

Publications

Florian Kraus

ORCID: <https://orcid.org/0000-0003-4368-8418>

Content

Articles in peer-reviewed journals	2
2001	2
2002	2
2003	2
2005	3
2006	4
2007	4
2008	4
2009	5
2010	6
2011	7
2012	8
2013	9
2014	11
2015	12
2016	13
2017	15
2018	17
2019	20
2020	23
2021	27
2022	29
2023	30
2024	33
2025	35
2026	37
Books and Book Chapters	38
Other Publications	39
Patents	41

Articles in peer-reviewed journals

2001

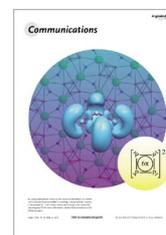
1. F. Kraus, B. Haenig, A. Kispert,
Cloning and expression analysis of the mouse T-box gene *Tbx18*,
Mech. Dev. **2001**, *100*, 83-86, [PDF](#)
2. F. Kraus, B. Haenig, A. Kispert,
Cloning and expression analysis of the mouse T-box gene *Tbx20*,
Mech. Dev. **2001**, *100*, 87-91, [PDF](#)

2002

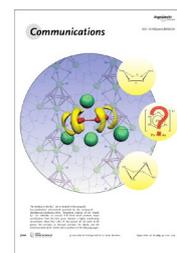
3. F. Kraus, J. Breu,
Arene-arene stacking in the revised structure of 2,2'-bipyridinium hexafluorophosphate,
Acta Crystallogr., Sect. C: Cryst. Struct. Commun. **2002**, *58*, o254-o256, [PDF](#)
4. B. Haenig, C. Schmidt, F. Kraus, M. Pfordt, A. Kispert,
Cloning and expression analysis of the chick ortholog of TBX22, the gene mutated in X-linked cleft palate and ankyloglossia,
Mech. Dev. **2002**, *117*, 321-325, [PDF](#)
5. J. Breu, W. Seidl, D. Huttner, F. Kraus,
Nucleation-Controlled Crystallization of a New, Spontaneously Resolved Solvate of [Ru(bpy)₃](PF₆)₂ and its Desolvation Reaction,
Chem. - Eur. J. **2002**, *8*, 4454-4460, [PDF](#)

2003

6. F. Kraus, J. C. Aschenbrenner, N. Korber,
P₄²⁻ - ein 6π-aromatisches Polyphosphid im Dicäsiumcyclotetraphosphid-Ammoniak(1/2),
Angew. Chem. **2003**, *42*, 4162-4165, [PDF](#),
Angew. Chem. Int. Ed. **2003**, *42*, 4030-4033, [PDF](#)



7. F. Kraus, B. Albert,
Synthesis and Crystal Structure of Cesium Hexamminesodium Decahydro-c/oso-decaborate-Ammonia(1/1),
Cs[Na(NH₃)₆][B₁₀H₁₀]·NH₃,
Z. Anorg. Allg. Chem. **2005**, 631, 152-154, [PDF](#)
8. T. Hanauer, F. Kraus, N. Korber,
Synthesis and Crystal Structure of Tetraamminelithium-Rubidiumtrisenide Li(NH₃)₄RbSe₃, and Pentaamminesodium-Rubidiumtrisenide-Ammonia(1/3),
Na(NH₃)₅RbSe₃·3NH₃,
Chem. Month. **2005**, 136, 119-125, [PDF](#)
9. F. Kraus, N. Korber,
K₂Li(NH₂)₃ and K₂Na(NH₂)₃—synthesis and crystal structure of two crystal-chemically isotypic mixed-cationic amides,
J. Solid State Chem. **2005**, 178, 1241-1246, [LINK](#)
10. F. Kraus, N. Korber,
Hydrogen Bonds in Potassium Amide-Ammonia(1/2),
KNH₂·2NH₃,
Z. Anorg. Allg. Chem. **2005**, 631, 1032-1034, [PDF](#)
11. F. Kraus, N. Korber,
The Chemical Bond in Polyphosphides: Crystal structures, the Electron Localization Function and a new view to aromaticity in P₄²⁻ and P₅⁻,
Chem. - Eur. J. **2005**, 11, 5945-5959, [PDF](#)
12. F. Kraus, T. Hanauer, N. Korber,
Chemical bond in the cyclic anions P₆⁴⁻ and As₆⁴⁻: Synthesis, crystal structure and the electron localization function of (Rb(18crown6))₂Rb₂As₆·6NH₃,
Angew. Chem. **2005**, 117, 7366-7370, [PDF](#),
Angew. Chem. Int. Ed. **2005**, 44, 7200-7204, [PDF](#)



2006

13. F. Kraus, J. Schmedt auf der Günne, B. F. DiSalle, N. Korber,
No aromaticity of P_6^{4-} observed via solid state ^{31}P -NMR spectroscopy,
Chem. Commun. **2006**, 2, 218-219, [PDF](#)
14. T. Hanauer, F. Kraus, M. Reil, N. Korber,
Isolated *cyclo*-Tetraarsendiide Anions: Synthesis and Crystal Structure of Bis(tetraamminelithium) tetraarsenide $[Li(NH_3)_4]_2As_4$, Bis(pentaamminesodium) tetraarsenide – ammonia (1/3) $[Na(NH_3)_5]_2As_4 \cdot 3NH_3$ and Bis[(4,7,13,16,21,24-Hexaoxa-1,10-diazabicyclo[8.8.8]hexacosane)(cesium, rubidium) tetraarsenide – ammonia (1/2) $[Cs_{0.35}Rb_{0.65}(2,2,2-crypt)]_2As_4 \cdot 2NH_3$,
Chem. Month. **2006**, 137, 147-156, [LINK](#)
15. F. Kraus, T. Hanauer, N. Korber,
Nature of the chemical bond in polypnictides: the lonepair aromatic anions P_4^{2-} and As_4^{2-} ,
Inorg. Chem. **2006**, 45, 1117-1123, [PDF](#)

2007

16. P. Alvarez, F. García, J. P. Hehn, F. Kraus, G. T. Lawson, N. Korber, M. E. G. Mosquera, M. McPartlin, D. Moncrieff, C. M. Pask, A. D. Woods, D. S. Wright,
Reactions of $Sn(NMe_2)_2$ with MPHcy: The Effects of Alkali Metal Phosphide Coupling (Cy = Cyclohexyl; M = Li, Na, K, Rb),
Chem. - Eur. J. **2007**, 13, 1078-1089, [PDF](#)
17. A. Spiekermann, S. D. Hoffmann, F. Kraus, T. F. Fässler,
 $[Au_3Ge_{18}]^{5-}$ - ein Gold-Germanium-Cluster mit bemerkenswerten Au-Au-Wechselwirkungen,
Angew. Chem. **2007**, 119, 1663-1666, PDF, *Angew. Chem. Int. Ed.* **2007**, 46, 1638-1640, [PDF](#)

2008

18. W. Meng, F. Kraus,
Crystal Structures of $Ag_2ZrF_6 \cdot 8NH_3$ and $Ag_2HfF_6 \cdot 8NH_3$ and Their Synthesis by the “Reactive Fluoride Route” in Liquid Ammonia,
Eur. J. Inorg. Chem. **2008**, 3068-3074, [PDF](#)
19. K. J. J. Mayerhofer, J. C. Meier, S. J. Ashton, G. K. H. Wiberg, F. Kraus, M. Hanzlik, M. Arenz,
Fuel cell catalyst degradation on the nanoscale,
Electrochem. Commun. **2008**, 10, 1144-1147, [PDF](#)

20. F. Kraus, S. A. Baer, M. B. Fichtl,
The Reactions of Silver, Zirconium, and Hafnium Fluorides with Liquid Ammonia: Synthesis and Crystal Structures of $\text{Ag}(\text{NH}_3)_2\text{F}\cdot 2\text{NH}_3$, $[\text{M}(\text{NH}_3)_4\text{F}_4]\cdot \text{NH}_3$ ($M = \text{Zr}, \text{Hf}$), and $(\text{N}_2\text{H}_7)\text{F}$,
Eur. J. Inorg. Chem. **2009**, 441-447, [PDF](#)
21. S.-J. Kim, F. Kraus, T. F. Fässler,
 Na_6ZnSn_2 , $\text{Na}_{4.24}\text{K}_{1.76(1)}\text{ZnSn}_2$, and $\text{Na}_{20}\text{Zn}_8\text{Sn}_{11}$: Three Intermetallic Structures Containing the Linear $\{\text{Sn}-\text{Zn}-\text{Sn}\}^{6-}$ Unit,
J. Am. Chem. Soc. **2009**, 131, 1469-1478, [PDF](#)
22. F. Kraus, M. B. Fichtl, S. A. Baer,
Beryllium Diammine Difluoride $[\text{BeF}_2(\text{NH}_3)_2]$,
Z. Naturforsch. **2009**, 64b, 257-262, [PDF](#)
23. F. Kraus, J. C. Aschenbrenner, T. Klamroth, N. Korber,
Hydrogen Polyphosphides $\text{P}_3\text{H}_2^{3-}$ and $\text{P}_3\text{H}_3^{2-}$: Synthesis and Crystal Structure of $\text{K}_3(\text{P}_3\text{H}_2)\cdot 2.3\text{NH}_3$, $\text{Rb}_3(\text{P}_3\text{H}_2)\cdot \text{NH}_3$, $[\text{Rb}(18\text{-crown-6})]_2(\text{P}_3\text{H}_3)\cdot 7.5\text{NH}_3$, and $[\text{Cs}(18\text{-crown-6})]_2(\text{P}_3\text{H}_3)\cdot 7\text{NH}_3$,
Inorg. Chem. **2009**, 48, 1911-1919, [PDF](#)
24. F. Kraus, S. A. Baer,
 UF_6 and UF_4 in liquid ammonia: $[\text{UF}_7(\text{NH}_3)]^{3-}$ and $[\text{UF}_4(\text{NH}_3)_4]$,
Chem. - Eur. J. **2009**, 15, 8269-8274, [PDF](#)
25. S. Joseph, C. Suchentrunk, F. Kraus, N. Korber,
 Si_9^{4-} Anions in Solution – Structures of the Solvates $\text{Rb}_4\text{Si}_9\cdot 4.75\text{NH}_3$ and $[\text{Rb}(18\text{-crown-6})]_3\text{Rb}_3\text{Si}_9\cdot 4\text{NH}_3$, and Chemical Bonding in Si_9^{4-} ,
Eur. J. Inorg. Chem. **2009**, 4641-4647, [PDF](#), [Titelbild](#)



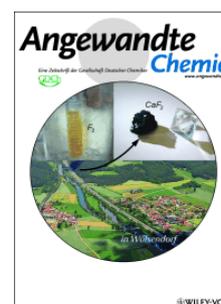
2010

26. F. Kraus, S. A. Baer,
Higher Ammoniates of BF_3 and SiF_4 : Syntheses, Crystal Structures and Theoretical Calculations,
Z. Anorg. Allgem. Chem. **2010**, 636, 414-422, [PDF](#)
27. S. A. Baer, F. Kraus,
The First Ammoniates of Alkali Metal Fluorides: Cesium Fluoride Ammonia (3/4) $[\text{Cs}_3\text{F}_3(\text{NH}_3)_4]$ and Ammonium Cesium Difluoride $[\text{NH}_4\text{CsF}_2]$,
Z. Naturforsch. **2010**, 65b, 1177-1184, [PDF](#), [Titelbild](#)
28. M. Waibel, F. Kraus, S. Scharfe, B. Wahl, T. F. Fässler,
 $[(\text{MesCu})_2(\eta^3\text{-Si}_4)]^{4-}$: A Mesitylcopper-Stabilized Tetrasilicide Tetraanion,
Angew. Chem. **2010**, 122, 6761-6765, [PDF](#),
Angew. Chem. Int. Ed. **2010**, 49, 6611-6615, [PDF](#)



