

List of all Publications Prof. Dr. C.C. Lu

[73]

Varying Lewis Acidity, Covalency, and Halide Mobility to Govern Oxidative Addition Reactivity of Ni-Group 13 Bimetallic Complexes

Schwartz, T. M.; Zhu, H.; Graziano, B. J.; Schnakenburg, G.; Grimme, S.*; Lu, C. C.*
Organometallics **2024**, *in press*.

<https://doi.org/10.1021/acs.organomet.4c00299>

[72]

Comparing the reaction profiles of single iron catalytic sites in enzymes and in reticular frameworks for methane-to-methanol oxidation

Vitillo, J. G.; Lu, C. C.; Bhan, A.; Gagliardi, L.
Rep. Phys. Sci **2024**, *4*, 101422

<https://doi.org/10.1016/j.xcrp.2023.101422>

[71]

Structure and Site Evolution of Framework Ni Species in MIL-128 MOFs for Propylene Oligomerization Catalysis

Yeh, B.; Chheda, S.; Prinslow, S. D.; Hoffman, A. S.; Hong, J.; Perez-Aguilar, J. E.; Bare, S. R.; Lu, C. C.; Gagliardi, L.; Bhan, A.

J. Am. Phys. Chem. Soc. **2023**, *145*, 6, 3408-3418

<https://doi.org/10.1021/jacs.2c10551>

[70]

Light-Driven Hydrodefluorination of Electron-Rich Aryl Fluorides by an Anionic Rhodium-Gallium Photoredox Catalyst

Moore, J. T.; Dorantes, M. J.; Pengmei, Z.; Schwartz, T. M.; Schaffner, J.; Apps, S. L.; Gaggioli, C. A.; Das, U.; Gagliardi, L.; Blank, D. A.; Lu, C. C.* *Angew. Chem. Int. Ed.* **2022**, e202205575

<https://doi.org/10.1002/anie.202205575>

[69]

Toggleing the Z-Type Interaction Off-On in Nickel-Boron Dihydrogen and Anionic Hydride Complexes.

Prat, J. R.; Cammarota, R. C.; Graziano, B. J.; Moore, J. T.; Lu, C. C.*

Chem. Comm. **2022**, *58*, 8798-8801

<https://doi.org/10.1039/D2CC03219H>

[68]

One-electron Bonds in Copper-Aluminum and Copper-Gallium Complexes

Graziano, B. J.; Scott, T. R.; Vollmer, M. V.; Dorantes, M. J.; Young, Jr., V. G.; Bill, E.* Gagliardi, L.*; Lu, C. C.*
Chem. Sci. **2022**, *13*, 6525 - 6531

<https://doi.org/10.1039/D2SC01998A>

(Highlight: Tibbets, I. "First examples of odd-electron σ bonds for aluminium and gallium." *Chemistry World*, May **23**, **2022**. <https://www.chemistryworld.com/news/first-examples-of-odd-electron--bonds-for-aluminium-and-gallium/4015710.article>)

[67]

Site Densities, Rates, and Mechanism of Stable Ni/UiO-66 Ethylene Oligomerization Catalysts

Yeh, B.; Vicchio, S. P.; Chheda, S.; Zheng, J.; Schmid, J.; Löbber, L.; Bermejo-Deval, R.; Gutiérrez, O. Y.; Lercher, J. A.; Lu, C. C.; Neurock, M.; Getman, R. B.; Gagliardi, L.*; Bhan, A.*

J. Am. Chem. Soc. **2021**, *143*, 20274–20280

<https://doi.org/10.1021/jacs.1c09320>

[66]

Site Densities, Rates, and Mechanism of Stable Ni/UiO-66 Ethylene Oligomerization Catalysts

Taylor, M. G.; Nandy, A.; Lu, C. C.; Kulik, H. J.*

J. Phys. Chem. **2021**, *12*, 9812–9820

<https://doi.org/10.1021/acs.jpcllett.1c02852>

[65]

Beyond Radical Rebound: Methane Oxidation to Methanol Catalyzed by Iron Species in Metal–Organic Framework Nodes

