CV

Weigand, Jan J., Prof. Dr. rer.nat.
*** 1974; https://tu-dresden.de/mn/chemie/ac/ac3**
Professor for Chemistry (Inorganic Chemistry)
Fakultät Chemie und Lebensmittelchemie
Technische Universität Dresden (TUD)
Germany

Scientific Career

1997 – 2002	Studies of Chemistry, Diploma at Ludwig-Maximilians-University (LMU) Munich
2005	Dr. rer. nat. LMU Munich (Prof. T. M. Klapoetke)
2005 – 2007	Postdoctoral Fellow (AvH, F. Lynen Fellowship), Dalhousie University Halifax, Canada (Prof. N. Burford)
2007 – 2010	Habilitation, Research Group Leader at the Westfälische Wilhelms University Münster (AvH return fellowship, FCI Liebig fellowship)
2010 – 2013	Habilitation, Emmy-Noether Research Group Leader at the at the Westfälische Wilhelms University Münster
2013 – 2015	W2 Professorship for Coordination Chemistry TU Dresden
since 2015	W3 Professorship for Inorganic Molecular Chemistry TU Dresden
Since 2022	"Extraordinary" Professor, Department of Chemistry and Polymer Science, Stellenbosch University, Department of South Africa

Jan J. Weigand obtained his diploma in chemistry in 2002 and his Dr. rer nat. in 2005 from the LMU in Munich. He was awarded in 2005 with the Bavarian culture prize and obtained a Lynen Scholarship from the AvH foundation for postdoctoral research at Dalhousie University in Halifax (Canada). He returned to Germany with a "Lynen Return Fellowship" and started his habilitation at the WWU Münster end of 2007 under the supervision of Prof. Hahn. He was awarded shortly after with the Liebig scholarship of the FCI which allowed him in 2008 to start his independent career. In April 2010 he became fellow of the very prestigious Emmy Noether research program awarded by the DFG and obtained the Wöhler research award for young scientist. In July 2012, he also obtained from the EC (European council) an "ERC starting grant". Since 01.01.2013 he is Professor at the TU University Dresden. Next to molecular inorganic and phosphorus chemistry, the research activity is focused on the development of sustainable methods in extraction and technical applications including novel recycling strategies. The latter particularly includes the development and improvement of innovative catalyst systems via synthetic and post-synthetic strategies for application in petrochemical industry and resource change to biogenic and fossil residues. In 2023 he received a Reinhardt Koselleck funding from the DFG for the project - Blueprint for a modern sustainable phosphorus chemistry and he is a member of the CTC-Expert Pool (Center for the Transformation of Chemistry) since 2023.

Scientific Awards, Appointments and Professional Recognition

2002 – 2005	PhD fellowship (Fonds der Chemischen Industrie, FCI)
2005	Bavarian Culture Award (awarded by E.ON Bayern AG), Category University – Best PhD Thesis from LMU Munich
2005	Postdoctoral fellowship (F. Lynen Fellowship, AvH Foundation)
2007 – 2008	Return Fellowship (F. Lynen program, AvH Foundation)
2008 – 2010	Liebig fellowship (Fonds der Chemischen Industrie)
2010	Wöhler – Young Researcher Award
2010 – 2013	Emmy-Noether Research Group Leader (DFG)
2011	Research award of the Dr. Röhm-Gedächtnisstiftung
since 2012	ERC Starting Grant of the European Research Council
2013 – 2015	Chemiedozentenstipendium of the Fonds der Chemischen Industrie (FCI)
16-23.05.2016	Visiting Lecturer of the Chemistry Promotion Center from the Ministry of Science and Technology, Taiwan
2016	Teaching award for "New aspects in Industrial Chemistry lecture" awarded by the GFF
2016 – 2019	Visiting Professorship in the ERC Program: Joint announcement to increase the attractiveness of the Lombard research system and the competitiveness of young researchers applying for ERC instruments; hosted by Univesità degli di Pavia**; project: Novel BNCT Clinical Approach to Ostersarcoma.**
since 08/2022	Appointed as **Professor extraordinary** at the Department of Chemistry and Polymer Science at the University of Stellenbosch, South Africa.
2023	DFG Reinhardt Koselleck project: Blueprint for a modern sustainable phosphorus chemistry

Institutional Responsibilities

since 2019	E-Learning Representative of the Faculty of Chemistry and Food Chemistry
since 2019	Course Coordinator Bsc and MSc Chemistry
since 2019	Chairman of the International Affairs Committee of the Scholl of Science
since 2019	Prodekan (Dean of study) of the Faculty for Chemistry and Food Chemistry, Germany
since 2019	Vice-Dean of International Affairs of the School of Science, TU Dresden, Germany
since 2018	Foreign representative of the Faculty for Chemistry and Food Chemistry, Germany
since 2018	Erasmus Coordinator (Erasmus and ERA+)
since 2018	Member of the Evaluation Commission for Flexible and Strategic Funding Programs Internationalization of the TUD
since 2017	Vice-Dean of International Affairs of the School of Science, TU Dresden, Germany
since 2016	Member of the Faculty Council of the TU Dresden, Faculty of Chemistry and Food Chemistry, duly elected
since 2015	Chairman of the MSc admissions committee of the Faculty for Chemistry and Food Chemistry, Germany

Memberships in committees and academic societies and outreach

since 1998	Full member GDCh (membership number 78250)
since 2007	Member of the Wöhler Association for Inorganic Chemistry
since 2007	Member of the Liebig Association for Organic Chemistry
since 2007	Sustainable Chemistry Division (GDCh)
since 2012	AG Fluorine Chemistry
since 2015	Advisory Board Member of the ProcessNet Extraction Specialist Group (FGr-EXT)
since 2016	Local association chairman of the GDCh (Society of German Scientists), Germany
since 2016	IUPAC affiliate member
since 2016	DECHEMA (membership number 50270)
since 2018	EAC (Experimental Advisory Committee) member of the SNOLAB; https://www.snolab.ca/science/experiment-advisory-committee/
since 2018	AG Phosphorus Chemistry (Board Member and founder)
since 2019	Co-founder of the Lohrmanns Brew GmbH; https://lohrmannsbrew.de/
since 2022	“Vertrauensdozent “ of the Deutsche Studienstiftung
since 2023	Member of the Research Advisory Board of the Fonds der Chemischen Industrie

Scientific Output

since 2000	> 225 scientific publications (peer reviewed)
since 2006	> 147 invited lectures for scientific colloquia and conference contributions
since 2005	> 110 conference contributions (lectures and posters)
since 2007	mentor for >40 doctoral students (18 completed dissertations), >50 former Diploma, BSc and MSc students
since 2013	inventor of 4 patents (2 pending, 3 in preparation)

For a complete and up-to-date list of publications, follow the link:
https://tu-dresden.de/mn/chemie/ac/ac3/forschung/publications
https://orcid.org/0000-0001-7323-7816
ResearcherID: O-8792-2018
Twitter: @WeigandGroup

Refereeing Activity (selection)

German Research Foundation (DFG); Alexander von Humboldt Foundation; Chemical Industry Fund; European Research Council; Natural Sciences and Engineering Research Council of Canada (NSERC); Agence Nationale De La Recherche (ANR); SAB (Sächsische Aufbaubank); Experimental Advisory Board (EAC) of the SNOLABS, Sudbury Canada; Deutsche Studienstiftung; All relevant scientific journals by Springer-Nature, AAAS, ACS, RSC, Wiley-VCH, Elsevier etc.

List of important Research Grants

2005 – 2007	**AvH Fondation:** F. Lynen postdoctoral fellowship, Project: "New Structures and Bonding for Phosphorus"
2007 – 2010	**Fonds der Chemischen Industrie:** Liebig fellowship, Project: "New poly-onio substituted pnictogen centers as building blocks for small molecules, ring and cluster systems"
since 2010	**DFG WE 4621/2-1:** Emmy Noether Program, Project: "Reaktive Pniktogenkationen zum gezielten Aufbau von Ring- und Clustersystemen und zur Aktivierung kleiner Moleküle"
2013 - 2018	**ERC starting grant SynPhos (307616):** Project: “Highly-Reactive (Regenerative) Phosphorus Building Blocks – New Concepts in Synthesis”
2013-2017	**ZIM / AIF (KF 2807202RH3):** Project: „Recycling von Seltenen Erden aus Sekundärquellen unter besondere Berücksichtigung von verbrauchten FCC-Katalysatoren“

2015-2020	**DFG WE 4621/3-1:** Project: „Neue Methoden zum gezielten und selektiven Aufbau von Polyphosphorgerüsten“
2017-2020	**SAB** (**3507**): Project: “Von der Pflanze zu innovativen High-Tech-Materialien - **Hyperi**cinderivate aus *Hypericum* als Präkursoren für die biotechnologische Synthese von neuartigen gra**phen**artigen 2D-Materialien“
2018-2020	**SAB** (**EFRE-InfraPro "GEPARD" 100326379**): Project: „Grundlegende Erforschung von InP Quantumdots und deren Prozessierung in hochauflösenden RGB-Displays“
since 2016	**BMBF** (**02NUK046A**): Project: “Structure-activity relationships between f-elements and organic ligands that are related to natural substances in view of possible environmental mobilization” (FENABIUM)
since 2017	**BMBF** (**033R188A**): Project: “Recycling of Catalysts Locally”
since 2018	**DFG WE 4621/4-1:** Project: „Grundlagenforschung zur grünen und effizienten Gewinnung und Regeneration von Lithium-Eisen-Phosphat-Kathodenmaterialien“
since 2019	**DFG WE 4621/6-1:** Project: „Selektive Auf- und Abbaureaktionen kationischer cyclo-Phosphane“
since 2020	**industrial research project (Covestro):** development of new flame retardants (confidential)
since 2021	**DFG WE 4621/3-2:** 2nd project period: „Neue Methoden zum gezielten und selektiven Aufbau von Polyphosphorgerüsten“
since 2022	**BMWK** (**ENNF02030022**): Stoffliche Wiederverwertung von Elektrolyt-Leitsalzen und -Lösungen; **SWELL** mit Industriepartner.
since 2023	**BMBF** (**02NUK077A**): Project: “Studies on the interactions of f-elements with biologically relevant structural motifs: Derivation of basic structure-activity principles for mobilization in the environment” (FENABIUM II)
since 2023	**DFG** (**WE4621/10-1**): Reinhardt Koselleck Project: “Sustainable Chemistry and Phopshorus Recycling” (FENABIUM II)

10 most important publications of the last 6 years

Redox-neutral conversion of ubiquitous P^V sources to a versatile PO_2^+ phosphorylation reagent; T. Schneider, K. Schwedtmann, J. Fidelius, J. J. Weigand; *Nat. Synt.,* **2023**, DOI: 10.1038/s44160-023-00344-0.

Cationic Phosphinidene as a Versatile P_1 Building Block: $[L_C\text{-}P]^+$ Transfer from Phosphonio-Phosphanides $[L_C\text{–}P\text{–}PR_3]^+$ and Subsequent L_C Replacement Reactions (L_C = N-Heterocyclic Carbene); P. Royla, K. Schwedtmann, Z. Han, J. Fidelius, D. P. Gates, R. M. Gomila, A. Frontera, J. J. Weigand; *J. Am. Chem. Soc.,* **2023***,* DOI: 10.1021/jacs.3c02256.

Selective Separation of Lithium, Magnesium and Calcium using 4-Phosphoryl Pyrazolones as pH-Regulated Receptors; J. Zhang, N. Tanjedrew, M. Wenzel, P. Royla, H. Du, S. Kiatisevi, L. F. Lindoy, J. J. Weigand; *Angew. Chem. Int. Ed*., **2023**, DOI: 10.1002/anie.2022160111002.

Homoatomic cations: From $[P_5]^+$ to $[P_9]^+$; J. Frötschel-Rittmeyer, M. Holthausen, C. Friedmann, D. Röhner, I. Krossing, J. J. Weigand; *Sci. Adv*., **2022**, DOI: 10.1126/sciadv.abq8613.

Direct conversion of white phosphorus to versatile phosphorus transfer reagents via oxidative onioation; M. Donath, K. Schwedtmann, T. Schneider, F. Hennersdorf, A. Bauzá, A. Frontera, J. J. Weigand; *Nat. Chem.,* **2022**, 14, 384.