29. S. Scharfe, F. Kraus, S. Stegmaier, A. Schier, T. F. Fässler,
Zintl-Ionen, Käfigverbindungen und intermetalloide Cluster der Elemente der 14. und 15. Gruppe,
Angew. Chem. **2011**, *123*, 3712-3754, [PDF](#),
Angew. Chem. Int. Ed. **2011**, *50*, 3630-3670, [PDF](#)
30. F. Kraus, S. A. Baer, A. J. Karttunen,
The Complex Amide $K_2[Zr(NH_2)_6]$,
Z. Anorg. Allg. Chem. **2011**, *637*, 1122-1130, [PDF](#)
31. J. Tong, F. Kraus, J. Köhler, A. Simon, J. Liu, M.-W. Whangbo,
Dimers of Ag^{2+} Ions – Synthesis and Characterization of the Quaternary Silver Fluoride $Ag_2ZnZr_2F_{14}$ with $[Ag_2F_7]^{3-}$ Units,
Z. Anorg. Allg. Chem. **2011**, *637*, 1118-1121, [PDF](#)
32. F. Kraus,
Caesium Tetrachlorido Aurate(III), $CsAuCl_4$,
Z. Naturforsch. **2011**, *66b*, 871-872, [PDF](#)
33. F. Kraus, S. A. Baer,
Tetraammine Tetrafluorido Cerium(IV) Ammonia (1/1), $[CeF_4(NH_3)_4] \cdot NH_3$,
Z. Naturforsch. **2011**, *66b*, 868-870, [PDF](#)
34. F. Kraus, S. A. Baer,
mer-Triammine Trifluorido Iron(III), $mer-[FeF_3(NH_3)_3]$,
Z. Naturforsch. **2011**, *66b*, 865-867, [PDF](#)
35. M. B. Fichtl, L. M. Scherf, S. A. Baer, F. Kraus,
 μ -Oxido-bis(pentammineisen(III))-tetrachlorid-Ammoniak(1/8) $[Fe_2(\mu-O)(NH_3)_{10}]Cl_4 \cdot 8NH_3$,
Z. Naturforsch. **2011**, *66b*, 784-792, [PDF](#)

36. C. Huber, F. Kraus, M. Hanzlik, W. Eisenreich, G. Wächtershäuser,
Elements of Metabolic Evolution,
Chem. - Eur. J. **2012**, *18*, 2063-2080, [PDF](#)
37. F. Kraus, S. A. Baer, M. R. Buchner, A. J. Karttunen,
Reactions of Beryllium Halides in Liquid Ammonia: The Tetraammine Beryllium Cation $[\text{Be}(\text{NH}_3)_4]^{2+}$, its Hydrolysis Products, and the Action of Be^{2+} as a Fluoride Ion Acceptor,
Chem. - Eur. J. **2012**, *18*, 2131-2142, [PDF](#)
38. F. Kraus,
Otto Ruff and a Fluoride that changed the World in many Ways: UF_6 ,
Z. Anorg. Allg. Chem. **2012**, *638*, 707-709, [PDF](#)
39. F. Kraus,
Dissolving the Insoluble: CdF_2 and moist Ammonia form Cadmium(II) Difluoride Monohydrate – Synthesis and Crystal Structure of $[\text{Cd}(\text{NH}_3)_6]\text{F}_2 \cdot \text{H}_2\text{O}$,
Monatsh. Chem. **2012**, *8*, 1097-1100, [LINK](#)
40. M. R. Buchner, F. Kraus, H. Schmidbaur,
Pyrophosphate Complexation of Tin(II) in Aqueous Solutions as Applied in Electrolytes for the Deposition of Tin and Tin Alloys such as White Bronze,
Inorg. Chem. **2012**, *51*, 8860-8867, [PDF](#)
41. P. Woidy, A. J. Karttunen, F. Kraus,
Uranyl Halides from Liquid Ammonia: $[\text{UO}_2(\text{NH}_3)_5]\text{Cl}_2 \cdot \text{NH}_3$ and $[\text{UO}_2\text{F}_2(\text{NH}_3)_3]_2 \cdot 2\text{NH}_3$ and their Decomposition Products $[\text{UO}_2\text{Cl}_2(\text{NH}_3)_3]$ and $[\text{UO}_2\text{F}_2(\text{NH}_3)_3]$,
Z. Anorg. Allg. Chem. **2012**, *638*, 2044-2052, [PDF](#)
42. F. Kraus,
Fluorine Chemistry meets liquid Ammonia,
Biolnorganic React. Mech. **2012**, *8(1-2)*, 29-39, [PDF](#)
43. J. Schmedt auf der Günne, M. Mangstl, F. Kraus,
Occurrence of Difluorine F_2 in Nature - In Situ Proof and Quantification,
Angew. Chem. **2012**, *124*, 7968-7971, [PDF](#)
Angew. Chem. Int. Ed. **2012**, *51*, 7847-7849, [PDF](#)
“Very Important Paper”, Titelbild [Link1](#), [Link2](#)



44. L. M. Scherf, S. A. Baer, F. Kraus, S. M. Bawaked, H. Schmidbaur
Implications of the crystal structure of the ammonia solvate
[Au(NH₃)₂]Cl·4NH₃,
Inorg. Chem. **2013**, *52*, 2157-2161, [PDF](#)
45. F. Kraus, M. Panda, T. Müller, B. Albert,
Closo-Hydroborates from liquid Ammonia: Synthesis and Crystal
Structures of [Li(NH₃)₄]₂[B₁₂H₁₂]·2NH₃, Rb₂[B₁₂H₁₂]·8NH₃,
Cs₂[B₁₂H₁₂]·6NH₃ and Rb₂[B₁₀H₁₀]·5NH₃.
Inorg. Chem. **2013**, *52*, 4692-4699, [PDF](#)
46. F. Kraus, S. A. Baer, M. Hoelzel, A.J. Karttunen,
[Be(ND₃)₄]Cl₂: Synthesis, Characterization, and Space Group
Determination guided by Solid-State Quantum Chemical
Calculations,
Eur. J. Inorg. Chem. **2013**, 4184-4190, [PDF](#)
47. S. Ivlev, P. Woidy, F. Kraus, I. Gerin, R. Ostvald,
Tetrafluorobromates for Urban Mining of Noble Metals – A Case
Study on Iridium Metal,
Eur. J. Inorg. Chem. **2013**, 4984-4987, [PDF](#)
48. D. Jantke, A. N. Marziale, T. Reiner, F. Kraus, E. Herdtweck, A. Raba,
J. Eppinger,
Synthetic strategies for efficient conjugation of organometallic
complexes with pendant protein reactive markers,
J. Organomet. Chem. **2013**, *744*, 82-91, [DOI](#)
49. E. Hinteregger, K. Wurst, L. Perfler, F. Kraus, H. Huppertz,
High-pressure Synthesis and Characterization of the Actinide
Borate-Phosphate U₂[BO₄][PO₄],
Eur. J. Inorg. Chem. **2013**, 5247-5252, [DOI](#)
50. F. Kraus, H. Schmidbaur, S.W. Bawaked,
Tracing Hydrogen Bonding Au···H–C at Gold Atoms: A Case
Study,
Inorg. Chem. **2013**, *52*, 9669-9674, [DOI](#)
51. S. Ivlev, P. Woidy, V. Sobolev, I. Gerin, R. Ostvald, F. Kraus,
On Tetrafluorobromates(III): Crystal Structures of the Dibromate
CsBr₂F₇ and the Monobromate CsBrF₄,
Z. Anorg. Allg. Chem. **2013**, *639*, 2846-2850, [DOI](#)
52. S. A. Baer, M. Lozinšek, F. Kraus,
Synthesis and Crystal Structure of Triammine Pentafluorido
Tantalum(V) [TaF₅(NH₃)₃],
Z. Anorg. Allg. Chem. **2013**, *639*, 2586-2588, [DOI](#)

53. E. Hinteregger, T. S. Hofer, G. Heymann, L. Perfler, F. Kraus, H. Huppertz,
High-pressure Synthesis and Characterization of the new Actinide Borates AnB_4O_8 ($An = Th, U$),
Chem. - Eur. J. **2013**, *19*, 15985-15992, [DOI](#)

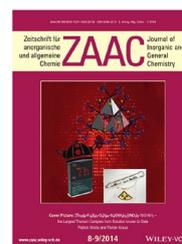
54. P. Woidy, F. Kraus,
The Diammine Silver(I) Acetate $[Ag(NH_3)_2]OAc$,
Z. Anorg. Allg. Chem. **2013**, *639*, 2643-2647, [DOI](#)

55. S. A. Baer, A. Pöthig, S. M. Bawaked, H. Schmidbaur, F. Kraus,
Bis(triphenylphosphine)gold(I) Perrhenate,
Z. Naturforsch. **2013**, *68b*, 1173-1179, [DOI](#)

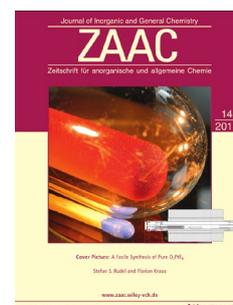
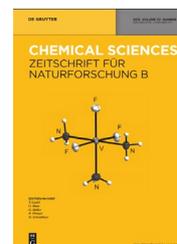


56. H. Schmidbaur, M. A. Blumenthal, F. Kraus,
Synthesis of a Tri(gold)boride Complex $(Cy_3P)B[AuP(o-Tol)_3]_3$,
Z. Naturforsch. **2013**, *68b*, 1173-1179, [DOI](#)

57. P. Woidy, W. Meng, F. Kraus,
**The Hexaammine Copper(II) Fluoride Monohydrate
 $[\text{Cu}(\text{NH}_3)_6][\text{F}(\text{H}_2\text{O})\text{F}]$: Synthesis and Crystal Structure,**
Z. Naturforsch. **2014**, *69b*, 1-7, [Link](#)
58. A. J. Karttunen, F. Kraus,
**Correspondence to “Fluorine in Shark Teeth: Its
 Direct Atomic-Resolution Imaging and Strengthening
 Function”,**
Angew. Chem. **2014**, *126*, 5606-5607, [DOI](#)
Angew. Chem. Int. Ed. **2014**, *53*, 5502-5503, [DOI](#)
59. P. Woidy, F. Kraus,
 **$[\text{Th}_{10}(\mu\text{-F}_{16})(\mu\text{-O}_4)(\mu\text{-O}_4)(\text{NH}_3)_{32}](\text{NO}_3)_8 \cdot 19.6\text{NH}_3$ – the
 largest Thorium Complex from Solution known to
 date,**
Z. Anorg. Allg. Chem. **2014**, *640*, 1547-1550, [DOI](#)
60. T. G. Müller, F. Karau, W. Schnick, F. Kraus,
A New Route to Metal Azides,
Angew. Chem. **2014**, *126*, 13913-13915, [DOI](#)
Angew. Chem. Int. Ed. **2014**, *53*, 13695-13697, [DOI](#)
61. F. Kraus,
 Li_2PtF_6 revisited,
Acta Crystallogr., Sect. E: Struct. Rep. Online, **2014**, *E70*, i43, [DOI](#)
62. P. Woidy, F. Kraus,
Crystal Structure of $\text{Cs}_2[\text{Th}(\text{NO}_3)_6]$,
Acta Crystallogr., Sect. E: Struct. Rep. Online, **2014**, *E70*, 98-100,
[DOI](#)
63. P. Woidy, A. J. Karttunen, T. G. Müller, F. Kraus,
**The Unusual Coordination Sphere in the Octaammine Calcium(II)
 Ions of $[\text{Ca}(\text{NH}_3)_8]\text{Br}_2$ and $[\text{Ca}(\text{NH}_3)_8]\text{I}_2$ and the Thermal
 Decomposition of the Iodide to $[\text{Ca}(\text{NH}_3)_6]\text{I}_2$,**
Z. Naturforsch. **2014**, *69b*, 1141-1148, [Abstract](#)
64. S. Ivlev, V. Sobolev, M. Hoelzel, A. J. Karttunen, T. Müller, I. Gerin, R.
 Ostvald, F. Kraus,
**Synthesis and Characterization of Barium
 Tetrafluoridobromate(III) $\text{Ba}(\text{BrF}_4)_2$,**
Eur. J. Inorg. Chem. **2014**, 6261-6267, [DOI](#)



