

195. Pereira, J. A.; Diniz, L. F.; Lehmann, C. W.; Carvalho Jr., C. S. Pharmaceutical Salts of Carvedilol with Increased Solubility as an Approach for Enhancing the Drug Action. *Crystal Growth & Design* **2024**, *24*, 6658-6682. doi: 10.1021/acs.cgd.4c00547.
194. Lindenbeck, L. M.; Dahlhaus, S.; Wende, L. M.; Beele, B. B.; Frauscher, M.; Schebb, N. H.; Lehmann, C. W.; Bornhorst, J.; Slabon, A.; Rodrigues, B. V. M. Breaking down lignin in gamma-valerolactone: advances into a bioelectrorefinery. *Green Chemistry Letters and Reviews* **2024**, *17*, 2390867. doi: 10.1080/17518253.2024.2390867.
193. Pinto, C. B.; Wanderley, A. B.; Tenorio, J. C.; Camps, I.; Lehmann, C. W.; Ellena, J. Structural Properties and Charge Redistribution in Cocrystallized Pharmaceutical Ingredients: A Comparative Experimental and Theoretical Charge Density Analysis. *Crystal Growth & Design* **2024**, *24*(13), 5614-5626. doi:10.1021/acs.cgd.4c00401.
192. Farmani, Z.; Vetere, A.; Pfänder, N.; Lehmann, C. W.; Schrader, W. Naturally Occurring Allotropes of Carbon. *Analytical Chemistry* **2024**, *96*(7), 2968-2974. doi:10.1021/acs.analchem.3c04662.
191. Kubens, L.; Truong, K.-N.; Lehmann, C. W.; Lützenkirchen-Hecht, D.; Bornhorst, J.; Mohr, F. The structure of Maneb: An important manganese-containing bis(dithiocarbamate) fungicide. *Chem. - Eur. J.* **2023**, *29*, e202301721. doi:10.1002/chem.202301721.
190. Piani, R.; Beele, B. B.; Rust, J.; Lehmann, C. W.; Mohr, F. Coinage Metal Complexes Containing Perfluorinated Carboxylates. *Chemistry* **2023**, *5*(2), 813-833. doi:10.3390/chemistry5020058.
189. Ammenhäuser, R.; Klein, P.; Schmid, E.; Streicher, S.; Vogelsang, J.; Lehmann, C. W.; Lupton, J. M.; Meskers, S. C. J.; Scherf, U. Circularly Polarized Light Probes Excited-State Delocalization in Rectangular Ladder-type Pentaphenyl Helices. *Angew. Chem., Int. Ed.* **2023**, *62*(2): e202211946. doi:10.1002/anie.202211946.
188. Hermesen, A.; Schoettl, J.; Hertel, F.; Cerullo, M.; Schlueter, A.; Lehmann, C. W.; Mayer, C.; Jaeger, M. Green Textile Materials for Surface Enhanced Raman Spectroscopy Identification of Pesticides Using a Raman Handheld Spectrometer for In-Field Detection. *Appl. Spectrosc.* **2022**, *76*(10), 1222-1233. doi:10.1177/00037028221097130.
187. Kuchar, J.; Reinhold, K.; Rösger, V.; Nöthling, N.; Lehmann, C. W.; Mohr, F. Synthesis, Reactivity and Antimicrobial Activity of a Series of 2-Arylamino-1,3-selenazoles. *Molecules* **2021**, *26*(24): 7695. doi:10.3390/molecules26247695.

186. Mokfi, M.; Rust, J.; Lehmann, C. W.; Mohr, F. Facile N9-Alkylation of Xanthine Derivatives and Their Use as Precursors for N-Heterocyclic Carbene Complexes. *Molecules* **2021**, *26*(12), 3705. doi:10.3390/molecules26123705.
185. Patzer, M.; Nöthling, N.; Goddard, R.; Lehmann, C. W. Absolute Configuration of In Situ Crystallized (+)- γ -Decalactone. *Chemistry* **2021**, *3*(2), 578-584. doi:10.3390/chemistry3020040.
184. Mell, B.; Rust, J.; Lehmann, C. W.; Berger, R. J. F.; Otte, D.; Ertl, M.; Monkowius, U.; Mohr, F. Arylamidoethyl-Functionalized Imidazolium Salts: Precursors for Dianionic [C,N,C]²⁻ Carbene Ligands at a Platinum Center. *Organometallics* **2021**, *40*(7), 890-898. doi:10.1021/acs.organomet.1c00013.
183. Kuchar, J.; Rust, J.; Lehmann, C. W.; Mohr, F. Silver(I) Complexes with Camphorsulfonato and Phosphine Ligands: Structural Diversity and Antibacterial Activity. *Inorg. Chem.* **2020**, *59*(15), 10557-10568. doi:10.1021/acs.inorgchem.0c00982.
182. Seidel, R. W.; Nöthling, N.; Goddard, R.; Lehmann, C. W. Structural Elucidation of Enantiopure and Racemic 2-Bromo-3-Methylbutyric Acid. *Chemistry* **2020**, *2*(3), 691-699. doi:10.3390/chemistry2030044.
181. Koch, L.; Rust, J.; Lehmann, C. W.; Mohr, F. Nickel(II) Phosphane- and N-heterocyclic Carbene Complexes with Tridentate, Dianionic [S,N,O]²⁻ Ligands. *Z. Anorg. Allg. Chem.* **2020**, *646*(10), 469-474. doi:10.1002/zaac.202000130.
180. Rodrigues, A. C. B.; Geisler, I. S.; Klein, P.; Pina, J.; Neuhaus, F. J. H.; Dreher, E.; Lehmann, C. W.; Scherf, U.; de Melo, J. S. S. Designing highly fluorescent, arylated poly(phenylene vinylene)s of intrinsic microporosity. *J. Mater. Chem. C* **2020**, *8*(7), 2248-2257. doi:10.1039/c9tc06028f.
179. Buchsteiner, M.; Martinez-Rodriguez, L.; Jerabek, P.; Pozo, I.; Patzer, M.; Nöthling, N.; Lehmann, C. W.; Fürstner, A. Catalytic Asymmetric Fluorination of Copper Carbene Complexes: Preparative Advances and a Mechanistic Rationale. *Chem. - Eur. J.* **2020**, *26*(11), 2509-2515. doi:10.1002/chem.202000081.
178. Kuchar, J.; Rust, J.; Lehmann, C. W.; Mohr, F. Acylseleno- and acylthiourea complexes of gold(I) N-heterocyclic carbenes. *New J. Chem.* **2019**, *43*(27), 10750-10754. doi:10.1039/C9NJ02229E.
177. Seidel, R. W.; Goddard, R.; Nöthling, N.; Lehmann, C. W. In situ cryocrystallization and solid-state structures of furfural and some derivatives. *CrystEngComm* **2019**, *21*(21), 3295-3303. doi:10.1039/c9ce00435a.
176. Cuenú, F.; Restrepo-Acevedo, A.; Isabel-Murillo, M.; Torres, J. E.; Moreno-Fuquen, R.; Abonia, R.; Kennedy, A. R.; Tenorio, J. C.; Lehmann, C. W. Synthesis, structural characterization, and theoretical studies of new pyrazole (E)-2- $\{[(5-(tert-butyl)-1H-pyrazol-3-$

