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**Systematische Uebersicht der sogenannten
unorganischen Verbindungen**

Weltzien, Karl

Heidelberg, 1867

Zwei- und vieratomige Metalle (Platinmetalle)

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Zwei- und vieratomige Metalle (Platinmetalle).

Erste Gruppe.

	Ru = 104.	Rh = 104.	Os = 198.	Ir = 198.
	Ruthenür = ru = 104 = H ²	Rhodür = rh = 104 = H ²	Osmür = os = 198 = H ²	Iridür = ir = 198 = H ²
	Ruthenid = Ru = 104 = 2 H ²	Rholid = Rh = 104 = 2 H ²	Osmid = Os = 198 = 2 H ²	Iridid = Ir = 198 = 2 H ²
Chlorüre	ruCl ²	rhCl ²	osCl ²	irCl ²
	—	—	—	2 H ² N + irCl ²
	4 H ² N + ruCl ²	—	4 H ² N + osCl ²	—
	—	—	4 H ² N + osCl ² + 2 H ² O	—
	4 H ² N + ruCl ² + 3 H ² O	—	—	—
	RuCl ⁴	—	OsCl ⁴	IrCl ⁴
	—	—	2 H ² N + OsCl ⁴	—
	—	—	Na ² O ₂ Cl ⁶	Na ² IrCl ⁶
	—	—	Na ² O ₂ Cl ⁶ + 2 H ² O	—
	—	—	—	Na ² IrCl ⁶ + 6 H ² O
	—	—	Ag ² O ₂ Cl ⁶	—
	—	—	2 H ² N + Ag ² O ₂ Cl ⁶	—
	—	—	4 H ² N + Ag ² O ₂ Cl ⁶	—
	Am ² RuCl ⁶	—	Am ² O ₂ Cl ⁶	Am ² IrCl ⁶
	K ² RuCl ⁶	—	K ² O ₂ Cl ⁶	K ² IrCl ⁶
	ruRuCl ⁶	rhRhCl ⁶	osOsCl ⁶	irIrCl ⁶
	—	rhRhCl ⁶ + 8 H ² O	—	irIrCl ⁶ + 8 H ² O
	—	5 H ² N + rhRhCl ⁶	—	—
	Am ⁴ ruRuCl ¹⁰	—	Am ⁴ osOsCl ¹⁰	—
	—	—	Am ⁴ osOsCl ¹⁰ + 3 H ² O	—
	K ⁴ ruRuCl ¹⁰	K ⁴ rhRhCl ¹⁰	—	—
	—	K ⁴ rhRhCl ¹⁰ + 2 H ² O	—	—
	4 H ² N + ruPtCl ⁶	—	—	—
	—	Na ⁶ rhRhCl ¹²	—	Na ⁶ irIrCl ¹²
	—	Na ⁶ rhRhCl ¹² + 24 H ² O	—	Na ⁶ irIrCl ¹² + 24 H ² O
	—	Ag ⁶ rhRhCl ¹²	—	Ag ⁶ irIrCl ¹²
	—	Am ⁶ rhRhCl ¹²	—	Am ⁶ irIrCl ¹²
	—	Am ⁶ rhRhCl ¹² + 3 H ² O	—	Am ⁶ irIrCl ¹² + 3 H ² O
	—	K ⁶ rhRhCl ¹²	K ⁶ osOsCl ¹²	K ⁶ irIrCl ¹²
	—	—	K ⁶ osOsCl ¹² + 3 H ² O	—
	—	K ⁶ rhRhCl ¹² + 6 H ² O	K ⁶ osOsCl ¹² + 6 H ² O	K ⁶ irIrCl ¹² + 6 H ² O
	—	12 H ² N + Co rhRhCl ¹²	—	12 H ² N + Co irIrCl ¹²
	12 H ² N + CoRu ² Cl ¹²	—	—	12 H ² N + CoIr ² Cl ¹²
Bromüre	—	—	—	IrBr ⁴
	—	—	—	Na ² IrBr ⁶
	—	—	—	Am ² IrBr ⁶
	—	—	—	K ² IrBr ⁶
	—	—	—	irIrBr ⁶
	—	—	—	irIrBr ⁶ + 8 H ² O
	—	—	—	H ⁶ irIrBr ¹²
	—	—	—	H ⁶ irIrBr ¹² + 12 H ² O
	—	—	—	Na ⁶ irIrBr ¹²
	—	—	—	Na ⁶ irIrBr ¹² + 24 H ² O
	—	—	—	Ag ⁶ irIrBr ¹²
	—	—	—	Am ⁶ irIrBr ¹²
	—	—	—	Am ⁶ irIrBr ¹² + H ² O
	—	—	—	K ⁶ irIrBr ¹²
	—	—	—	K ⁶ irIrBr ¹² + 6 H ² O

