-33 (2015). https://doi.org/10.1016/j.tca.2015.03.003

2015SOO E. S. Sooby; A. T. Nelson; J. T. White; P. M. McIntyre; "Measurements of the liquidus surface and solidus transitions of the NaCl-UCl3 and NaCl-UCl3-CeCl3 phase diagrams," J. Nucl. Mater. 466, 280-285 (2015). http://doi.org/10.1016/j.jnucmat.2015.07.050

2016DAN Danczak, A; Rycerz, L; "Reinvestigation of the DyCl3-LiCl binary system phase diagram," J. Therm. Anal. Calorim. 126, 299-305 (2016). https://doi.org/10.1007/s10973-016-5547-y

2016KAN Kang, Z.; Robelin, C.; He, M.; Chartrand, P.; "Thermodynamic evaluation and optimization of the (KF + YF3), (KCl + YCl3) and (YF3 + YbF3) binary systems," J. Chem. Thermodyn. 98, 242-253 (2016). https://doi.org/10.1016/j.jct.2016.02.022

2016PIL Pilarek, B; Rycerz, L; Szczygiel, I; "Thermodynamic and transport properties of the HoBr3-KBr pseudo-binary system," J. Therm. Anal. Calorim. 125, 1125-1133 (2016). https://doi.org/10.1007/s10973-016-5496-5

2016SAL Salamon, B; Kapala, J; Rycerz, L; Szczygiel, I; "Phase equilibria in the SmCl3-TlCl pseudobinary system," J. Therm. Anal. Calor. 126, 807-814 (2016). https://doi.org/10.1007/s10973-016-5470-2

2016SCZ I. Szczygieł, B. Salamon, J. Kapała, "Modelling of thermodynamic properties of NdBr3–MBr (M=Li–Cs) pseudobinary systems," Calphad 53, 130-135 (2016). https://doi.org/10.1016/j.calphad.2016.04.012

2016WAN Wang, K.; Robelin, C.; Wu, Z.; Li, C.; Xie, L.; Chartrand, P.; "Thermodynamic description of the AgCl–CoCl2–InCl3–NaCl system," J. Alloys Cpds. 663, 885-898 (2016). https://doi.org/10.1016/j.jallcom.2015.12.104

2017DAN Danczak, A; Salamon, B; Kapala, J; Rycerz, L; Gaune-Escard, M; "Reinvestigation of phase equilibria in TbCl3-LiCl binary system," J. Therm. Anal. Calorim. 130, 25-33 (2017). https://doi.org/10.1007/s10973-017-6315-3

2017SOU P. Souček, O. Beneš, B. Claux, E. Capelli, M. Ougier, V. Tyrpekl, J.-F. Vigier, R. J. M. Konings, "Synthesis of UF4 and ThF4 by HF gas fluorination and re-determination of the UF4 melting point," J. Fluor. Chem. 200, 33-40 (2017). https://doi.org/10.1016/j.jfluchem.2017.05.011

2018BOU Bounouri, Y; Berkani, M; Zamouche, A; Danczak, A; Chojnacka, I; Rycerz, L; "Thermodynamic properties of the NdBr3-MBr binary systems (M = Na, K)," J. Therm. Anal. Calorim. 133, 1589-1596 (2018). https://doi.org/10.1007/s10973-018-7180-4

2018OCA J.A. Ocadiz-Flores; E. Capelli; P.E. Raison; R.J.M. Konings; A.L. Smith; "Thermodynamic assessment of the LiF-NiF2, NaF-NiF2 and KF-NiF2 systems," J. Chem. Thermodyn. 121, 17-26 (2018). https://doi.org/10.1016/j.jct.2018.01.023

2018RED Redkin, A., Korzun, I., Reznitskikh, O., Yaroslavtseva, T., Zaikov, Yu., Kumkov, S.; "Heat of fusion of halide salts and their eutectics," J. Therm. Anal. Calorim. 131, 2021–2026 (2018). https://doi.org/10.1007/s10973-017-6650-4

2019CHO Chojnacka, I; Rutkowska, I; Kapala, J; Rycerz, L; "Phase equilibria in the AgCl-LnCl3 (Ln=Ce, Nd, Sm, Gd) binary systems," J. Therm. Anal. Calorim. 138, 4541-4549 (2019). https://doi.org/10.1007/s10973-019-08470-8

2019DAN Danczak, A; Rycerz, L; "Phase equilibria in the CeI3-CsI binary system," J. Therm. Anal. Calorim. 137, 2115-2120 (2019). https://doi.org/10.1007/s10973-019-08106-x