65. P. Woidy, A. J. Karttunen, M. Widenmeyer, R. Niewa, F. Kraus, **On Copper(I)-Fluorides, the Cuprophilic Interaction, the Preparation of Copper Nitride at Room Temperature and its Formation Mechanism at Elevated Temperatures**, *Chem. - Eur. J.* **2015**, *21*, 3290-3303, [DOI](#)
66. S. S. Rudel, T. G. Müller, F. Kraus, **Na₂PtF₆, its Crystal Structure, Characterization, and Ammonolysis to [Na(NH₃)₃]₂[PtF₆]**, *Z. Anorg. Allg. Chem.* **2015**, *641*, 298-303, [DOI](#)
67. P. Woidy, F. Kraus, **mer-Triammine Trifluorido Vanadium(III), mer-[VF₃(NH₃)₃]: Synthesis and Crystal Structure**, *Z. Naturforsch.* **2015**, *70b*, 161-164, [DOI](#)
68. F. Deiser, F. Kraus, H. Schmidbaur, **Bis(triphenylphosphine)silver(I) perrhenate, a cyclic dimer**, *Chem. Commun.* **2015**, *51*, 6746-6748, [Link](#)
69. P. Woidy, M. Bühl, F. Kraus, **[UO₂(NH₃)₅]Br₂·NH₃: Synthesis, Crystal Structure, and Speciation in Liquid Ammonia Solution by First-Principles Molecular Dynamics Simulations**, *Dalton Trans.* **2015**, *44*, 7332-7337, [Link](#)
70. A. Siebel, Y. Gorlin, M. Piana, T. Huthwelker, H. Jha, G. Monsch, F. Kraus, H. A. Gasteiger, M. Tromp, **Operando Characterization of Intermediates of Lithium-Sulfur Battery**, *J. Electrochem. Soc.* **2015**, *162*, A1146-A1155, [PDF](#)
71. P. Woidy, A. J. Karttunen, S. S. Rudel, F. Kraus, **The Reactions of TiCl₃, and of UF₄ with TiCl₃ in liquid Ammonia: Unusual Coordination Spheres in [Ti(NH₃)₈]Cl₃·6NH₃ and [UF(NH₃)₈]Cl₃·3.5NH₃**, *Chem. Commun.* **2015**, *51*, 11826-11829, [Link](#)
72. S. S. Rudel, F. Kraus, **A facile synthesis of pure O₂PtF₆**, *Z. Anorg. Allgem. Chem.* **2015**, *641*, 2404-2407, [DOI](#)
73. S. Ivlev, A. J. Karttunen, R. Ostvald, F. Kraus, **RbBrF₄ revisited**, *Z. Anorg. Allgem. Chem.* **2015**, *641*, 2593-2598, [DOI](#)
74. T. G. Müller, F. Kraus, **Crystal structure of [Co(NH₃)₆][Co(CO)₄]₂**, *Acta Cryst. E* **2015**, *71*, 1418-1420, [DOI](#)



75. S. I. Ivlev, D. V. Akimov, N. B. Egorov, F. Kraus,
Synthesis and Characterization of $\text{LiClO}_4 \cdot \text{H}_2\text{O}$,
Monatsh. Chem. **2016**, *147*, 279-288, [Link](#)
76. T. G. Müller, F. Kraus,
Crystal Structure of $\text{Ag}_2(\mu\text{-SCN})_2(\text{NH}_3)_4$,
Acta Cryst. E **2016**, *72*, 881-883, [Link](#)
77. D. Naglav, M. R. Buchner, G. Bendt, F. Kraus, S. Schulz,
**Auf neuen Pfaden – Per Anhalter durch die Berylliumchemie,
Off the beaten track – A Hitchhiker's Guide to Beryllium
Chemistry,**
Angew. Chem. **2016**, *128*, 10718-10733, [Link](#)
Angew. Chem. Int. Ed. **2016**, *55*, 10562-10576, [Link](#)
78. S. I. Ivlev, R. V. Ostvald, F. Kraus,
**A New Look at NaBrF_4 : The Most BrF_3 -Rich
Tetrafluoridobromate(III) by Mass,**
Monatsh. Chem. **2016**, *147*, 1661-1668, [Link](#)
79. B. Scheibe, S. Lippert, S. S. Rudel, M. R. Buchner, O. Burghaus, C.
Pietzonka, M. Koch, A. J. Karttunen, and F. Kraus,
**NOUF₆ revisited. A comprehensive study of a
hexafluoridouranate(V) salt.,**
Chem. - Eur. J. **2016**, *22*, 12145-12153, [Link](#)
80. T. G. Müller, M. R. Buchner, T. J. Scheubeck, N. Korber, F. Kraus,
Ammine Complexes of Na-, Ag-, Mn-, and Zn-Azides,
Z. Anorg. Allgem. Chem. **2016**, *642*, 796-803, [Link](#)
81. T. G. Müller, J. Mogk, M. Conrad, F. Kraus,
**Octaammine Eu(II) and Yb(II) Azides and their Thermal
Decomposition to the Nitrides,**
Eur. J. Inorg. Chem. **2016**, 4162-4169, [Link](#)
82. J. Bandemehr, M. Conrad, F. Kraus,
A Redetermination of the Crystal Structure of NbF_4 ,
Acta Cryst. E, **2016**, *72*, 1211-1213, [Link](#)
83. V. R. Celinski, M. Ditter, F. Kraus, F. Fujara, J. Schmedt auf der
Günne,
**Trace determination and pressure estimation of fluorine F_2
caused by irradiation damage in minerals and synthetic
fluorides,**
Chem. - Eur. J. **2016**, *22*, 18388-18393, [Link](#), Hot Paper

84. S. I. Ivlev, A. J. Karttunen, R. V. Ostvald, F. Kraus,
Br₂F₇⁻ and Br₃F₁₀⁻: Peculiar anions showing μ₂- and μ₃-bridging F-atoms,
Chem. Commun. **2016**, 52, 12040-12043, [Link](#)
85. K. Duda, A. Himmelspach, J. Landmann, F. Kraus, M. Finze,
Synthesis of Fluorohydridoborate Anions [BHF₃]⁻ and [1-HF₂B-9,12-X₂-closo-1,2-C₂B₁₀H₉]⁻ (X = H, I): Deboronation of 1,2- and 1,7-dicarba-closo-dodecaboranes with anhydrous [Me₄N]F,
Chem. Commun. **2016**, 52, 13241-13244, [Link](#)
86. P. Woidy, F. Kraus,
Crystal Structure of [UO₂(NH₃)₅]NO₃·NH₃,
Acta Cryst. E **2016**, 72, 1710-1713, [Link](#)
87. F. Kraus, M. Fichtl, S. Baer,
Crystal structure of [Ag(NH₃)₃]₂[Ag(NH₃)₂]₂[SnF₆]F₂, a compound showing argentophilic interactions,
Acta Cryst. E **2016**, 72, 1860-1863, [Link](#)

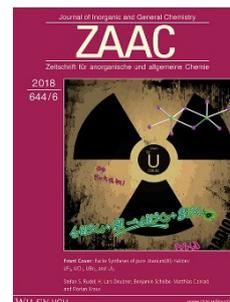
88. B. Scheibe, S. S. Rudel, M. R. Buchner, A. J. Karttunen, F. Kraus,
A 1D Coordination Polymer of UF₅ with HCN as a Ligand – [UF₅(HCN)₂],
Chem. - Eur. J. **2017**, *23*, 291-295, [Link](#)
89. S. S. Rudel, F. Kraus,
Facile Synthesis of Pure Uranium Halides: UCl₄, UBr₄, UI₄,
Dalton Trans. **2017**, *46*, 5835-5842, [Link](#)
90. K. Reuter, S. S. Rudel, M. R. Buchner, F. Kraus, C. von Hänisch,
Crown ether complexes of alkali metal chlorides from SO₂,
Chem. - Eur. J. **2017**, *23*, 9607-9617, [Link](#)
91. J. Bandemehr, M. Conrad, F. Kraus,
Redetermination of the crystal structure of K₂Hg(SCN)₄,
Acta Cryst. E **2017**, *73*, 1073-1075, [Link](#)
92. S. I. Ivlev, T. Soltner, A. J. Karttunen, M. J. Mühlbauer, A. J. Kornath,
F. Kraus,
Syntheses and Crystal Structures of Sodium Hydrogen Fluorides NaF·nHF (n = 2, 3, 4),
Z. Anorg. Allg. Chem. **2017**, *643*, 1436-1443, [Link](#)
93. H. L. Deubner, S. S. Rudel, F. Kraus,
A Simple Access to Pure Thorium(IV) Halides (ThCl₄, ThBr₄ & ThI₄),
Z. Anorg. Allg. Chem. **2017**, *643*, 2005-2010, [Link](#)
94. H. L. Deubner, F. Kraus,
The decomposition products of sulfur hexafluoride (SF₆) with metals dissolved in liquid ammonia,
Inorganics **2017**, *5*, 68, [Link](#)
95. C. Schöttle, S. S. Rudel, R. Popescu, J. Treptow, D. Gerthsen, F. Kraus, C. Feldmann,
Nanosized Gadolinium and Uranium – Two Representatives of High-Reactivity Lanthanide and Actinide Metal Nanoparticles,
ACS Omega **2017**, *2*, 9144-9149, [Link](#)
96. P. Muggli, E. Adli, R. Apsimon, F. Asmus, R. Baartman, A.-M. Bachmann, M. Barros Marin, F. Batsch, J. Bauche, V. K. Berglyd Olsen, M. Bernardini, B. Biskup, A. Boccardi, T. Bogey, T. Bohl, C. Bracco, F. Braunmuller, S. Burger, G. Burt, S. Bustamante, B. Buttenschön, A. Butterworth, A. Caldwell, M. Cascella, E. Chevally, M. Chung, H. Damerau, L. Deacon, A. Dexter, P. Dirksen, S. Doebert, J. Farmer, V. Fedosseev, T. Feniet, G. Fior, R. Fiorito, R. Fonseca, F. Friebel, P. Gander, S. Gessner, I. Gorgisyan, A. A. Gorn, O. Grulke, E. Gschwendtner, A. Guerrero, J. Hansen, C. Hessler, W. Hofle, J. Holloway, M. Hüther, M. Ibison, M.R. Islam, L. Jensen, S. Jolly, M.