- yl)imino]methyl}phenol and (E)-2-{[(1-(4-bromophenyl)-3-(tert-butyl)-1H-pyrazol-5-yl)imino]methyl}phenol. *J. Mol. Struct.* **2019**, *1184*(5), 59-71. doi:10.1016/j.molstruc.2019.02.004.
175. Clauberg, M. H.; Schmidt, D.; Rust, J.; Lehmann, C. W.; Arefyeva, N.; Wickleder, M.; Mohr, F. Nickel(II) NHC-complexes with tridentate, dianionic ligands. *J. Organomet. Chem.* **2019**, *881*(2), 45-50. doi:10.1016/j.jorganchem.2018.11.034.
 174. Kuchar, J.; Rust, J.; Lehmann, C. W.; Mohr, F. Copper(I) Complexes with Anionic Acylthio- or Acylselenourea Ligands and N-Heterocyclic Carbenes or Phosphanes. *Eur. J. Inorg. Chem.* **2018**, *2018*(48), 5215-5222. doi:10.1002/ejic.201801007.
 173. Wombacher, T.; Goddard, R.; Lehmann, C. W.; Schneider, J. J. Complete charge separation provoked by full cation encapsulation in the radical mono- and di-anions of 5,6:11,12-di-o-phenylene-tetracene. *Dalton Trans.* **2018**, *47*(32), 10874-10883. doi:10.1039/c8dt01285g.
 172. Gu, L.; Wolf, L. M.; Thiel, W.; Lehmann, C. W.; Alcarazo, M. Reductive Elimination of C₆F₅-C₆F₅ from Pd(II) Complexes: Influence of α -Dicationic Chelating Phosphines. *Organometallics* **2018**, *37*(5), 665-672. doi:10.1021/acs.organomet.7b00418.
 171. Krämer, R.; Nöthling, N.; Lehmann, C. W.; Mohr, F.; Tausch, M. W. E-Diazocine in Chemical Education: Synthesis, Structure, Photochromism and Thermal Stability. *ChemPhotoChem* **2018**, *2*(1), 6-11. doi:10.1002/cptc.201700124.
 170. Barrado, A. G.; Bayne, J. M.; Johnstone, T. C.; Lehmann, C. W.; Stephan, D. W.; Alcarazo, M. Dicationic phosphonium salts: Lewis acid initiators for the Mukaiyama-aldol reaction. *Dalton Trans.* **2017**, *46*(46), 16216-16227. doi: 10.1039/C7DT03197A.
 169. Wombacher, T.; Goddard, R.; Lehmann, C. W.; Schneider, J. J. Bowl shaped deformation in a planar aromatic polycycle upon reduction. Li and Na separated dianions of the aromatic polycycle 5,6:11,12-di-o-phenylene-tetracene. *Dalton Trans.* **2017**, *46*(41), 14122-14129. doi:10.1039/c7dt03039h.
 168. Seidel, R. W.; Goddard, R.; Nöthling, N.; Lehmann, C. W. Adiponitrile at 100 K. *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.* **2017**, *73*(11), 937-940. doi:10.1107/S2053229617014620.
 167. Wombacher, T.; Goddard, R.; Lehmann, C. W.; Schneider, J. J. Organometallic rubidium and cesium compounds of the 5,6:11,12-di-o-phenylene-tetracene dianion. *Chem. Commun.* **2017**, *53*(52), 7030-7033. doi:10.1039/c7cc02320k.
 166. Marzun, G.; Bönnemann, H.; Lehmann, C.; Spliethoff, B.; Weidenthaler, C.; Barcikowski, S. Role of Dissolved and Molecular Oxygen on Cu and PtCu Alloy Particle Structure during Laser Ablation Synthesis in Liquids. *ChemPhysChem* **2017**, *18*(9), 1175-1184. doi:10.1002/cphc.201601315.

165. Wang, A.; Wang, R.; Kalf, I.; Dreier, A.; Lehmann, C. W.; Englert, U. Charge-Assisted Halogen Bonds in Halogen-Substituted Pyridinium Salts: Experimental Electron Density. *Cryst. Growth Des.* **2017**, *17*(5), 2357-2364. doi:10.1021/acs.cgd.6b01562.
164. González-Fernández, E.; Nicholls, L. D. M.; Schaaf, L. D.; Farès, C.; Lehmann, C. W.; Alcarazo, M. Enantioselective Synthesis of [6]Carbohelicenes. *J. Am. Chem. Soc.* **2017**, *139*(4), 1428-1431. doi:10.1021/jacs.6b12443.
163. Dörner, M.; Rautiainen, J. M.; Rust, J.; Lehmann, C. W.; Mohr, F. Acylchalcogenourea Complexes of Silver(I). *Eur. J. Inorg. Chem.* **2017**, *2017*(4), 789-797. doi:10.1002/ejic.201601074.
162. Meyer, N.; Schucht, H.; Lehmann, C. W.; Weibert, B.; Winter, R. F.; Mohr, F. Multimetallic Gold–Iron Compounds Based on Aurated Ferrocenes. *Eur. J. Inorg. Chem.* **2017**, *2017*(2), 521-526. doi:10.1002/ejic.201601458.
161. Molter, A.; Rust, J.; Lehmann, C. W.; Mohr, F. A cyclopalladated phosphine selenide with an anionic acylselenourea ligand. *Inorg. Chem. Commun.* **2016**, *73*(11), 69-71. doi:10.1016/j.inoche.2016.09.016.
160. Seidel, R. W.; Goddard, R.; Nöthling, N.; Lehmann, C. W. Acetic anhydride at 100 K: the first crystal structure determination. *Acta Crystallogr., Sect. C: Struct. Chem.* **2016**, *72*(10), 753-757. doi:10.1107/S2053229616015047.
159. Blümel, M.; Chauhan, P.; Vermeeren, C.; Dreier, A.; Lehmann, C. W.; Enders, D. Asymmetric Organocatalytic Synthesis of Highly Functionalized Spirocyclohexane Indandiones via a One-Pot Michael/Michael/Aldol Sequence. *Synthesis* **2015**, *47*(22), 3618-3628. doi:10.1055/s-0035-1560072.
158. Großmann, D.; Dreier, A.; Lehmann, C. W.; Grünert, W. Methanol synthesis over Cu–ZnO aggregates supported on carbon nanotubes. *Appl. Catal., A* **2015**, *504*, 351-360. doi:10.1016/j.apcata.2015.02.031.
157. Farès, C.; Lehmann, C. W.; Schrader, W.; Schulze, P. Analytik in Deutschland-MPI für Kohlenforschung. In *GDCh Gesellschaft Deutscher Chemiker Fachgruppe Analytische Chemie Mitteilungsblatt 2/2015*; Vorstand der Fachgruppe Analytische Chemie in der Gesellschaft Deutscher Chemiker: Frankfurt/Main, 2015; pp. 5-8.
156. Samanta, S. K.; Preis, E.; Lehmann, C. W.; Goddard, R.; Bag, S.; Maiti, P. K.; Brunklaus, G.; Scherf, U. One-step synthesis of a cyclic 2,17-dioxo[3,3](4,4') biphenylophane and first preparation of a microporous polymer network from a macrocyclic precursor by cyclotrimerization. *Chem. Commun.* **2015**, *51*(43), 9046-9049. doi:10.1039/C5CC01654A.
155. Breuers, V.; Lehmann, C. W.; Frank, W. Unusual Bonding and Properties in Main Group Element Chemistry: Rational Synthesis, Characterization, and Experimental Electron Density

- Determination of Mixed-Valent Tetraphosphetes. *Chem. - Eur. J.* **2015**, *21*(12), 4596-4606. doi:10.1002/chem.201406131.
154. Großmann, D.; Dreier, A.; Lehmann, C. W.; Grünert, W. Encapsulation of copper and zinc oxide nanoparticles inside small diameter carbon nanotubes. *Microporous Mesoporous Mater.* **2015**, *202*, 189-197. doi:10.1016/j.micromeso.2014.09.057.
153. Jungbauer, S. H.; Bulfield, D.; Kniep, F.; Lehmann, C. W.; Herdtweck, E.; Huber, S. M. Toward Molecular Recognition: Three-Point Halogen Bonding in the Solid State and in Solution. *J. Am. Chem. Soc.* **2014**, *136*(48), 16740-16743. doi:10.1021/ja509705f.
152. Loh, C. C. J.; Chauhan, P.; Hack, D.; Lehmann, C. W.; Enders, D. Rapid Asymmetric Synthesis of Highly Functionalized Indanols via a Michael/Henry Organocascade with Submol% Squaramide Catalyst Loadings. *Adv. Synth. Catal.* **2014**, *356*(14-15), 3181-3186. doi:10.1002/adsc.201400499.
151. David, B.; Monkowius, U.; Rust, J.; Lehmann, C. W.; Hyzak, L.; Mohr, F. Gold(III) compounds containing a chelating, dicarbanionic ligand derived from 4,4'-di-tert-butylbiphenyl. *Dalton Trans.* **2014**, *43*(28), 11059-11066. doi:10.1039/C4DT00778F.
150. Patzsch, J.; Balog, I.; Krauß, P.; Lehmann, C. W.; Schneider, J. J. Synthesis, characterization and p-n type gas sensing behaviour of CuFeO₂ delafossite type inorganic wires using Fe and Cu complexes as single source molecular precursors. *RSC Adv.* **2014**, *4*(30), 15348-15355. doi:10.1039/c3ra47514j.
149. Li, F.; Bravo-Rodriguez, K.; Fernandez-Oliva, M.; Ramirez-Anguita, J. M.; Merz, K.; Winter, M.; Lehmann, C. W.; Sander, W.; Sanchez-Garcia, E. Stereochemistry Rules: A Single Stereocenter Changes the Conformation of a Cyclic Tetrapeptide. *J. Phys. Chem. B* **2013**, *117*(37), 10785-10791. doi:10.1021/jp406497r.
148. Wang, R.; Dols, T. S.; Lehmann, C. W.; Englert, U. Charge Density of Intra- and Intermolecular Halogen Contacts. *Z. Anorg. Allg. Chem.* **2013**, *639*(11), 1933-1939. doi:10.1002/zaac.201200493.
147. Grünert, W.; Gies, H.; Muhler, M.; Polarz, S.; Lehmann, C. W.; Grossmann, D.; van den Berg, M.; Tkachenko, O. P.; De Toni, A.; Sinev, I.; Bandyopadhyay, M.; Narkhede, V.; Dreier, A.; Klementiev, K. V.; Birkner, A.; Löffler, E. Metal-supported catalysts encapsulated in mesoporous solids: Challenges and opportunities of a model concept. *Phys. Status Solidi B* **2013**, *250*(6), 1081-1093. doi:10.1002/pssb.201248454.
146. Kozma, Á.; Petušková, J.; Lehmann, C. W.; Alcarazo, M. Synthesis, structure and reactivity of cyclopropenyl-1-ylidene stabilized S(II), Se(II) and Te(II) mono- and dications. *Chem. Commun.* **2013**, *49*, 4145-4147. doi:10.1039/C2CC36225B.