Jodüre	—	—	—	irJ ²
—	—	—	—	Am ² irJ ⁴
—	—	—	—	IrJ ⁴
—	—	—	—	Am ² IrJ ⁶
—	—	—	—	K ² IrJ ⁶
—	—	—	—	irIrJ ⁶
—	—	—	—	Ag ⁶ irIrJ ¹²
—	—	—	—	Am ⁶ irIrJ ¹²
—	—	—	—	Am ⁶ irIrJ ¹² + H ² O
—	—	—	—	K ⁶ irIrJ ¹²
Oxyde	ruO	rhO	osO	—
—	ruO ³	—	—	—
—	ruO ⁴	—	osO ⁴	—
—	RuO ²	RhO ²	OsO ²	IrO ²
—	ruRuO ³	rhRhO ³	osOsO ³	irIrO ³
Hydrate	—	—	H ² osO ³	—
—	H ⁴ RuO ⁴	H ⁴ RhO ⁴	H ⁴ OsO ⁴	H ⁴ IrO ⁴
—	—	—	H ⁴ OsO ⁴ + H ² O	—
—	H ⁴ RuO ⁴ + 3H ² O	—	H ⁴ OsO ⁴ + 3H ² O	—
—	—	H ² rhRhO ⁴	—	—
—	H ² ruRuO ⁶	H ⁶ rhRhO ⁶	H ⁶ osOsO ⁶	H ⁶ irIrO ⁶
—	—	H ⁶ rhRhO ⁶ + 2H ² O	—	—
—	2H ² N + ruO	—	—	—
—	4H ² N + ruO	—	—	—
—	4H ² N + ruO + 5H ² O	—	—	—
—	—	—	2H ² N + OsO ²	—
—	—	—	2H ² N + OsO ² + H ² O	—
—	—	10H ² N + rhRhO ³	—	—
—	K ² ruO ⁴	—	K ² osO ⁴	—
—	—	—	—	—
—	—	—	—	—
Sulfüre	—	rhS	osS (?)	K ² ir ² O ⁷
—	—	—	OsS ²	Ca ² irIrO ⁶
—	—	rhRhS ³	osOsS ³	—
—	—	—	OsS ⁴	—
—	—	K ² rhRhS ⁴	—	—
Sulfite	—	—	osSO ³	—
—	K ² ruS ² O ⁵	—	—	—
—	—	—	K ⁶ osS ⁵ O ¹⁴	—
—	—	—	K ⁶ osS ⁵ O ¹⁴ + 5H ² O	—
—	—	—	6KCl + osS ⁵ O ⁵	—
—	—	—	—	—
—	—	rhRhS ³ O ⁹	—	IrSO ⁴
—	—	rhRhS ³ O ⁹ + 6H ² O	—	IrSO ⁴ + 4H ² O
—	—	—	—	irIrS ³ O ⁹
—	—	—	—	irIrS ³ O ⁹ + 6H ² O
—	—	—	—	Na ⁶ irIrS ⁶ O ¹⁸
—	—	—	—	Na ⁶ irIrS ⁶ O ¹⁸ + 8H ² O
—	—	—	—	Am ⁶ irIrS ⁶ O ¹⁸
—	—	—	—	Am ⁶ irIrS ⁶ O ¹⁸ + 6H ² O
—	—	K ⁶ rhRhS ⁶ O ¹⁸	—	K ⁶ irIrS ⁶ O ¹⁸
—	—	K ⁶ rhRhS ⁶ O ¹⁸ + 6H ² O	—	K ⁶ irIrS ⁶ O ¹⁸ + 6H ² O
Sulfate	—	rhSO ⁴	osSO ⁴ (?)	—
—	4H ² N + ruSO ⁴	—	—	—
—	4H ² N + ruSO ⁴ + 4H ² O	—	—	—
—	RuS ² O ³	Rh ² S ² O ³ (?)	OsS ² O ³ (?)	—
—	—	rhRhS ³ O ¹²	—	—
—	—	rhRhS ³ O ¹² + 12H ² O	—	—
—	—	K ⁶ rhRhS ⁶ O ²⁴	—	—