Kasim, F. Keeble, S.-Y. Kim, F. Kraus, A. Lasheen, T. Lefevre, G. LeGodec, Y. Li, S. Liu, N. Lopes, K. V. Lotov, M. Martyanov, S. Mazzone, D. Medina Godoy, O. Mete, V. A. Minakov, R. Mompoti, J. Moody, M. T. Moreira, J. Mitchell, C. Mutin, P. Norreys, E. Öz, E. Ozturk, W. Pauw, A. Pardone, C. Pasquino, K. Pepitone, A. Petrenko, S. Pitmann, G. Plyushchev, A. Pukhov, K. Rieger, H. Ruhl, J. Schmidt, I. A. Shalimova, E. Shaposhnikova, P. Sherwood, L. Silva, A. P. Sosedkin, R. I. Spitsyn, K. Szczurek, J. Thomas, P. V. Tuev, M. Turner, V. Verzilov, J. Vieira, H. Vincke, C. P. Welsch, B. Williamson, M. Wing, G. Xia, H. Zhang,

AWAKE readiness for the study of the seeded self-modulation of a 400 GeV proton bunch,

Plasma Phys. Controlled Fusion **2017**, *60*, 014046, [Link](#)

97. S. S. Rudel, H. L. Deubner, B. Scheibe, M. Conrad, F. Kraus,
Facile Syntheses of pure Uranium(III) Halides: UF_3 , UCl_3 , UBr_3 , and UI_3 ,
Z. Anorg. Allg. Chem. **2018**, *644*, 323-329, [Link](#)
98. T. Quax, F. Altegoer, F. Rossi, Z. Li, M. Rodriguez-Franco, F. Kraus, G. Bange, S.-V. Albers,
Structure and function of the archaeal response regulator CheY,
PNAS **2018**, [Link](#)
99. S. I. Ivlev, A. J. Karttunen, M. R. Buchner, M. Conrad, R. V. Ostvald, F. Kraus,
Synthesis and Characterization of Barium Hexafluoridoosmates,
Crystals **2018**, *8*, 11, [Link](#)
100. S. S. Rudel, C. Pietzonka, M. Hoelzel, F. Kraus,
 $[\text{UCl}_4(\text{HCN})_4]$ – A hydrogen cyanide complex of uranium tetrachloride,
Chem. Commun. **2018**, *54*, 1241-1244, [Link](#)
101. B. Scheibe, C. Pietzonka, O. Mustonen, M. Karppinen, A. J. Karttunen, M. Atanasov, F. Neese, M. Conrad, F. Kraus,
The $[\text{U}_2\text{F}_{12}]^{2-}$ anion of $\text{Sr}[\text{U}_2\text{F}_{12}]$,
Angew. Chem. Int. Ed. **2018**, *57*, 2914-2918, [Link](#)
102. L. Skripnikov, S. Schmidt, J. Ullmann, C. Geppert, F. Kraus, B. Kresse, W. Nörtershäuser, A. F. Privalov, B. Scheibe, V. M. Shabaev, M. Vogel, and A. V. Volotka,
New Nuclear Magnetic Moment of ^{209}Bi - Resolving the Bismuth Hyperfine Puzzle,
Phys. Rev. Lett. **2018**, *120*, 093001, [Link](#)
103. H. L. Deubner, F. Kraus,
Redetermination of the crystal structure of ThI_4 ,
IUCrData **2018**, *3*, x180201, [Link](#)
104. M. Zyuzin, D. Baranov, A. Escudero, I. Chakraborty, A. Tsyppkin, E. Ushakova, F. Kraus, W. Parak, S. Makarov,
Photoluminescence quenching of dye molecules near a resonant silicon nanoparticle,
Scientific Reports **2018**, *8*, 6107, [Link](#)
105. S. I. Ivlev, F. Kraus,
Redetermination of the crystal structure of $\text{K}[\text{BrF}_4]$ from single-crystal X-Ray diffraction data,
IUCrData **2018**, *3*, x180646, [Link](#)

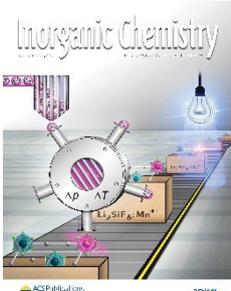


106. R. E. Stene, B. Scheibe, C. Pietzonka, A. J. Karttunen, W. Petry, F. Kraus,
MoF₅ revisited. A comprehensive study of MoF₅.
J. Fluorine Chem. **2018**, *211*, 171-179, [Link](#)
107. S. I. Ivlev, A. J. Karttunen, M. R. Buchner, M. Conrad, F. Kraus,
The Interhalogen Cations [Br₂F₅]⁺ and [Br₃F₈]⁺,
Angew. Chem. **2018**, *44*, 14850-14855, [Link](#)
Angew. Chem. Int. Ed. **2018**, *57*, 14640-14644, [Link](#)
108. S. S. Rudel, S. A. Baer, P. Woidy, T. G. Müller, H.-L. Deubner, B. Scheibe, F. Kraus,
Recent Advances in the Chemistry of Uranium Halides in Anhydrous Ammonia,
Z. Kristallogr. **2018**, *233*, 817-844, [Link](#)
109. S. I. Ivlev, T. G. Müller, A. J. Karttunen, M. Hoelzel, F. Kraus,
A Neutron Diffraction and Quantum-Chemical Study of [Mn(ND₃)₆](N₃)₂,
Z. Anorg. Allg. Chem. **2018**, *644*, 1349-1353, [Link](#)
110. J. Bandemehr, H. L. Deubner, M. Sachs, F. Kraus,
Li₂PbF₆ and SrPbF₆ revisited,
Z. Anorg. Allg. Chem. **2018**, *644*, 1721-1726, [Link](#)
111. The AWAKE Collaboration: E. Adli, A. Ahuja, O. Apsimon, R. Apsimon, A.-M. Bachmann, , D. Barrientos, F. Batsch, , J. Bauche, V.K. Berglyd Olsen, M. Bernardini, T. Bohl, C. Bracco, F. Braunmüller, G. Burt, B. Buttenschön, A. Caldwell, M. Cascella, J. Chappell, E. Chevallay, M. Chung, D. Cooke, H. Dameray, L. Deacon, L.H. Deubner, A. Dexter, S. Doebert, J. Farmer, V.N. Fedosseev, R. Fiorito, R.A. Fonseca, F. Friebel, L. Garolfi, S. Gessner, I. Gorgisyan, A.A. Gorn, E. Granados, O. Grulke, E. Gschwendtner, J. Hansen, A. Helm, J.R. Henderson, M. Hüther, M. Ibison, L. Jensen, S. Jolly, F. Keeble, S.-Y. Kim, F. Kraus, Y. Li, S. Liu, N. Lopes, K.V. Lotov, L. Maricalva Brun, M. Martyanov, S. Mazzoni, D. Medina Godoy, V.A. Minakov, J. Mitchell, J.C. Molendijk, J.T. Moody, M. Moreira, P. Muggli, E. Öz, C. Pasquino, A. Pardons, F. Peña Asmus, K. Pepitone, A. Perera, A. Petrenko, S. Pitman, A. Pukhov, S. Rey, K. Rieger, H. Ruhl, J.S. Schmidt, I.A. Shalimova, P. Sherwood, L.O. Silva, L. Soby, A.P. Sosedkin, R. Speroni, R.I. Spitsyn, P.V. Tuev, M. Turner, F. Velotti, L. Verra, V.A. Verzilov, J. Vieira, C.P. Welsch, B. Williamson, M. Wing, B. Woolley, and G. Xia,
Acceleration of electrons in the plasma wakefield of a proton bunch,
Nature **2018**, *561*, 363–367, [Link](#)



112. S. I. Ivlev, M. R. Buchner, A. J. Karttunen, F. Kraus,
**Synthesis and characterization of the pyridine – bromine
trifluoride (1/1) complex [py·BrF₃],**
J. Fluorine Chem. **2018**, *215*, 17-24, [Link](#)
113. M. Conrad, C. Pietzonka, J. Bernzen, V. Motta, K.-M. Weitzel, A.
J. Karttunen, F. Kraus,
The fluoroperovskite TIMnF₃,
Z. Anorg. Allg. Chem. **2018**, *644*, 1557-1561, [Link](#)

114. M. Sachs, A. J. Karttunen, F. Kraus,
Half-metallicity in uranium intermetallics: Crystal structure prediction of a high-pressure phase of UCo,
J. Phys.: Condens. Matter **2019**, *31*, 025501, [Link](#)
115. S. I. Ivlev, A. V. Malin, A. J. Karttunen, R. V. Ostvald, F. Kraus,
Reactions of KBrF₄ with Platinum Metals,
J. Fluorine Chem. **2019**, *218*, 11-20, [Link](#)
116. J. Linnera, S. I. Ivlev, F. Kraus, A. J. Karttunen,
F-bridged Anions of Bromine and Gold: Predictions of Unexpected Behavior,
Z. Anorg. Allg. Chem. **2019**, *645*, 284-291, [Link](#)
117. P. Bielec, L. Eisenburger, H. L. Deubner, D. Günther, F. Kraus, O. Oeckler, W. Schnick,
Targeting Vacancies in Nitridosilicates: Aliovalent Substitution of M²⁺ (M = Ca, Sr) by Sc³⁺ and U³⁺,
Angew. Chem. Int. Ed. **2019**, *58*, 840-843, [Link](#)
118. M. Turner, the AWAKE Collaboration,
Experimental observation of plasma wakefield growth driven by the seeded self-modulation of a proton bunch,
Phys. Rev. Lett. **2019**, *122*, 054801, [Link](#)
119. The AWAKE Collaboration,
Experimental observation of proton bunch modulation in a plasma, at varying plasma densities,
Phys. Rev. Lett. **2019**, *122*, 054802, [Link](#)
120. W. Nörtershäuser, J. Ullmann, L. Skripnikov, Z. Andelkovic, C. Brandau, A. Dax, W. Geithner, C. Geppert, C. Gorges, M. Hammen, V. Hannen, S. Kaufmann, K. König, F. Kraus, B. Kresse, Y. A. Litvinov, M. Lochmann, B. Maass, J. Meisner, T. Murböck, A. F. Privalov, R. Sánchez, B. Scheibe, M. Schmidt, S. Schmidt, V. M. Shabaev, M. Steck, T. Stöhlker, R. C. Thompson, C. Trageser, M. Vogel, J. Vollbrecht, A. V. Volotka, C. Weinheimer,
The Hyperfine Puzzle of Strong-Field Bound-State QED,
Hyperfine Interact. **2019**, *240*, 51, [Link](#)
121. S. I. Ivlev, A. J. Karttunen, M. Hoelzel, M. Conrad, F. Kraus,
The Crystal Structures of α - and β -F₂ revisited,
Chem. - Eur. J. **2019**, *25*, 3310-3317, [Link](#)
122. S. I. Ivlev, M. Conrad, F. Kraus,
HKLF5Tools: A Program for Processing Diffraction Data of Non-Merohedrally Twinned Crystals,
Z. Krist. **2019**, *234*, 415-418, [Link](#)

