

# List of Publications

## Division Chemistry of the *f*-Elements (FWOF)

(as of 1<sup>st</sup> February 2017)

\* *The division commenced in June 2014.*

(FWOF staff underlined.)

<2017>

1. ["\[UO<sub>2</sub>Cl<sub>2</sub>\(phen\)<sub>2</sub>\], a simple uranium\(VI\) compound with a significantly bent uranyl unit \(phen = 1,10-phenanthroline\)"](#),  
Schöne, S.; Radoske, T.; März, J.; Stumpf, T.; Patzschke, M.; Ikeda-Ohno, A.  
*Chem. Eur. J.*, **23**(55), 13574-13578 (2017).
2. ["Trivalent \*f\*-elements in human saliva: A comprehensive speciation study by time-resolved laser-induced fluorescence spectroscopy and thermodynamic calculations"](#),  
Barkleit, A.; Wilke, C.; Heller, A.; Stumpf, T.; Ikeda-Ohno, A.  
*Dalton Trans.*, **46**(5), 1593-1605 (2017).
3. ["Technetium complexes with arylselenolato and aryltellurolato ligands"](#),  
Noschang Cabral, B.; Kirsten, L.; Hagenbach, A.; Piquini, P.C.; Patzschke M.; Schulz Lang, E.; Abram U.  
*Dalton Trans.*, **46**(28), 9280-9286 (2017).
4. ["Batch sorption and spectroscopic speciation studies of neptunium uptake by montmorillonite and corundum"](#),  
Elo, O.; Müller, K.; Ikeda-Ohno, A.; Bok, F.; Scheinost, A. C.; Hölttä, P.; Huittinen, N.  
*Geochim. Cosmochim. Acta*, **198**, 168-181 (2017).
5. ["Synthesis of coordination polymers of tetravalent actinides \(U and Np\) with phthalate or mellitate ligand in aqueous medium"](#),  
Martin, N. P.; März, J.; Volkringer, C.; Henry, N.; Hennig, C.; Ikeda-Ohno, A.; Loiseau, T.  
*Inorg. Chem.*, **56**(5), 2902-2913 (2017).
6. ["Speciation of the trivalent \*f\*-elements Eu\(III\) and Cm\(III\) in digestive media"](#),  
Wilke, C.; Barkleit, A.; Stumpf, T.; Ikeda-Ohno, A.  
*J. Inorg. Biochem.*, **175**, 248-258 (2017).
7. ["Investigation of the Ga complexation behaviour of the siderophore Desferrioxamine B"](#)  
Jain, R.; Cirina, F.; Kaden, P.; Pollmann, K.  
*Solid State Phenomena*, **262**, 643-646 (2017).