Irit.

	—	—	os ² N ² O ⁴ ¹⁾	—
	—	—	H ² os ² N ² O ⁵ (?) ²⁾	—
	—	—	Na ² os ² N ² O ⁵	—
	—	—	Ag ² os ² N ² O ⁵	—
	—	—	Am ² os ² N ² O ⁵	—
	—	—	K ² os ² N ² O ⁵	—
	—	—	K ² os ² N ² O ⁵ + 3H ² O	—
	—	—	Caos ² N ² O ⁵	—
	—	—	Baos ² N ² O ⁵	—
	—	—	Pbos ² N ² O ⁵	—
	—	—	Pb ² os ² N ² O ⁵ Cl ²	—
	—	—	4H ² N + Znos ² N ² O ⁵	—
	—	—	Hgos ² N ² O ⁵	—
	—	—	Hgos ² N ² O ⁵	—
Nitrate	—	—	osN ² O ⁶ (?)	—
	4H ² N + ruN ² O ⁶	—	—	—
	4H ² N + ruN ² O ⁶ + 2H ² O	—	—	—
	—	rhRhN ⁶ O ¹⁸	—	—
Phosphate	—	rhRhN ⁶ O ¹⁸ + 4H ² O	—	—
	—	H ⁶ rhRhP ⁴ O ¹⁶	—	—
	—	H ⁶ rhRhP ⁴ O ¹⁶ + 3H ² O	—	—
	—	rh ⁴ Rh ⁴ P ⁶ O ²⁷	—	—
	—	rh ⁴ Rh ⁴ P ⁶ O ²⁷ + 32H ² O	—	—
Carbonate	4H ² N + ruCO ³	—	—	—
	4H ² N + ruCO ³ + 5H ² O	—	—	—
Cyanüre	ruCy ²	—	osCy ²	—
	H ⁴ ruCy ⁶	—	H ⁴ osCy ⁶	—
	K ⁴ ruCy ⁶	—	K ⁴ osCy ⁶	—
	K ⁴ ruCy ⁶ + 3H ² O	—	K ⁴ osCy ⁶ + 3H ² O	—
	—	—	Ag ⁴ osCy ⁶ (?)	—
	—	—	Ba ² osCy ⁶	—
	—	—	Ba ² osCy ⁶ + 6H ² O	—
	—	—	K ² BaosCy ⁶	—
	—	—	K ² BaosCy ⁶ + 3H ² O	—
	—	—	Pb ² osCy ⁶	—
	—	—	Zn ² osCy ⁶	—
	—	—	Cd ² osCy ⁶	—
	—	—	fe ² osCy ⁶	—
	—	—	Fe ² os ³ Cy ¹⁸	—
	—	—	Cu ² osCy ⁶	—
	—	—	Hg ² osCy ⁶	—
	—	rhRhCy ⁶	—	—
	—	K ⁶ rhRhCy ¹²	—	H ⁶ irIrCy ¹²
	—	—	—	K ⁶ irIrCy ¹²
	—	—	—	Sr ³ irIrCy ¹²
	—	—	—	Sr ³ irIrCy ¹² + 11H ² O
	—	—	—	Ba ³ irIrCy ¹²
	—	—	—	Ba ³ irIrCy ¹² + 18H ² O

¹⁾ Anhydrid der Osmiamsäure.