123. S. I. Ivlev, K. Gaul, M. Chen, A. J. Karttunen, R. Berger, F. Kraus,
Synthesis and Characterization of $[\text{Br}_3][\text{MF}_6]$ ($M = \text{Sb, Ir}$), as well as Quantum Chemical Study of $[\text{Br}_3]^+$ Structure, Chemical Bonding, and Relativistic Effects compared to $[\text{XBr}_2]^+$ ($X = \text{Br, I, At, Ts}$) and $[\text{TsZ}_2]^+$ ($Z = \text{F, Cl, Br, I, At, Ts}$),
Chem. - Eur. J. **2019**, *25*, 5793-5802, [Link](#)
124. H. L. Deubner, S. S. Rudel, M. Sachs, C. Pietzonka, A. J. Karttunen, S. I. Ivlev, M. Müller, M. Conrad, U. Müller, F. Kraus,
A Revised Structure Model for the UCl_6 Structure Type, Novel Modifications of UCl_6 and UBr_5 , and a comment on the Modifications of Protactinium Pentabromides,
Chem. - Eur. J. **2019**, *25*, 6402-6411, [Link](#)
125. B. Scheibe, J. Bruns, G. Heymann, M. Sachs, A. J. Karttunen, C. Pietzonka, S. I. Ivlev, H. Huppertz, F. Kraus,
 UF_4 and the High-Pressure Polymorph HP- UF_4 ,
Chem. - Eur. J. **2019**, *25*, 7366-7374, [Link](#)
126. S. I. Ivlev, M. Conrad, M. Hoelzel, A. J. Karttunen, F. Kraus,
The Crystal Structures of α - and β -Nitrogen Trifluoride,
Inorg. Chem. **2019**, *58*, 6422-6430, [Link](#)
127. C. Stoll, J. Bandemehr, F. Kraus, M. Seibald, D. Baumann, M. J. Schmidberger, H. Huppertz,
HF-Free Synthesis of $\text{Li}_2\text{SiF}_6:\text{Mn}^{4+}$ – A Red Emitting Phosphor,
Inorg. Chem. **2019**, *58*, 5518-5523, [Link](#)
- 
128. C. Ritter, B. Ringler, F. Dankert, M. Conrad, F. Kraus, C. von Hänisch,
Synthesis and crystal structures of novel tertiary butyl substituted (pseudo-)halogen bismuthanes,
Dalton Trans. **2019**, *48*, 5253-5262, [Link](#)
129. The AWAKE Collaboration,
Proton-Driven Plasma Wakefield Acceleration in AWAKE,
Philos. Trans. R. Soc., A **2019**, *377*, 20180418, [Link](#)
130. R. E. Stene, B. Scheibe, A. J. Karttunen, W. Petry, F. Kraus,
Lewis Acidic Behavior of MoOF_4 towards the Alkali Metal Fluorides in Anhydrous Hydrogen Fluoride Solution,
Eur. J. Inorg. Chem. **2019**, 3672-3682, [Link](#)

131. M. S. Kuklin, L. Maschio, D. Usvyat, F. Kraus, A. J. Karttunen, **Evolutionary Algorithm-based Crystal Structure Prediction for Copper(I) Fluoride**, *Chem. - Eur. J.* **2019**, *25*, 11528-11537, [Link](#)
132. I. Müller, C. Schneider, C. Pietzonka, F. Kraus, C. G. Werncke, **Reduction of 2,2'-Bipyridine by Quasi-Linear 3d-Metal(I) Silylamides – a Structural and Spectroscopic Study**, *Inorganics* **2019**, *7*, 117, [Link](#)
133. H. L. Deubner, M. Sachs, J. Bandemehr, S. I. Ivlev, A. J. Karttunen, S. R. Kachel, B. P. Klein, L. Ruppenthal, M. Schöniger, C. K. Krug, J. Herritsch, J. M. Gottfried, J. N. M. Aman, J. Schmedt auf der Günne, F. Kraus, **The binary lead fluoride Pb_3F_8** , *Chem. - Eur. J.* **2019**, *25*, 15656-15661, [Link](#)
134. A. V. Malin, S. I. Ivlev, R. V. Ostvald, F. Kraus, **Rubidium tetrafluoridobromate(III): redetermination of the crystal structure from single-crystal X-ray diffraction data**, *IUCr Data* **2019**, *4*, x191595, [Link](#)

135. J. Bandemehr, M. Sachs, S. I. Ivlev, A. J. Karttunen, F. Kraus,
PbF[Br₂F₇], a Fluoridobromate(III) of a p-Block Metal,
Eur. J. Inorg. Chem. **2020**, 64-70, [Link](#)
136. K. Eklund, M. S. Kuklin, F. Kraus, A. J. Karttunen,
Evolutionary Algorithm-based Crystal Structure Prediction for Gold(I) Fluoride,
ChemPhysChem **2020**, 2, 1-8, [Link](#)
137. H. L. Deubner, F. Kraus,
A spatially separated [KBr₆]⁵⁻ anion in the cyanido-bridged uranium(IV) compound [U₂(CN)₃(NH₃)₁₄]⁵⁺[KBr₆]⁵⁻·NH₃,
Z. Naturforsch. **2020**, 75b, 111-116, [Link](#)
138. F. Dankert, H. L. Deubner, M. Müller, M. R. Buchner, F. Kraus, C. von Hänisch,
C–F Bond Cleavage Reactions with Beryllium, Magnesium, Gallium, Hafnium and Thorium Halides,
Z. Anorg. Allg. Chem. **2020**, 646, 1-8, [Link](#)
139. A. V. Malin, S. I. Ivlev, R. V. Ostvald, F. Kraus,
Redetermination of the crystal structure of cesium tetrafluoridobromate(III) from single crystal X-ray diffraction data,
IUCrData **2020**, 5, x200114, [Link](#)
140. J. Bandemehr, J. Klippstein, S. I. Ivlev, M. Sachs, F. Kraus,
Laboratory Synthesis and Characterization of Knasibfite K₃Na₄[SiF₆]₃[BF₄] and the homologous Ge compound K₃Na₄[GeF₆]₃[BF₄],
Z. Kristallogr. – Cryst. Mater. **2020**, 235, 247-254 [Link](#)
141. B. Scheibe, S. I. Ivlev, A. J. Karttunen, F. Kraus,
Synthesis and Characterization of the Tetrafluoridochlorates(III) A[ClF₄] (A = K, Rb, Cs),
Eur. J. Inorg. Chem. **2020**, 2, 1319-1324, [Link](#)
142. V. Fella, L. V. Skripnikov, W. Nörtershäuser, M. R. Buchner, H. L. Deubner, F. Kraus, A. F. Privalov, V. M. Shabaev, M. Vogel,
Magnetic moment of ²⁰⁷Pb and the hyperfine splitting of ²⁰⁷Pb⁸¹⁺,
Phys. Rev. Research **2020**, 2, 013368, [Link](#)



143. A. Reckziegel, C. Pietzonka, F. Kraus, C. G. Werncke,
C–H bond activation by an Imido Cobalt(III) and the Resulting Amido Cobalt(II) Complex,
Angew. Chem. Int. Ed. **2020**, *59*, 8527-8531, [Link](#)
144. F. Kraus, S. I. Ivlev, J. Bandemehr, M. Sachs, C. Pietzonka, M. Conrad, M. Serafin, B. G. Müller,
Synthesis and Characterization of Manganese Tetrafluoride β - MnF_4 ,
Z. Anorg. Allgem. Chem. **2020**, *646*, 1481-1489, [Link](#)
145. H. L. Deubner, J. Bandemehr, A. J. Karttunen, F. Kraus,
A brief visit to the $BeCl_2/ZnCl_2$ system and the prediction of a new polymorph of $ZnCl_2$,
Z. Naturforsch. **2020**, *75*, 491-496, [Link](#)
146. R. E. Stene, B. Scheibe, W. Petry, F. Kraus,
Synthesis and Characterization of the Hexafluoridomolybdates(V) $A[MoF_6]$ ($A = Li - Cs$),
Eur. J. Inorg. Chem. **2020**, *19*, 1834-1843, [Link](#),
[Profile](#), [Cover](#)
- 
147. S. S. Rudel, A. J. Karttunen, F. Kraus,
 $Rb_2[U(NH_2)_6]$, a Rubidium Hexaamidouranate(IV) obtained from the Reaction of UCl_3 with $RbNH_2$ in Anhydrous Ammonia,
Z. Anorg. Allg. Chem. **2020**, *646*, 1023-1029, [Link](#)
148. J. Bandemehr, C. Stoll, G. Heymann, S. I. Ivlev, A. J. Karttunen, M. Conrad, H. Huppertz, F. Kraus,
The crystal structure of MnF_3 revisited,
Z. Anorg. Allgem. Chem. **2020**, *646*, 882-888, [Link](#)
149. M. A. Nowroozi, K. Wissel, M. Donzelli, N. Hosseinpourkahvaz, S. Plana-Ruiz, U. Kolb, R. Schoch, M. Bauer, A. M. Malik, J. Rohrer, S. Ivlev, F. Kraus, O. Clemens,
High cycle life all-solid-state fluoride ion battery with $La_2NiO_{4+\delta}$ high voltage cathode,
Comms. Mater. **2020**, *1*, 27, [Link](#)
150. B. Scheibe, J. März, M. Schmidt, Th. Stumpf, F. Kraus,
Synthesis and crystal structures of transition metal(II) fluoridometallate(IV) hydrates of neptunium and plutonium: $A''M^V F_6 \cdot 3H_2O$ ($A'' = Mn, Zn; M^V = Np, Pu$),
Eur. J. Inorg. Chem. **2020**, 2279-2284, [Link](#)
151. R. E. Stene, B. Scheibe, A. J. Karttunen, W. Petry, F. Kraus,
Synthesis and Characterization of $A[W_2O_2F_9]$ ($A = Li - Cs$),
Eur. J. Inorg. Chem. **2020**, 2260-2269, [Link](#)

152. R. E. Stene, B. Scheibe, S. I. Ivlev, A. J. Karttunen, W. Petry, F. Kraus,
Photochemical synthesis of tungsten pentafluoride, WF₅,
Z. Anorg. Allg. Chem. **2021**, 647, 218-224, [Link](#)
153. S. S. Rudel, T. Graubner, A. J. Karttunen, F. Kraus,
Reactions in Anhydrous Liquid Ammonia: Syntheses and Crystal Structures of [M(NH₃)₈]I₂ (M = Eu, Yb) with Bicapped Trigonal-Prismatic Octaammine Lanthanoid(II) Cations,
Z. Anorg. Allg. Chem. **2020**, 646, 1396-1402, [Link](#)
154. S. S. Rudel, H. Lars Deubner, M. Müller, A. J. Karttunen, F. Kraus,
Complexes featuring a linear [N≡U≡N] core isoelectronic to the uranyl cation,
Nature Chemistry **2020**, 12, 962-967, [Link](#)
155. B. Scheibe, A. J. Karttunen, U. Müller, F. Kraus,
Cs[Cl₃F₁₀]: A Propeller-Shaped [Cl₃F₁₀]⁻ Anion in a Peculiar A^[5]B^[5] Structure Type,
Angew. Chem. Int. Ed. **2020**, 59, 18116-18119, [Link](#)
Angew. Chem. **2020**, 132, 18272-18276, [Link](#)
156. M. Turner, P. Muggli, the AWAKE Collaboration,
Experimental Study of Wakefields Driven by a Self-Modulating Proton Bunch in Plasma,
Phys. Rev. Accel. Beams **2020**, 23, 081302, [Link](#)
157. H. L. Deubner, S. I. Ivlev, F. Kraus,
Rerefinement of the crystal structure of trichloridosulfonium(IV) hexachloridouranate(V), (SCl₃)(UCl₆),
IUCr Data **2020**, 5, x200960, [Link](#)
158. B. Scheibe, M. Patzschke, J. März, M. Conrad, F. Kraus,
A Molecular Octafluoridoneptunate(IV) anion in (NH₄)₄[NpF₈] and Theoretical Investigations of the [MF₈]⁴⁻ System (M = Th - Bk),
Eur. J. Inorg. Chem. **2020**, 3757-3759, [Link](#)
159. A. R. Eulenstein, N. Lichtenberger, Y. J. Franzke, R. J. Wilson, H. L. Deubner, F. Kraus, R. Clérac, F. Weigend, S. Dehnen,
Substantial π-aromaticity in the anionic heavy-metal cluster [Th@Bi₁₂]⁴⁻,
Nature Chemistry **2020**, 13, 149-155, [Link](#)
160. R. Wallauer, P. Marauhn, J. Reimann, S. Zörb, F. Kraus, J. Güdde, M. Rohlfing, U. Höfer,
Momentum-resolved observation of ultrafast interlayer transfer in MoS₂,
Phys. Rev. B **2020**, 102, 125417, [Link](#)