Surface ion-imprinted brewer’s spent grain with low template loading for selective uranyl ions adsorption from simulated wastewater; Y. Su, M. Wenzel, M. Seifert, J. J. Weigand; *J. Hazard. Mater.*, **2022**, DOI: 10.1016/j.jhazmat.2022.129682.

***CeRES* Process−Separation of Cerium from Lanthanum by Redox Extraction and Stripping**; Y. Zhou, S. Schulz, J. Haberstroh, M. Wenzel, H. Du, J. J. Weigand; *ACS Sustainable Chem. Eng.,* **2022**, DOI: 10.1021/acssuschemeng.2c05048.

Flowers of the plant genus *Hypericum* as versatile photoredox catalyst; J. Wang, K. Schwedtmann, K. Liu, S. Schulz, J. Haberstroh, G. Schaper, A. Wenke, J. Naumann, T. Wenke, S. Wanke, J. J. Weigand; *Green. Chem*. **2021**, 23, 881.

Coordination chemistry of f-block metal ions with ligands bearing bio-relevant functional groups; L. Götzke, G. Schaper, J. März, P. Kaden, N. Huittinen, T. Stumpf, K. K. K. Kammerlander, E. Brunner, P. Hahn, A. Mehnert, B. Kersting, T. Henle, L. F. Lindoy, G. Zanoni, J. J. Weigand; *Coord. Chem. Rev.,* **2019**, 386, 267.

Versatile Tri(pyrazolyl)phosphanes - Application as phosphorus precursors for the synthesis of highly emitting InP/ZnS quantum dots; R. Panzer, C. Guhrenz, R. Hübner, N. Gaponik, D. Haubold, A. Eychmüller, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2017**, 56, 14737.

List of publications, patents, invited lectures

Patents

6

Verfahren zur Wiederverwertung von Oganophosphaten; J. J. Weigand, K. Schwedtmann, T. Schneider, S. Schulz; Deutsche Patentanmeldung 10 2022 120 599.1; eingereicht 17.08.2022 (pending).

5

Synthese von Metallpnictidnanopartikeln; J. J. Weigand, M. Müller, K. Schwedtmann; Deutsche Patentanmeldung 10 2022 109 554.1; eingereicht 20.04.2022 (pending).

4

Ligandenunterstützte Desoxygenierung von Phosphaten zu stickstoffhaltigen Phosphor(V)-Präkursoren und deren weitere Umsetzung zu verschiedenen Oxyphosphorverbindungen; J. J. Weigand, K. Schwedtmann, R. Schoemaker, S. Schulz; EP4183742A1; Veröffentlichung der Pateneinreichung: **25.05.2023**.

3

Synthesis of Aminopnictogens; J. J. Weigand, R. Panzer, A. Eychmüller, C. Guhrenz; EP 3630786 B1; Veröffentlichungstag der Patenterteiltung: **08.09.2021**.

2

Pflanzen und/ oder Pilzmaterial als Photoredoxkatalysator; J. J. Weigand, K. Schwedtmann, J. Wang, S. Wanke; DE 102019215817; Veröffentlichungstag der Patenterteilung: **18.02.2021**.

1

Verfahren zur Herstellung von Explosivstoffen; J. J. Weigand, G. Holl, T. M. Klapötke; DE 102005011563 B4; Veröffentlichungstag der Patenterteilung: **18.02.2010**.

Publication list (since 2013)

2023 (14 publication)

226

Highly Utilized Active Sites on Pt@Cu/C for Ethanol Electrocatalytic Oxidation in Alkali Metal Hydroxide Solutions; C. Han, Y. Lyu, S. Wang, B. Liu, Y. Zhang, J. J. Weigand, H. Du, J. Lu; *Adv. Funct. Mater.*, **2023**, DOI: 10.1002/adfm.202305436.

225

The role of polysulfide-saturation in electrolytes for high power applications of real world Li-S pouch cells; T. Boenke, S. Kirchhoff, F. S. Reuter, F. Schmidt, C. Weller, S. Dörfler, K. Schwedtmann, P. Härtel, T. Abendroth, H. Althues, J. J. Weigand, S. Kaskel; *Nano Res*., **2023**, 16, 8313.

224

Curved graphene nanoribbons derived from tetrahydropyrene-based polyphenylenes via one-pot K-region oxidation and Scholl cyclization; S. Obermann, W. Zheng, J. Melidonie, S. Böckmann, S. Osella, N. Arisnabarreta, L. A. Guerrero-León, F. Hennersdorf, D. Beljonne, J. J. Weigand, M. Bonn, S. De Feyter, M. Ryan Hansen, H. I. Wang, J. Ma, X. Feng; *Chem Sci*., **2023**, DOI: 10.1039/d3sc02824k.

223

Formation of a Hexaphosphido Cobalt Complex through P–P Condensation; C. Hoidn, K. Trabitsch, K. Schwedtmann, C. Taube, J. J. Weigand, R. Wolf; *Chem. Eur J.*, **2023**, DOI: 10.1002/chem.202301930.

222

A copper decorated porphyrin-based porous organic polymer: Evaluation in the oxidation of lignin model compounds; E. D. Maggott, D. A Haynes, M. Hantusch, M. Seifert, J. J. Weigand, S. F. Mapolie; *React. Funct. Polym*., **2023**, accepted.

221

Structure-Activity Relationships of Triphenylethylene Derivatives and Their Evaluation as Anticancer and Antiviral Agents; N. S. Ahmed, H. E. El-Nakib, M. M. Ramsis, N. O. Albably, J. Wober, J. J. Weigand, K. Schwedtmann, O. Zierau, A. H. Abadi; *ACS Omega,* **2023***,* DOI: 10.1021/acsomega.3c01682.

220

A Review of Electrolyte Additives in Vanadium Redox Flow Batteries; W. Tian, H. Du, J. Wang, J. J. Weigand, J. Qi, S. Wang, L. Li; *Materials,* **2023**, 16, 4582, DOI: 10.3390/ma16134582

219

Redox-neutral conversion of ubiquitous P^V sources to a versatile PO_2^+ phosphorylation reagent; T. Schneider, K. Schwedtmann, J. Fidelius, J. J. Weigand; *Nat. Synt.,* **2023**, DOI: 10.1038/s44160-023-00344-0.

218

Interaction of crude oil with halogen-free ionic liquid-based catanionic surfactants; A. Sanati, R. Malayeri, O. Busse, J. J. Weigand, M. Beckmann; *Fuel*, **2023**, 349, 128660.

217

Beneficial or hazardous? A comprehensive study of 24 elements from wild edible plants from Angola; C. Baumgärtel, L. Götzke, J. J. Weigand, C. Neinhuis, M. H. G. Panzo, F. Afonso, T. Lautenschläger; *J. Appl. Bot. Food Qual*., **2023**, DOI: 0.5073/JABFQ.2023.096.004.

216
Cationic Phosphinidene as a Versatile P_1 Building Block: $[L_C\text{-}P]^+$ Transfer from Phosphonio-Phosphanides $[L_C\text{–}P\text{–}PR_3]^+$ and Subsequent L_C Replacement Reactions (L_C = N-Heterocyclic Carbene); P. Royla, K. Schwedtmann, Z. Han, J. Fidelius, D. P. Gates, R. M. Gomila, A. Frontera, J. J. Weigand; *J. Am. Chem. Soc.,* **2023***,* DOI: 10.1021/jacs.3c02256.

215
A method to load tellurium in liquid scintillator for the study of neutrinoless double beta decay; D. J. Auty, et al.; *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2023**, DOI: 10.1016/j.nima.2023.168204.

214
Highly Tunable 4-Phosphoryl Pyrazolone Receptors for Selective Rare-Earth Separation; J. Zhang, M. Wenzel, K. Schnaars, F. Hennersdorf, L. F. Lindoy, J. J. Weigand; *Inorg. Chem*., **2023**, DOI: 10.1021/acs.inorgchem.2c0422.

213
Selective Separation of Lithium, Magnesium and Calcium using 4-Phosphoryl Pyrazolones as pH-Regulated Receptors; J. Zhang, N. Tanjedrew, M. Wenzel, P. Royla, H. Du, S. Kiatisevi, L. F. Lindoy, J. J. Weigand; *Angew. Chem. Int. Ed*., **2023**, DOI: 10.1002/anie.2022160111002.

2022 (18 publication)

212
Surface energy and wetting behavior of dolomite in the presence of carboxylic acid-based deep eutectic solvents; A. Sanati, M. R. Malayeri, O. Busse, J. J. Weigand, M. Beckmann; *Langmuir,* **2022**, 38, 15622.

211
CeRES Process−Separation of Cerium from Lanthanum by Redox Extraction and Stripping; Y. Zhou, S. Schulz, J. Haberstroh, M. Wenzel, H. Du, J. J. Weigand; *ACS Sustainable Chem. Eng.,* **2022**, 10, 16290.

210
A turn-on bis-BODIPY chemosensor for copper recognition based on the in situ generation of a benzimidazole–triazole receptor and its applications in bioimaging; W. Saiyasombat, S. Nuchpun, K. P. Katewongsa, S. Pornsuwan, J. J. Weigand, S. Kiatisevi; *NJC,* **2022**, 46, 22525.

209
Crucial role of silica-alumina binder mixtures for hydrocarbon cracking with ZSM-5 additives; L. A. Haufe, V. Timoshev, M. Seifert, O. Busse, J. J. Weigand; *ACS Omega,* **2022**, *7*, 44892.

208
The role of polysulfide-saturation in electrolytes for high power applications of real world Li-S pouch cells; T. Boenke, F. Reuter, S. Kirchhoff, F. Schmidt, C. Weller, S. Dörfler, K. Schwedtmann, P. Härtel, T. Abendroth, H. Althues, J. J. Weigand, S. Kaskel; *Nano Res.*, **2022**, DOI: 10.1007/s12274-022-5017-8.

207
Prediction of retention indices and response factors of oxygenates for GC-FID by multilinear regression; N. Kretschmar, M. Seifert, O. Busse, J. J. Weigand; *DATA*, **2022**, *7*, 133.

206
Homoatomic cations: From $[P_5]^+$ to $[P_9]^+$; J. Frötschel-Rittmeyer, M. Holthausen, C. Friedmann, D. Röhner, I. Krossing, J. J. Weigand; *Sci. Adv*., **2022**, 8, eabq8613; DOI: 10.1126/sciadv.abq8613.

205
Improved search for invisible modes of nucleon decay in water with the SNO+ detector; A. Allega et. al.; *Phys. Rev. D*, **2022**, 105, 112012.

204
Surface ion-imprinted brewer's spent grain with low template loading for selective uranyl ions adsorption from simulated wastewater; Y. Su, M. Wenzel, M. Seifert, J. J. Weigand; *J. Hazard. Mater.*, **2022**, DOI: 10.1016/j.jhazmat.2022.129682.

203
Utilization of ionic liquids and deep eutectic solvents in oil operations: Progress and challenges; A. Sanati, M. R. Malayeri, O. Busse, J. J. Weigand; *J. Mol. Liq*., **2022,** 361, 119641.

202
One-pot synthesis of brewer's spent grain-supported superabsorbent polymer for highly efficient uranium adsorption from wastewater; Y. Su, M. Wenzel, S. Paasch, M. Seifert, T. Doert, E. Brunner, J. J. Weigand; *Environ. Res.,* **2022**, 113333.

201
Large Acene Derivatives with B-N Lewis Pair Doping: Synthesis, Characterization and Application; J. Zhang, J. Ma, F. Liu, L.-S. Cui, Y. Fu, L. Yang, A. Popov, J. J. Weigand, J. Liu, X. Feng; *Org. Lett*., **2022**, 24, 1877.

200
Direct conversion of white phosphorus to versatile phosphorus transfer reagents via oxidative onioation; M. Donath, K. Schwedtmann, T. Schneider, F. Hennersdorf, A. Bauzá, A. Frontera, J. J. Weigand; *Nat. Chem.,* **2022**, 14, 384.