²⁾ Osmiamsäure. Nach Gerhardt käme ihr die Formel H²os²N²O⁶ zu, dann könnte sie als ein Nitrit betrachtet werden:



Zweite Gruppe.

Pd = 106.

Palladinür = pd = 106 = H²Palladinid = Pd = 106 = 2 H²

Fluorüre

2 H²N + pdF²4 H²N + pdF²Na²pdF⁴K²pdF⁴

Chlorüre

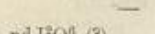
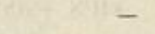
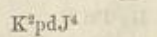
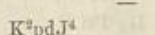
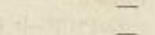
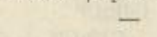
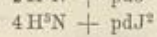
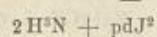
pdCl²PdCl⁴2 H²N + pdCl²4 H²N + pdCl²4 H²N + pdCl² + H²ONa²pdCl⁴Am²pdCl⁴Am²PdCl⁶K²pdCl⁴K²PdCl⁶Ca pdCl⁴Ba pdCl⁴Mg pdCl⁴Ni pdCl⁴

Pt = 197.

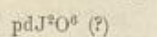
Platinür = pt = 197 = H²Platinid = Pt = 197 = 2 H²PtF⁴Na²PtF⁶Am²PtF⁶K²PtF⁶ptCl²PtCl⁴PtCl⁴ + 10 H²O2 H²N + ptCl²4 H²N + ptCl²4 H²N + 2 ptCl² 1)2 H²N + PtCl⁴4 H²N + PtCl⁴4 H²N + PtCl⁴ + H²OLi²PtCl⁶Li²PtCl⁶ + 6 H²ONa²ptCl⁴Na²PtCl⁶Ag²ptCl⁴Am²ptCl⁴Am²PtCl⁶K²ptCl⁴K²PtCl⁶Rb²PtCl⁶Cs²PtCl⁶tl²PtCl⁶CaPtCl⁶CaPtCl⁶ + 8 H²OSrPtCl⁶SrPtCl⁶ + 8 H²OBa ptCl⁴Ba ptCl⁴ + 3 H²OBaPtCl⁶BaPtCl⁶ + 4 H²OPb ptCl⁴PbPtCl⁶MgPtCl⁶MgPtCl⁶ + 6 H²ONiPtCl⁶NiPtCl⁶ + 6 H²O

1) Grünes Salz von Magnus.

Jodüre



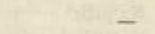
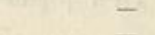
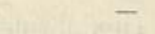
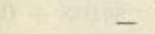
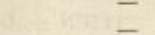
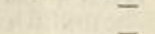
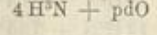
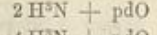
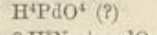
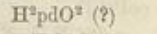
Jodate



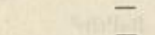
Oxyde



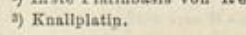
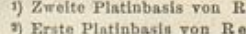
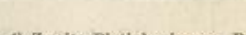
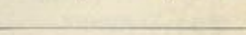
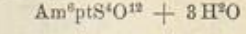
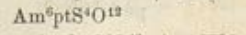
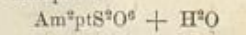
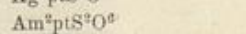
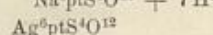
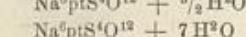
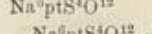
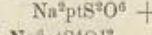
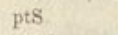
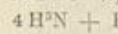
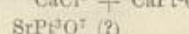
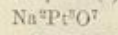
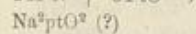
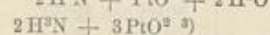
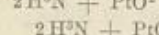
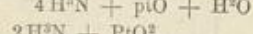
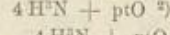
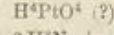
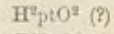
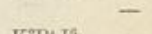
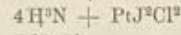
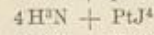
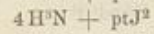
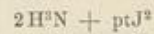
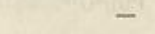
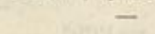
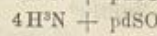
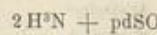
Hydrate



Sulfüre



Sulfite

¹⁾ Zweite Platinbasis von Reiset.²⁾ Erste Platinbasis von Reiset.³⁾ Knallplatin.