Simons, M. C.; Prinslow, S. D.; Babucci, M.; Hoffman, A. S.; Hong, J.; Vitillo, J. G.; Bare, S. R.; Gates, B. C.; Lu, C. C.; Gagliardi, L.; Bhan, A.*

J. Am. Chem. Soc. **2021**, *143*, 12165-12174

<https://doi.org/10.1021/jacs.1c04766>

[64]

Cooperative Bond Activation and Facile Intramolecular Aryl Transfer of Nickel-Aluminum Pincer-type Complexes

Graziano, B. J.; Vollmer, M. V.; Lu, C. C*

Angew. Chem. Int. Ed. Engl. **2021**, *60*, 15087-15094

<http://dx.doi.org/10.1002/anie.202104050>

(Featured as a Hot article;highlight: A. J. Bissette, "[Nickel-aluminium pincer complexes undergo cooperative bond activation](#)." *Commun. Chem.* **2021**, *4*, 80.)

[63]

Influence of First and Second Coordination Environment on Structural Fe(II) Sites in MIL-101 for CH Bond Activation in Methane

Vitillo, J.*; Lu, C. C.; Cramer, C. J.; Bhan, A.; Gagliardi, L.*

ACS Catal. **2021**, *11*, 579-589

<https://doi.org/10.1021/acscatal.0c03906>

[62]

Bioinspired Nickel Complexes Supported by an Iron Metalloligand

Prat, J. R.; Gaggioli, C. A.; Cammarota, R. C.; Bill, E.; Gagliardi, L.; Lu, C. C*

Inorg. Chem. **2020**, *59*, 14251-14262

<https://doi.org/10.1021/acs.inorgchem.0c02041>

[61]

Bimetallic Iron-Tin Catalyst for N₂ to NH₃ and a Silyldiazenido Model Intermediate Dorantes, M. J. †; Moore, J. T. †; Bill, E.; Mienert, B.; Lu, C. C.*

Chem. Comm. **2020**, *56*, 11030-11033

<https://doi.org/10.1039/D0CC04563B> (Featured as a ChemComm HOT article.)

[60]

Catalytic Hydrogenolysis of Aryl C-F Bonds Using a Bimetallic Rhodium-Indium Complex

Moore, J.T.; Lu, C.C.*

J. Am. Chem. Soc. **2020**, *142*, 11641-11646

<https://doi.org/10.1021/jacs.0c04937>

[59]

Size Control of the MOF NU-1000 through Manipulation of the Modulator/Linker Competition

Webber, T. E.; Desai, S. P.; Combs, R. L.; Bingham, S.; Lu, C. C.; Penn, R. L.

Cryst. Growth Des. **2020**, *20*, 2965-2972.

<https://doi.org/10.1021/acs.cgd.9b01590>

[58]

Rare-Earth Supported Nickel Catalysts for Alkyne Semihydrogenation: Chemo- and Regioselectivity Impacted by the Lewis Acidity and Size of the Support

Ramirez, B. L.; Lu, C. C.*

J. Am. Chem. Soc. **2020**, *142*, 11, 5396-5407

<https://doi.org/10.2021/jacs.0c00905>

(Featured in the ACS Select virtual issue "JACS Early Career Investigators," which highlights outstanding work published by young investigators in JACS in 2020.)

[57]

Cobalt-Group 13 Complexes Catalyze CO₂ Hydrogenation via a Co(-I)/Co(I) Redox Cycle

Vollmer, M. V.†; Ye, J. †; Linehan, J. C.; Graziano, B. J.; Preston, A.; Wiedner, E. S.; Lu, C. C.

ACS Catal. **2020**, *10*, 2459-2470

<https://pubs.acs.org/doi/10.1021/acscatal.9b03534>

[56]

Structure, Dynamics, and Reactivity for Light Alkane Oxidation of Fe(II) Sites Situated in the Nodes of a Metal–Organic Framework

Simons, M. C.; Vitillo, J. G.; Babucci, M.; Hoffman, A. S.; Boubnov, A.; Beauvais, M. L.; Chen, Z.; Cramer, C. J.; Chapman, K. W.; Bare, S. R.; Gates, B. C.; Lu, C. C.; Gagliardi, L*

J. Am. Chem. Soc. **2019**, *141*, 18142-18151

<https://pubs.acs.org/doi/10.1021/jacs.9b08686>

[55]

Mechanistic Study on the Origin of the Trans Selectivity in Alkyne Semihydrogenation by a Heterobimetallic Rhodium–Gallium Catalyst in a Metal–Organic Framework

Desai, S. P., Ye, J.; Islamoglu, T.; Farha, O.; Lu, C. C.