145. Sternberg, M.; Rust, J.; Lehmann, C. W.; Mohr, F. Synthesis and Metal Complexes of Thiourea Ligands Containing Carbohydrate-Derived Substituents. *Helv. Chim. Acta* **2013**, *96*(2), 280-288. doi:10.1002/hlca.201200386.
144. Molter, A.; Rust, J.; Lehmann, C. W.; Mohr, F. Synthesis and structural studies of some gold(I) complexes containing selenoureato ligands. *Tetrahedron* **2012**, *68*(51), 10586-10591. doi:10.1016/j.tet.2012.09.023.
143. Macabeo, A. P. G.; Lehmann, C. W.; Reiser, O. Diastereoselective Synthesis of Enantiopure γ -Butenolide-butyrolactones towards Pseudopterogorgia Lactone Furanocembranoid Substructures. *Synlett* **2012**, *23*(20), 2909-2912. doi:10.1055/s-0032-1317555.
142. Wang, R.; Dols, T.; Lehmann, C. W.; Englert, U. The halogen bond made visible: experimental charge density of a very short intermolecular Cl $\cdots$ Cl donor-acceptor contact. *Chem. Commun.* **2012**, *48*(54), 6830-6832. doi:10.1039/c2cc32647g.
141. Tüysüz, H.; Salabaş, E.-L.; Bill, E.; Bongard, H.; Spliethoff, B.; Lehmann, C. W.; Schüth, F. Synthesis of Hard Magnetic Ordered Mesoporous Co₃O₄/CoFe₂O₄ Nanocomposites. *Chem. Mater.* **2012**, *24*(13), 2493-2500. doi:10.1021/cm3005166.
140. Deiana, L.; Zhao, G.-L.; Leijonmarck, H.; Sun, J.; Lehmann, C. W.; Córdova, A. Direct Catalytic Asymmetric Synthesis of Pyrazolidine Derivatives. *ChemistryOpen* **2012**, *1*(3), 134-139. doi:10.1002/open.201200015.
139. Bock, D. A.; Lehmann, C. W. Chirality determination from X-ray powder data—diastereomeric co-crystals of mandelic acid and proline amide. *CrystEngComm* **2012**, *14*(5), 1534-1537. doi:10.1039/C2CE06427H.
138. Mohr, F.; Niesel, J.; Schatzschneider, U.; Lehmann, C. W. Synthesis, Structures, and CO Releasing Properties of two Tricarbonyl Manganese(I) Complexes. *Z. Anorg. Allg. Chem.* **2012**, *638*(3-4), 543-456. doi:10.1002/zaac.201100422.
137. Petušková, J.; Patil, M.; Holle, S.; Lehmann, C. W.; Thiel, W.; Alcarazo, M. Synthesis, Structure, and Reactivity of Carbene-Stabilized Phosphorus(III)-Centered Trications [L₃P]³⁺. *J. Am. Chem. Soc.* **2011**, *133*(51), 20758-20760. doi:10.1021/ja210223s.
136. Molter, A.; Rust, J.; Lehmann, C. W.; Deepa, G.; Chiba, P.; Mohr, F. Synthesis, structures and anti-malaria activity of some gold(I) phosphine complexes containing seleno- and thiosemicarbazonato ligands. *Dalton Trans.* **2011**, *40*(38), 9810-9820. doi:10.1039/C1DT10885A.
135. Lehmann, C. W. Crystal Structure Prediction-Dawn of a New Era. *Angew. Chem., Int. Ed.* **2011**, *50*(25), 5616-5617. doi:10.1002/anie.201101530.

134. Molter, A.; Rust, J.; Lehmann, C. W.; Mohr, F. Synthesis and structural studies of some selenoureas and their metal complexes. *Arkivoc* **2011**, (6), 10-17. doi:10.3998/ark.5550190.0012.602.
133. Itani, H.; Keil, P.; Lützenkirchen-Hecht, D.; Haake, U.; Bongard, H.; Dreier, A.; Lehmann, C. W.; Grundmeier, G. XANES studies of the formation of Ag-nanoparticles in LbL deposited polyelectrolyte thin films. *Surf. Coat. Technol.* **2010**, 205(7), 2113-2119. doi:10.1016/j.surfcoat.2010.08.104.
132. Ramos, L. A.; Ulic, S. E.; Romano, R. M.; Erben, M. F.; Lehmann, C. W.; Bernhardt, E.; Beckers, H.; Willner, H.; Della Védova, C. O. Vibrational Spectra, Crystal Structures, Constitutional and Rotational Isomerism of FC(O)SCN and FC(O)NCS. *Inorg. Chem.* **2010**, 49(23), 11142-11157. doi:10.1021/ic101741e.
131. Bock, D. A.; Lehmann, C. W.; List, B. Crystal structures of proline-derived enamines. *Proc. Natl. Acad. Sci. U. S. A.* **2010**, 107(48), 20636-20641. doi:10.1073/pnas.1006509107.
130. Seidel, G.; Lehmann, C. W.; Fürstner, A. Elementary Steps in Gold Catalysis: The Significance of gem-Diauration. *Angew. Chem., Int. Ed.* **2010**, 49(45), 8466-8470. doi:10.1002/anie.201003349.
129. Zeng, X.; Beckers, H.; Willner, H.; Lehmann, C. W. Bis(methanesulfonyl) Peroxide, CH₃S(O)₂OOS(O)₂CH₃: Spectroscopic, Structural, and Thermal Properties. *Z. Anorg. Allg. Chem.* **2010**, 636(13-14), 2447-2453. doi:10.1002/zaac.201000184.
128. Lu, A.-H.; Nitz, J.-J.; Comotti, M.; Weidenthaler, C.; Schlichte, K.; Lehmann, C. W.; Terasaki, O.; Schüth, F. Spatially and Size Selective Synthesis of Fe-Based Nanoparticles on Ordered Mesoporous Supports as Highly Active and Stable Catalysts for Ammonia Decomposition. *J. Am. Chem. Soc.* **2010**, 132(40), 14152-14162. doi:10.1021/ja105308e.
127. Pisiewicz, S.; Rust, J.; Lehmann, C. W.; Mohr, F. Cationic palladium(II), platinum(II) and ruthenium(II) complexes containing a chelating difluoro-substituted thiourea ligand. *Polyhedron* **2010**, 29(8), 1968-1972. doi:10.1016/j.poly.2010.03.010.
126. Werner, G.; Lehmann, C. W.; Butenschön, H. The First Anionic Thia-Fries Rearrangements at Ferrocene: Ready Access to Trifluoromethylsulfonyl-Substituted Hydroxyferrocenes and an Extremely High Interannular Stereoinduction between Cyclopentadienyl Ligands. *Adv. Synth. Catal.* **2010**, 352(8), 1345-1355. doi:10.1002/adsc.201000068.
125. Wang, R.; Lehmann, C. W.; Englert, U. Weak interactions in chain polymers [M(μ-X)₂L₂]_∞ (M = Zn, Cd; X = Cl, Br; L = substituted pyridine) – an electron density study. *Acta Crystallogr., Sect. B: Struct. Sci.* **2009**, 65(Part 5), 600-611. doi:10.1107/S0108768109028626.