161. H. L. Deubner, M. Köster, C. von Hänisch, F. Kraus,
Synthesis and Crystal Structure of Triethylammonium Hexabromidouranate(IV)—Dichloromethane(1/1),
Acta Crystallogr., Sect. E: Struct. Rep. Online **2020**, 76, 1587-1590,
[Link](#)
162. B. Scheibe, R. Haiges, S. I. Ivlev, A. J. Karttunen, U. Müller, K. O. Christe, F. Kraus,
Difluorochloronium(III) Fluoridometallates – From Molecular Building Blocks to (Helical) Chains,
Eur. J. Inorg. Chem. **2020**, 4483-4496, [Link](#)
163. R. E. Stene, T. Chemnitz, W. Petry, F. Kraus,
Reductive Photo-Chemical Separation of the Hexafluorides of Uranium and Molybdenum,
J. Fluorine Chem. **2020**, 240, 109655, [Link](#)
164. J. Bandemehr, S. I. Ivlev, A. J. Karttunen, F. Kraus,
Preparation of two quantum-chemically predicted, isomeric [Br₄F₁₃]⁻ anions in the solid state,
Eur. J. Inorg. Chem. **2020**, 4568-4576, [Link](#)
165. A. Gorn, M. Turner, K. Lotov, AWAKE Collaboration,
Proton beam defocusing in AWAKE: comparison of simulations and measurements,
Plasma Phys. Controlled Fusion **2020**, 62, 125023, [Link](#)
166. F. Braunmüller, The AWAKE Collaboration,
Proton Bunch Self-Modulation in Plasma with Density Gradient,
Phys. Rev. Lett. **2020**, 125, 264801, [Link](#)

167. C. Stoll, M. Seibald, D. Baumann, J. Bandemehr, F. Kraus, H. Huppertz,
KLiSiF₆ and CsLiSiF₆ – A Structure Investigation,
Eur. J. Inorg. Chem. **2021**, 62-70, [Link](#)
168. J. Chappell, The AWAKE Collaboration,
Experimental study of extended timescale dynamics of a plasma wakefield driven by a self-modulated proton bunch,
Phys. Rev. Accel. Beams **2021**, 24, 011301, [Link](#)
169. B. Scheibe, A. J. Karttunen, F. Kraus,
Reactions of ClF₃ with Main Group and Transition Metal Oxides: Access to Dioxychloronium(V) Fluoridometallates and Oxidofluoridometallates,
Eur. J. Inorg. Chem. **2021**, 405-421, [Link](#)
170. B. Scheibe, A. J. Karttunen, F. Weigend, F. Kraus,
Photochemistry with Chlorine Trifluoride: Syntheses and Characterization of Difluorooxychloronium(V) Hexafluorido(non)metallates(V), [ClOF₂][MF₆] (M = V, Nb, Ta, Ru, Os, Ir, P, Sb),
Chem. - Eur. J. **2021**, 27, 2381-2392, [Link](#)
171. J. Zhang, M. Wenzel, K. Schnaars, F. Hennersdorf, K. Schwedtmann, J. März, A. Rossberg, P. Kaden, F. Kraus, T. Stumpf, J. J. Weigand,
Coordination of Trivalent Lanthanum and Cerium, and Tetravalent Cerium and Actinides (An = Th(IV), U(IV), Np(IV)) by a 4-Phosphoryl 1H-Pyrazol-5-olate Ligand in Solution and the Solid State,
Dalton Trans. **2021**, 50, 3550-3558, [Link](#)
172. F. Batsch, The AWAKE Collaboration,
Transition between instability and seeded self-modulation of a relativistic particle bunch in plasma,
Phys. Rev. Lett. **2021**, 126, 164802, [Link](#)
173. C. Stoll, J. Bandemehr, C. Pietzonka, F. Kraus, M. Atanasov, F. Neese, A. J. Karttunen, M. Seibald, G. Heymann, H. Huppertz
Coexistence of Two Different Distorted Octahedral [MnF₆]³⁻ Sites in K₃[MnF₆]: Manifestation in Spectroscopy and Magnetism,
Chem. - Eur. J. **2021**, 27, 9801-9813, [Link](#)
174. J. Rienmüller, J. Bandemehr, F. Kraus,
Single-crystal structures of A₂SiF₆ (A = Tl, Rb, Cs), a better structure model for Tl₃[SiF₆]F, and its novel tetragonal polymorph,
Z. Naturforsch. B **2021**, 76, 559-565, [Link](#)

175. M. Sachs, L. Deubner, M. Möbs, M. Hoelzel, M. Conrad, F. Kraus,
Temperature dependent crystal structure re-determination and electronic properties of $U\text{I}_3$,
Z. Anorg. Allg. Chem. **2021**, 647, 2015-2022, [Link](#)
176. H. L. Deubner, T. Graubner, F. Weigend, A. J. Karttunen, F. Kraus,
Reactions of ThX_4 ($X = \text{F}, \text{Cl}, \text{Br}, \text{I}$) with Liquid Ammonia – Crystal Structures and a Theoretical Study of Ammine Thorium(IV) Halide Ammoniates,
Eur. J. Inorg. Chem. **2021**, 2787-2796, [Link](#)
177. S. I. Ivlev, F. Kraus,
Barium bis[tetrafluoridobromate(III)],
IUCrData **2021**, 6, x210735, [Link](#)
178. T. Chemnitz, M. R. Buchner, W. Petry, F. Kraus,
Plasmachemical Synthesis of the binary Hexafluorides of Mo, Os, Ir, Te, and U,
J. Fluorine Chem. **2021**, 249, 109862, [Link](#)
179. J. Bandemehr, F. Zimmerhofer, S. I. Ivlev, C. Pietzonka, K. Eklund, A. J. Karttunen, H. Huppertz, F. Kraus,
Syntheses and Characterization of the Mixed-Valent Mn(II/III) Fluorides Mn_2F_5 and Mn_3F_8 ,
Inorg. Chem. **2021**, 60, 12651-12663, [Link](#), Featured Article, Editors Choice
180. J. Bandemehr, D. Baumann, M. Seibald, F. Kraus,
Alkali Metal Hexafluorido Plumbates(IV) $A_2[\text{PbF}_6]$ ($A = \text{Na}-\text{Cs}$) and Luminescence of the Mn^{4+} -substituted Compounds $A_2[\text{PbF}_6]:\text{Mn}$ ($A = \text{Li}-\text{Cs}$) and $\text{Li}_2[\text{MF}_6]:\text{Mn}$ ($M = \text{Ti}, \text{Ge}, \text{Sn}$),
Eur. J. Inorg. Chem. **2021**, 37, 3870-3877, [Link](#)
181. J. Bandemehr, D. Baumann, M. Seibald, K. Eklund, A. J. Karttunen, F. Kraus,
Mn(IV)-Substituted Metal(II) Hexafluorido Metallates(IV): Synthesis, Crystal Structures and Luminescence Properties,
Eur. J. Inorg. Chem. **2021**, 37, 3861-3869, [Link](#)
182. P.I. Morales Guzmán, P. Muggli, R. Agnello, C.C. Ahdida, M. Aladi, M.C. Amoedo Goncalves, Y. Andrebe, O. Apsimon, R. Apsimon, A.-M. Bachmann, M.A. Bastrukov, F. Batsch, M. Bergamaschi, P. Blanchard, P.N. Burrows, B. Buttenschön, A. Caldwell, J. Chappell, E. Chevally, M. Chung, D.A. Cooke, H. Damerau, C. Davut, G. Demeter, A. Dexter, S. Doebert, J. Farmer, A. Fasoli, V.N. Fedosseev, R. Fiorito, R.A. Fonseca, I. Furno, S. Gessner, A.A. Gorn, E. Granados, M. Granetzny, T. Graubner, O. Grulke, E. Gschwendtner, E.D. Guran, V. Hafych, J.R. Henderson, M.

Hüther, M. A. Kedves, V. Khudiyakov, S.-Y. Kim, F. Kraus, M. Krupa, T. Lefevre, L. Liang, N. Lopes, K.V. Lotov, S. Mazzoni, D. Medina Godoy, J.T. Moody, K. Moon, M. Moreira, T. Nechaeva, E. Nowak, C. Pakuza, H. Panuganti, A. Pardons, A. Perera, J. Pucek, A. Pukhov, B. Ráczkevi, R.L. Ramjiawan, S. Rey, O. Schmitz, E. Senes, L.O. Silva, C. Stollberg, A. Sublet, A. Topaloudis, N. Torrado, P.V. Tuev, M. Turner, F. Velotti, L. Verra, J. Vieira, H. Vincke, C.P. Welsch, M. Wendt, M. Wing, J. Wolfenden, B. Woolley, G. Xia, M. Zepp, G. Zevi Della Porta,

Simulation and Experimental Study of Proton Bunch Self-Modulation in Plasma with Linear Density Gradients,

Phys. Rev. Accel. Beams **2021**, *24*, 101301, [Link](#)

183. S. S. Rudel, T. Graubner, A. J. Karttunen, S. Dehnen, F. Kraus, **Reactions of $[\text{SiF}_4(\text{NH}_3)_2]$ with Fluorides AF ($\text{A} = \text{Li} - \text{Cs}, \text{TI}, \text{NH}_4$) in liquid NH_3 : A $[\text{NH}_4(\text{NH}_3)_2]^+$ Cation and a Thallophilic Interaction in $[\text{Tl}_2(\text{NH}_3)_6]^{2+}$,**
Inorg. Chem. **2021**, *60*, 15031-15040, [Link](#)

184. M. Sachs, S. I. Ivlev, M. Etter, M. Conrad, A. J. Karttunen, F. Kraus,
DFT-guided crystal structure re-determination and lattice dynamics of the intermetallic actinoid compound Ulr ,
Inorg. Chem. **2021**, *60*, 16686-16699, [Link](#)

185. V. Weippert, K. Witthaut, M. Pointner, M. Sachs, L. Eisenburger, F. Kraus, D. Johrendt,
High Thermoelectric Properties in the Sodalite Compounds $\text{BaGe}_3\text{As}_{14}$ and $\text{AGe}_7\text{As}_{15}$ ($\text{A} = \text{Rb}, \text{Cs}$),
Chem. Mater. **2021**, *33*, 8248-8258, [Link](#)