2019GAR Garkushin, I.K., Burchakov, A.V. & Emel'yanova, U.A. Calculation of the Phase Diagram of the NaCl–RaCl2 System by Analyzing the NaCl–MCl2 Systems (M = Ca, Sr, Ba) Using the Schröder–Le Châtelier Equation. Russ. J. Inorg. Chem. 64, 389–392 (2019). https://doi.org/10.1134/S0036023619030094

2019LIZ Lizin, A.A., Tomilin, S.V., Osipenko, A.G., Nezgovorov, N. Yu., Ignat'ev, V. V., and Kormilitsyn, M. V., "Investigation of PuF3 and AmF3 Solubility in 73LiF–27BeF2 Melt," At Energy 126, 368–371 (2019). https://doi.org/10.1007/s10512-019-00566-6

2019MCM J. McMurray, T. Besmann, J. Ard, S. Utlak, R. Lefebvre; "Status of the molten salt thermodynamic database, MSTDB," ORNL/SPR-2019/1208, Oak Ridge National Laboratory, 2019. https://doi.org/10.2172/1559647

2019SAL Salamon, B; Kapala, J; Rycerz, L; Szczygiel, I; "Phase equilibria in LaBr3-TlBr pseudobinary system. Thermodynamic assessment of LaBr3-MBr (M = Li, Na, K, Rb, Cs, Tl) pseudobinary systems," Calphad 65, 232-243 (2019). https://doi.org/10.1016/j.calphad.2019.03.006

2020ARD J. Ard, K. Johnson, M. Christian, J. Schorne-Pinto, J. Yingling, T. Besmann, J. McMurray, J. Peng, "FY20 Status report on the Molten Salt Thermodynamic Database (MSTDB) development," ORNL/SPR-2020/1648, Oak Ridge National Laboratory, 2020. https://doi.org/10.2172/1778080

2020CAP E. Capelli, R. J.M. Konings, Halides of the Actinides and Fission Products Relevant for Molten Salt Reactors, Comprehensive Nuclear Materials (Second Edition) 7, 256-283 (2020) https://doi.org/10.1016/B978-0-12-803581-8.11794-1

2020HAR Haroune, S; Berkani, M; Bounouri, Y; Danczak, A; Rycerz, L; Kapala, J; "Phase diagram and thermodynamic properties of the GdBr3-CsBr binary system," Calphad 68, 101736 (2020). https://doi.org/10.1016/j.calphad.2020.101736

2020KRA Král, R., Zemenová, P., Vaněček, V. A. Bystřický, M. Kohoutková, V. Jarý, S. Kodama, S. Kurosawa, Y. Yokota, A. Yoshikawa, M. Nikl, "Thermal analysis of cesium hafnium chloride using DSC–TG under vacuum, nitrogen atmosphere, and in enclosed system," J. Therm. Anal. Calorim. 141, 1101–1107 (2020). https://doi.org/10.1007/s10973-019-09087-7

2020MAG J. Magnusson, M. Memmott, T. Munro, Review of thermophysical property methods applied to fueled and un-fueled molten salts, Ann. Nucl. Energy 146, 107608 (2020) https://doi.org/10.1016/j.anucene.2020.107608

2020RYC Rycerz, L; Kapala, J; Salamon, B; Szczygiel, I; Gaune-Escard, M; "Phase diagram and thermodynamic properties of the LaI3-RbI binary system," Calphad 70, 101809 (2020). https://doi.org/10.1016/j.calphad.2020.101809

2021AGC C. Agca, K. E. Johnson, J. W. McMurray, J. A. Yingling, T. M. Besmann; "FY21 status report on the Molten Salt Thermal Properties Database (MSTDB) development," ORNL/SPR-2021/2102, Oak Ridge National Laboratory, 2021. https://doi.org/10.2172/1814280

2021FLO O. Flores, J. A., Rooijakkers, B. A. S., Konings, R. J. M., Smith, A. L.; "Thermodynamic Description of the ACl-ThCl4 (A = Li, Na, K) Systems," Thermo 1, 122-133 (2021). https://doi.org/10.3390/thermo1020009

2021RYC1 L. Rycerz; J. Kapala; M. Gaune-Escard; "Phase Diagram and Thermodynamic Properties of the EuBr2–CsBr Binary System," J. Chem. Eng. Data 66, 1939–1946 (2021). https://doi.org/10.1021/acs.jced.0c01016

2021RYC2 Rycerz, L; Kapala, J; Gaune-Escard, M; "Experimental mixing enthalpy and thermodynamic modelling of UCl3-KCl system," J. Mol. Liq. 342, 116963 (2021). https://doi.org/10.1016/j.molliq.2021.116963

2022ARD J. C. Ard, J. A. Yingling, T. J. Johnson, J. Schorne-Pinto, M. Aziziha, C. M. Dixon, M. S. Christian, J. W. McMurray, t. M. Besmann, "Development of the Molten Salt Thermal Properties Database − Thermochemical (MSTDB−TC),

example applications, and LiCl−RbCl and UF3−UF4 system assessments," J. Nucl. Mater. 563, 153631 (2022). https://doi.org/10.1016/j.jnucmat.2022.153631