199
Binder selection to modify hydrocarbon cracking properties of zeolite containing composites; A. S. Carrasco, V. Timoshev, M. Hauck, M. Hassan Nejad, T. Dang, X. H. Vu, M. Seifert, O. Busse, J. J. Weigand; *ACS Omega*, **2022**, 19, 16430.
198
On-water surface synthesis of charged two-dimensional polymer single crystals via the irreversible Katritzky reaction; Z. Wang, Z. Zhang, H. Qi, A. Ortega-Guerrero, L. Wang, K. Xu, M. Wang, S. Park, F. Hennersdorf, A. Dianat, A. Croy, H. Komber, G. Cuniberti, J. J. Weigand, U. Kaiser, R. Dong, X. Feng; *Nat. Synth*., **2022**, 1, 69.
197
Insights at the molecular level into the formation of oxo-bridged trinuclear uranyl complexes; G. Schaper, M. Wenzel, U. Schwarzenbolz, J. Steup, F. Hennersdorf, T. Henle, L. F. Lindoy, J. J. Weigand; *Chem. Commun.*, **2022**, 58, 1748.
196
Recent advances in guanidinium salt based receptors and functionalized materials for the recognition of anions; M. Wenzel, J. Steup, K. Ohto, J. J. Weigand; *Chem. Lett.*, **2022**, 51, 20.
195
Origin of Morphology Change and Effect of Crystallization Time and Si/Al Ratio during Synthesis of Zeolite ZSM-5; C. Jonscher, M. Seifert, N. Kretzschmar, M. S. Marschall, M. Le Anh, T. Doert, O. Busse, J. J. Weigand; *ChemCatChem*., **2022**, 14, e202101248.

2021 (32 publication)

194
Optical calibration of the SNO+ detector in the water phase with deployed sources; SNO+ collaboration et al.; *JINST*, **2021**, 16, P10021.
193
Manipulating Estrogenic/Anti-Estrogenic Activity of Triphenylethylenes towards Development of Novel Anti-Neoplastic SERMs; H. E. Elnakib, M. M. Ramsis, N. O. Albably, M. A. Vector, J. J. Weigand, K. Schwedtmann, J. Wober, O. Zierau, G. Vollmer, A. H. Abadi, N. S. Ahmed; *Int. J. Mol. Sci*. **2021**, 22, 12575.
192
Comparative extraction of aluminum group metals using three acetic acid derivative frameworks with different coordination site sizes and properties; K. Ohto, N. Fuchiwaki, H. Furugou, S. Morisada, H. Kawakita, M. Wenzel, J. J Weigand; *Separations*, **2021**, 8, 11, 211.
191
Study of asphaltene deposition in the presence of a hydrophobic deep eutectic solvent using XDLVO theory; A. Sanati, M. R. Malayeri, M. Nategh, O. Busse, J. J. Weigand; *Energy Fuels*, **2021**, 35, 19953.
190
4-Phosphoryl pyrazolones for highly selective lithium separation from alkali metal ions; J. Zhang, M. Wenzel, J. Steup, G. Schaper, F. Hennersdorf, H. Du, S. Zheng, L. F. Lindoy, J. J. Weigand; *Chem. Eur. J.*, **2021**, DOI: 10.1002/chem.202103640.
189
Preparation of hierarchical y zeolite catalysts for improved performance in the fluid catalytic cracking of residues; V. X. Hoàn, N. T. Phượng, T. V. Trí, Đ. Đ. Mạnh, Đ. T. Tùng, V. D. Hùng, T. T. N. Mai, O. Busse, J. J. Weigand; *Petro Vietnamn J.*, **2021**, 8, 35.
188
The SNO+ experiment; SNO+ collaboration et al.; *JINST*, **2021**, 16, P08059.
187
Polymorphic Phosphorescence from Seperable Aggregates with Unique Photophysical Properties; P. Pinter, F. Hennersdorf, J. J. Weigand, T. Strassner; *Chem. Eur. J.*, **2021**, 27, 13135.
186
Effective extraction of Pt(IV) as $[PtCl_6]^{2-}$ from hydrochloric acid using a simple urea extractant; Y. Ueda, S. Morisada, H. Kawakita, M. Wenzel, J. J. Weigand, K. Ohto; *Sep. Purif. Technol*., **2021**, 277, 119456.
185
Leaching performance of Al-bearing spent $LiFePO_4$ cathode powder in H_2SO_4 aqueous solution; W. Lou, Y. Zhang, Y. Zhang, S. Zheng, P. Sun, X. Wang, J. Li, S. Qiao, Y Zhang, M. Wenzel, J. J. Weigand; *Trans. Nonferrous Met. Soc. China*, **2021**, 31, 817.
184
Recycling of Brewer's Spent Grain as a Biosorbent by Nitro-Oxidation for Uranyl Ion Removal from Wastewater; Y. Su, M. Wenzel, S. Paasch, M. Seifert, W. Böhm, T. Doert, J. J. Weigand; *ACS Omega*, **2021**, 6, 19364. (**Inside Cover**)
183
Bifunctional fluorophosphonium triflates as intramolecular Frustrated Lewis Pairs: reversible CO_2 sequestration and binding of carbonyls, nitriles and acetylenes; C.-X. Guo, K. Schwedtmann, J. Fidelius, F. Hennersdorf, A. Dickschat, A. Bauzá, A. Frontera, J. J. Weigand; *Chem. Eur. J.,* **2021**, 27, 13709.

182
Asymmetric Total Synthesis of (−)-Dehydrocostus Lactone by Domino Metathesis; F. Kaden, S. Nowotni, F. Höfner, M. Lorenz, A. Barthel, A. Jäger, F. Hennersdorf, J. J. Weigand, P. Metz; *Eur. J. Org. Chem.*, **2021**, 2021, 3579.
181
Recovering valuable metals from spent hydrodesulfurization catalyst via blank roasting and alkaline leaching; J. Wang, S. Wang, A. Olayiwola, N. Yang, B. Liu, J. J. Weigand, M. Wenzel, H. Du; *J. Hazard. Mat.*, **2021**, 416, 125849.
180
A Convenient Access to Fluorophosphonium Triflate Salts by Electrophilic Fluorination and Anion Exchange; C.-X. Guo, S. Yogendra, R. M. Gomila, A. Frontera, F. Hennersdorf, J. Steup, K. Schwedtmann, J. J. Weigand; *Inorg. Chem. Front.*, **2021**, 8, 2854.
179
Inhibition of Asphaltene Precipitation Using Hydrophobic Deep Eutectic Solvents and Ionic Liquid; A. Sanati, M. R. Malayeri, O. Busse, J. J. Weigand; *J. Mol. Liq.*, **2021**, 334, 116100.
178
Conversion of Oxygenates on H-ZSM-5 Zeolites – Effects of Feed Structure and Si/Al Ratio on the Product Quality; T. Gille, M. Seifert, M. S. Marschall, S. Bredow, T. Schneider, O. Busse, W. Reschetilowski, J. J. Weigand; *Catalysts*, **2021**, 11, 432.
177
Saccharified uranyl ions: Self-assembly of UO_2^{2+} into trinuclear anionic complexes via the coordination of glucosamine-derived Schiff bases; G. Schaper, M. Wenzel, F. Hennersdorf, L. F. Lindoy, J. J. Weigand; *Chem. Eur. J.*, **2021**, 27, 8484. HOT Paper (**Inside Front Cover**)
176
Design and Synthesis of Novel Symmetric Fluorene-2,7-diamine Derivatives as Potent Hepatitis C Virus Inhibitors; M. Mousa, N. Ahmed, K. Schwedtmann, E. Frakolaki, N. Vassilaki, G. Zoidis, J. J. Weigand, A. H. Abadi; *Pharmaceuticals*, **2021**, 14, 292.
175
Peptization control of aluminum chloride containing composites for catalysts with active matrix; A. Carrasco, M. Seifert, M. Hauck, A. Brünner, T. Doert, O. Busse, J. J. Weigand; *Chem. Eng. Technol.*, **2021**, 44, 1051.
174
Deactivation kinetics of ZSM-5 by coke in ethanol to hydrocarbons process; M. Seifert, C. Jonscher, L. A. Haufe, J. J. Weigand; *Chem.-Ing-Tech.*, **2021**, 93, 747.
173
Spatiotemporal Control of Supramolecular Polymerization and Gelation of Metal-Organic Polyhedra; A. Legrand, L.-H. Liu, P. Royla, T. Aoyama, G. Craig, A. Carne-Sanchez, K. Urayama, J. J. Weigand, C.-H. Lin, S. Furukawa; *J. Am. Chem. Soc.*, **2021**, 143, 3562.
172
Development, characterisation, and deployment of the SNO+ liquid scintillator; M. R. Anderson et al.; *JINST*, **2021**, 16, P05009.
171
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; J. Zhang, M. Wenzel, K. Schnaars, F. Hennersdorf, K. Schwedtmann, J. März, A. Rossberg, P. Kaden, F. Kraus, T. Stumpf, J. J. Weigand; *Dalton Trans.*, **2021**, 50, 3550.
170
Peptization control of composite materials containing water glass for spray drying catalysts; A. Carrasco, M. Seifert, M. Hannß, T. Henle, M. Lê-Anh, O. Busse, J. J. Weigand; *Chem. Eng. Technol.*, **2021**, 44, 732.
169
Pyrazolyl-substituted Phosphorus(III) Compounds in Synthesis; R. Schoemaker, K. Schwedtmann, J. J. Weigand; *Coord. Chem. Rev.*, **2021**, 436, 213829.
168
Comparative Study of an Acidic Deep Eutectic Solvent and an Ionic Liquid as Chemical Agents for Enhanced Oil Recovery; A. Sanati, S. Rahmani, A.H. Nikoo, M.R. Malayeri, O. Busse, J. J. Weigand; *J. Mol. Liq.*, **2021**, 329, 115527.
167
Enhanced thermal stability of hierarchical Y zeolites obtained by acid and subsequent base treatments; X. H. Vu, M. S. Marschall, V. T. Tran, T. P. Ngo, T. T. Dang, D. M. Dinh, T. K. T. Dao, O. Busse, J. J. Weigand; *J. Phys. Chem. Solids*, **2021**, 152, 109962.
166
A facile way to regenerate $FePO_4{\cdot}2H_2O$ precursor from spent lithium iron phosphate cathode powder: spontaneous precipitation and phase transformation in an acidic medium; W. Lou, Y. Zhang, Y. Zhang, S. Zheng, P. Sun, X. Wang, S. Qiao J. Li, Y. Zhang, D. Liu. M. Wenzel, J. J. Weigand; *J. Alloys Compd.*, **2021**, 865, 158148.
165
A facile way to regenerate $FePO_4{\cdot}2H_2O$ precursor from spent lithium iron phosphate cathode powder: spontaneous precipitation and phase transformation in an acidic medium; W. Lou, Y. Zhang, Y.

Zhang, S. Zheng, P. Sun, X. Wang, S. Qiao J. Li, Y. Zhang, D. Liu. M. Wenzel, J. J. Weigand; *J. Alloys Compd.*, **2021**, 865, 158148.

164

Flowers of the plant genus *Hypericum* as versatile photoredox catalyst; J. Wang, K. Schwedtmann, K. Liu, S. Schulz, J. Haberstroh, G. Schaper, A. Wenke, J. Naumann, T. Wenke, S. Wanke, J. J. Weigand; *Green. Chem*. **2021**, 23, 881.

163

One-Pot Synthesis of Boron-Doped Polycyclic Aromatic Hydrocarbons via 1,4-Boron Migration; J.-J. Zhang, M. C. Tang, Y. Fu, K.-H. Low, J. Ma, J. J. Weigand, J. Liu, V. W.-W. Yam, X. Feng; *Angew. Chem. Int. Ed*., **2021**, 60, 2833.

2020 (18 publication)

162

Mild hydrothermal treated brewer`s spent grain for efficient removal of uranyl and rare earth metal ions; Y. Su, W. Böhm, M. Wenzel, S. Paasch, M. Acker, T. Doert, E. Brunner, T. Henle, J. J. Weigand; *RSC Adv.*, **2020**, 10, 45116.

160

Ethanol to aromatics on modified H-ZSM-5 Part II: An unexpected low coking; M. Seifert, M. S. Marschall, T. Gille, C. Jonscher, P. Royla, O. Busse, W. Reschetilowski, J. J. Weigand; *Chem. Asian J.*, **2020**, 15, 3878.

159

Ethanol to aromatics on modified H-ZSM-5 Part I: Interdependent dealumination actions; M. Seifert; M. S. Marschall; T. Gille; C. Jonscher; O. Busse; S. Paasch; E. Brunner; W. Reschetilowski, J. J. Weigand; *ChemCatChem*., **2020**, 12, 6301.