Organometallics **2019**, *38*, 3466-3473

(Special issue on "Organometallic Chemistry within Metal-Organic Frameworks," edited by P.

Chirik, M. Dincă, F. Gabbaï, L. Schafer, and J. R. Long.)

<https://pubs.acs.org/doi/10.1021/acs.organomet.9b00331>

[54]

Multiple Bonds in Uranium–Transition Metal Complexes

Sharma, P.; Pahls, D. R.; Ramirez, B.; Lu, C. C.; Gagliardi, L.

Inorg. Chem. **2019**, *58*, 10139-10147

<https://pubs.acs.org/doi/10.1021/acs.inorgchem.9b01264>

[53]

Thermodynamic and kinetic studies of H₂ and N₂ binding to bimetallic nickel-group 13 complexes and neutron structure of a Ni(η^2 -H₂) adduct

Ryan C. Cammarota[†], Jing Xie J. [†], Samantha A. Burgess, Matthew V. Vollmer,^a Konstantinos D. Vogiatzis, Jingyun Ye, John C. Linehan, Aaron M. Appel, Christina Hoffmann, Xiaoping Wang, Victor G. Young, Jr.^a and Connie C. Lu^{*}

Chem. Sci. **2019**, *10*, 7029-7042

<https://pubs.rsc.org/en/content/articlelanding/2019/SC/C9SC02018G>

[52]

Enhanced Fe-Centered Redox Flexibility in Fe–Ti Heterobimetallic Complexes

Moore, J. T.[†] Chatterjee, S.[†]; Tarrago, M.[†]; Clouston, L. J.; Sproules, S.; Bill, E.; Bernales, V.; Gagliardi, L.; Ye, S.*; Lancaster, K. M.*; Lu, C. C.*

Inorganic. Chem. **2019**, *58*, 6199-6214

<https://pubs.acs.org/doi/10.1021/acs.inorgchem.9b00442>

[51]

Bimetallic Nickel-Lutetium Complexes: Tuning the Properties and Catalytic Hydrogenation Activity of the Ni Site by Varying the Lu Coordination Environment

Ramirez, B. L.; Sharma, P.; Eisenhart, R. J.; Gagliardi, L.; Lu, C. C.*

Chem. Sci., **2019**, *10*, 3375-3384

[50]

Reductive Disproportionation of CO₂ Mediated by Bimetallic Nickelate(–I)/Group 13 Complexes

Vollmer, M. V.; Cammarota, R. C.; Lu, C. C.*

Eur. J. Inorg. Chem. **2019**, 2140-2145

<http://dx.doi.org/10.1002/ejic.201801452>

[49]

Quantum Chemical Characterization of Structural Single Fe(II) Sites in MIL-Type Metal Organic Frameworks for Oxidation of Methane to Methanol and Ethane to Ethanol

Vitillo, J. G.*; Bhan, A.; Cramer, C. J.; Lu, C. C.; Gagliardi, L.*

ACS Catal. **2019**, *9*, 2870-2879

<http://dx.doi.org/10.1021/acscatal.8b04813>

[48]

Well-Defined Rhodium-Gallium Catalytic Sites in a Metal-Organic Framework: Promoter-Controlled Selectivity in Alkyne Semi-Hydrogenation

Desai, S. P.; Ye, J.; Zheng, J.; Ferrandon, M.; Weber, T. E.; Platero-Prats, A. E.; Duan, J.; Holley, P. G.; Camaioni, D.; Chapman, K. W.; Delferro, M.; Farha, O. K.; Fulton, J. L.; Gagliardi, L.; Lercher, J. A.; Penn, R. L.; Stein, A. S.; Lu, C. C.*

J. Am. Chem. Soc. **2018**, *140*, 15309-15318

<http://dx.doi.org/10.1002/anie.201803356>

[47]

Formal Nickelate(–I) Complexes Supported by Group 13 Ions

Vollmer, M. V.[†]; Xie, J.[†]; Cammarota, R. C.; Young, Jr, V. G.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Angew. Chem. Int. Ed. **2018**, *57*, 7815-7819

<http://dx.doi.org/10.1002/anie.201803356>

[46]

Rationalizing the Reactivity of Bimetallic Molecular Catalysts for CO₂ Hydrogenation

Ye, J.*; Cammarota, R. C.; Xie, J.; Vollmer, M. V.; Truhlar, D. G.; Cramer, C. J.; Lu, C. C.*; Gagliardi, L.