2022CSI V. I. Tsirelnikov, L. M. Bazhanova, B. V. Lokshin; "Thermodynamic properties of crystalline and gaseous lower niobium chlorides," Thermochim. Acta 717, 179347 (2022). https://doi.org/10.1016/j.tca.2022.179347

2022FAU B. Faure, T. Kooyman, "A comparison of actinide halides for use in molten salt reactor fuels," Prog. Nucl. Energy 144, 104082 (2022). https://doi.org/10.1016/j.pnucene.2021.104082

2022PAR S. S. Parker, A. Long, C. Lhermitte, S. Vogel, M. Monreal, and J. M. Jackson, “Thermophysical properties of liquid chlorides from 600 to 1600 K: Melt point, enthalpy of fusion, and volumetric expansion,” J. Mol. Liq. 346, 118147 (2022). https://doi.org/10.1016/j.molliq.2021.118147

2022SMI A.L. Smith, "Structure-property relationships in actinide containing molten salts – A review: Understanding and modelling the chemistry of nuclear fuel salts," J. Mol. Liq. 360, 119426 (2022). https://doi.org/10.1016/j.molliq.2022.119426

2023CHO Chojnacka, I., Rycerz, L., Kapala, J., M. Gaune-Escard, M., Salamon, M., "Phase equilibria in the YbCl2–MCl (M=Li, Na, K) binary systems," J. Therm. Anal. Calorim. 148, 3515–3523 (2023). https://doi.org/10.1007/s10973-022-11813-7

2023JAC R. Jacob, E. Sergeev, E. Yazhenskikh, M. Müller, Evaluation of the calcium chloride-calcium fluoride system for high temperature thermal energy storage, J. Energy Storage, Volume 72, Part C, 2023, 108521. https://doi.org/10.1016/j.est.2023.108521

2023KAN Kang, Z.; He, M.; Lu, G.; "Thermodynamic evaluation and optimization of (LiF + ReF3) (Re = La, Nd, Gd, Yb, Y, Lu) binary systems," Calphad 83, 102612 (2023). https://doi.org/10.1016/j.calphad.2023.102612

2023KAR Karlsson, T. Y.; Middlemas, S. C.; Nguyen, M.-T.; Woods, M. E.; Tolman, K. R.; Glezakou, V.-A.; Herrmann, S. D.; Schorne-Pinto, J.; Johnson, R. D.; Reddish, S. E.; Warmann, S. A.; Paviet, P. D. Synthesis and thermophysical property determination of NaCl-PuCl3 salts. J. Mol. Liq. 2023, 387, 122636. https://doi.org/10.1016/j.molliq.2023.122636

2023LIA C. Liao; Z. Fu; L. Que; H. Tang; X. Wang; "Experimental determination and thermodynamic optimization of the LiF-NdF3 system," RSC Adv. 13, 24174-24180 (2023). https://doi.org/10.1039/d3ra03003b

2023RYC Rycerz, L; Kapala, J; "Phase equilibria in the EuBr2-AgBr pseudobinary system," Calphad 82, 102582 (2023). https://doi.org/10.1016/j.calphad.2023.102582

2023TER N. Termini, A. Birri, S. Henderson, N. D. B. Ezell; "An Overview of the Molten Salt Thermal Properties Database–Thermophysical, Version 2.1.1 (MSTDB-TP v.2.1.1)," ORNL/TM-2023/2955, Oak Ridge National Laboratories, 2023. https://www.osti.gov/biblio/1988348

2023YIN Yingling, J.; Schorne-Pinto, J.; Aziziha, M.; Ard, J.; Mofrad, A.; Christian, M.; Dixon, C.; Besmann, T. Thermodynamic measurements and assessments for LiCl-NaCl-KCl-UCl3 systems. J. Chem. Thermodyn. 2023, 179, 106974. https://doi.org/10.1016/j.jct.2022.106974

2024ALD D. C. Alders, D. J. Cette, R. J. M. Konings, A. L. Smith; "Experimental investigation and thermodynamic modelling assessment of the AECl2–NdCl3 (AE = Sr, Ba) systems," Phys. Chem. Chem. Phys., 2024, 26, 24041-24057. https://doi.org/10.1039/D4CP01784F

2024AME4 American Elements, "Hafnium Bromide," 2024. https://www.americanelements.com/hafnium-bromide-13777-22-5

2024AME6 American Elements, Tin(IV) Fluoride https://www.americanelements.com/tin-iv-fluoride-7783-62-2