158

An unusual $Ni_2Si_2P_8$ cluster fromed by complexation and thermolysis; C. G. P. Ziegler, C. Taube, J. A. Kelly, G. Hierlmeier, M. Uttendorfer, J. J. Weigand, R. Wolf; *Chem. Commun.,* **2020**, 56, 14071.

157

Measurement of neutron-proton capture in the SNO+ water phase; M. R. Anderson et al.; *Physical Review C*, **2020**, 102, 014002.

156

Separation of Na_3VO_4 and Na_2CrO_4 from High Alkalinity Solutions by Solvent Extraction; M. Feng, M. Wenzel, S. Wang, H. Du, Y. Zhang, J. J. Weigand; *Sep. Purif. Technol*., **2020**, 255, 117282.

155

Synthesis and Characterization of AIE-active B-N Coordinated Phenalene Complexes; Y. Fu, Z. Wu, J. J. Weigand, X. Feng; *Organic Materials*, **2020**, 3, 240.

154

Determination of metastable zone width, induction time and primary nucleation kinetics for cooling crystallization of sodium orthovanadate from NaOH solution; S. Wang, M. Feng, H. Du, J. J. Weigand, Y. Zhang, X. Wang; *J. Cryst. Growth*, **2020**, 545, 125721.

153

Coordination Chemistry and Methylation of Mixed-substituted Tetraphosphetanes (RP-PtBu)2 (R = Ph, Py); R. Schoemaker, P. Kossatz, K. Schwedtmann, F. Hennersdorf, J. J. Weigand; *Chem. Eur. J.*, **2020**, 26, 11734. HOT Paper (**Cover Profile**: DOI: 10.1002/chem.202003227; **Front Cover**: DOI: 10.1002/chem.202003226)

152

Toward N,P-Doped π-Extended PAHs - A One-Pot Synthesis to Diannulated 1,4,2-Diazaphospholium Triflate Salts; R. Schoemaker, K. Schwedtmann, F. Hennersdorf, A. Bauzá, A. Frontera, J. J. Weigand; *J. Org. Chem*., **2020**, 85, 14420.

151

Introduction for the JOC Special Issue on "The Golden Age of OrganoPhosphorus Chemistry": Love in the Time of COVID; L.-B. Han, S.-D. Yang, R. Waterman, J. J. Weigand; *J. Org. Chem.* **2020**, 85, 14273.

150

Ammonium vanadate/ammonia precipitation for vanadium production from a high vanadate to sodium ratio solution obtained via membrane electrolysis method; B. Pan, B. Liu, S. Wang, M. Wenzel, J. J. Weigand, M. Feng, H. Du, Y. Zhang; *J. Clean. Prod.*, **2020**, 263, 121357.

149

Separation and recovery of rare earths by in situ selective electrochemical oxidation and extraction from spent fluid catalytic cracking (FCC) catalysts; Y. Zhou, S. Schulz, L. F. Lindoy, H. Du, S. Zheng, M. Wenzel, J. J. Weigand; *Hydrometallurgy*, **2020**, 194, 105300.

148

Iron-Gallium and Cobalt-Gallium Tetraphosphido Complexes; C. G. P. Ziegler, F. Hennersdorf, J. J. Weigand, R. Wolf; *Z. Anorg. Allg. Chem.*, **2020**, 646, 552.

147

Facile synthesis of tellurium nano-and microstructures by HCl traces in ionic liquid; T. Zhang, T. Doert, K. Schwedtmann, J. J. Weigand, M. Ruck; *Dalton Trans*., **2020**, 49, 1891.

146

Helical Nanographenes Containing an Azulene Unit: Synthesis, Crystal Structures, and Properties; J. Ma, Y. Fu, E. Dmitrieva, F. Liu, H. Komber, F. Hennersdorf, A. A. Popov, J. J. Weigand, J. Liu, X. Feng; *Angew. Chem. Int. Ed.*, **2020**, 59, 5637.

145

P–P Condensation and P/N–P/P bond metathesis: Facile Synthesis of Cationic Tri- and Tetraphosphanes; C. Taube, K. Schwedtmann, M. Noikham, E. Somsook, F. Hennersdorf, R. Wolf, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2020**, 59, 3585. (**Inside Cover**: DOI: 10.1002/anie.201916375)

2019 (15 publication)

144

Controlled Scrambling Reactions to Polyphosphanes *via* Bond Metathesis Reactions; R. Schoemaker, K. Schwedtmann, A. Franconetti, A. Frontera, F. Hennersdorf, J. J. Weigand; *Chem. Sci.*, **2019**, 10, 11054.

143

Functionalization of Pentaphosphorus Cations by Complexation; A.-K. Adhikari, C. Ziegler, K. Schwedtmann, C. Taube, J. J. Weigand, R. Wolf; *Angew. Chem. Int. Ed.*, **2019**, 58, 18584.

142

[3+2] Fragmentation of a Pentaphosphido Ligand by Cyanide; C. Hoidn, T. Maier, K. Trabitsch, J. J. Weigand, R. Wolf; *Angew. Chem. Int. Ed.*, **2019**, 58, 18931.

141

Amido Silicon Chalcogenide Compounds with Unprecedented Cluster Cores and Low Oxidation State Silicon Atoms; K. Schwedtmann, A. Hepp, K. Schwedtmann, J. J. Weigand, F. Lips; *Eur. J. Inorg. Chem.*, **2019**, 4719.

140

Formation of an imidazoliumyl-substituted $[(L_C)_4P_4]^{4+}$ tetracation and transition metal mediated fragmentation and insertion reaction (L_C = NHC); K. Schwedtmann, J. Haberstroh, S. Roediger, F. Hennersdorf, A. Bauza, A. Frontera, J. J. Weigand; *Chem. Sci.*, **2019**, 10, 6868.

139

Search for invisible modes of nucleon decay in waterwith the SNO+ detector; M. Anderson, et al.; *Phys. Rev.*, **2019**, D99, 032008.

138

1,3-Diphosphacyclobutene Cobalt Complexes; C. Rödl, K. Schwedtmann, J. J. Weigand, R. Wolf; *Chem. Eur. J.*, **2019**, 25, 6180.

137

Wave-shaped Polycyclic Hydrocarbons with Controlled Aromaticity; J. Ma, K. Zhang, K. S. Schellhammer, Y. Fu, H. Komber, C. Xu, A. A. Popov, F. Hennersdorf, J. J. Weigand, S. Zhou, W. Pisula, F. Ortmann, R. Berger, J. Liu, X. Feng; *Chem. Sci.*, **2019**, 10, 4025.

136

Coordination chemistry of f-block metal ions with ligands bearing bio-relevant functional groups; L. Götzke, G. Schaper, J. März, P. Kaden, N. Huittinen, T. Stumpf, K. K. K. Kammerlander, E. Brunner, P. Hahn, A. Mehnert, B. Kersting, T. Henle, L. F. Lindoy, G. Zanoni, J. J. Weigand; *Coord. Chem. Rev.,* **2019**, 386, 267.

135

Polycyclic Aromatic Hydrocarbons Containing A Porrolopyridazin Core; M. Richter, Y. Fu, E. Dmitrieva, J. J. Weigand, A. A. Popov, R. Berger, J. Liu, X. Feng; *ChemPlusChem.,* **2019**, 84, 613.

134

NBN-embedded Polycyclic Aromatic Hydrocarbons Containing Pentagonal and Heptagonal Rings; Y. Fu, K. Zhang, E. Dmitrieva, F. Liu, J. Ma, J. J. Weigand, A. A. Popov, R. Berger, W. Pisula, J. Liu, X. Feng; *Org. Lett.,* **2019**, 21, 1354.

133

Construction of alkyl-substituted pentaphosphido ligands in the coordination sphere of cobalt; C. G. P. Ziegler, T. M. Maier, S. Pelties, C. Taube, F. Hennersdorf, A. W. Ehlers, J. J. Weigand, R. Wolf; *Chem. Sci.,* **2019**, 10, 1302. (**Back Cover**: DOI: 10.1039/C9SC90025J)

132

Amine-Borane Dehydrogenation and Transfer Hydrogenation Catalyzed by alpha-Diimine Cobaltates; T. M. Maier, S. Sandl, I. G. Shenderovich, A. Jacobi von Wangelin, J. J. Weigand, R. Wolf; *Chem. Eur. J.*, **2019**, 25, 238.

131

Preface: Prof. Karsten Gloe; Y. Kim, S. Hayami, J. J. Weigand, K. Gloe; *J. Incl. Phenom. Macrocycl. Chem.,* **2019***,* 94, 119.

130

Measurement of the ^{8}B solar neutrino flux in SNO+ with very low backgrounds; M. Anderson et al.; *Phys. Rev.*, **2019**, D99, 012012.

2018 (11 publication)

129

Low-Temperature Tailoring of Copper-Deficient $Cu_{3-x}P$-Electric Properties, Phase Transitions, and Performance in Lithium-Ion Batteries; A. Wolff, T. Doert, J. Hunger, M. Kaiser, J. Pallmann, R.

Reinhold, S. Yogendra, L. Giebeler, J. Sichelschmidt, W. Schnelle, R. Whiteside, H. Q. N. Guanaratnee, P. Nockemann, J. J. Weigand, E. Brunner, M. Ruck; *Chem. Mater.*, **2018**, 30, 7111.

128

Towards efficient extraction of La(III) from spent FCC catalysts by alkaline pre-treatment; N. Le-Phuc, Y. T. H. Pham, P. N. V. Bui, T. N. Luong, P. N. X. Vo, P. T. Ngo, T. V. Tran, D. A. Nguyen, M. Wenzel, K. Gloe, J. J. Weigand; *Minerals Engineering*, **2018**, 127, 1.

127

Pyrene-Fused s-Indacene; J. Melidonie, J. Liu, Y. Fu, J. J. Weigand, R. Berger, X. Feng; *J. Org. Chem.,* **2018**, 83, 6633.

126

Synthesis of NIR-Emitting InAs-Based Core/Shell Quantum Dots with the Use of Tripyrazolylarsane as Arsenic Precursor; R. Tietze, R. Panzer, T. Starzynski, C. Guhrenz, F. Frenzel, C. Würth, U. Resch-Genger, J. J. Weigand, A. Eychmüller; *Part. Part. Syst. Charact.,* **2018**, 35, 1800175.

125

Exploration of Thiazolo[5,4-d]thiazole Linkages in Conjugated Porous Organic Polymers for Chemoselective Molecular Sieving; B. P. Biswal, D. Becker, N. Chandrasekhar, J. S. Seenath, S. Paasch, S. Machill, F. Hennersdorf, E. Brunner, J. J. Weigand, R. Berger, X. Feng; *Chem. Eur J.*, **2018**, 24, 10868.

124

Toward Full Zigzag-Edged Nanographenes: peri-Tetracene and Its Corresponding Circumanthracene; M. R. Ajayakumar, Y. Fu, J. Ma, F. Hennersdorf, H. Komber, J. J. Weigand, A. Alfonsov, A. A. Popov, R. Berger, J. Liu, K. Müllen, X. Feng; *J. Am. Chem. Soc.,* **2018**, 140, 6240.

123

Understanding the chemical reactivity of phosphonium-based ionic liquids with tellurium; T. Zhang, K. Schwedtmann, J. J. Weigand, T. Doert, M. Ruck*; Chem. Eur. J.*, **2018**, 24, 9325.

122

Extractive Separation of Trivalent Rare Earth Metal Ions with Phenylphosphoric Acid Type Trident Molecule for rare Metal Recovery; K. Ohto, H. Murashima, S. Morasida, H. Kawakita, M. Wenzel, J. J. Weigand, K. Gloe; *Int. J. Soc. Mater. Eng. Resour.*, **2018**, 23, 36.

121

Production of high purity rare earth mixture from iron-rich spent fluid catalytic cracking (FCC) catalyst using acid leaching and two-step solvent extraction process; L-P. Nguyen, Y. T. H. Pham, P. T. Ngo, T. V. Tran, L. V. Tran, N. T. H. Le, L. H. Nguyen, T. T. Dang, D. A. Nguyen, M. Wenzel, D. Hartmann, K. Gloe, J. J. Weigand, K. Kretschmer; *Korean J. Chem. Eng.*, **2018**, 35, 1195.