ACS Catal. **2018**, *8*, 4955-4968

<http://dx.doi.org/10.1021/acscatal.8b00803>

[45]

Role of a Modulator in the Synthesis of Phase-Pure NU-1000

Webber, T. E.; Liu, W.-G.; Desai, S. P.; Lu, C. C., Truhlar, D. G.; Penn, R. L.*

ACS Appl. Mater. Interfaces **2017**, *9*, 39342-39346

<http://dx.doi.org/10.1021/acscami.7b11348>

[44]

A Bimetallic Nickel-Gallium Complex Catalyzes CO₂ Hydrogenation via the Intermediacy of an Anionic d¹⁰ Nickel Hydride

Cammarota, R. C.; Vollmer, M. V.; Xie, J.; Ye, J.; Linehan, J. C.; Burgess, S. A.; Appel, A. M.; Gagliardi, L.; Lu, C. C.*

J. Am. Chem. Soc. **2017**, *139*, 14244-142

<http://dx.doi.org/10.1021/jacs.7b07911>

[43]

Stable Dihydrogen Complexes of Cobalt(-I) Suggest an Inverse trans-Influence of Lewis Acidic Group 13 Metalloligands

Vollmer, M. V.; Xie, J.; Lu, C. C.*

J. Am. Chem. Soc. **2017**, *139*, 6570-6573

<http://dx.doi.org/10.1021/jacs.7b02870>

(Featured in the ACS Select virtual issue "JACS Young Investigators," which highlights outstanding work published by young investigators in JACS in 2017. <https://pubs.acs.org/page/jacsat/vi/young-investigator2018.html>)

[42]

Assembly of Dicobalt and Cobalt-Aluminum Oxide Clusters on Metal-Organic Framework and Nanocast Silica Supports

Farad. Discuss. **2017**, *201*, 287-302

<http://dx.doi.org/10.1039/C7FD00055C>

[41]

Structure and Dynamic NMR Behavior of Rhodium Complexes Supported by Lewis Acidic Group 13 Metallatranes

Moore, J. T.; Smith, N. E.; Lu, C. C.*

Dalton Trans. **2017**, *46*, 5689-5701

<http://dx.doi.org/10.1039/C6DT04769F> (invited article)

[40]

Redox Pairs of Diiron and Iron-Cobalt Complexes with High-Spin Ground States

Miller, D. L.; Siedschlag, R. B.; Clouston, L. J.; Young, V.G., Jr.; Chen, Y.-S.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2016**, *55*, 9725-9735

<http://dx.doi.org/10.1021/acs.inorgchem.6b01487>

[39]

Installing Heterobimetallic Cobalt-Aluminum Single Sites on a Metal Organic Framework Support

Thompson, A. B.; Pahls, D. R.; Bernales, V.; Gallington, L. C.; Malonzo, C. D.; Webber, T.; Tereniak, S. J.; Wang, T. C.; Desai, S. P.; Li, Z.; Kim, I. S.; Gagliardi, L.; Penn, R. L.; Chapman, K. W.; Stein, A.; Farha, O. K.; Hupp, J. T.; Martinson, A. B. F.; Lu, C. C.*

Chem. Mater. **2016**, *28*, 6753-6762

<http://dx.doi.org/10.1021/acs.chemmater.6b03244>

[38]

Leveraging Molecular Metal-Support Interactions for H₂ and N₂ Activation

Cammarota, R. C.*; Clouston, L. J.; Lu, C. C.*

Coord. Chem. Rev. **2017**, *334*, 100-111

<http://dx.doi.org/10.1016/j.ccr.2016.06.014>

[37]