2024DIX C. M. Dixon, J. Schorne-Pinto, M. Aziziha, J. A. Yingling, R. E. Booth, R. M. Besmann, "Thermodynamic modeling of CsF with LiF-NaF-KF for molten fluoride-fueled reactors," J. Mol. Liq. 406, 125056 (2024). https://doi.org/10.1016/j.molliq.2024.125056

2024HAO L. Hao; S. Sridar; W. Xiong; "Thermodynamic optimization of KCl-LiCl-LaCl3 with ionic two-sublattice model for liquid," J. Mol. Liq. 400, 124516 (2024). https://doi.org/10.1016/j.molliq.2024.124516

2024KAR Karlsson, T. Y.; Pinto, J. S.; "Experimental Plan for Synthesis of an Americium and Plutonium Containing Salt," INL/RPT-24-80052-Rev000, Idaho National Laboratories, 2024. https://www.osti.gov/biblio/2438435

2024SAL Salamon-Baran, B; Kapala, J; Rycerz, L; Szczygiel, I; "Thermodynamics of Tl2PrBr5 Compound and Re-examination of Phase Equilibria in the PrBr3-TlBr System," ACS Omega 9, 49539-49544 (2024). https://doi.org/10.1021/acsomega.4c07419

2024SCU N.L. Scuro; B.W.N. Fitzpatrick; E. Geiger; M. Poschmann; T. Dumaire; O Beneš; M.H.A. Piro; "Thermodynamic investigations of the NaI-CsI, KI-CsI, and NaF-CsI pseudo-binary systems," J. Chem. Thermo. 193, 107272 (2024). https://doi.org/10.1016/j.jct.2024.107272

2025ALD D. C. Alders, A. Sacristán-Civera, M. Wolff, E. Capelli, E. L. Bright, C. Hennig, R. J. M. Konings and A. L. Smith, "Simulant chemistry for uranium and plutonium molten fuel salts: crystallographic investigation and thermodynamic modelling assessment of the NaCl–RECl3 and NaCl-MgCl2-RECl3 (RE = Ce, Nd) systems," Dalton Trans. 44, 16475-16491 (2025). https://doi.org/10.1039/D5DT01486G

2025CHE Chesser, R., Termini, N., Henderson, S., Zhang, D., Glezakou, V., Birri, T.; "An Overview of the Molten Salt Thermal Properties Database–Thermophysical, Version 4.0 (MSTDB-TP V.4.0)," Sep. 2025. https://doi.org/10.2172/3002157

2025DIX C. M. Dixon; M. Aziziha; A. Mofrad; J. P. S. Palma; R. E. Booth; A. P. Manissery; J. A. Wilson; H. zur Loye; H B. Tisdale; J. Schorne-Pinto; T. M. Besmann; "Thermodynamic assessment of the Li, Na, K, Cs | F, I reciprocal salt for MSR applications," J. Chem. Thermo. 211, 107548 (2025). https://doi.org/10.1016/j.jct.2025.107548

2025PIL Pilarek, B; Kapala, J; Rycerz, L; "Phase equilibria of the TbCl3-LnCl3 systems: a comparative thermodynamic study," J. Therm. Anal. Calorim. 150, 19981-19987 (2025). https://doi.org/10.1007/s10973-025-14988-x

2025SAL1 Salamon-Baran, B; Kapala, J; Rycerz, L; Szczygiel, I; "Re-examination of phase equilibria in NdBr3-TlBr system," J. Therm. Anal. 150, 15299-15306 (2025). https://doi.org/10.1007/s10973-025-14777-6

2025SCU Scuro, N.L., Collins, M.C., Beneš, O., Sklenka, J., Piro, M. H. A., “Thermodynamic Investigations of the KF–CsI, NaI–KI, and MgCl2–SrCl2 Pseudo-binary Systems, Metall Mater Trans A 56, 2268–2276 (2025). https://doi.org/10.1007/s11661-025-07774-9

2025STR A. C. Strzelecki, S. S. Parker, S. C. Mann, D. C. Arellano, S. M. Hickam, S. D. Ware, N. A. Conroy, H. Boukhalfa, T. Y.P. De Jong, D. A. Andersson, J. M. Jackson, J. Mitchell, M. Monreal, H. Xu; "Determination of thermochemical properties of the molten PuCl3-NaCl eutectic mixture by high-temperature drop calorimetry," J. Mol. Liq. 424, 127073 (2025). https://doi.org/10.1016/j.molliq.2025.127073

2025WAN H. Wang; Y. Norikawa; T. Nohira; "Relationship between Oxygen Content and Crystal Structure of W Films Electrodeposited in Molten CsF–CsCl–WO3," J. Electrochem. Soc. 172, 042507 (2025). https://doi.org/10.1149/1945-7111/adccfb