120

Recent Advances in Imidazoliumyl-substituted Phosphorus Compounds; K. Schwedtmann, G. Zanoni, J. J. Weigand; *Chem. Asian J.*, **2018**, 13, 1388.

119

Tripodal polyamines - adjustable receptors for cation extraction; M. Wenzel, F. Hennersdorf, M. Langer, K. Gloe, B. Antonioli, H.-J. Buschmann, L. F. Lindoy, G. Bernhard, K. Gloe, J. J. Weigand; *Separation Science and Technology*, **2018**, 53, 1273.

2017 (19 publication)

118

Exploration of pyrazine-embedded antiaromatic polycyclic hydrocarbons generated by solution and on-surface azomethine ylide homocoupling; X.-Y. Wang, M. Richter, Y. He, J. Björk, A. Riss, R. Rajesh, M. Garnica, F. Hennersdorf, J. J. Weigand, A. Narita, R. Berger, X. Feng, W. Auwärter, J. V. Barth, C.-A. Palma, K. Müllen; *Nat. Commun.*, **2017**, *8*, 1948.

117

New Trident Molecule with Phosphoric Acid Functionality for Trivalent Rare Earth Extraction; K. Ohto, H. Murashima, H. Murakami, S. Morisada, H. Kawakita, M. Wenzel, J. J. Weigand, K. Gloe; *Indones. J. Chem.*, **2017**, 17, 491.

116

Recent advances in anion recognition; M. Wenzel, J. J. Weigand; *J. Incl. Phenom. Macrocycl. Chem.*, **2017**, 89, 247.

115

Donor acceptor interactions in tri(phosphonio)methanide dications $[(Ph_3P)_2CP(X)Ph_2]^{2+}$; S. Yogendra, F. Hennersdorf, A. Bauzà, A. Frontera, R. Fischer, J. J. Weigand; *Dalton Trans.*, **2017**, 46, 15503.

114

Mechanistic exploration of the copper(I) phosphide synthesis in phosphonium-based and phosphorus-free ionic liquids; M. Lê Anh, A. Wolff, M. Kaiser, S. Yogendra, J. J. Weigand, J. Pallmann, E. Brunner, M. Ruck, T. Doert; *Dalton Trans.*, **2017**, 46, 15004.

113

Reductive Ring Opening of a Cyclotris(phosphonio)methanide Dication to a Phosphanylcarbodiphosphorane: In Situ UV-Vis Spectroelectrochemistry and Gold Coordination; S. Yogendra, S. Schulz, F. Hennersdorf, S. Kumar, R. Fischer, J. J. Weigand; *Organometallics*, **2017**, 37, 748. (S. Yogendra and S. Schulz contributed equally and share first authorship)

112
Cationic Nitrogen Doped Helical Nanographenes; K. Xu, Y. Fu, Y. Zhou, F. Hennersdorf, P. Machata, I. Vincon, J. J. Weigand, A. A. Popov, R. Berger, X. Feng; *Angew. Chem. Int. Ed.*, **2017**, 56, 15876.
111
Selective Derivatisation of a Hexaphosphane from Funktionalization of White Phosphorus; F. Hennersdorf, J. Froetschel, J. J. Weigand; *J. Am. Chem. Soc.*, **2017**, 139, 14592.
110
Versatile Tri(pyrazolyl)phosphanes - Application as phosphorus precursors for the synthesis of highly emitting InP/ZnS quantum dots; R. Panzer, C. Guhrenz, R. Hübner, N. Gaponik, D. Haubold, A. Eychmüller, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2017**, 56, 14737.
109
Dissolution behaviour and activation of selenium in phosphonium based ionic liquids; T. Zhang, K. Schwedtmann, J. J. Weigand, T. Doert, M. Ruck, *Chem. Commun.*, **2017**, 53, 7588.
108
π-Extended and Curved Anti-Aromatic Polycyclic Hydrocarbons; J. Liu, J. Ma, K. Zhang, P. Ravat, P. Machata, S. M. Avdoshenko, F. Hennersdorf, H. Komber, W. Pisula, J. J. Weigand, A. A. Popov, R. Berger, K. Müllen, X. Feng; *J. Am. Chem. Soc.*, **2017**, 139, 7513.
107
A Tetracyclic Octaphosphane R_2P_8 (R = (DDP)GaBr) by Subsequent Addition, Inversion and Condensation Reactions; F. Hennersdorf, J. J. Weigand; *Angew. Chem. Int. Ed.,* **2017**, 56, 7858.
106
Selective and Reversible Fluoride Complexation from Water by a Cyclic Tri(phosphonio)methanide Dication; S. Yogendra, F. Hennersdorf, A. Bauzá, A. Frontera, R. Fischer, J. J. Weigand; *Angew. Chem. Int. Ed.,* **2017**, 56, 7907.
105
Isolation of Azadiphosphiridines and Diphosphenimines by Cycloaddition of Azides and a Cationic Diphosphene; K. Schwedtmann, F. Hennersdorf, A. Bauzà, A. Frontera, R. Fischer, J. J. Weigand, *Angew. Chem. Int. Ed.*, **2017**, 56, 6218.
104
Nitrogen-Phosphorus(III)-Chalcogen Macrocycles for the Synthesis of Polynuclear Silver(I) Sandwich Complexes; S. Yogendra, F. Hennersdorf, J. J. Weigand, *Inorg. Chem.,* **2017**, 56, 8698.
103
Facile synthesis of potassium tetrathiooxalate – The “true” monomer for the preparation of electron-conductive poly(nickel-ethylenetetrathiolate); R. Tkachov, L. Stepien, A. Roch, H. Komber, F. Hennersdorf, J. J. Weigand, I. Bauer, A. Kiriy, C. Leyens; *Tetrahedron*, **2017**, 73, 16, 2250.
102
Exploring the Chemical Reaction Space at the Formation of Chalcogenidometalate Superspheres in Ionic Liquids; S. Santner, S. Yogendra, J. J. Weigand, S. Dehnen; *Chem. Eur. J.*, **2017**, 23, 1999.
101
New Heterodinuclear Zn/Ln (Ln = Gd, Tb, Er, Yb) Complexes of Hexadentate *N*,*N*′-Bis(3-alkoxy-2-hydroxybenzyl)cyclohexane-1,2-diamines: Synthesis and Structure; N. Kelly, K. Schnaars, K. Gloe, T. Doert, J. J. Weigand, K. Gloe; *Aust. J. Chem*. **2017**, *70*, 601.
100
Carbodiphopshirane mediated synthesis of a triflyloxyphosphonium dication and its reactivity towards nucleophiles; S. Yogendra, F. Hennersdorf, A. Bauzà, A. Frontera, R. Fischer, J. J. Weigand, *Chem. Commun.*, **2017**, 53, 2954.

2016 (13 publication)

99
Spacer-Controlled Supramolecular Assemblies of Cu(II) with Bis-(2-Hydroxyphenyl-imine) Ligands. From Monoligand Complexes to Double-Stranded Helicates and Metallomacrocycles; N. Kelly, F. Taube, K. Gloe, T. Doert, W. Seichter, A. Heine, J. J. Weigand, K. Gloe; *Crystals*, **2016**, 6, 120.
98
The Importance of Pore Size and Surface Polarity for Polysulfide Adsorption in Lithium Sulfur Batteries; F. Hippauf, W. Nickel, G.-P. Hao, K. Schwedtmann, L. Giebeler, S. Oswald, L. Borchardt, S. Doerfler, J. J. Weigand, S. Kaskel; *Adv. Mater. Interfaces*, **2016**, 3, 1600508.
97
Cationic 5-phosphonio-substituted N-heterocyclic carbenes; K. Schwedtmann, R. Schoemaker, F. Hennersdorf, A. Bauza, A. Frontera, R. Weiss, J. J. Weigand; *Dalton Trans.*, **2016**, 45, 11384.
96
Self-assembly of [2+2] Co(II) metallomacrocycles and Ni(II) metallogels with novel bis(pyridylimine) ligands; N. Kelly, K. Gloe, T. Doert, F. Hennersdorf, A. Heine, J. März, U. Schwarzenbolz, J. J. Weigand, K. Gloe; *J. Organomet. Chem.*, **2016**, 821, 182.
95
Recent highlights in mixed-coordinate oligophosphorus chemistry; M. Donath, F. Hennersdorf, J. J. Weigand; *Chem. Soc. Rev.*, **2016**, 45, 1145. (M. Donath and F. Hennersdorf contributed equally and share first authorship)
94
Condensation Reactions of Chlorophosphanes with Chalcogenides; S. Yogendra, S. S. Chitnis, F. Hennersdorf, M. Bodensteiner, R. Fischer, N. Burford, J. J. Weigand; *Inorg. Chem.*, **2016**, 55, 1854.

93

Unique Occurrence of Cationic and Anionic Bis-1,2-Diaminocyclohexane Copper(II) Units in a Double Complex Salt; N. Kelly, M. Wenzel, T. Doert, K. Gloe, J. J. Weigand, L. F. Lindoy, K. Gloe; *Aust. J. Chem.*, **2016**, 69, 533.

92

[(ClImDipp)P=P(Dipp)][$GaCl_4$]: A Polarized, Cationic Diphosphene; K. Schwedtmann, M. H. Holthausen, C. H. Sala, F. Hennersdorf, R. Fröhlich, J. J. Weigand; *Chem. Commun.*, **2016**, 52, 1409.

91

Tetra-cationic imidazoliumyl-substituted phosphorus-sulfur heterocycles from a cationic organophosphorus sulfide; F. D. Henne, F. A. Watt, K. Schwedtmann, F. Hennersdorf, M. Kokoschka, J. J. Weigand; *Chem. Commun.*, **2016**, 52, 2023.

90

Extraction Studies of Heavy Metal Ions Employing Benzothiaoxacrown Compound; T. Tsend-Ayush, M. Wenzel, K. Gloe, K. Gloe, J. J. Weigand, Y. V. Fedorov, O. A. Fedorova, S. P. Gromov, P. G. Plieger; *Solvent Extraction Research and Development, Japan*, **2016**, 23, 31.

89

Formation of the spirocyclic, Si-centered cage cations $[ClP(NSiMe_3)_2Si(NSiMe_3)_2P_5]^+$ and $[P_5(NSiMe_3)_2Si(NSiMe_3)_2P_5]^{2+}$; M. H. Holthausen, J. J. Weigand; *Dalton Trans.*, **2016**, 45, 1953.

88

Reaction of P_4 with in situ formed cyclo-triphosphatriazenium cation $[(DmpNP)_3Cl_2]^+$ (Dmp = 2,6-dimethylphenyl); M. H. Holthausen, C. Sala, J. J. Weigand; *Eur. J. Inorg. Chem.*, **2016**, 5, 667.

87

Uranyl(VI) binding by bis(2-hydroxyaryl)diimine and bis(2-hydroxyaryl)diamine ligand derivatives. Synthetic, X-ray, DFT and solvent extraction studies; H. B. Tanh Jeazet, K. Gloe, T. Doert, J. Mizera, O. N. Kataeva, S. Tsushima, G. Bernhard, J. J. Weigand, L. F. Lindoy, K. Gloe; *Polyhedron*, **2016**, 103, Part B, 198.

2015 (8 publication)

86

Self-assembly of Dinuclear Double-stranded Cu(II) Helicates with 3-Ethoxy-2-hydroxyphenyl Substituted Diimines; Synthesis, Molecular Structure and Host-guest Recognition of H2O; N. Kelly, J. Schulz, K. Gloe, T. Doert, K. Gloe, M. Wenzel, M. Acker, J. J. Weigand; *Z. Anorg. Allg. Chem.*, **2015**, 641, 2215.

85

Synthesis and EPR/UV/Vis-NIR Spectroelectrochemical Investigation of a Persistent Phosphanyl Radical Dication; K. Schwedtmann, S. Schulz, F. Hennersdorf, T. Strassner, E. Dmitrieva, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2015**, 54, 11054.

84

Dioxygen activation by an in situ reduced Cu(II) hydrazone complex; C. Radunsky, J. Kösters, M. C. Letzel, S. Yogendra, C. Schwickert, S. Manck, B. Sarkar, R. Pöttgen, J. J. Weigand, J. Neugebauer, J. Müller; *Eur. J. Inorg. Chem.*, **2015**, 4006.