124. Fuge, F.; Lehmann, C. W.; Rust, J.; Mohr, F. Bridge cleavage reactions of cyclopalladated nitrosamines with thioamides and related compounds. *J. Organomet. Chem.* **2009**, 694(15), 2395-2401. doi:10.1016/j.jorganchem.2009.03.026.
123. Alcarazo, M.; Lehmann, C. W.; Anoop, A.; Thiel, W.; Fürstner, A. Coordination chemistry at carbon. *Nat. Chem.* **2009**, 1(4), 295-301. doi:10.1038/nchem.248.
122. Meyer, N.; Lehmann, C. W.; Lee, T.-K.-M.; Rust, J.; Yam, V.-W.-W.; Mohr, F. Peri-Diaurated Naphthalene: Synthesis and Reactions of a New Class of Organogold(I) Complexes Containing Bridging, Dianionic Naphthalenediyl Ligands. *Organometallics* **2009**, 28(10), 2931-2934. doi:10.1021/om9002335.
121. Fürstner, A.; Alcarazo, M.; Radkowski, K.; Lehmann, C. W. Carbenes Stabilized by Ylides: Pushing the Limits. *Angew. Chem., Int. Ed.* **2008**, 47(43), 8302-8306. doi:10.1002/anie.200803200.
120. Bejan, D.; Willner, H.; Ignatiev, N.; Lehmann, C. W. Synthesis and Characterization of Bis[bis(pentafluoroethyl)phosphinyl]imides, $M^+N[(C_2F_5)_2P(O)]^{2-}$, $M = H, Na, K, Cs, Ag, Me_4N$. *Inorg. Chem.* **2008**, 47(19), 9085-9089. doi:10.1021/ic801088q.
119. Tüysüz, H.; Lehmann, C. W.; Bongard, H.; Tesche, B.; Schmidt, R.; Schüth, F. Direct Imaging of Surface Topology and Pore System of Ordered Mesoporous Silica (MCM-41, SBA-15, and KIT-6) and Nanocast Metal Oxides by High Resolution Scanning Electron Microscopy. *J. Am. Chem. Soc.* **2008**, 130(34), 11510-11517. doi:10.1021/ja803362s.
118. Fürstner, A.; Martin, R.; Krause, H.; Seidel, G.; Goddard, R.; Lehmann, C. W. Preparation, Structure, and Reactivity of Nonstabilized Organoiron Compounds. Implications for Iron-Catalyzed Cross Coupling Reactions. *J. Am. Chem. Soc.* **2008**, 130(27), 8773-8787. doi:10.1021/ja801466t.
117. Fürstner, A.; Alcarazo, M.; Goddard, R.; Lehmann, C. W. Coordination Chemistry of Ene-1,1-diamines and a Prototype "Carbodicarbene". *Angew. Chem., Int. Ed.* **2008**, 47(17), 3210-3214. doi:10.1002/anie.200705798.
116. Fürstner, A.; Majima, K.; Martin, R.; Krause, H.; Kattnig, E.; Goddard, R.; Lehmann, C. W. A Cheap Metal for a "Noble" Task: Preparative and Mechanistic Aspects of Cycloisomerization and Cycloaddition Reactions Catalyzed by Low-Valent Iron Complexes. *J. Am. Chem. Soc.* **2008**, 130(6), 1992-2004. doi:10.1021/ja0777180.
115. Fürstner, A.; De Souza, D.; Turet, L.; Fenster, M. D. B.; Parra-Rapado, L.; Wirtz, C.; Mynott, R.; Lehmann, C. W. Total Syntheses of the Actin-Binding Macrolides Latrunculin A, B, C, M, S and 16-epi-Latrunculin B. *Chem. - Eur. J.* **2007**, 13(1), 115-134. doi:10.1002/chem.200601135.

114. Fürstner, A.; Schlecker, A.; Lehmann, C. W. Facile formation of iodocyclobutenes by a ruthenium-catalyzed enyne cycloisomerization. *Chem. Commun.* **2007**, (41), 4277-4279. doi:10.1039/B708903A.
113. Fürstner, A.; Alcarazo, M.; Krause, H.; Lehmann, C. W. Effective Modulation of the Donor Properties of N-Heterocyclic Carbene Ligands by "Through-Space" Communication within a Planar Chiral Scaffold. *J. Am. Chem. Soc.* **2007**, 129(42), 12676-12677. doi:10.1021/ja076028t.
112. Küppers, T.; Bernhardt, E.; Eujen, R.; Willner, H.; Lehmann, C. W. [Me₃Si][R-CB₁₁F₁₁]—Synthesis and Properties. *Angew. Chem., Int. Ed.* **2007**, 46(33), 6346-6349. doi:10.1002/anie.200701136.
111. Küppers, T.; Bernhardt, E.; Lehmann, C. W.; Willner, H. Die Tetracyanoborsäuren H[B(CN)₄]·n H₂O, n = 0, 1, 2 (The Tetracyanoboronic Acids H[B(CN)₄]·n H₂O, n = 0, 1, 2). *Z. Anorg. Allg. Chem.* **2007**, 633(10), 1666-1672. doi:10.1002/zaac.200700097.
110. Geier, J.; Willner, H.; Lehmann, C. W.; Aubke, F. Formation of Hexacarbonylmanganese(I) Salts, [Mn(CO)₆]⁺X⁻, in Anhydrous HF. *Inorg. Chem.* **2007**, 46(17), 7210-7214. doi:10.1021/ic700798z.
109. Rodrigues, A.-S.; Kirillov, E.; Lehmann, C. W.; Roisnel, T.; Vuillemin, B.; Razavi, A.; Carpentier, J.-F. Allyl ansa-Lanthanidocenes: Single-Component, Single-Site Catalysts for Controlled Syndiospecific Styrene and Styrene–Ethylene (Co)Polymerization. *Chem. - Eur. J.* **2007**, 13(19), 5548-5565. doi:10.1002/chem.200601708.
108. Lehmann, C. W.; Stowasser, F. The Crystal Structure of Anhydrous β-Caffeine as Determined from X-ray Powder-Diffraction Data. *Chem. - Eur. J.* **2007**, 13(10), 2908-2911. doi:10.1002/chem.200600973.
107. Fürstner, A.; Radkowski, K.; Peters, H.; Seidel, G.; Wirtz, C.; Mynott, R.; Lehmann, C. W. Total Synthesis, Molecular Editing and Evaluation of a Tripyrrolic Natural Product: The Case of "Butylcycloheptylprodigiosin". *Chem. - Eur. J.* **2007**, 13(7), 1929-1945. doi:10.1002/chem.200601639.
106. Bernini, M. C.; Brusau, E. V.; Narda, G. E.; Echeverria, G. E.; Pozzi, C. G.; Punte, G.; Lehmann, C. W. The Effect of Hydrothermal and Non-Hydrothermal Synthesis on the Formation of Holmium(III) Succinate Hydrate Frameworks. *Eur. J. Inorg. Chem.* **2007**, (5), 684-693. doi:10.1002/ejic.200600860.
105. Lian, B.; Thomas, C. M.; Casagrande, O. L.; Lehmann, C. W.; Roisnel, T.; Carpentier, J.-F. Aluminum and Zinc Complexes Based on an Amino-Bis(pyrazolyl) Ligand: Synthesis, Structures, and Use in MMA and Lactide Polymerization. *Inorg. Chem.* **2007**, 46(1), 328-340. doi:10.1021/ic061749z.

104. Döpp, D.; Hassan, A. A.; Nour El-Din, A. M.; Mourad, A.-F.-E.; Lehmann, C. W.; Rust, J. Reaction of (1,3-dioxo-2,3-dihydro-1H-inden-2-ylidene)propanedinitrile with N-arylisindolines. *Tetrahedron* **2006**, 62(50), 11618-11626. doi:10.1016/j.tet.2006.09.070.
103. Bernhardt, E.; Finze, M.; Willner, H.; Lehmann, C. W.; Aubke, F. Salts of the Cobalt(I) Complexes $[\text{Co}(\text{CO})_5]^+$ and $[\text{Co}(\text{CO})_2(\text{NO})_2]^+$ and the Lewis Acid–Base Adduct $[\text{Co}_2(\text{CO})_7\text{CO}-\text{B}(\text{CF}_3)_3]$. *Chem. - Eur. J.* **2006**, 12(32), 8276-8283. doi:10.1002/chem.200600210.
102. Nehls, B. S.; Galbrecht, F.; Brauer, D. J.; Lehmann, C. W.; Scherf, U.; Farrell, T. Synthesis and characterization of a helical step-ladder polyarylene. *J. Polym. Sci., Part A: Polym. Chem.* **2006**, 44(19), 5533-5545. doi:10.1002/pola.21552.
101. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. $(\text{PPh}_3)_3\text{RhCNB}(\text{CF}_3)_3$ and $(\text{PPh}_3)_3\text{RhNCB}(\text{CF}_3)_3$: Isocyano- and Cyanoborate Complexes of Tris(triphenylphosphine)rhodium(I). *Organometallics* **2006**, 25(12), 3070-3075. doi:10.1021/om060135z.
100. Fürstner, A.; Alcarazo, M.; César, V.; Lehmann, C. W. Convenient, scalable and flexible method for the preparation of imidazolium salts with previously inaccessible substitution patterns. *Chem. Commun.* **2006**, (20), 2176-2178. doi:10.1039/B604236H.
99. Gausepohl, R.; Buskens, P.; Kleinen, J.; Bruckmann, A.; Lehmann, C. W.; Klankermayer, J.; Leitner, W. Highly Enantioselective Aza-Baylis–Hillman Reaction in a Chiral Reaction Medium. *Angew. Chem., Int. Ed.* **2006**, 45(22), 3689-3692. doi:10.1002/anie.200600327.
98. Lehmann, C. W. Frank H. Herbstein: Crystalline Molecular Complexes and Compounds, Vol. 1 and 2; Oxford University Press: Oxford, 2005; ISBN: 9780198526605. *Acta Crystallogr., Sect. B: Struct. Sci., Cryst. Eng. Mater.* **2006**, 62(2), 338-339.
97. Schneider, J. J.; Spickermann, D.; Lehmann, C. W.; Magull, J.; Krüger, H.-J.; Ensling, J.; Gütlisch, P. Decacyclene as Complexation Manifold: Synthesis, Structure and Properties of Its Fe_2 and Fe_4 Slipped Triple-Decker Complexes. *Chem. - Eur. J.* **2006**, 12(5), 1427-1435. doi:10.1002/chem.200500100.
96. Fürstner, A.; Krause, H.; Lehmann, C. W. Unusual Structure and Reactivity of a Homoleptic "Super-Ate" Complex of Iron: Implications for Grignard Additions, Cross-Coupling Reactions, and the Kharasch Deconjugation. *Angew. Chem., Int. Ed.* **2006**, 45(3), 440-444. doi:10.1002/anie.200502859.
95. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. Reactions of $(\text{CF}_3)_3\text{BCO}$ with Amines and Phosphines. *Inorg. Chem.* **2006**, 45(2), 669-678. doi:10.1021/ic0515305.
94. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. Haloacyl Complexes of Boron, $[(\text{CF}_3)_3\text{BC}(\text{O})\text{Hal}]^-$ (Hal=F, Cl, Br, I). *Chem. - Eur. J.* **2005**, 11(22), 6653-6665. doi:10.1002/chem.200500038.