Thermal Stabilization of Metal–Organic Framework-Derived Single-Site Catalytic Clusters through Nanocasting

Malonzo, C. D.; Shaker, S. M.; Ren, L.; Prinslow, S. D.; Platero-Prats, A. E.; Gallington, L. C.; Borycz, J.; Thompson, A. B.; Wang, T. C.; Farha, O. K.; Hupp, J. T.; Lu, C. C.; Chapman, K. W.; Myers, J. C.; Penn, R. L.; Gagliardi, L.; Tsapatsis, M.; Stein, A.*

J. Am. Chem. Soc. **2016**, *138*, 2739-2748

<http://dx.doi.org/10.1021/jacs.5b12688>

[36]

Heterobimetallic Complexes that Bond Vanadium to Iron, Cobalt, and Nickel

Clouston, L. J.; Bernales, V.; Cammarota, R. C.; Carlson, R. K.; Bill, E.; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2015**, *54*, 11669–11679

<http://dx.doi.org/10.1021/acs.inorgchem.5b01631>

[35]

Influence of Copper Oxidation State on the Bonding and Electronic Structure of Cobalt-Copper Complexes

Eisenhart, R. J.; Carlson, R. K.; Clouston, L. J.; Young, V. G., Jr.; Cheng, Y.-S.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2015**, *54*, 11330-11338

<http://dx.doi.org/10.1021/acs.inorgchem.5b01950>

[34]

Configuring Bonds Between First-Row Transition Metals

Eisenhart, R. J.; Clouston, L. J.; Lu, C. C.*

Acc. Chem. Res. **2015**, 2885–2894. (invited article)

<http://dx.doi.org/10.1021/acs.accounts.5b00336>

[33]

Tuning Nickel with Lewis Acidic Group 13 Metalloligands for Catalytic Olefin Hydrogenation

Cammarota, R. C.; Lu, C. C.*

J. Am. Chem. Soc. **2015**, 137, 12486–12489

<http://dx.doi.org/10.1021/jacs.5b08313>

[32]

Can Multiconfigurational Self-Consistent Field Theory and Density Functional Theory Correctly Predict the Ground State of Metal-Metal Bonded Complexes?

Carlson, R. K.; Odoh, S. O.; Tereniak, S. J.; Lu, C. C.; Gagliardi, L.*

J. Chem. Theory Comput. **2015**, 11, 4093–4101

<http://dx.doi.org/10.1021/acs.jctc.5b00412>

[31]

Pushing the Limits of Delta Bonding in Metal-Chromium Complexes with Redox Changes and Metal Swapping

Eisenhart, R. J.†; Rudd, P. A.†; Planas, N.; Boyce, D. W.; Carlson, R. K.; Tolman, W. B.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2015**, 54, 7579–7592

<http://dx.doi.org/10.1021/acs.jctc.5b00412>

[30]

Bimetallic Cobalt-Dinitrogen Complexes: Impact of the Supporting Metal on N₂ Activation

Clouston, L. J.; Bernales, V.; Carlson, R. K.; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2015**, 54, 9263–9270

<http://dx.doi.org/10.1021/acs.inorgchem.5b00983> (invited article)

[29]

Catalytic Silylation of Dinitrogen with a Dicobalt Complex

Siedschlag, R. B.; Bernales, V.; Vogiatzis, K. D.; Planas, N.; Clouston, L. J.; Bill, E.; Gagliardi, L.*; Lu, C. C.*

J. Am. Chem. Soc. **2015**, 137, 4638–4641

<http://dx.doi.org/10.1021/jacs.5b01445>

(Highlight: Williams, S. G. “Two Cobalts Are Better Than One.” *Frontiers in Energy Research*, Autumn 2015. A newsletter of the US Department of Energy, Energy Research Frontier

Centers. <http://www.energyfrontier.us/newsletter/201509/two-cobalts-are-better-one>

[28]

Synthesis and Redox Reactivity of a Phosphine-ligated Dichromium Paddlewheel

Eisenhart, R. J.; Carlson, R. K.; Boyle, K. M.; Gagliardi, L.; Lu, C. C.*

Inorg. Chim. Acta **2015**, 424, 336–344

<http://dx.doi.org/10.1016/j.ica.2014.10.013> (invited article)