83

Synthesis of Selected Cationic Pnictanes [L*n*PnX3-*n*]*n*+ (L = Imidazolium-2-yl; Pn = P, As; *n* = 1-3) and Replacement Reactions with Pseudohalogens; F. D. Henne, A. T. Dickschat, F. Hennersdorf, K.-O. Feldmann, J. J. Weigand; *Inorg. Chem.*, **2015**, 54, 6849.

82

Synthesis and reactivity of cyclotetra(stibinophosphonium) tetracations: redox and coordination chemistry of phosphine-antimony complexes; S. S. Chitnis, A. P. M. Robertson, N. Burford, J. J. Weigand, R. Fischer; *Chem. Sci.,* **2015**, 6, 2559.

81

Reductive Catenation of Phosphine Antimony Complexes; S. S. Chitnis, N. Burford, J. J. Weigand, R. McDonald; *Angew. Chem. Int. Ed.*, **2015**, 54, 7828.

80

$[P_3Se_4]^+$: A Binary Phopshorus-Selenium Cation; K.-O. Feldmann, T. Wiegand, J. Ren, H. Eckert, J. Breternitz, M. F. Groh, U. Miller, M. Ruck, B. Maryasin, C. Ochsenfeld, O. Schön, K. Karaghiosoff, J. J. Weigand; *Chem. Eur. J.,* **2015**, 21, 9697. (**Front Cover**: DOI: 10.1002/chem.201590117)

79

5,7,8,10,15,17,18,20-Octaphenyl-21,23-Dithiaporphyrin: Synthesis, Structure and Spectroelectrochemistry; V. Lukes, P. Rapta, L. Götzke, A. Packalén, E. Dmitrieva, J. K. Clegg, K. Gloe, K. Gloe, J. J. Weigand; *J. Solid State Electrochem.*, **2015**, 19, 123.

2014 (7 publication)

78

The Versatile Reagent$Ph_3As(OTf)_2$: One-Pot Synthesis of $[P_7(AsPh_3)_3][OTf]_3$ from PCl_3; M. Donath, M. Bodensteiner, J. J. Weigand; *Chem. Eur. J.,* **2014**, 20, 17306.

77

A Versatile Protocol for the Synthesis of Pyrazolyl-substituted Pyridinium- and Guanidinium Salts from Pyridone and Urea derivatives; A. K. C. Echterhoff, S. Yogendra, J. Kösters, R. Fischer, J. J. Weigand; *Eur. J. Org. Chem.*, **2014**, 34, 7631.

76
Heteropolynuclear 3d- 4f- Metal Complexes in Solvent Extraction; N. Kelly, K. Schnaars, T. Doert, F. Hennersdorf, A. Heine, F. Taube, M. Acker, K. Gloe, K. Gloe, J. J. Weigand; *ISEC2014*, **2014**, 752.
75
Frustrated Lewis pair-mediated C-O or C-H bond activation of ethers; M. H. Holthausen, T. Mahdi, C. Schlepphorst, L. J. Hounjet, J. J. Weigand, D. W. Stephan; *Chem. Commun.*, **2014**, 50, 10038.
74
The chemistry of cationic polyphosphorus cages - syntheses, structure and reactivity; M. H. Holthausen, J. J. Weigand; *Chem. Soc. Rev.*, **2014**, 43, 6639.
73
Hauptgruppenelemente: Carbene und ihre Homologen sowie die Suche nach dem Außergewöhnlichen. Koordinationschemie: Metall-Metall-Mehrfachbindungen zwischen zwei 3d-Metallen; Funktionen in der supramolekularen Chemie. Bioorganik: Umsetzung von H_2, O_2, N_2 und e- sowie anorganische Verbindungen für die Pharmazie; R. C. Fischer, J. J. Weigand, I. Siewert, M. Walter, K. Ray, P. Kurz; *Nachrichten aus der Chemie*, **2014**, 62, 219.
72
Self-Assembly of an Imidazolate-Bridged FeIII/CuII Heterometallic Cage; F. Reichel, J. Clegg, K. Gloe, K. Gloe, J. J. Weigand, J. Reynolds, C.-G. Li, J. Aldrich-Wright, C. Kepert, L. Lindoy, H.-C. Yao, F. Li; *Inorg. Chem.*, **2014**, 53, 688.

2013 (7 publication)

71
NHC-Mediated Synthesis of an Asymmetric, Cationic Phosphoranide, a Phosphanide, and Coinage-Metal Phosphanido Complexes; K. Schwedtmann, M. H. Holthausen, K.-O. Feldmann, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2013**, 52, 14204.
70
Phosphenium-Insertion and Chloronium-Addition Reactions Involving the cyclo-Phosphanes (t-BuP) n (n = 3, 4); M. H. Holthausen, D. Knackstedt, N. Burford, J. J. Weigand; *Aust. J. Chem.*, **2013**, 66, 1155.
69
[3+2] Fragmentation of an $[RP_5Cl]^+$ cage cation induced by a N-heterocyclic carbene; M. H. Holthausen, S. K. Surmiak, P. Jerabek, G. Frenking, J. J. Weigand; *Angew. Chem. Int. Ed.*, **2013**, 52, 11078.
68
Synthesis of cationic $R_2P_5^+$ cages and subsequent chalcogenation reactions; M. H. Holthausen, A. Hepp, J. J. Weigand; *Chem. Eur. J.*, **2013**, 19, 9895.
67
Observation of a Chloride-Bridged P-P Bond in the Phosphorus Cation $[L(Cl)P(\mu\text{-}Cl)P(Cl)L]^+$ (L = NHC); F. D. Henne, E.-M. Schnoeckelborg, K.-O. Feldmann, J. Grunenberg, R. Wolf, J. J. Weigand; *Organometallics*, **2013**, 32, 6674.
66
Hauptgruppenelemente: Neue Synthesestrategien, ungewöhnliche Bindungssituationen und vollständige katalytische Kreisprozesse - Koordinationschemie: Gold als überraschendes Element und metallhaltige, supramolekulare Systeme gewinnen an Komplexität - Bioorganik: Mechanismen von Metallenzymen und Aktivierung von Sauerstoff; R. C. Fischer, J. J. Weigand, R. Wolf, G. Clever, P. Kurz; *Nachrichten aus der Chemie*, **2013**, 61, 219.
65
Zerovalent [Pd(NHC)(Alkene)1-2] Complexes Bearing Expanded Ring N-Heterocyclic Carbene Ligands in Transfer Hydrogenation of Alkynes; P. Hauwert, J. Dunsford, D. Tromp, J. J. Weigand, M. Lutz, K. Cavell, C. J. Elsevier; *Organometallics*, **2013**, 31, 131.

Invited Lectures for scientific colloquia and conference contributions

2023

147
Von der Transformation der Chemie zur Kreislaufwirtschaft; Sächsische Innovationskonferenz, futurSAX, Dresden, Germany, 4. Juli, **2023**.
146
With the CTC for the Transformation of an Entire Industry – The Chemical Industry in Transition; Keynote lecture at the The International Bioeconomy Conference #11, iBC11, Leuna, Germany, 15. June, **2023**.
145
Panel discussion: Technology leaps for the energy transition: how start-ups are shaping the sustainable transformation Deep Dive, Ostdeutsches Wirtschaftsforum 23, OWF23, Bad Saarow, Germany, 12. June, **2023**.
144
Blueprint for a modern "sustainable" phosphorus chemistry; Keynote lecture at the Science-Policy Workshop organized by the EuChemS online meeting, Brussels, Belgium, 25. May, **2023**.

143
Center for the Transformation of Chemistry (CTC); Keynote speech on CTC at the annual conference of the Metropolitan Region of Central Germany together with the Stifterverband (Donors' Association), Leipzig, Germany, 25. May, **2023**.
142
Sustainable approaches in main group chemistry – from waste to treasure; GDCh-Kolloqium, Department of Chemistry, Albert-Ludwigs-Universität Freiburg, Germany, 22. May, **2022**.
141
Center for the Transformation of Chemistry (CTC); Invitation for a Keynote lecture, Building Bridges for the Next Generation, Dresden, Germany, 17. May, **2023**.
140
Einblicke in die Vielfalt des Phosphors; Sommersymposium Förderverein Chemie-Olympiade e.V., online, 14. April, **2023**.
139
Blueprint for a modern "sustainable" phosphorus chemistry; Invitation for a lecture at a scientific meeting at Solvay Technology Solutions - Phosphorus Specialties at CA Niagara Falls Welland, Niagara Falls, Canada, 31. March, **2023**.
138
Blueprint for a modern "sustainable" phosphorus chemistry; Invitation as Plenary Speaker at PBSi 2023 at FU Berlin, Berlin, Germany, 22. – 24. March, **2023**.
137
Redox-neutral conversion of ubiquitous P^V sources to a versatile PO_2^+ phosphorylation reagent; departmental seminar, UBC, Department of Chemistry, Vancouver, Canada, 6. March, **2023**.
136
The Chemistry of P_4 – A Problem for the Environment; Invitation as invited speaker for Pure and Applied Chemistry International Conference 2023 (PACCON 2023), Mae Fah Luang University, Chiang Rai, Thailand, 20. – 21. January, **2023**.
135
The element phosphorus – a challenge of the not too distant future; Plenary lecture invitation for the 44th South African Chemical Institute National Convention (SACI-44), Stellenbosch, South Africa, 8 –13 January, **2023**.

2022

134
Sustainable and Circular Chemistry; invited lecture, Summer School iSCOPe, TU Dresden, Germany, 10. – 18. September, **2022**.
133
Blueprint for a modern "sustainable" phosphorus chemistry; keynote lecture, International Crossroads of Organometallic and Group V Chemistry, ACS Fall Meeting, Chicago, USA, 21. – 25. August, **2022**.
132
Phospha-Wittig type reaction and 1,3-dipolar cycloaddition – powerful tools for the synthesis of P-based heterocyclic ring systems; keynote lecture, 16th International Symposium on Onorganic Ring Systems (IRIS-16), Graz, Austria, 24. – 29 June, **2022**.
Aufgrund einer aktuten COVID19 Infektion musste der Vortrag kurzfristig durch Doktoranden von mir vertreten werden.
131
Today's challenges: from Lithium recovery to modern Phosphorus chemistry; GDCh-Kolloqium, Department of Chemistry, University of Regensburg, Germany, 28. April, **2022**.

2021

130
Online: *Main Group Elements in Action*; Special Seminar for Chemistry-Friends all over the world; **Experimental lecture** invited by the Department of Chemistry, Faculty of Science, Mahidol University, Bangok, Thailand, 29. September, **2021**. https://t.co/sIbqYCTo9A
129
Online: *Flowers as versatile photoredox catalysts*; invited talk, **Summerschool Workshop** "From Molecules to Materials: Photocatalysis" Examples from synthesis, material chemistry and biocatalysis", orgnaized by the University of Leipzig, Prof. Hey-Hawkins and Prof. Zeitler, Germany, 09. September, **2021**.
128
Online: Johanniskraut – von der Grundlagenforschung zur Anwendung; invited talk (tandem), Tagung der Gesellschaft für Pflanzenzüchtung, AG 17 Arznei- und Gewürzpflanzen 2021, Julius Kühn-Institut (JKI) – Bundesforschungsinstitut für Kulturpflanzen, Institut für Züchtungsforschung an gartenbaulichen Kulturen, Quedlinburg, Germany, 10. June, **2021**.
127
Online: *Fascinating P-chemistry – Azoles make the difference!?*; invited talk, P-Chemistry Online-Seminar Series, Germany, 21. March, **2021**.

2020

126
The Chemistry of P_4 - A Problem for the Environment?; departmental seminar, UBC, Department of Chemistry, Vancouver, Canada, 9. March, **2020**.

125
The Chemistry of P_4 - A Problem for the Environment?; departmental seminar at Mahidol University, Department of Chemistry, Bangkok, Thailand, 14 February, **2020**.
124
The Chemistry of P_4 - A Problem for the Environment?; invited lecture, Pure and Applied Chemistry International Conference 2020 (PACCON 2020), Bangkok, Thailand, 13 - 14 February, **2020**.
123
The Chemistry of P_4 - A Problem for the Environment?; Inorganic colloquium, Faculty of Chemistry, Universität Dueisburg – Essen, Germany, 20. January, **2020**.