93. Lavanant, L.; Toupet, L.; Lehmann, C. W.; Carpentier, J.-F. Group 4 Metal Complexes of Nitrogen-Bridged Dialkoxide Ligands: Synthesis, Structure, and Polymerization Activity Studies. *Organometallics* **2005**, *24*(23), 5620-5633. doi:10.1021/om0505817.
92. Nehls, B. S.; Galbrecht, F.; Bilge, A.; Brauer, D. J.; Lehmann, C. W.; Scherf, U.; Farrell, T. Synthesis and spectroscopy of an oligophenyl based cruciform with remarkable π - π assisted folding. *Org. Biomol. Chem.* **2005**, *3*(17), 3213-3219. doi:10.1039/B508125D.
91. Grevels, F.-W.; Jacke, J.; Goddard, R.; Lehmann, C. W.; Özkar, S.; Saldamli, S. Bis(trimethylsilyl)ethyne as a Two-Electron Alkyne Ligand in Group 6 Carbonylmetal(0) Complexes: Photochemical Syntheses and Comprehensive Characterization of $M(CO)_5(\eta^2-Me_3SiC:CSiMe_3)$ ($M = W, Mo, Cr$) and $trans-Mo(CO)_4(\eta^2-Me_3SiC:CSiMe_3)_2$. *Organometallics* **2005**, *24*(19), 4613-4623. doi:10.1021/om058016r.
90. Fürstner, A.; Davies, P. W.; Lehmann, C. W. Bidentate Ruthenium Vinylcarbene Catalysts Derived from Enyne Metathesis. *Organometallics* **2005**, *24*(16), 4065-4071. doi:10.1021/om050310w.
89. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. Cyano- and Isocyanotris(trifluoromethyl)borates: Syntheses, Spectroscopic Properties, and Solid State Structures of $K[(CF_3)_3BCN]$ and $K[(CF_3)_3BNC]$. *J. Am. Chem. Soc.* **2005**, *127*(30), 10712-10722. doi:10.1021/ja0516357.
88. Burstein, C.; Lehmann, C. W.; Glorius, F. Imidazo[1,5-a]pyridine-3-ylidenes - pyridine derived N-heterocyclic carbene ligands. *Tetrahedron* **2005**, *61*(26), 6207-6217. doi:10.1016/j.tet.2005.03.115.
87. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W.; Aubke, F. Homoleptic, σ -Bonded Octahedral Superelectrophilic Metal Carbonyl Cations of Iron(II), Ruthenium(II), and Osmium(II). Part 2: Syntheses and Characterizations of $[M(CO)_6][BF_4]_2$ ($M = Fe, Ru, Os$). *Inorg. Chem.* **2005**, *44*(12), 4206-4214. doi:10.1021/ic0482483.
86. Lian, B.; Lehmann, C. W.; Navarro, C.; Carpentier, J.-F. Model Studies of Methacrylate Chain Transfer Polymerization Mediated by Cationic Zirconocene tert-Butyl Enolate. *Organometallics* **2005**, *24*(10), 2466-2472. doi:10.1021/om050119m.
85. Kremzow, D.; Seidel, G.; Lehmann, C. W.; Fürstner, A. Diaminocarbene- and Fischer-Carbene Complexes of Palladium and Nickel by Oxidative Insertion: Preparation, Structure, and Catalytic Activity. *Chem. - Eur. J.* **2005**, *11*(6), 1833-1853. doi:10.1002/chem.200400928.
84. Lavanant, L.; Chou, T.-Y.; Chi, Y.; Lehmann, C. W.; Toupet, L.; Carpentier, J.-F. C_2 -Symmetric Fluorous Diamino-Dialkoxide Complexes of Early Transition Metals. *Organometallics* **2004**, *23*(23), 5450-5458. doi:10.1021/om0494364.

836. Altenhoff, G.; Goddard, R.; Lehmann, C. W.; Glorius, F. Sterically Demanding, Bioxazoline-Derived N-Heterocyclic Carbene Ligands with Restricted Flexibility for Catalysis. *J. Am. Chem. Soc.* **2004**, *126*(46), 15195-15201. doi:10.1021/ja045349r.
82. Kirillov, E.; Lehmann, C. W.; Razavi, A.; Carpentier, J.-F. Highly Syndiospecific Polymerization of Styrene Catalyzed by Allyl Lanthanide Complexes. *J. Am. Chem. Soc.* **2004**, *126*(39), 12240-12241. doi:10.1021/ja0455695.
81. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. $[(CF_3)_3BCP]^-$ and $[(CF_3)_3BCAs]^-$: Thermally Stable Phosphaethynyl and Arsaethynyl Complexes. *Angew. Chem., Int. Ed.* **2004**, *43*(32), 4160-4163. doi:10.1002/anie.200454034.
80. Glorius, F.; Spielkamp, N.; Holle, S.; Goddard, R.; Lehmann, C. W. Efficient Asymmetric Hydrogenation of Pyridines. *Angew. Chem., Int. Ed.* **2004**, *43*(21), 2850-2852. doi:10.1002/anie.200453942.
79. Kirillov, E.; Lehmann, C. W.; Razavi, A.; Carpentier, J.-F. Synthesis, Structure, and Polymerization Activity of Neutral Halide, Alkyl, and Hydrido Yttrium Complexes of Isopropylidene-Bridged Cyclopentadienyl-Fluorenyl Ligands. *Organometallics* **2004**, *23*(11), 2768-2777. doi:10.1021/om049902p.
78. Kirillov, E.; Lehmann, C. W.; Razavi, A.; Carpentier, J.-F. $[\eta^5:\eta^1-(3,6-tBu_2Flu)SiMe_2NtBu]Y(\eta^1-NC_5H_5)(py)_2$: A 1,4-Hydride-Addition Product to Pyridine that Provides Evidence for the First Fluorenyl(hydrido)metal (Group 3) Complex. *Eur. J. Inorg. Chem.* **2004**, *2004*(5), 943-945. doi:10.1002/ejic.200300837.
77. Cai, C.-X.; Amgoune, A.; Lehmann, C. W.; Carpentier, J.-F. Stereoselective ring-opening polymerization of racemic lactide using alkoxy-amino-bis(phenolate) group 3 metal complexes. *Chem. Commun.* **2004**, (3), 330-331. doi:10.1039/B314030J.
76. Prühs, S.; Lehmann, C. W.; Füstner, A. Preparation, Reactivity, and Structural Peculiarities of Hydroxyalkyl-Functionalized "Second-Generation" Ruthenium Carbene Complexes. *Organometallics* **2004**, *23*(2), 280-287. doi:10.1021/om0342006.
75. Saha, M. K.; Dey, D. K.; Choudhury, C. R.; Dey, S. K.; Mitra, S.; Lehmann, C. W. Isolation of a Novel Singly Oxo-bridged Low-spin Fe(II) Dimeric Complex: Synthesis, Crystal Structure, and Spectroscopic Study. *Chem. Lett.* **2003**, *32*(12), 1136-1137. doi:10.1246/cl.2003.1136.
74. Cai, C.-X.; Toupet, L.; Lehmann, C. W.; Carpentier, J.-F. Synthesis, structure and reactivity of new yttrium bis(dimethylsilyl)amido and bis(trimethylsilyl)methyl complexes of a tetradentate bis(phenoxide) ligand. *J. Organomet. Chem.* **2003**, *683*(1), 131-136. doi:10.1016/S0022-328X(03)00513-8.
73. Kirillov, E.; Toupet, L.; Lehmann, C. W.; Razavi, A.; Carpentier, J.-F. "Constrained geometry" Group 3 Metal Complexes of the Fluorenyl-Based Ligands $[(3,6-tBu_2Flu)SiR_2N^tBu]$: Synthesis,