8. ["Scale dependent soil erosion dynamics in a fragile loess landscape"](#)  
Baumgart, P.; Eltner, A.; Domula, A. R.; Berkleit, A.; Faust, D.  
*Z. Geomorphologie*, **61**(3), 191-206 (2017).
- <2016>
9. ["Speciation studies of metals in trace concentrations: The mononuclear uranyl\(VI\) hydroxo complexes"](#),  
Drobot, B.; Bauer, A.; Steudtner, R.; Tsushima, S.; Bok, F.; Patzschke, M.; Raff, J.; Brendler, V.  
*Anal. Chem.*, **88**(7), 3548-55 (2016).
10. ["Oxyhydroxy silicate colloids: A new type of waterborne actinide\(IV\) colloids"](#),  
Zänker, H.; Weiss, S.; Hennig, C.; Brendler, V.; Ikeda-Ohno, A.  
*ChemistryOpen*, **5**(3), 174-182 (2016).
11. ["Interaction of europium and curium with alpha-amylase"](#),  
Barkleit, A.; Heller, A.; Ikeda-Ohno, A.; Bernhard, G.  
*Dalton Trans.*, **45**(21), 8724-8733 (2016).
12. ["Fate of plutonium at a former nuclear testing site in Australia"](#),  
Ikeda-Ohno, A.; Shahin, L. M.; Howard, D. L.; Collins, R. N.; Payne, T. E.;  
Johansen, M. P.  
*Environ. Sci. Technol.*, **50**(17), 9098-9104 (2016).
13. ["The specific sorption of Np\(V\) on the corundum \(alpha-Al<sub>2</sub>O<sub>3</sub>\) in the presence of trivalent lanthanides Eu\(III\) and Gd\(III\): A batch sorption and XAS study"](#),  
Virtanen, S.; Bok, F.; Ikeda-Ohno, A.; Rossberg, A.; Lützenkirchen, J.; Rabung, T.; Lehto, J.; Huittinen, N.  
*J. Colloid Interface Sci.*, **483**, 334-342 (2016).
14. ["Accumulation of plutonium in mammalian wildlife tissues following dispersal by accidental-release tests"](#),  
Johansen, M. P.; Child, D. P.; Caffrey, E. A.; Davis, E.; Harrison, J. J.; Hotchkis, M. A.; Payne, T. E.; Ikeda-Ohno, A.; Thiruvoth, S.; Twining, J. R.; Beresford, N. A.  
*J. Environ. Radioactiv.*, **151**(2), 387-394 (2016).
15. ["Self-assembly of \[2+2\] Co\(II\) metallomacrocycles and Ni\(II\) metallogels with novel bis\(pyridylimine\) ligands"](#),  
Kelly, N.; Gloe, K.; Doert, T.; Hennersdorf, F.; Heine, A.; März, J.;  
Schwarzenbolz, U.; Weigand, J. J.; Gloe, K.  
*J. Organometal. Chem.*, **821**, 182-191 (2016).
16. ["Electric-field-induced insulator to Coulomb glass transition via oxygen-vacancy migration in Ca-doped BiFeO<sub>3</sub>"](#),

Lim, J. S.; Lee, J. H.; Ikeda-Ohno, A.; Ohkochi, T.; Kim, K.-S.; Seidel, J.; Yang, C.-H.  
*Phys. Rev. B*, **94**, 035123 (2016).

17. "[Comparative NMR study of n-PrBTP and i-PrBTP](#)"  
Adam, C.; Rohde, V.; Müllich, U.; Kaden, P.; Geist, A.; Panak, P. J.; Geckeis, H.  
*Proc. Chem.*, **21**, 38-45 (2016).
18. "[Incorporation of Eu\(III\) into calcite under recrystallization conditions](#)",  
Hellebrandt, S.E.; Hofmann, S.; Jordan, N.; Barkleit, A.; Schmidt, M.  
*Sci. Rep.*, **6**, 33137 (2016).

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19. "[Growth and properties of fully strained SrCoO<sub>x</sub> \(x = 2.8\) thin films on DyScO<sub>3</sub>](#)",  
Hu, S.; Yue, Z.; Lim, J. S.; Callori, S. J.; Bertinshaw, J.; Ikeda-Ohno, A.; Ohkochi, T.; Yang, C.-H.; Wang, X.; Nagarajan, V.; Ulrich, C.; Seidel, J.  
*Adv. Mater. Interfaces.*, **2**(8), 1500012 (2015).
20. "[Intrinsic formation of nanocrystalline neptunium dioxide in the neutral aqueous condition relevant to deep geological repositories](#)",  
Husar, R.; Hübner, R.; Hennig, C.; Philippe, M. P.; Chollet, M.; Weiss, S.; Stumpf, T.; Zänker, H.; Ikeda-Ohno, A.  
*Chem. Comm.*, **51**(7), 1301-1304 (2005).
21. "[Uranium\(VI\) binding forms in selected human body fluids: thermodynamic calculations versus spectroscopic measurements](#)",  
Osman, A. A. A.; Geipel, G.; Barkleit, A.; Bernhard, G.  
*Chem. Res. Toxicol.*, **28**(2), 238-247 (2015).
22. "[Photophysical property of catena-bis\(thiocyanato\)aurate\(I\) complexes in ionic liquids](#)",  
Aoyagi, N.; Shinha, Y.; Ikeda-Ohno, A.; Haga, Y.; Shimojo, K.; Brooks, N. R.; Izuoka, A.; Naganawa, H.; Kimura, T.; Binnemans, K.  
*Cryst. Growth Design*, **15**(3), 1422-1429 (2015).
23. "[Formation of neptunium\(IV\)-silica colloids at near-neutral and slightly alkaline pH](#)",  
Husar, R.; Weiss, S.; Hennig, C.; Hübner, R.; Ikeda-Ohno, A.; Zänker, H.  
*Environ. Sci. Technol.*, **49**(1), 665-671 (2015).
24. "[Spectroscopic study on uranyl carboxylate complexes formed at the surface layer of \*Sulfolobus acidocaldarius\*](#)",  
Reitz, T.; Rossberg, A.; Barkleit, A.; Steudtner, R.; Selenska-Pobell, S.; Merroun, M. L.