186. V. Hafych, A. Caldwell, The AWAKE Collaboration,
Analysis of proton bunch parameters in the AWAKE experiment,
J. Instrum. **2021**, *16*, P11031, [Link](#)

2022

187. R. E. Stene, T. Graubner, S. I. Ivlev, A. J. Karttunen, F. Kraus,
A Symmetric F–H–F Hydrogen Bond in Strontium Bifluoride, $\text{Sr}[\text{HF}_2]_2$,
Z. Anorg. Allg. Chem. **2022**, *648*, e202100374, [Link](#)

188. H. L. Deubner, T. Graubner, M. R. Buchner, F. Weigend, S. I. Ivlev, A. J. Karttunen, F. Kraus,
Surprises in the Solvent Induced Self-Ionization in the Uranium Tetrahalide UX_4 ($\text{X} = \text{Cl}, \text{Br}, \text{I}$) / Ethyl Acetate System,
ACS Omega **2022**, *7*, 11995-12003, [Link](#)

189. W. H. E. Schwarz, U. Müller, F. Kraus,
The Good Reasons for a Standard Periodic Table of the Chemical

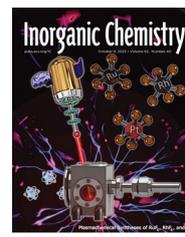
- Elements**,
Z. Anorg. Allg. Chem. **2022**, 648, e202200008, [Link](#)
190. B. Scheibe, A. J. Karttunen, F. Kraus,
Photochemistry with ClF_3 - An Access to $[\text{ClOF}_2]^+$ Salts,
Z. Anorg. Allg. Chem. **2022**, 648, e202200106, [Link](#)
191. The AWAKE Collaboration,
Controlled Growth of the Self-Modulation of a Relativistic Proton Bunch in Plasma,
Phys. Rev. Lett. **2022**, 129, 024802, [Link](#)
192. S. S. Rudel, H. L. Deubner, T. G. Müller, T. Graubner, S. I. Ivlev, F. Kraus,
 $[\text{U}(\text{NH}_3)_{10}]^{4+}$ Cations in Azide, Bromide, and Iodide Ammoniates and a Hydrolysis Product with an unprecedented $[\text{U}(\text{H}_2\text{O})_9]^{4+}$ Cation,
Z. Anorg. Allg. Chem. **2022**, 648, e202200211, [Link](#)
193. The AWAKE Collaboration,
The AWAKE Run 2 programme and beyond,
Symmetry **2022**, 14, 1680, [Link](#)
194. M. Möbs, T. Graubner, K. Eklund, A. J. Karttunen, F. Kraus,
Bromine Pentafluoride BrF_5 , the Formation of $[\text{BrF}_6]^-$ Salts, and the Stereochemical (In)Activity of the Br Lone Pairs,
Chem. - Eur. J. **2022**, 28, e202202466, [Link](#)
195. H. Youssef, T. Schäfer, J. Becker, A. E. Sedykh, L. Basso, C. Pietzonka, I. V. Taydakov, F. Kraus, K. Müller-Buschbaum,
3D-Frameworks and 2D-Networks of Lanthanide Coordination Polymers with 3-Pyridylpyrazole: Photophysical and Magnetic Properties,
Dalton Trans. **2022**, 51, 14673-14685, [Link](#)

2023

196. T. Graubner, A. J. Karttunen, F. Kraus,
A Computational Study on Closed Shell Molecular Hexafluorides MF_6 ($M = \text{S, Se, Te, Po, Xe, Rn, Cr, Mo, W, U}$) – Molecular Structure, Anharmonic Frequency Calculations, and Prediction of the NdF_6 Molecule,
ChemPhysChem **2023**, 24, e2022009, [Link](#)
197. J. Bandemehr, M. Atanasov, S. V. Rao, F. Neese, C. Pietzonka, S. I. Ivlev, F. Kraus,
Exchange Interactions and Magnetic Properties of a Molecular Mn_{18} -Ring Complex,
Chem. - Eur. J. **2023**, 29, e202203449, [Link](#)

198. J. Pfeiffer, H. Günther, L. Völlinger, D. Botros, B. Scheibe, M. Möbs, F. Kraus, F. Weigend, F. Tambornino,
Double addition vs. ring closure: Systematic reactivity study of CO(NCO)₂ and CO(NCS)₂ towards hydrogen halides,
Chem. - Eur. J. **2023**, *29*, e202203983, [Link](#)
199. H. Youssef, J. Becker, C. Pietzonka, I. V. Taydakov, F. Kraus, K. Müller-Buschbaum,
Divalent Europium, NIR and Variable Emission of Trivalent Tm, Ho, Pr, Er, Nd, and Ce in 3D-Frameworks and 2D-Networks of Ln-Pyridylpyrazolates,
Chemistry **2023**, *5*, 1006-1027, [Link](#)
200. L. Bonometti, F. Kraus, T. Graubner, A. J. Karttunen, B. Civalieri, L. Donà, L. Maschio,
A Fresh Look at a Well-known Solid: Structure, Vibrational Spectra, and Formation Energy of NaNH₂,
J. Phys. Chem. C **2023**, *127*, *25*, 12287-12294, [Link](#)
201. M. Möbs, T. Graubner, A. J. Karttunen, F. Kraus,
[(μ₃-F)(BrF₅)₃]⁻ - An Unprecedented Molecular Fluoridobromate(V) Anion in Cs[Br₃F₁₆],
Chem. - Eur. J. **2023**, *29*, e202301876, [Link](#)
202. M. Möbs, D. A. Dixon, G. F. de Melo, M. Vasiliu, T. Graubner, K. O. Christe, F. Kraus,
The Crucial Role of Sb₂F₁₀ in the Chemical Synthesis of F₂,
Angew. Chem. Int. Ed. **2023**, *62*, e202307218, [Link](#)
Angew. Chem. **2023**, *135*, e202307218, [Link](#)
203. T. Graubner, A. J. Karttunen, F. Kraus,
A Dinuclear Uranium Complex [(UO₂F₂(NH₃))₂(μ-F)₂]²⁻ from Reaction of TIF and UO₂F₂ in liquid anhydrous Ammonia and Fluoride Ion Affinities for some Uranyl(VI) Species [UO₂F_x]^{2-x} and [UO₂F_x(NH₃)_{5-x}]^{2-x},
Eur. J. Inorg. Chem. **2023**, *28*, e202300387, [Link](#)
204. T. B. Wassermann, R. E. Stene, B. Scheibe, A. J. Karttunen, F. Kraus,
Discrete Mono-, Di-, and Trinuclear Anions [MoOF₅]⁻, [Mo^VOF₅]²⁻, [MoO₂F₄]²⁻, [Mo₂O₂F₉]⁻, [Mo₃O₃F₁₃]⁻, and the Infinite Chain Anion [MoO₂F₃]⁻ obtained from Reactions of MoOF₄. Synthesis and Analysis of the Structure-Chemical Relations of the Compounds.,
Inorg. Chem. **2023**, *62*, 13435-13452, [Link](#)
205. The AWAKE Collaboration,
Development of the Self-Modulation Instability of a Relativistic Proton Bunch in Plasma,
Physics of Plasmas **2023**, *30*, 083104, [Link](#)

206. T. Chemnitz, B. N. Koch, M. R. Buchner, W. Petry, F. Kraus,
Plasmachemical Syntheses of RuF₆, RhF₆, and PtF₆,
Inorg. Chem. **2023**, *62*, 16263-16273, [Link](#), Featured Article



207. T. Graubner, F. Kraus,
Re-refinement of the crystal structure of α -ThBr₄,
IUCrData **2023**, *8*, [Link](#)
208. M. Möbs, F. Kraus,
Synthesis and Redetermination of the Crystal Structure of NbF₅,
Acta Crystallogr. E **2023**, *79*, 1207-1211, [Link](#)

209. K. Beeks, T. Sikorsky, F. Schaden, M. Pressler, F. Schneider, B. N. Koch, T. Pronebner, D. Werban, N. Hosseini, G. Kazakov, J. Welch, J. H. Sterba, F. Kraus, T. Schumm,
Optical Transmission Enhancement of Ionic Crystals via Superionic Fluoride Transfer: Growing VUV-Transparent Radioactive Crystals,
Phys. Rev. B **2024**, 109, 094111, [Link](#)
210. T. Nechaeva, The AWAKE Collaboration,
Hosing of a long relativistic particle bunch in plasma,
Phys. Rev. Lett. **2024**, 132, 075001, [Link](#)
211. M. Möbs, T. Graubner, A. J. Karttunen, F. Kraus,
[Br₄F₂₁]⁻ - A Unique Molecular Tetrahedral Interhalogen Ion Containing a μ₄-bridging Fluorine Atom surrounded by BrF₅ molecules,
Chem. Sci. **2024**, 15, 3273-3278, [Link](#)
212. T. Graubner, S. S. Rudel, S. I. Ivlev, A. J. Karttunen, F. Kraus,
Uranium Cyanides from Reactions in Liquid Ammonia Solution,
Eur. J. Inorg. Chem. **2024**, e202400041, [Link](#)
213. T. Graubner, P. Woidy, S. A. Baer, A. J. Karttunen, F. Kraus,
Uranium Chemistry in liquid Ammonia: Compounds obtained by adventitious Presence of Moisture or Air,
Eur. J. Inorg. Chem. **2024**, e202300752, [Link](#)
214. M. Möbs, M. Sachs, K. Rolheiser, C. Pietzonka, A. J. Karttunen, F. Kraus,
Synthesis, Characterization, and Polymorphism of [H₃O][NbF₆]: A Polar and Possibly Ferroelectric Oxonium Salt,
Eur. J. Inorg. Chem. **2024**, e202400015, [Link](#)
215. M. Möbs, A. J. Karttunen, K. O. Christe, F. Kraus,
Further Insights into the Chemical Synthesis of F₂ and on Drying moist HF,
Inorg. Chem. **2024**, 63, 7105-7112, [Link](#)
216. AWAKE Collaboration,
Filamentation of a relativistic proton bunch in plasma,
Phys. Rev. E **2024**, 109, 055203, [Link](#)
217. U. Jakob, F. Kraemer, F. Kraus, T. Lengauer,
Applying Ethics in the Handling of Dual-Use Research – The Case of Germany,
Res. Ethics **2024**, 17470161241261044, [Link](#)
218. F. Kraus, T. Graubner, M. R. Buchner, M. Metzulat, A. J. Karttunen,

- Bis(2-chloroethyl)sulfane revisited: (ClH₄C₂)₂S⋯S(C₂H₄Cl) dimers by S⋯S interaction in the solid state,**
Z. Naturforsch. **2024**, 79b, 605-617, [Link](#)
219. T. B. Wassermann, F. Kraus,
Re-refinement of the crystal structure of BiF₅,
Acta Crystallogr. E **2024**, 80, 826-828, [Link](#)
220. B. N. Koch, T. Graubner, F. Kraus,
The peculiar molecular [(IF₅)₆(HF₂)₄]⁴⁻ anion of the compound K₄[(IF₅)₆(HF₂)₄],
Z. Anorg. Allg. Chem. **2024**, 650, e202400085, [Link](#)
221. E. K. Albrecht, T. Graubner, S. I. Ivlev, E.-L. Rautama, M. Karppinen, F. Kraus, A. J. Karttunen,
Low-temperature single-crystal structure and phonon properties of A-site ordered double perovskite CaMnTi₂O₆,
ChemistrySelect **2024**, 9, e202402132, [Link](#)
222. C. L. Silva, L. Amidani, M. Retegan, S. Weiss, E. F. Bazarkina, T. Graubner, F. Kraus, K. O. Kvashnina,
On the origin of low-valent uranium oxidation state,
Nat. Commun. **2024**, 15, 6861, [Link](#)