[27]

Photochemical Route to Actinide-Transition Metal Bonds: Synthesis, Characterization and Reactivity of a Series of Thorium and Uranium Heterobimetallic Complexes

Ward, A. L.; Lukens, W. W.; Lu, C. C.; Arnold, J.*

J. Am. Chem. Soc. **2014**, 136, 3647–3654

<http://dx.doi.org/10.1021/ja413192m>

[26]

Role of the Metal in the Bonding and Properties of Bimetallic Complexes with Metal-Metal Interactions Involving Manganese, Iron, and Cobalt

Tereniak, S. J.; Carlson, R. K.; Clouston, L. J.; Young, V. G., Jr.; Bill, E.*; Maurice, R.; Cheng, Y.-S.; Kim, H. J.; Gagliardi, L.*; Lu, C. C.*

Am. Chem. Soc. **2014**, 136, 1842–1855

<http://dx.doi.org/10.1021/ja409016w>

(Cover of the *JACS* issue on February 5, 2014 and *JACS* spotlight. Annual highlight of the Advanced Photon Source, Argonne National Laboratory. Bradley, D. “Investigating the Ties that Bind: Catalysts with Paired-Up Metals,” *APS Science*, **2014**, ANL-15/03, ISSN 1931-5007, pp. 80–81.)

[25]

Systematic Variation of Metal-Metal Bond Order in Metal-Chromium Complexes

Clouston, L. J.; Siedschlag, R. B.; Rudd, P. A.; Planas, N.; Hu, S.; Miller, A. D.; Gagliardi, L.; Lu, C. C.*

J. Am. Chem. Soc. **2013**, 135, 13142–13148

<http://dx.doi.org/10.1021/ja406506m>

(Highlight: Ritter, S. K. “Family of Multiply Bonded Bimetallic Complexes Grows.” *Chemical & Engineering News* 2013, 91(35), 43. <http://cen.acs.org/articles/91/i35/Family-Multiply-Bonded-Bimetallic-Complexes.html>)

[24]

Mixed-Valent Dicobalt and Iron-Cobalt Complexes with High-Spin Configurations and Short Metal-Metal Bonds

Zall, C. M.; Clouston, L. J.; Young, V. G., Jr.; Ding, K.; Kim, H. J.; Zherebetsky, D.; Cheng, Y.-S.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2013**, *52*, 9216-9228

<http://dx.doi.org/10.1021/ic400292g>

[23]

CO₂ reduction by Fe(I): solvent control of C-O cleavage versus C-C coupling

Saouma, C. T.; Lu, C. C.; Day, M.; Peters, J. C.*

Chem. Sci. **2013**, *4*, 4042-4051

<http://dx.doi.org/10.1039/C3SC51262B>

[22]

Dinitrogen Activation at Iron and Cobalt Metallalumtranes

Rudd, P. A.; Planas, N.; Bill, E.; Gagliardi, L.; Lu, C. C.*

Eur. J. Inorg. Chem. **2013**, 3898-3906. (invited article)

<http://dx.doi.org/10.1002/ejic.201300272>

[21]

Multiple Metal-Metal Bonds in Iron-Chromium Complexes

Rudd, P. A.; Liu, S.; Planas, N.; Bill, E.; Gagliardi, L.*; Lu, C. C.*

Angew. Chem. Int. Ed. Engl. **2013**, *52*, 4449-4452

<http://dx.doi.org/10.1002/anie.201208686>

(Highlight: Doherty, R. "Heterometallic complexes: Meeting of the metals." *Nature Chemistry*, **2013**, *5*, 358-359. <http://dx.doi.org/10.1038/nchem.1638>)

[20]

Mononuclear Five- and Six-Coordinate Iron Hydrazido and Hydrazine Species

Saouma, C. T.; Lu, C. C.; Peters, J. C.*

Inorg. Chem. **2012**, *51*, 10043-10054

<http://dx.doi.org/10.1021/ic301704f>

[19]

One-electron Ni(II/I) Redox Couple: Potential Role in Hydrogen Activation and Production

Tereniak, S. J.; Marlier, E. E.; Lu, C. C.*

Dalton Trans. **2012**, *41*, 7862-7865 (New Talent: Americas issue)