	—	$K^6PtS^4O^{12}$
	—	$K^6PtS^4O^{12} + \frac{1}{2}H^2O$
	—	$K^2PtS^2O^7$
	—	$K^2PtS^2O^7 + H^2O$
Sulfate	$pdSO^4$	$ptSO^4$
	—	PtS^2O^5
	$2H^2N + pdSO^4$	$2H^2N + ptSO^4$
	—	$2H^2N + ptSO^4 + H^2O$
	$4H^2N + pdSO^4$	$4H^2N + ptSO^4$
	—	$4H^2N + PtS^2O^5$
	—	$4H^2N + PtSO^4Cl^2$
	—	$8H^2N + ptPtSO^4Cl^4$
	—	$4H^2N + PtSO^4Br^2$
	—	$4H^2N + PtSO^4J^2$
Hyposulfite	$K^2pdSe^2O^4$	$K^2PtS^2O^4 (?)$
	—	$Na^6PtS^2O^{12}$
	—	$Na^6PtS^2O^{12} + 10H^2O$
Selenüre	$pdSe (?)$	$ptSe (?)$
Sulfotellurüre	—	$Pt^2Te^2S^8$
Borüre	—	PtB
Nitrite	—	$H^2PtN^4O^8$
	—	$Na^2PtN^4O^8$
	$Ag^2pdN^4O^8$	$Ag^2PtN^4O^8$
	—	$Am^2PtN^4O^8$
	—	$Am^2PtN^4O^8 + H^2O$
	$K^2pdN^4O^8$	$K^2PtN^4O^8$
	$K^2pdN^4O^8 + 2H^2O$	$K^2PtN^4O^8 + 2H^2O$
	—	$BaPtN^4O^8$
	—	$BaPtN^4O^8 + 3H^2O$
	—	$Hg^2PtN^6O^{12}$
	—	$Hg^2PtN^6O^{12} + H^2O$
Nitrate	pdN^2O^6	$ptN^2O^6 (?)$
	—	PtN^4O^{12}
	$2H^2N + pdN^2O^6 (?)$	$2H^2N + ptN^2O^6$
	—	$2H^2N + ptN^2O^6 + H^2O$
	$4H^2N + pdN^2O^6 (?)$	$4H^2N + ptN^2O^6$
	—	$2H^2N + PtN^2O^7$
	—	$2H^2N + PtN^2O^7 + 3H^2O$
	—	$4H^2N + PtN^2O^7$
	—	$4H^2N + PtN^2O^7 + H^2O$
	—	$2H^2N + PtN^4O^{12}$
	—	$8H^2N + Pt^2N^8O^{16}$
	—	$8H^2N + Pt^2N^8O^{16} + H^2O$
	—	$4H^2N + PtN^4O^{10} 1)$
	—	$2H^2N + PtN^2O^6Cl^2$
	—	$4H^2N + PtN^2O^6Cl^2$
	—	$8H^2N + Pt^2N^4O^{10}Cl^2$
	—	$4H^2N + PtN^2O^6Br^2$
	—	$4H^2N + PtN^2O^6Br^2$
	—	$8H^2N + Pt^2N^4O^{10}Br^2$
	—	$8H^2N + Pt^2N^4O^{10}Br^4$
	—	$16H^2N + Pt^4N^8O^{24}Br^4$
	—	$4H^2N + PtN^2O^6J^2$
	—	$8H^2N + Pt^2S^2N^2O^{14}Br^2 2)$

1) $4H^2N + Pt(NO)_2(NO_2)_2O^4$.2) $8H^2N + Pt(SO_2)_2(NO_2)_2O^6Br^2$.