- Structural Characterization, and Polymerization Activity. *Organometallics* **2003**, 22(22), 4467-4479. doi:10.1021/om0304210.
72. Giunta, D.; Hölscher, M.; Lehmann, C. W.; Mynott, R.; Wirtz, C.; Leitner, W. Room Temperature Activation of Aromatic C-H Bonds by Non-Classical Ruthenium Hydride Complexes Containing Carbene Ligands. *Adv. Synth. Catal.* **2003**, 345(9-10), 1139-1145. doi:10.1002/adsc.200303091.
 71. Kirillov, E.; Toupet, L.; Lehmann, C. W.; Razavi, A.; Kahlal, S.; Saillard, J.-Y.; Carpentier, J.-F. [(Cp-CMe₂-Flu)₂Ln]⁺[Li(ether)_n]⁺ (Ln = Y, La): Complexes with Unusual Coordination Modes of the Fluorenyl Ligand and the First Examples of Bis-Ansa Lanthanidocenes. *Organometallics* **2003**, 22(20), 4038-4046. doi:10.1021/om030181o.
 70. Altenhoff, G.; Goddard, R.; Lehmann, C. W.; Glorius, F. An N-Heterocyclic Carbene Ligand with Flexible Steric Bulk Allows Suzuki Cross-Coupling of Sterically Hindered Aryl Chlorides at Room Temperature. *Angew. Chem., Int. Ed.* **2003**, 42(31), 3690-3693. doi:10.1002/anie.200351325.
 69. Schneider, J. J.; Wolf, D.; Lehmann, C. W. Coordination studies of polycondensed π -perimeters: mono-, di- and tri-nuclear cobalt sandwich complexes of tetracene, benzo[a]pyrene, triphenylene, benzo[b]triphenylene and perylene. *Inorg. Chim. Acta* **2003**, 350, 625-632. doi:10.1016/S0020-1693(03)00109-9.
 68. Döpp, D.; Hassan, A. A.; Mourad, A.-F.-E.; Nour El-Din, A. M.; Angermund, K.; Krüger, C.; Lehmann, C. W.; Rust, J. New reaction of ethenetetracarbonitrile with N-arylisindolines. *Tetrahedron* **2003**, 59(27), 5073-5081. doi:10.1016/S0040-4020(03)00735-X.
 67. Bernhardt, E.; Finze, M.; Willner, H.; Lehmann, C. W.; Aubke, F. [Co(CO)₅][(CF₃)₃BF]: A Stable Salt of a Homoleptic Trigonal-Bipyramidal Metal-Carbonyl Cation. *Angew. Chem., Int. Ed.* **2003**, 42(18), 2077-2079. doi:10.1002/anie.200250780.
 66. Bradley, J. S.; Cheng, F.; Archibald, S. J.; Supplit, R.; Rovai, R.; Lehmann, C. W.; Krüger, C.; Lefebvre, F. Syntheses and structures of [(Me₃N)₃SiNHLi]₄, (C₄H₈O)Al[NHSi(NMe₂)₃]₃, ((Me₂N)₃SiNH)₃Al and Li(THF)₂⁺[(Me₂N)₃SiNH₄Al]⁻. *Dalton Trans.* **2003**, (9), 1846-1851. doi:10.1039/B209605F.
 65. Fürstner, A.; Seidel, G.; Kremzow, D.; Lehmann, C. W. Preparation of Metal-Imidazolidin-2-ylidene Complexes by Oxidative Addition. *Organometallics* **2003**, 22(5), 907-909. doi:10.1021/om021022s.
 64. Finze, M.; Bernhardt, E.; Willner, H.; Lehmann, C. W. The fluoroacyltris(trifluoromethyl)borate ion, [(CF₃)₃BC(O)F]⁻, a fluoroacylboron complex. *Angew. Chem., Int. Ed.* **2003**, 42(9), 1052-1055. doi:10.1002/anie.200390272.

63. Kaskel, S.; Lehmann, C. W.; Chaplais, G.; Schlichte, K.; Khanna, M. Synthesis, Structure, and Characterization of $[\text{RAl}(\mu\text{-NHet})(\mu\text{-NEt})_2\text{Si}(\text{NHet})_2]$ ($\text{R}=\text{Me}, \text{Et}$). *Eur. J. Inorg. Chem.* **2003**, (6), 1193-1196. doi:10.1002/ejic.200390154.
62. Fürstner, A.; Castanet, A.-S.; Radkowski, K.; Lehmann, C. W. Total Synthesis of (S)-(+)-Citireofuran by Ring Closing Alkyne Metathesis. *J. Org. Chem.* **2003**, 68(4), 1521-1528. doi:10.1021/jo026686q.
- 60.61. Bette, V.; Mortreux, A.; Lehmann, C. W.; Carpentier, J.-F. Direct Zn-diamine promoted reduction of C=O and C=N bonds by polymethylhydrosiloxane in methanol. *Chem. Commun.* **2003**, 2003(3), 332-333. doi:10.1039/B210144K.
59. Glorius, F.; Altenhoff, G.; Goddard, R.; Lehmann, C. W. Oxazolines as chiral building blocks for imidazolium salts and N-heterocyclic carbene ligands. *Chem. Commun.* **2002**, 2002(22), 2704-2705. doi:10.1039/B208045A.
58. Parvulescu, V. I.; Bönemann, H.; Parvulescu, V.; Endruschat, U.; Ruffinška, A.; Lehmann, C. W.; Tesche, B.; Poncelet, G. Erratum to "Preparation and characterisation of mesoporous zirconium oxide". *Appl. Catal., A* **2002**, 214(2), 273-287. doi:10.1016/S0926-860X(02)00134-5.
57. Dash, A. K.; Razavi, A.; Mortreux, A.; Lehmann, C. W.; Carpentier, J.-F. Amine Elimination Reactions between Homoleptic Silylamide Lanthanide Complexes and an Isopropylidene-Bridged Cyclopentadiene-Fluorene System. *Organometallics* **2002**, 21(15), 3238-3249. doi:10.1021/om0200398.
56. Fürstner, A.; Radkowski, K.; Wirtz, C.; Goddard, R.; Lehmann, C. W.; Mynott, R. Total Syntheses of the Phytotoxic Lactones Herbarumin I and II and a Synthesis-Based Solution of the Pinolidoxin Puzzle. *J. Am. Chem. Soc.* **2002**, 124(24), 7061-7069. doi:10.1021/ja020238i.
55. Fürstner, A.; Thiel, O. R.; Lehmann, C. W. Study Concerning the Effects of Chelation on the Structure and Catalytic Activity of Ruthenium Carbene Complexes. *Organometallics* **2002**, 21(2), 331-335. doi:10.1021/om0108503.
54. Fürstner, A.; Mathes, C.; Lehmann, C. W. Alkyne Metathesis: Development of a Novel Molybdenum-Based Catalyst System and Its Application to the Total Synthesis of Epothilone A and C. *Chem. - Eur. J.* **2001**, 7(24), 5299-5317. doi:10.1002/1521-3765(20011217)7:24<5299:AID-CHEM5299>3.0.CO;2-X.
53. Fürstner, A.; Krause, H.; Lehmann, C. W. Preparation, structure and catalytic properties of a binuclear Pd(0) complex with bridging silylene ligands. *Chem. Commun.* **2001**, 2001(22), 2372-2373. doi:10.1039/B108132B.
52. Fürstner, A.; Krause, H.; Ackermann, L.; Lehmann, C. W. N-Heterocyclic carbenes can coexist with alkenes and C-H acidic sites. *Chem. Commun.* **2001**, 2001(21), 2240-2241. doi:10.1039/B107238B.

51. Fürstner, A.; Ackermann, L.; Gabor, B.; Goddard, R.; Lehmann, C. W.; Mynott, R.; Stelzer, F.; Thiel, O. R. Comparative Investigation of Ruthenium-Based Metathesis Catalysts Bearing N-Heterocyclic Carbene (NHC) Ligands. *Chem. – Eur. J.* **2001**, 7(15), 3236-3253. doi:10.1002/1521-3765(20010803)7:15<3236:AID-CHEM3236>3.0.CO;2-S.
50. Marlow, F.; Leike, I.; Weidenthaler, C.; Lehmann, C. W.; Wilczok, U. Mesostructured Silica Fibers: Ring Structures in Reciprocal Space. *Adv. Mater.* **2001**, 13(5), 307-310. doi:10.1002/1521-4095(200103)13:5<307:AID-ADMA307>3.0.CO;2-P.
49. Fürstner, A.; Grabowski, J.; Lehmann, C. W.; Kataoka, T.; Nagai, K. Synthesis and Biological Evaluation of Nonylprodigiosin and Macrocyclic Prodigiosin Analogues. *ChemBioChem* **2001**, 2(1), 60-68. doi:10.1002/1439-7633(20010105)2:1<60:AID-CBIC60>3.0.CO;2-P.
48. Bogaert, S.; Chenal, T.; Mortreux, A.; Nowogrocki, G.; Lehmann, C. W.; Carpentier, J.-F. Neodymium(III) Complexes with Bulky ansa-Bis(cyclopentadienyl) Ligands: Synthesis and Use in Olefin Oligomerization. *Organometallics* **2001**, 20(1), 199-205. doi:10.1021/om0006357.
47. Fürstner, A.; Grela, K.; Mathes, C.; Lehmann, C. W. Novel and Flexible Entries into Prostaglandins and Analogues Based on Ring Closing Alkyne Metathesis or Alkyne Cross Metathesis. *J. Am. Chem. Soc.* **2000**, 122(48), 11799-11805. doi:10.1021/ja003119g.
46. Wulff, G.; Matussek, A.; Hanf, C.; Gladow, S.; Lehmann, C. W.; Goddard, R. Template-Induced, Stereoselective Cyclizations in the Cyclopolymerization of TADDOL-Dimethacrylate. *Angew. Chem., Int. Ed.* **2000**, 39(13), 2275-2277. doi:10.1002/1521-3773(20000703)39:13<2275:AID-ANIE2275>3.0.CO;2-H.
45. Schwarz, I.; Rust, J.; Lehmann, C. W.; Braun, M. Synthesis, crystal structure, and NMR investigation of methyl α,α -dimethyl acetate-substituted π -allylpalladium complexes. *J. Organomet. Chem.* **2000**, 605(1), 109-116. doi:10.1016/S0022-328X(00)00276-X.
44. Fürstner, A.; Liebl, M.; Lehmann, C. W.; Picquet, M.; Kunz, R.; Bruneau, C.; Touchard, D.; Dixneuf, P. H. Cationic Ruthenium Allenylidene Complexes as Catalysts for Ring Closing Olefin Metathesis. *Chem. – Eur. J.* **2000**, 6(10), 1847-1857. doi:10.1002/(SICI)1521-3765(20000515)6:10<1847:AID-CHEM1847>3.0.CO;2-1.
43. Bönnemann, H.; Endruschat, U.; Tesche, B.; Rufinska, A.; Lehmann, C. W.; Wagner, F. E.; Filoti, G.; Pârvulescu, V.; Pârvulescu, V. I. An SiO₂-Embedded Nanoscopic Pd/Au Alloy Colloid. *Eur. J. Inorg. Chem.* **2000**, 2000(5), 819-822. doi:10.1002/(SICI)1099-0682(200005)2000:5<819:AID-EJIC819>3.0.CO;2-F.
42. Lehmann, C. W.; Fürstner, A.; Müller, T. Macrocyclic substructure of tricolorin A – The first crystal structure of a resin glycoside. *Z. Kristallogr.* **2000**, 215(2), 114-117. doi:10.1524/zkri.2000.215.2.114.