<http://dx.doi.org/10.1039/C2DT30176H>

[18]

Encapsulating Zinc(II) Within a Hydrophobic Cavity

Miller, D. L.; Lu, C. C.*

Dalton Trans. **2012**, *41*, 7464-7466

<http://dx.doi.org/10.1039/C2DT30529A>

[17]

A Combined Spectroscopic and Computational Study of a High-spin S = 7/2 Diron Complex with a Short Iron-Iron Bond

Zall, C. M.; Zherebetsky, D.; Dzubak, A. L.; Bill, E.*; Gagliardi, L.*; Lu, C. C.*

Inorg. Chem. **2012**, *51*, 728-736

<http://dx.doi.org/10.1021/ic202384b>

[16]

Metal-Alane Adducts with Zero-Valent Nickel, Cobalt, and Iron

Rudd, P. A.; Liu, S.; Gagliardi, L.; Lu, C. C.*

J. Am. Chem. Soc. **2011**, *133*, 20724-20727

<http://dx.doi.org/10.1021/ja2099744>

[15]

First-Row Transition-Metal Chloride Complexes of the Wide Bite-Angle Diphosphine ⁱPrDPDBPhos and Reactivity Studies of Monovalent Nickel

Marlier, E. E.; Tereniak, S. J.; Ding, K.; Milliken, J. E.; Lu, C. C.*

Inorg. Chem. **2011**, *50*, 9290-9299

<http://dx.doi.org/10.1021/ic200589e>

[14]

Study of the Conformationally Flexible, Wide Bite-Angle Diphosphine 4,6-Bis(3-diisopropylphosphinophenyl)dibenzofuran in Rhodium(I) and Palladium(II) Coordination Complexes

Ding, K.; Miller, D. L.; Young, Jr., V. G.; Lu, C. C.*

Inorg. Chem. **2011**, *50*, 2545-2552

<http://dx.doi.org/10.1021/ic102373w>

[13]

Accessing the different redox states of a-aminopyridines within cobalt complexes

Lu, C. C.*; Weyhermüller, T.; Bill, E.; Wieghardt, K.*

Inorg. Chem. **2009**, *48*, 6055-606

<http://dx.doi.org/10.1021/ic9004328>

[12]

Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Investigation of the Diradical Bis(a-aminopyridinato)zinc Complex

van Gastel, M.*; Lu, C. C.; Wieghardt, K.; Lubitz, W

Inorg. Chem. **2009**, *48*, 2626-2632

<http://dx.doi.org/10.1021/ic802131w>

[11]

An Electron-Transfer Series of High-valent Chromium Complexes with Redox Non-innocent, Non-heme Ligands

Lu, C. C.*; DeBeer George, S.; Weyhermüller, T.; Bill, E.; Bothe, E.; Wieghardt, K.*

Angew. Chem. Int. Ed. Engl. **2008**, *47*, 6384-6387

<http://dx.doi.org/10.1002/anie.200800669>

[10]

Neutral Bis(a-aminopyridine)metal Complexes of the First-row Transition Ions (Cr, Mn, Fe, Co, Ni, Zn) and Their Monocationic Analogues: Mixed Valency Involving a Redox Non-innocent Ligand System

Lu, C. C.; Bill, E.; Weyhermüller, T.; Bothe, E.; Wieghardt, K.*

J. Am. Chem. Soc. **2008**, *130*, 3181-3197

<http://dx.doi.org/10.1021/ja710663n>

[9]

Bis(a-Diimine)iron Complexes: Electronic Structure Determination by Spectroscopy and Broken Symmetry Density Functional Theoretical Calculations

Muresan, N.; Lu, C. C.; Ghosh, M.; Peters, J. C.; Abe, M.; Henling, L. M.; Weyhermüller, T.; Bill, E.; Wieghardt, K.*

Inorg. Chem. **2008**, *47*, 4579-4590

<http://dx.doi.org/10.1021/ic7022693>

[8]

The Monoanionic p-Radical Redox State of a-Iminoketones in Bis(ligand)metal Complexes of Nickel and Cobalt