2019

122
Phosphorus in Sustainable Synthetic Applications; GDCh-Kolloqium, Department of Chemistry, FU Berlin, Berlin, Germany, 10. December, **2019**.
121
Fenabium; closing workshop, TU Dresden, Dresden, Germany, 12 November, **2019**.
120
Phosphorus Chemistry 2.0; departmental seminar, CAS, Bejing, China, 28 October, **2019**.
119
The Chemistry of P_4 - A Problem for the Environment?; GDCh-Kolloqium, Department of Chemistry and Pharmacy, Friedrich-Alexander University, Erlangen, Germany, 4. October, **2015**.
118
Sustainable approaches in P-chemistry - from waste to treasure; departmental seminar, University of Stellenbosch, Stellenbosch, South Africa, 4. October, **2019**.
117
Happy 350th Anniversary, Phosphorus!; invited lecture, GDCh-Wissenschaftsforum Chemie 2019, Aachen, Germany, 15. – 18. September, **2019**.
116
Green chemistry approaches, from waste to treasure?; invited lecture, Summer School at the GUC, Cairo, Egypt, 3. July, **2019**.
116
Phosphorus Based Compounds: A Problem for the Environment?; joned seminar with Food Chemistry at the University of Graz, Graz, Austria, 8. May, **2019**.
115
Phosphorus Based Compounds: A Problem for the Environment?; German-African Strategies: A Partnership for Better Health, Education and Development (AvH Meeting), Cairo, Egypt, 12 - 14 April, **2019**.
114
Sustainability and the concept of "Oxidative Onionation" in P_4 Chemistry; departmental seminar at UBC, Vancouver, Canada, 8. March, **2019**.
113
Sustainable Production of Platform Chemicals and Fuels - Synthesis, Catalysis and Recycling; invited lecture, Pure and Applied Chemistry International Conference 2019 (PACCON 2019), BITEC, Bangkok, Thailand, 7. – 8. February, **2019**.

2018

112
"Oxidative Onionation" of White Phosphorus; invited lecture, International Conference on Phopshorus, Boron and Silicon 2018 (PBSi2018), Barcelona, Spain, 10. – 12. December, **2018**.
111
Phosphorus Chemistry 2.0; Arbuzov Memorial conference 'Dynamic processes in the chemistry of organoelement compounds' dedicated to 115th anniversary of Boris Arbuzov, Kazan, Russia, 6. – 9. November, **2018**.

110
Syn*P*hos – *New Concepts in Synthesis*; departmental seminar, OIST, Okinawa, Japan, 10. September, **2018**.
109
SynPhos – New Concepts in Synthesis; Second Interdisciplinary and Research Alumni Symposium iJaDe2018, Kobe, Japan, 3. – 7. September, **2018**.
108
Coordination chemistry of selected f-block elements carrying bio-related binding functions; keynote lecture, 43rd International Conference on Coordination Chemistry (ICCC2018), Sendai, Japan, 30.July – 4. August, **2018**.
107
Selective Formation of Polyphosphorus compounds involving the Functionalization of White Phosphorus; keyote lecture, XXVIII International Conference on Organometallic Chemistry (ICOMC-2018), Florence, Italy, 15. – 20. July, **2018**.
106
Advanced Synthetic Approaches to Acyclic and Cyclic Polyphosphorus Compounds; invited talk, 15th International Symposium on Onorganic Ring Systems (IRIS-15), Kyoto, Japan, 24. – 29 June, **2018**.

105
Chemistry & Chemical Engineering: Fundamental Research on Green and Efficiency Recovery and Regeneration of Lithium Iron Phosphate Cathode Materials; Kick-off meeting, Chinese Academy of Sciences (IPE, CAS), Beijing, China, 22. June, **2018**.

104
P_4 – Geheimnisse und Mythen; Inorganic colloquium, Faculty of Chemistry, Niversität Bielefeld, Bielefeld, Germany, 13. April, **2018**.

103
Highly-reactive Phosphorus Building Blocks – New Concepts in Synthesis; departmental seminar, Faculty for Chemistry and Mineralogy, University of Leipzig, Leipzig, Germany, 11. April, **2018**.

102
New Aspects in modern Phosphorus Chemistry; departmental seminar, Department of Chemistry and Applied Chemistry, University of Saga, Saga, Japan, 3. April, **2018**.

101
Selective and Reversible Fluoride Complexation from Water by a Cyclic Tri(phosphonio)methanide Dication; invited lecture, Pure and Applied Chemistry International Conference 2018 (PACCON 2018), Hat Yai, Songkhla, Thailand, 7. – 9. February, **2018**.

2017

100
SynPhos – From Synthesis to Application; invited lecture, LCC CRNS, Toulouse, France, 13. December, **2017**.

99
SynPhos – From Synthesis to Application; invited lecture, Department of chemistry, Shanghai Jiao Tong University, Shanghai, China, 23. November, **2017**.

98
ReCaLI Project: Road-Map; invited lecture, Ministry of Science and Technology, PetroVietnam and VNU, Univeristy of Science, Hanoi, Vietnam, 15. – 16. November, **2017**.

97
4-Phosphorylpyrazolones as receptor molecules for f-block elements; invited lecture, 2017 International Symposium on Separation Science and Technology, University of Kitakyushu, Kitakyushu, Japan, 10. November, **2017**.

96
Hydrometallurgical recovery and separation of vanadate and chromate from slags by solvent extraction at highly alkaline pH; invited lecture, The 21st International Solvent Extraction Conference (ISEC 2017), Miyazaki, Japan, 5 – 9 November, **2017**.

95
Modern aspects of Main-Group Chemistry with a focus on group 15 elements; departmental seminar, Division of Chemical Science, IISC Bangalore, India, 10. October, **2017**.

94
Insights in the SNO+ Te-diol problem; experimental seminar invited by the SNO+ consortium, SNOLAP meeting, Sudburry, Canada, 26. – 31. August, **2017**.

93
Highly-Reactive Phosphorus Building Blocks –New Concepts in Synthesis; plenary lecture, ERC Chemistry day, Aula Magna, Pavia, Italy, 22. May, **2017**.

92
SynPhos: From Synthesis to Application; AGICHEM 2017, Göttingen, Germany, 6. – 9. August, **2017**.

91
P_4 – Geheimnisse und Mythen; GDCh-Kolloqium, Faculty of Chemistry, Georg-August-Univeristy Göttingen, Göttingen, Germany, 13. July, **2017**.

90
Rückkehr nach Deutschland: Chancen und Strategien; invited lecture, network meeting of the Alexander from Humboldt foundation, TU Dresden, Germany, 5. – 7. April, **2017**.

89
Phosphorus Derivatives: From Synthetic Application to Metal Recycling within the Urban Mining; departmental seminar, Kyoto University, Institute of Chemical Research, Organoelement Chemistry, Kyoto, Japan, 3. April, **2017**.

88
Phosphorus in sustainable applications - from supramolecular chemistry to hydrometallurgical recovery of rare earth metals within the urban mining; invited lecture, Pure and Applied Chemistry International Conference 2017 (PACCON 2017), Chaeng Watthana, Bangkok, Thailand, 2. – 3. February, **2017**.

87
Phosphorus Derivatives: From Synthetic Application to Metal Recycling within the Urban Mining; GDCh-Kolloqium, Department of Chemistry, Rostock University, Rostock, Germany, 18. January, **2017**.

2016

86

Innovative Concepts for Technical Processes – Catalysis and Recycling; invited talk, 3rd International IRASA Conference and Projects Discussion on "Science and Technology for Sustainable Development in Iran" (IRASA STSD201), TU Berlin, Berlin, Germany, 10. – 12. July, **2016**.

85

Phosphorus in Sustainable Synthetic Applications; GDCh-Kolloqium, Department of Chemistry, Chemistry at the Faculty of Chemical and Geosciences, Friedrich Schiller University Jena, Jena, Germany, 6. July, **2016**.

84

Reversible fluoride ion complexation by a cyclic and dicationic tri(phosphonio)methanide; keynote lecture, 21st International Conference on Phosphorus Chemistry (21st ICPC2016, Kazan, Russia, 5. – 10 June, **2016**.

83

Synthesis of cationic phosphorus-selenium cage compounds; invited lecture, The 13th Internaional Conference on the Chemistry of Selenium and Tellurium (ICCST-13), Gifu, Japan, 23. – 27. May, **2016**.

Phosphorus in Sustainable Synthetic Applications; Visiting Lecturer of the Chemistry Promotion Center, Taiwan, 16. – 23. May, **2016**.

82

Hydrometallurgical Recovery of Rare Earth Metals from Spent FCC Catalysts; invited talk, First Interdisciplinary and Research Alumni Symposium iJaDe2016, TU Dresden, Germany, 10. May, **2016**.

81

Phosphor – ein facettenreiches Element; invited lecture, Wilhelm-Ostwald-Gesellschaft, Grimma, Germany, 7. May, **2016**.

80

Phosphorus in Sustainable Synthetic Applications; invited lecture, Challenges and Opportunities of Organoboron, Organosilicon and Organophosphorus Chemsitry, Sino-German Center for Research Promotion, Bejing, China, 11. – 15. April, **2016**.

79

Phosphorus in Sustainable Synthetic Applications; plenary talk, 1st International Conference on Applied Chemistry (ICAC-1), Hurghada, Egypt, 14-17 March, **2016**.

78

Synthesis of Cationic 4-Phosphonio Substituted NHCs; invited lecture, Pure and Applied Chemistry International Conference 2016 (PACCON 2016), Bangkok, Thailand, 9 - 11 February, **2016**.

2015

77

Cationic 5-phosphonio-substituted NHCs and their coordination chemistry; invited talk, Pacifichem, Hawai, USA, Germany, 15. – 20. December, **2015**.

76

Zwitterionic Diphosphanides; invited talk, Pacifichem, Hawai, USA, Germany, 15. – 20. December, **2015**.

75

Application of Cationic Phosphanes; invited talk, 9th Australian Organometallics Meeting (OZOM IX), Sydney, Australia, Germany, 8. – 11. December, **2015**.

74

Multifunctional Ligands for the metal separation within the Urban Mining; invited lecture 7th ISNCS, 7th Internation Symposium on Nano and Supramolecular Chemistry, Busan, Korea, 14. – 17. August, **2015**.

73

Symposium zu 60 Jahre "Ekki"; invited talk, WWU Münster, Germany, 16. October, **2015**.

72

Application of cationic phosphanes in catalysis; invited lecture, BIT's 6Th Annual Global Congress of Catalysisi-2015, Xi'an, China, 24. – 26. September, **2015**.

71

Phosphor – ein Element mit vielen Facetten; invited lecture, GDCh-Wissenschaftsforum CHEMIE 2015, Dresden, Germany, 30. August. – 2. September, **2015**.

70

Multifunctional Ligands for the metal separation within the Urban Mining; invited lecture, 7th ISNCS, 7th Internation Symposium on Nano and Supramolecular Chemistry, Busan, Korea, 14. – 17. August, **2015**.

69

Cationic 4-Phosphonio-substituted NHCs and their Coordination Chemistry; invited lecture, 45rd IUPAC World Chemistry Congress, Busan, Korea, 9. – 14. August, **2015**.

68

Cationic 4-Phosphonio-substituted NHCs and their Coordination Chemistry; ACCC5, 5th Asian Conference on Coordination Chemistry, Hong Kong, China, 12 – 16 July **2015**.

67

Phosphor und seine Verbindungen - von den Grundlagen zur Anwendung; Inorganic colloquium, Goethe University Frankfurt, Germany, 1. July, **2015**.

66
Phosphor und seine Verbindungen - von den Grundlagen zur Anwendung; GDCh-Kolloqium, Inorganic colloquium at University Bremen, Germany, 15. June, **2015**.
65
Recovery of La from spent FCC catalysts; Microsymposium Coordination Chemistry, TU Dresden, Germany, 26. March, **2015**.
64
Multifunktionelle Liganden für das Urban Mining: Möglichkeiten und Probleme; invited lecture, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, ProcessNet-Fachgruppe, Germany, 16. – 17. March, **2015**.
63
Einblicke in die Forschung des AK Weigand; Aktuelle Themen der Phosphorchemie, AK Anorganische Molekülchemie**,** Studienstiftung des deutschen Volkes**,** TU Dresden, Germany, 31. January, **2015**.