*Dalton Trans.*, **44**(6), 2684-2692 (2015).

25. ["The interaction of Eu\(III\) with organoborates - a further approach to understand the complexation in the An/Ln\(III\)-borate system"](#),  
Schott, J.; Kretzschmar, J.; Tsushima, S.; Drobot, B.; Acker, M.; Barkleit, A.;  
Taut, S.; Brendler, V.; Stumpf, T.  
*Dalton Trans.*, **44**(24), 11095-11108 (2015).
26. ["Synthesis of S-layer conjugates and evaluation of their modifiability as a tool for the functionalization and patterning of technical surfaces"](#),  
Weinert, U.; Pollmann, K.; Barkleit, A.; Vogel, M.; Günther, T.; Raff, J.  
*Molecules*, **20**(6), 9847-9861 (2015).
27. ["Unwilling U-U bonding in U<sub>2</sub>@C<sub>80</sub>: cage-driven metal-metal bonds in di-uranium fullerenes"](#),  
Foroutan-Nejad, C.; Vicha, J.; Marek, R.; Patzschke, M.; Straka, M.  
*Phys. Chem. Chem. Phys.*, **17**(37), 24182-24192 (2015).
28. ["Iron and phosphorus speciation in Fe-conditioned membrane bioreactor activated sludge"](#),  
Wu, H.; Ikeda-Ohno, A.; Wang, Y.; Waite, T. D.  
*Water Res.*, **77**, 213-226 (2015).

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29. ["Americium\(III\) and europium\(III\) complex formation with lactate at elevated temperatures studied by spectroscopy and quantum chemical calculations"](#),  
Barkleit, A.; Kretzschmar, J.; Tsushima, S.; Acker, M.  
*Dalton Trans.*, **43**(29), 11221-11232 (2014).
30. ["Formation of a Eu\(III\) borate solid species from a weak Eu\(III\) borate complex in aqueous solution"](#),  
Schott, J.; Kretzschmar, J.; Acker, M.; Eidner, S.; Kumke, M.U.; Drobot, B.;  
Barkleit, A.; Taut, S.; Brendler, V.; Stumpf, T.  
*Dalton Trans.*, **43**(30), 11516-11528 (2014).
31. ["Paramagnetic Decoration of DNA Origami Nanostructures by Eu<sup>3+</sup> Coordination"](#),  
Opherden, L.; Oertel, J.; Barkleit, A.; Fahmy, K.; Keller, A.  
*Langmuir*, **30**(27), 8152-8159 (2014).
32. ["Interaction of europium and nickel with calcite studied by Rutherford Backscattering Spectrometry and Time-Resolved Laser Fluorescence Spectroscopy"](#),  
Sabau, A.; Pipon, Y.; Toulhoat, N.; Lomenech, C.; Jordan, N.; Moncoffre, N.;  
Barkleit, A.; Marmier, N.; Brendler, V.; Surblé, S.; Giffaut, E.

*Nucl. Inst. Method B*, **332**, 111-116 (2014).

33. ["Decrease of U\(VI\) immobilization capability of the facultative anaerobic strain \*Paenibacillus\* sp. JG-TB8 under anoxic conditions due to strongly reduced phosphatase activity"](#),  
Reitz, T.; Rossberg, A.; Barkleit, A.; Selenska-Pobell, S.; Merroun, M. L.  
*PLoS One*, **9**, e102447 (2014).