41. Schneider, J. J.; Czap, N.; Spickermann, D.; Lehmann, C. W.; Fontani, M.; Laschi, F.; Zanello, P. Synthesis, structure and spectroelectrochemistry of bis(η^6 -1,4-tri-tert-butyl-benzene)chromium(0) and bis(η^5 -1,2,4-tri-tert-butyl-cyclopentadienyl)cobalt(II). Dia- and paramagnetic sandwich complexes derived from sterically highly demanding π -ligands. *J. Organomet. Chem.* **1999**, 590(1), 7-14. doi:10.1016/S0022-328X(99)00383-6.
40. Fürstner, A.; Mathes, C.; Lehmann, C. W. Mo[N(t-Bu)(Ar)]₃ Complexes As Catalyst Precursors: In Situ Activation and Application to Metathesis Reactions of Alkynes and Dienes. *J. Am. Chem. Soc.* **1999**, 121(40), 9453-9454. doi:10.1021/ja991340r.
39. Fürstner, A.; Grabowski, J.; Lehmann, C. W. Total Synthesis and Structural Refinement of the Cyclic Tripyrrole Pigment Nonylprodigiosin. *J. Org. Chem.* **1999**, 64(22), 8275-8280. doi:10.1021/jo991021i.
38. Grevels, F.-W.; Jacke, J.; Klotzbücher, W. E.; Mark, F.; Skibbe, V.; Schaffner, K.; Angermund, K.; Krüger, C.; Lehmann, C. W.; Özkar, S. Sequential Photosubstitution of Carbon Monoxide by (E)-Cyclooctene in Hexacarbonyltungsten: Structural Aspects, Multistep Photokinetics, and Quantum Yields. *Organometallics* **1999**, 18(17), 3278-3293. doi:10.1021/om990300t.
37. Goeta, A. E.; Thompson, L. K.; Sheppard, C. L.; Tandon, S. S.; Lehmann, C. W.; Cosier, J.; Webster, C.; Howard, J. A. K. [Cu₂{1,4-bis[(3-methyl-2-pyridyl)amino]phthalazine-H}(N₃)₃] at 40K. *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.* **1999**, 55(Part 8), 1243-1246. doi:10.1107/S0108270199005648.
36. Rovai, R.; Lehmann, C. W.; Bradley, J. S. Non-Oxide Sol-Gel Chemistry: Preparation from Tris(dialkylamino)silazanes of a Carbon-Free, Porous, Silicon Diimide Gel. *Angew. Chem., Int. Ed.* **1999**, 38(13-14), 2036-2038. doi:10.1002/(SICI)1521-3773(19990712)38:13/14<2036:AID-ANIE2036>3.0.CO;2-Q.
35. Schneider, J. J.; Denninger, U.; Goddard, R.; Krüger, C.; Lehmann, C. W. Synthese, Struktur und Reaktivität zweikerniger Pentamethyl-Cyclopentadien-Nickelkomplexe mit verbrückenden Butadienliganden. *J. Organomet. Chem.* **1999**, 582(2), 188-194. doi:10.1016/S0022-328X(99)00034-0.
34. Bruckmann, J.; Krüger, C.; Lehmann, C. W.; Leitner, W.; Rust, J.; Six, C. Ethylenebis(phosphonic acid). *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.* **1999**, 55(Part 4), 695-696. doi:10.1107/S0108270198016448.
33. Klein, J.; Lehmann, C. W.; Schmidt, H.-W.; Maier, W. F. Combinatorial Material Libraries on the Microgram Scale with an Example of Hydrothermal Synthesis. *Angew. Chem., Int. Ed.* **1998**, 37(24), 3369-3372. doi:10.1002/(SICI)1521-3773(19981231)37:24<3369:AID-ANIE3369>3.0.CO;2-H.
32. Moore, A. J.; Bryce, M. R.; Batsanov, A. S.; Heaton, J. N.; Lehmann, C. W.; Howard, J. A. K.; Robertson, N.; Underhill, A. E.; Perepichka, I. F. (N-Methylthiocarbamoyl)tetrathiafulvalene

- derivatives and their radical cations: synthetic and X-ray structural studies. *J. Mater. Chem.* **1998**, 8(7), 1541-1550. doi:10.1039/A802037J.
31. Davidson, M. G.; Goeta, A. E.; Howard, J. A. K.; Lehmann, C. W.; McIntyre, G. M.; Price, R. D. Low temperature neutron and X-ray diffraction study of imino(triphenyl)phosphorane. *J. Organomet. Chem.* **1998**, 550(1-2), 449-452. doi:10.1016/S0022-328X(97)00551-2.
30. Batsanov, A. S.; Crabtree, S. P.; Howard, J. A.; Lehmann, C. W.; Kilner, M. η^1 - and η^2 -benzene coordination in $[\text{Ag}(\text{C}_6\text{D}_6)_3\text{BF}_4]$. *J. Organomet. Chem.* **1998**, 550(1-2), 59-61. doi:10.1016/S0022-328X(97)00173-3.
29. Chan, M. C. W.; Cole, J. M.; Gibson, V. C.; Howard, J. A. K.; Lehmann, C. W.; Poole, A. D.; Siemeling, U. Half-sandwich imido complexes of niobium bearing alkyne, benzyne and benzyldiene ligands: relatives of the zirconocene family. *J. Chem. Soc., Dalton Trans.* **1998**, (1), 103-112. doi:10.1039/A705197B.
28. Byerley, A. L. J.; Kenwright, A. M.; Lehmann, C. W.; MacBride, J. A.; Steel, P. G. Acetyl Perchlorate Mediated Rearrangement of Tri-O-benzyl-D-glucal. Evidence for a 1,6-Hydride Shift. *J. Org. Chem.* **1998**, 63(1), 193-194. doi:10.1021/jo971400g.
27. Davidson, M. G.; Howard, J. A. K.; Lamb, S.; Lehmann, C. W. Synthesis and X-ray structures of tetralithium derivatives of tert-butylcalix[4]arene containing unique Li-O cores based on a square-pyramidal geometry. *Chem. Commun.* **1997**, 1997(17), 1607-1608. doi:10.1039/A702280H.
26. Copley, R. C. B.; Goeta, A.; Lehmann, C. W.; Cole, J. C.; Yufit, D. S.; Howard, J. A. K.; Archer, J. M. The Fddd four-circle diffractometer for single-crystal X-ray studies at temperatures down to 9 K. *J. Appl. Crystallogr.* **1997**, 30(Part 3), 413-417. doi:10.1107/S0021889897002525.
25. Barker, J.; Barr, D.; Barnett, N. D. R.; Clegg, W.; Cragg-Hine, I.; Davidson, M. G.; Davies, R. P.; Hodgson, S. M.; Howard, J. A. K.; Kilner, M.; Lehmann, C. W.; Lopez-Solera, I.; Mulvey, R. E.; Raithby, P. R.; Snaith, R. Lithiated amidines: Syntheses and structural characterisations. *J. Chem. Soc., Dalton Trans.* **1997**, (6), 951-955. doi:10.1039/a605849c.
24. Dickins, R. S.; Howard, J. A. K.; Lehmann, C. W.; Moloney, J.; Parker, D.; Peacock, R. D. Structural Rigidity and Luminescence of Chiral Lanthanide Tetraamide Complexes Based on 1,4,7,10-Tetraazacyclododecane. *Angew. Chem., Int. Ed.* **1997**, 36(5), 521-523. doi:10.1002/anie.199705211.
23. Moore, A. J.; Bryce, M. R.; Batsanov, A. S.; Lehmann, C. W.; Howard, J. A. K. New tetrathiafulvalene derivatives bearing thioamide substituents. *Synth. Met.* **1997**, 86(1-3), 1901-1902. doi:10.1016/S0379-6779(97)80956-3.