2014

62
Novel phosphorus compounds as reagents for efficient and sustainable synthetic procedures; invited lecture, 1st ICSPC-2014, First International Conference on Sustainable phosphorus Chemistry, Florence, Italy, 4 – 5 December, **2014**.
61
Synthesis and Application of Organofluorophosphonium Salts in Organocatalysis; invited lecture, BIT's 5th Annual Global Congress of Cataysis, 2014 GCC, Qingdao, China, 21 – 23 September, **2014**.
60
Establishing your own ERC research group Starting Grand (1st stage); invited lecture, 5th EuChemMS Chemistry Congress, Istanbul, Turkey, 31. August – 4. September, **2014**.
59
Pnictogen Building Blocks Based on Highly-charged Ligand-stabilized Cations and their Coordination Chemistry; invited lecture, 6th ISNCS, 6th Internation Symposium on Nano and Supramolecular Chemistry, Denpasar, Bali, Indonesia, 10. – 14. August, **2014**.
58
Chemical Bonding in selected Compounds involving Group 15 Elements from the Perspective of an Experimentalist; ICCB, International Conference on Chemical Bonding, Kauai, Hawaii, 24 – 28 July, **2014**.
57
Highly-Reactive Phosphorus Building Blocks - New Concepts in Synthesis; invited lecture, Institute for Chemical Research, Kyoto University, Kyoto, Japan, 19. July **2014**.
56
Alternative Chloride-abstracting Agents in Synthesis: Preparation of the Nortricyclane-type Cage Compound $[P_7(AsPh_3)_3][OTf]_3$; invited lecture, International Confrence on Phosphorus Chemistry ICPC 2014, Dublin, Ireland, 28th June – 2nd July, **2014**.
55
Highly-reactive Phosphorus Building Blocks – New Concepts in Synthesis; Main Group Chemistry symposium at the Canadian Society for Chemistry meeting, Vancouver, Canada, 1 – 5 June, **2014**.
54
Phosphor – ein Element mit vielen Facetten; invited lecture, Anorganisch-Chemisches Kolloqium, Universität Regensburg, Germany, 30. January, **2014**.

2013

53
Phosphor – ein Element mit vielen Facetten; invited lecture, elementorganic chemistry symposium on the occasion of Prof. Werner Uhls 60th birthday, Münster, Germany, 29 November, **2013**.
52
Highly-reactive Phosphorus Building Blocks – New Concepts in Synthesis; invited lecture, BASF Insights, Ludwigshafen, Germany, 17 - 19 November, **2013**.
51
Rückkehr nach Deutschland: Chancen und Strategien; invited lecture, network meeting of the Alexander from Humboldt foundation, Jena, Germany, 21 – 22 November, **2013**.
50
Preparation of Polyphosphanes by P–N/P–P Metathesis Reaction and their Application in Coordination Chemistry; keynote lecture, ACCC4, 4th Asian Conference on Coordination Chemistry, Jeju, South Korea, 4 – 7 November, **2013**.
49
Highly-Reactive Phosphorus Building Blocks - New Concepts in Synthesis; invited lecture, Acharya & BM Reddy College of Pharmacy, Bangalore, India, 28. October, **2013**.
48
Highly-Reactive Phosphorus Building Blocks - New Concepts in Synthesis; invited lecture, IUPAC 9th International Conference on Novel Materials and Synthesis (NMS-IX) & 23rd International Symposium on Fine Chemistry and Functional Polymers (FCFP-XXIII), Shanghai, 17-22 October, **2013**.

47
NHC induced Fragmentation of $[RP_5Cl]^+$-cations; invited lecture, 15th Asian Chemical Congress 2013 Chemistry at the Centre of Molecular Science & Nanotechnology, Singapore, 19 - 23 August, **2013**.
46
Highly-Reactive Phosphorus Building Blocks - New Concepts in Synthesis; invited lecture, PERCH - CIC Congress VIII, 5-8 May, Pattaya, Thailand, **2013**.
45
P–N/P–P Metathesis Reaction for the Preparation of Polyphosphanes; invited lecture, 3rd Molecular Materials Meeting (M3) @ Singapore on *"Frontiers in Materials Science, Chemistry & Physics"*, Singapore, 14-16 January, **2013**.

2012

44
Novel phosphorus compounds as reagents for efficient and sustainable synthetic procedures; 4. Sino-German FOC Symposium, Peking, China, 3. – 7. September, **2012**.
43
P–N/P–P Metathesis Reaction for the Preparation of Polyphosphanes; invited lecture "Zasshikai", Tokio, Japan, 23. August, **2012**.
42
Cationic Polyphosphorus Ring- and Cage-Compounds from P_4; IRIS13, 13th International Symposium on Inorganic Ring Systems, Victoria, Canada, 29. Juli – 2. August, **2012**.
41
Cationic phosphorus reagents in Synthesis; Seminar, National University of Singapur, Singapur, 24. February, **2012**.
40
Cationic phosphorus reagents in Synthesis; Seminar, Mahidol University Bangkok, Thailand, 24. February, **2012**.

2011

39
Novel catena-Phosphorus Compounds from P_4 Functionalization; RACI IC'11 Inorganic Chemistry 11, Perth, Australia, 4. – 8. December, **2011**, 8. December, **2011**.
38
Phosphorus Cations as Synthetic Targets – From Fundamentals to Application; Seminar, Nanyang University, Singapur, 1. December, **2011**.
37
Phosphorus Cations as Synthetic Targets - From Fundamentals to Application; Seminar, University of Victoria, Canada, 3. October, **2011**.
36
Kationische Phosphorverbindungen in der Synthese; TU Dresden, Germany, 19. September, **2011**.
35
Phosphorus-centered Cations in Synthesis; 94th CSC National Meeting, Montreal, Canada, 5. – 9. Juni, **2011**, 6. June, **2011**.
34
Phosphor-zentrierte Kationen in der Synthese; Anorganisch-Chemisches Kolloqium, Universität Erlangen, Germany, 9. May, **2011**.
33
Phosphor-zentrierte Kationen in der Synthese; Anorganisch-Chemisches Kolloqium, Universität Münster, Germany, 28. April, **2011**.
32
The Chemistry of Cationic Pnictogen Compounds; Conférence sur la Chimie des Métaux de Transition et Ingénierie Moléculaire, Université de Strasbourg, France, 17. March, **2011**.
31
Hochgeladene kationische Phosphorverbindungen und deren Anwendung in der Synthese; Anorganisch-Chemisches Kolloqium, Universität Braunschweig, Germany, 16. February, **2011**.
30
Hochgeladene kationische Phosphorverbindungen und deren Anwendung in der Synthese; Vorstellung, FU Berlin, Germany, 15. February, **2011**.
29
Die Chemie kationischer Phosphorverbindungen; Anorganisch-Chemisches Kolloqium, Universität Marburg, Germany, 14. February, **2011**.
28
Synthesis and Characterization of Pnictogen-centered Cations; OZOM6, University of Tasmania, Hobart, Tasmania, 17. – 20. January, **2011**.
27
Kationische Phosphorverbindungen und deren Synthese; Anorganisch-Chemisches Kolloqium, Universität Oldenburg, Germany, 10. January, **2011**.

2010

26
Die Chemie kationischer Phosphorverbindungen; Anorganisch-Chemisches Kolloqium, Universität Tübingen, Germany, 22. November, **2010**.

25
The Diverse Chemistry of Multiply Charged Cationic Phosphorus Compounds; Germany, 18. November, **2010**.
24
Reaktive kationische Phosphorverbindungen zum gezielten Aufbau von Ringen und Käfigen; *15. Wöhlertagung*, Freiburg im Breisgau, Germany, 29. September – 1. October, **2010**.
23
The Chemistry of Cationic Phosphorus Compounds; *WWU Münster SFB*, Rotenberge, Germany, 13. October, **2010**.
22
Facile Construction of diverse Ring- and Clustersystems via Phosphorus Building Blocks; Dalhousie University, Halifax, Canada, 6. August, **2010**.
21
Phosphorus cations as Building Blocks; University of New Brunswick, Fredericton, Canada, 4. August, **2010**.
20
Facile Construction of diverse Ring- and Clustersystems and Activation of Small Molecules via Pnictogen (Phosphorus) Building Blocks; AC Kolloquium, LMU*,* München, Germany, 1. Jule, **2010**.
19
Poly-onio substituted phosphorus centers as building blocks for small molecule, ring and cluster systems; COST (CM0802), PhoSci-Net, Budapest, Hungaria, 27. March, **2010**.
18
Facile Construction of diverse Ring- and Cluster Systems via Pnictogen Building Blocks; IRTG Winterschool, Hollersbach, Austria, 8. – 13. March, **2010**.
17
Kationische Phosphorverbindungen als Synthesebausteine zum Aufbau von Ring- und Clustersystemen; Anorganisch-Chemisches Kolloqium, Universität Stuttgart, Germany, 22. January, **2010**.
16
Phosphorkationen – Synthese und Reaktivität; Anorganisch-Chemisches Kolloqium, Technische Universität München, Germany, 18. January, **2010**.

2009

15
The Chemistry of Onio-Substituted Main Group Element Frameworks based on Phosphorus; keynote lecture, XII Regional Seminar of PhD-Students on Organometallic and Coordination Chemistry, Szklarska Poreba, Poland, 3. – 7. October, **2009**.
14
Polyonio-Substituted Main Group Element Frameworks: Syntheses and Reactivities; invited talk GDCh-Wissenschaftsforum Chemie 2009 "Mit Chemie sicher leben", Frankfurt am Main, Germany, 30. August – 2. September, **2009**.
13
Polyonio-substituted Main Group Frameworks as Building Blocks for small Molecule, Ring and Cluster Systems; invited talk, 12. Steinheimer Gespräche des Fonds für den Hochschul-lehrernachwuchs, Parkhotel Rödermark, Germany, 23. – 25. April, **2009**.
12
Cationic Pnictogen Centers as Building Blocks for small Molecules, Ring, and Cluster Systems; IRTG Winterschool, Chaumpéry, Swiss, 22. – 25. March, **2009**.

2008

11
Phosphorus likes it Positive: Cationic Phosphorus Centers as Building Blocks for Small Molecules, Ring, and Cluster Systems; invite talk, HRSRM Symposium 2008, Vrje Universiteit Amsterdam, Organic and Inorganic Chemistry, Amsterdam, Netherland, 27. November, **2008**.
10
Non Transition Metal-Assisted Functionalization of P_4; Netzwerktagung für Forschungs-stipendiaten, Berlin, Germany, 22. – 25. April, **2008**.
9
Poly-onio Substituted Pnictogen Centers and their Coordination Chemistry; 1st Winter School on Molecular Chemistry, Söll, Austria, 1. – 8. March, **2008**.
8
The Coordination Chemistry of Lewis Acidic Phosphorus; invited talk, University of Leiden, Leiden, Netherlands, 18. January, **2008**.
7
The Coordination Chemistry of Lewis Acidic Phosphorus; departmental seminar, Vrje Universiteit Amsterdam, Organic and Inorganic Chemistry, Amsterdam, Netherland, 17. January, **2008**.

2007

6
Ligand Stabilized Cationic Phosphorus Centers; University of Stellenbosch, Department of Chemistry, Matieland, South Africa, 25. April, **2007**.
5

Stabilized Cationic Phosphorus Centers; Westphalian Wilhelms- Universität Münster, Germany, 10. April, **2007**.

4

Nitrogen-Based HEDMs and catena-Phosphorus Cations; Mount Allison University, Department of Chemistry, Sackville, NB, Canada, 25 January, **2007**.

2006

3

High Energy Density Materials Based on Molecules with High Nitrogen Content and catena-Phosphorus Cations; University of Alberta, Department of Chemistry, Edmonton, Alberta, Canada, 18. December, **2006**.

2

Recent Advances in the Chemistry of Catenated Nitrogen and Phosphorus; Dalhousie University, Department of Chemistry, Canada, Halifax, 24. November, **2006**.

1

Catenated Acyclic and Cyclic Phosphorus Cations; Indian Institute of Science, Department of Inorganic and Physical Chemistry, Indien, Bangalore, 30. October, **2006**.