223. M. Möbs, A. J. Karttunen, F. Kraus,
Fluoridobromate(V)–Hydrogen Fluoride Cocrystals,
Acta Chim. Slov. **2025**, *72*, 1-9, [Link](#), [DOI](#)
224. B. Koch, T. Graubner, A. J. Karttunen, F. Kraus,
**Mono-, Di-, and Trinuclear Complex Anions of RuF₅ in Rb[RuF₆],
Cs[Ru₂F₁₁], and [O₂][Ru₃F₁₆],**
Eur. J. Inorg. Chem. **2025**, *28*, e202400767, [Link](#)
225. T. B. Wassermann, L. Link, R. Niewa, A. J. Karttunen, F. Kraus,
**Reactions of Binary Nitrides in Liquid Hydrogen Fluoride and the
First Calcium Oxidofluoridometallate of a Group Six Element
Ca[Mo₂O₂F₉]₂·HF,**
Eur. J. Inorg. Chem. **2025**, *28*, e202400748, [Link](#)
226. M. Turner, et al., The AWAKE Collaboration,
**Experimental Observation of Motion of Ions in a Resonantly
Driven Plasma Wakefield Accelerator,**
Phys. Rev. Lett. **2025**, *134*, 155001, [Link](#)
227. T. B. Wassermann, M. Sachs, M. Etter, F. Kraus,
**Single Crystal Structure Precludes Predicted Ferroelectricity of
Uranium Trifluoride, UF₃,**
Inorg. Chem. **2025**, *64*, 7088–7095, [Link](#)
228. T. Chemnitz, C. Reiter, F. Kraus, D. Novog,
**A novel approach to process TRISO nuclear fuel using plasma-
aided chemistry,**
<http://arxiv.org/abs/2505.14108>
229. M. Möbs, A. J. Karttunen, F. Kraus,
The Crystal Structure of Anhydrous [NMe₄]F,
Z. Anorg. Allg. Chem. **2025**, *651*, e202500082, [DOI](#)
230. T. B. Wassermann, A. J. Karttunen, F. Kraus,
**[Au(CO)₂][UF₆] – Synthesis, Crystal Structure, Raman
Spectroscopy and Quantum-Chemical Calculations of the Non-
Classical Carbonyl Compound,**
Eur. J. Inorg. Chem. **2025**, e202500340, [DOI](#)
231. M. Kozadaeva, D. Khrapov, I. Yu. Grubova, A. Vladescu
(Dragomir), V. Anorin, C. M. Cotrut, K. Loukelis, M. Chatzinikolaidou,
F. Kraus, F. Noll, P. Kahler, A. V. Koptuyug, R. A. Surmenev, M. A.
Surmeneva,
**Multiscale design of an additively manufactured Ti–Nb alloy with
nanostructured Sr-substituted hydroxyapatite coating for bone
tissue engineering,**
Ceram. Int. **2025**, *51*, 46323-46342, [DOI](#)

232. M. Möbs, F. Kraus,
Tips and Procedures for Safe Handling of Anhydrous Hydrogen Fluoride and Pure Elemental Fluorine in Chemical University Laboratories,
ACS Chem. Health Saf. **2025**, 32, 662-672, [DOI](#)
233. T. B. Wassermann, G. Hoß, A. J. Karttunen, F. Kraus,
Syntheses and Crystal Structures of the Novel Salts $\text{Sr}[\text{Mo}^{\text{VI}}_2\text{O}_2\text{F}_9]_2 \cdot \text{HF}$, $\text{Ba}[\text{Mo}^{\text{VI}}_2\text{O}_2\text{F}_9]_2 \cdot 2\text{HF}$ and of $\text{Ba}[\text{Mo}^{\text{V}}\text{OF}_5]$,
Eur. J. Inorg. Chem. **2025**, e202500316, [DOI](#)
234. B. Scheibe, T. B. Wassermann, F. Kraus,
Syntheses, Single Crystal Structures, and Structural-Chemistry of Hexafluoridouranates(V), MUF_6 ($M = \text{Li}-\text{Cs}, \text{Ag}, \text{Tl}, \text{H}_3\text{O}$) and the Dodecafluoridodiuranate(V) $\text{Ba}[\text{U}_2\text{F}_{12}] \cdot 1.36\text{HF}$,
Inorg. Chem. **2025**, 64, 18432-18446, [DOI](#)
235. M. Möbs, J. Moritz, T. Schwarze, M. Pittroff, F. Kraus,
Fluorine gas (30 %) escaping through leaks in stainless steels at 7 and 93 bars of pressure did not cause metal-fluorine fires,
J. Fluorine Chem. **2025**, 288, 110503, [DOI](#)
236. S. Nezamabadi, P. A. Fuzon, F. Kraus, R. X. Fischer,
Empirical electronic polarizabilities of iodine (I^-) and bromine (Br^- , Br^{7+}) for the prediction of refractive indices,
Eur. J. Miner. **2025**, 37, 889-907, [DOI](#)

237. M. Sachs, A. J. Karttunen, F. Kraus,
A First-Principles Analysis of Metal Fluorides with Polar Crystal Structures as Candidates for New Ferroelectric Materials,
Chem. Mater. **2026**, accepted, [DOI](#)
238. R. K. Kremer, F. Kraus, P. Woidy, G. Nenert, C. Drahten, B. Ouladdiaf,
Orbital and Magnetic Ordering in the Weak Ferromagnet Vanadiumtrifluoride VF₃,
Phys. Rev. B **2026**, accepted
239. N. Schubert, N. Zomack, A. Stapf, P. Fuzon, A.-L. Neumann, D. Walter, A. Lissner, F. Kraus, E. Kroke,
Aqueous HF-HBrO₄ Solutions for Wet-Chemical Etching of (100) Silicon Wafer Surfaces,
Mater. Adv. **2026**, accepted, [DOI](#)

Books and Book Chapters

1. T. Schlöder, F. Kraus, S. Riedel,
Fluorides: Solid-State Chemistry,
Encyclopedia of Inorganic Chemistry **2014**, John Wiley & Sons, [Link](#)
2. S.A. Baer, F. Kraus,
Preparation of $\text{SiF}_4(\text{NH}_3)_2$ and its higher ammoniate $\text{SiF}_4(\text{NH}_3)_2 \cdot 2\text{NH}_3$,
in H. Roesky, *Efficient Methods for Preparing Silicon Compounds*,
Academic Press **2016**, London, Oxford, Boston, New York, San Diego,
[Link](#), [DOI](#)
3. F. Kraus,
About F_2 in K. Seppelt, *The Curious World of Fluorinated Molecules*,
Elsevier **2020**, [Link](#)
4. F. Kraus,
Fluorides: Solid-State Chemistry,
Encyclopedia of Inorganic and Bioinorganic Chemistry **2024**, Wiley-
Blackwell, [Link](#)
5. Mortimer, Müller, Kraus,
Chemie – Das Basiswissen der Chemie,
Thieme-Verlag Stuttgart, 14. Auflage in Bearbeitung

Other Publications

1. F. Kraus,
Uran und Fluor – zwei eng verwobene Elemente,
Nachrichten aus der Chemie **2008**, 56, 1236-1240, [PDF](#)
2. F. Kraus,
Keine Angst vor Paragraphen – Radioaktive Stoffe,
Nachrichten aus der Chemie **2011**, 5, 1044-104, [PDF](#)
3. B. Baumeister, W. Schmid, F. Kraus, W. Petry,
An alternative chemical cleaning procedure for blank monolithic U-Mo foils,
European Research Reactor Conference **2012**, [PDF](#)
4. P. Adelhelm, M. Armbrüster, F. Kraus,
Trendbericht Festkörperchemie 2012,
Nachr. Chem. **2013**, 61, 252-264, [DOI](#)
5. F. Kraus,
Von “Stinkspat” und elementarem Fluor,
labor&more **2014**, 2, 38-42, [PDF](#)
6. S. I. Ivlev, P. Woidy, I. I. Zherin, R. V. Ostvald, F. Kraus, M. Yu. Voytenko, V. V. Shagalov,
Crystallographic Studies of Cesium Tetrafluorobromates(III),
Procedia Chem. **2014**, 11, 35-42, [Abstract](#), [DOI](#)
7. S. I. Ivlev, P. Woidy, F. Kraus, A. Rybakov, I. I. Zherin, R. V. Ostvald, V. V. Shagalov,
Simultaneous Fluorination and Oxidation of Iridium by Metal Tetrafluorobromates,
Procedia Chem. **2014**, 11, 43-48, [Abstract](#), [DOI](#)
8. F. Kraus,
Rezension zu “N Stickstoff – ein Element schreibt Weltgeschichte” von G. Ertl, J. Söntgen (Hrsg.), ekom, München 2015.
Nachr. Chem. **2016**, 1, 67-68
9. F. Kraus, M. R. Buchner,
Beryllium das Supergift?,
Aktuelle Wochenschau der GDCh **2016**, <https://faszinationchemie.de>
10. F. Kraus,
Von elementarem Fluor und gewagten Experimenten,
Nachr. Chem. **2019**, 67, 54-58, [Link](#)
11. F. Kraus,
CIF₃ – von der „Wunderwaffe“ zum Laborexoten,
Nachr. Chem. **2019**, 67, 17-22, [Link](#)

12. F. Kraus,
Rezension zu „Das Chemiewissen für die Feuerwehr“ von Torsten Schmiermund, Springer Spektrum Heidelberg,
Nachr. Chem. **2019**, *67*, 77-77, [Link](#)
13. M. Jansen, F. Kraus,
Laudatio: "Rudolf Hoppe – A Life Committed to Chemistry",
Z. Anorg. Allg. Chem. **2022**, *648*, e202200327, [Link](#)
14. F. Kaus,
Rezension zu „Das unheimliche Element – Die Geschichte des Urans zwischen vermeintlicher Klimarettung und atomarer Bedrohung“ von Horst Hamm, Oekom Verlag, München, 2023, 240 Seiten,
Nachr. Chem. **2023**, *71*, 77-77.

Patents

Granted:

1. WO2020188048 - PREPARATION OF METAL FLUORIDES AND SEPARATION PROCESSES, Publication Date 2020-09-24, [Link](#)
US 2022/153607, Publication Date 2022-05-19, RU 2021 130 304
2. WO2021185756A1 - LUMINOPHORE, METHOD FOR PRODUCING A LUMINOPHORE AND RADIATION-EMITTING COMPONENT, Publication Date 2021-09-23 [Link](#)
3. WO2022200501A1 - LEUCHTSTOFF, VERFAHREN ZUR HERSTELLUNG EINES LEUCHTSTOFFS UND STRAHLUNGSEMITTIERENDES BAUELEMENT, Publication Date 2022-09-29
4. WO2022200154A1 - LEUCHTSTOFF, VERFAHREN ZUR HERSTELLUNG EINES LEUCHTSTOFFS UND STRAHLUNGSEMITTIERENDES BAUELEMENT, Publication Date 2022-09-29
5. US20230100663 - LUMINOPHORE, METHOD FOR PRODUCING A LUMINOPHORE AND RADIATION-EMITTING COMPONENT, Publication Date 2023-03-30, [Link](#)