Phosphüre	—	PtP ²
	—	12H ² N + Pt ² P ⁴ O ¹⁶
	—	8H ² N + Pt ² P ² O ⁸ Cl ²
	—	8H ² N + Pt ² P ² O ⁸ Br ²
	—	4H ² N + PtNPO ⁷ 1)
Arseniate	—	Pt ² As ⁴ O ¹⁶
Sulfarsenite	—	PtAs ² S ⁶
Sulfarseniate	—	PtAs ² S ⁷
Amalgame	—	PtHg ²
Chromate	—	PtCr ² O ³ (?)
Siliciumfluorüre	—	PtSiF ³ (?)
Carbüre	—	PtC ²
Carbonate	2H ² N + pdCO ³	—
	4H ² N + pdCO ³	4H ² N + ptCO ³
	—	4H ² N + ptCO ³ + H ² O
	—	4H ² N + H ² ptC ² O ⁶
	—	8H ² N + PtCO ² Cl ²
	—	8H ² N + Pt ² C ² O ⁸ Cl ²
	—	8H ² N + Pt ² C ² O ⁸ Br ²
Sulfocarbonate	—	PtC ² S ⁶
Cyanüre	pdCy ²	ptCy ²
	PdCy ⁴	—
	2H ² N + pdCy ²	2H ² N + ptCy ²
	—	H ² ptCy ⁴
	—	H ² ptCy ⁴ + 5H ² O
	—	Li ² ptCy ⁴
	—	Li ² ptCy ⁴ + 3H ² O
	—	Na ² ptCy ⁴
	—	Na ² ptCy ⁴ + 3H ² O
	—	Ag ² ptCy ⁴
	—	2H ² N + Ag ² ptCy ⁴
	—	Am ² ptCy ⁴
	—	Am ² ptCy ⁴ + 2H ² O
	—	Am ¹ ptPtCy ¹⁰
	—	Am ⁴ ptPtCy ¹⁰ + 5H ² O
	—	Am ² PtCy ⁴ Cl ²
	—	K ² ptCy ⁴
	K ² pdCy ⁴	—
	K ² pdCy ⁴ + H ² O	K ² ptCy ⁴ + 3H ² O
	K ² pdCy ⁴ + 3H ² O	K ⁴ ptPtCy ¹⁰
	—	K ⁴ ptPtCy ¹⁰ + 2H ² O
	—	K ² PtCy ⁴ Cl ²
	—	K ² PtCy ⁴ Cl ² + 2H ² O
	—	LiKptCy ⁴
	—	LiKptCy ⁴ + 3H ² O
	—	NaKptCy ⁴
	—	NaKptCy ⁴ + 3H ² O
	—	CaPtCy ⁴
	—	CaPtCy ⁴ + 5H ² O
	—	Am ² CaPt ² Cy ⁵
	—	K ² CaPt ² Cy ⁵
	—	SrptCy ⁴
	—	SrptCy ⁴ + 5H ² O

1) 4H²N + Pt(NO²)(PO)₄.

Ba ptCy⁴
 Ba ptCy⁴ + 4H²O
 K²Ba pt²Cy⁸
 Pb ptCy⁴
 La ptCy⁴
 La ptCy⁴ + 6H²O
 Mg ptCy⁴
 Mg ptCy⁴ + 2H²O
 Mg ptCy⁴ + 7H²O
 K²Mg pt²Cy⁸
 Ni ptCy⁴
 2H²N + Ni ptCy⁴
 2H²N + Ni ptCy⁴ + H²O
 Zn ptCy⁴
 2H²N + Zn ptCy⁴
 2H²N + Zn ptCy⁴ + H²O
 Cd ptCy⁴
 2H²N + Cd ptCy⁴
 2H²N + Cd ptCy⁴ + H²O
 Cu ptCy⁴
 4H²N + Cu ptCy⁴
 4H²N + Cu ptCy⁴ + H²O
 Hg ptCy⁴
 HgN²O⁶ + Hg pt⁶Cy¹²
 HgN²O⁶ + Hg pt⁶Cy¹² + H²O
 2H²N + co ptCy⁴
 ce ptCy⁴
 ce ptCy⁴ + 6H²O