22. Chambers, R. D.; Gray, W. K.; Vaughan, J. F. S.; Korn, S. R.; Medebielle, M.; Batsanov, A. S.; Lehmann, C. W.; Howard, J. A. K. Reactions involving fluoride ion. Part 41. Synthesis of hexakis(trifluoromethyl)cyclopentadiene and derived cyclopentadienide salts. *J. Chem. Soc., Perkin Trans. 1* **1997**, 1997(2), 135-145. doi:10.1039/a604087j.
21. Borwick, S. J.; Howard, J. A. K.; Lehmann, C. W.; O'Hagan, D. 1-(4-Bromophenyl)-2-fluoroethanone (2,4-Dinitrophenyl)hydrazone Containing a Particularly Short Fluorine-Hydrogen Bond. *Acta Crystallogr., Sect. C: Cryst. Struct. Commun.* **1997**, 53, 124-126. doi:10.1107/S0108270196013133.
20. Kerkoc, P.; Venkataramanan, V.; Lochran, S.; Bailey, R. T.; Cruickshank, F. R.; Pugh, D.; Sherwood, J. N.; Moseley, R.; Goeta, A. E.; Lehmann, C. W.; Howard, J. A. K. Thermal properties of the nonlinear optical crystal zinc tris (thiourea) sulphate. *J. Appl. Phys.* **1996**, 80(12), 6666-6669. doi:10.1063/1.363791.
19. Bryce, M. R.; Chalton, M. A.; Batsanov, A. S.; Lehmann, C. W.; Howard, J. A. K. Nitroso derivatives of 1,3-dithiol-2-ylidene stabilised by intramolecular oxygen..sulfur interactions: Synthesis and X-ray crystal structures. *J. Chem. Soc., Perkin Trans. 2* **1996**, 1996(11), 2367-2371. doi:10.1039/p29960002367.
18. Chambers, R. D.; Hutchinson, J.; Batsanov, A. S.; Lehmann, C. W.; Naumov, D. Y. Elemental fluorine. Part 6. Fluorination of cyclic 1,3-diketones and related compounds. *J. Chem. Soc., Perkin Trans. 1* **1996**, 1996(18), 2271-2275. doi:10.1039/p19960002271.
17. Howard, S. T.; Hursthouse, M. B.; Lehmann, C. W.; Poyner, E. A. Experimental and theoretical determination of electronic properties in L-dopa. *Acta Crystallogr., Sect. B: Struct. Sci., Cryst. Eng. Mater.* **1995**, 51(3), 328-337. doi:10.1107/S0108768194011407.
16. Banister, A. J.; Gorell, I. B.; Lawrence, S. E.; Lehmann, C. W.; May, I.; Tate, G.; Blake, A. J.; Rawson, J. M. Novel bonding modes in metallo-dithiadiazolyl complexes: preparation and crystal structures of [Pt(SNCPhNS-S,S)(PPh₃)₂]·MeCN and [Pt₃(μ-SNCPhNS-S,S)₂(PPh₃)₄·2PhMe. *J. Chem. Soc., Chem. Commun.* **1994**, 1994(15), 1779-1780. doi:10.1039/c39940001779.
15. Batsanov, A. S.; Brooke, G. M.; Drury, C. J.; Howard, J. A. K.; Lehmann, C. W. The pyrolysis of 1,3,4,5,6,7,8-heptafluoro-2-naphthyl propynoate: remarkable products obtained via an internal Diels–Alder reaction. *J. Chem. Soc., Perkin Trans. 1* **1994**, 1994(14), 1991-1995. doi:10.1039/p19940001991.
14. Lehmann, A.; Luger, P.; Lehmann, C. W.; Ibberson, R. M. Oxalic Acid Dihydrate - an Accurate Low-Temperature Structural Study using High-Resolution Neutron Powder Diffraction. *Acta Crystallogr., Sect. B: Struct. Sci., Cryst. Eng. Mater.* **1994**, 50(Part 3), 344-348. doi:10.1107/S0108768193011656.

13. Busby, R.; Hursthouse, M. B.; Jarret, P. S.; Lehmann, C. W.; Malik, K. A.; Phillips, C. Dimorphs of [1,2-bis(diphenylphosphino)ethane]dichloronickel(II). *J. Chem. Soc., Dalton Trans.* **1993**, 1993(24), 3767-3770. doi:10.1039/dt9930003767.
12. Bridge, A. W.; Fenton, G.; Halley, F.; Hursthouse, M. B.; Lehmann, C. W.; Lythgoe, D. J. Synthesis of 1,3-disubstituted-pyrrolo[2,1-a]isoquinoline-2-carboxylic acids, esters and amides. *J. Chem. Soc., Perkin Trans. 1* **1993**, 1993(22), 2761-2772. doi:10.1039/P19930002761.
11. Bridge, A. W.; Hursthouse, M.; Lehmann, C. W.; Lythgoe, D. J.; Newton, C. G. Novel cycloadditions of isoquinoline Reissert salts. *J. Chem. Soc., Perkin Trans. 1* **1993**, 1993(16), 1839-1847. doi:10.1039/p19930001839.
10. Lehmann, C. W.; Karaulow, A.; Hursthouse, M. B. New Opportunities for Charge Density Studies Using the FAST Area Detector. *Z. Naturforsch., A: Phys. Sci.* **1993**, 48(1-2), 63-67. doi:10.1515/zna-1993-1-217.
9. Howard, S.; Hursthouse, M.; Lehmann, C. W.; Mallinson, P.; Frampton, C. Experimental and theoretical study of the charge density in 2-methyl-4-nitroaniline. *J. Chem. Phys.* **1992**, 97(8), 5616-5630. doi:10.1063/1.463769.
8. Stein, A.; Lehmann, C. W.; Luger, P. Crystal structure of cyclobutane at 117 K. *J. Am. Chem. Soc.* **1992**, 114(20), 7684-7687. doi:10.1021/ja00046a012.
7. Fuhrhop, J.-H.; Blumtritt, P.; Lehmann, C. W.; Luger, P. Supramolecular assemblies, a crystal structure, and a polymer of N-diacetylenic gluconamides. *J. Am. Chem. Soc.* **1991**, 113(19), 7437-7439. doi:10.1021/ja00019a060.
6. Mulzer, J.; Kattner, L.; Strecker, A. R.; Schröder, C.; Buschmann, J.; Lehmann, C. W.; Luger, P. Highly Felkin-Anh selective Hiyama additions of chiral allylic bromides to aldehydes. Application to the first synthesis of nephromopsinic acid and its enantiomer. *J. Am. Chem. Soc.* **1991**, 113(11), 4218-4229. doi:10.1021/ja00011a025.
5. Lehmann, C. W.; Luger, P. Crystal structure redetermination of the D,L-glyceraldehyde dimer: A comparison of synchrotron and conventional X-ray diffraction data. *Z. Kristallogr. - Cryst. Mater.* **1991**, 195(1-2), 49-63. doi:10.1524/zkri.1991.195.1-2.49.
4. Mulzer, J.; Kirstein, H. M.; Buschmann, J.; Lehmann, C. W.; Luger, P. Total synthesis of 9-dihydroerythronolide B derivatives and of erythronolide B. *J. Am. Chem. Soc.* **1991**, 113(3), 910-923. doi:10.1021/ja00003a026.
3. Lehmann, C. W.; Buschmann, J.; Luger, P.; Demoulin, C.; Fuhrhop, J.-H.; Eichhorn, K. Kristallstruktur einer racemischen Lipid-Doppelschicht bestimmt mit Synchrotronstrahlung. *Acta Crystallogr., Sect. B: Struct. Sci., Cryst. Eng. Mater.* **1990**, 46, 646-650. doi:10.1107/S010876819000492X.

2. Mahato, S. B.; Mandal, N. B.; Pal, A. K.; Maitra, S. K.; Lehmann, C. W.; Luger, P. A novel application of the Friedel-Crafts reaction to the synthesis of differently substituted polynuclear compounds. *J. Org. Chem.* **1988**, 53(23), 5554-5558. doi:10.1021/jo00258a034.
1. Jeffrey, G. A.; Buschmann, J.; Lehmann, C. W.; Luger, P. The structure of 1,4-cyclohexadiene at 153 K. *J. Am. Chem. Soc.* **1988**, 110(21), 7218-7219. doi:10.1021/ja00229a049.