Lu, C. C.; Bill, E.; Weyhermüller, T.; Bothe, E.; Wieghardt, K.*

Inorg. Chem. **2007**, *46*, 7880-7889

<http://dx.doi.org/10.1021/ic7008094>

[7]

Fe(I)-mediated Reductive Cleavage and Coupling of CO₂: An Fe^{II}(m-O, m-CO)Fe^{II} Core

Lu, C. C.; Saouma, C. T.; Day, M. W.; Peters, J. C.*

J. Am. Chem. Soc. **2007**, *129*, 4-5

<http://dx.doi.org/10.1021/ja065524z>

[6]

On the Feasibility of N₂ Fixation Mediated via a Single Site Fe^I/Fe^{IV} Redox Cycle: Spectroscopic Studies of Fe^I(N₂)Fe^I, Fe^{IV}N, and Related Species

Hendrich, M.P.*; Gunderson, W.; Behan, R. K.; Green, M. T.*; Mehn, M.P.; Betley, T. A.; Lu, C. C.; Peters, J. C.*

Proc. Natl. Acad. Sci. U.S.A. **2006**, *103*, 17107-17112

<http://dx.doi.org/10.1073/pnas.0604402103>

[5]

Pseudotetrahedral manganese complexes supported by the anionic tris(phosphino)borate ligand [PhBPⁱPr₃]

Lu, C. C.; Peters, J. C.*

Inorg. Chem. **2006**, *45*, 8597-8607

<http://dx.doi.org/10.1021/ic060735q>

[4]

Synthetic, Structural, and Mechanistic Aspects of an Amine Activation Process Mediated at a Zwitterionic Pd(II) Center

Lu, C. C.; Peters, J. C.*

J. Am. Chem. Soc. **2004**, *126*, 15818-15832

<http://dx.doi.org/10.1021/ja046415s>

[3]

Synthesis, Characterization, and Polymerization Behavior of Zirconium and Hafnium Complexes that Contain Asymmetric Diamido-N-Donor Ligands

Tonzetich, Z. J.; Lu, C. C.; Schrock, R. R.*; Hock, A. S.

Organometallics **2004**, *23*, 4362-4372

<http://dx.doi.org/10.1021/om040043e>

[2]

Catalytic Copolymerization of CO and Ethylene at a Charge Neutral Palladium(II) Zwitterion

Lu, C. C.; Peters, J. C.*

J. Am. Chem. Soc. **2002**, *124*, 5272-5273

<http://dx.doi.org/10.1021/ja017011s>

[1]

Elimination of Amyloid Neurotoxicity

Blanchard, B. J.; Hiniker, A. E.; Lu, C. C.; Margolin, Y.; Yu, A. S.; Ingram, V. M.*

J. Alzheimer's Disease **2000**, *2*, 137-149

Edited Book Chapters

[2]

Lu, C. C.*; Prinslow, S. D. "Group 9 transition metal-dinitrogen complexes." In *Transition Metal-Dinitrogen Complexes: Preparation and Reactivity*; Nishibayashi, Y., Ed.;

Wiley-VCH: Weinheim, Germany, **2019**, pp. 337- 402

<https://doi.org/10.1002/9783527344260.ch7>

[1]

Tereniak, S. J.; Lu, C. C.* "Group 8 metal-metal bonds." In *Molecular Metal-Metal Bonds. Compounds, Synthesis, Properties*; Liddle, S. T., Ed.; *Wiley-VCH*: Weinheim, Germany, **2015**, pp. 225-278

<http://doi.org/10.1002/9783527673353>

Non-refereed Journal Articles or Essays

[5]

Lu, C. C.* and Szymczak, N. K.* "Transition Metal Groups 7 and 8: An Introduction (*Volume 5*)."

In *Comprehensive Coordination Chemistry III*; Constable, E., Parkin, G., Que, L, Eds.;

Elsevier **2021**

<https://doi.org/10.1016/B978-0-08-102688-5.00110-0>

[4]

Gabbaï, F. P.*; Jones, C.*; Lu, C. C.* "Spotlighting Main Group Elements in Polynuclear Complexes."

Chem. Sci. **2021**, *12*, 1961-1963

<https://doi.org/10.1039/D1SC90011K> (Editorial for a themed collection)

[3]

Berry, J. F.*; Lu, C. C.* "Metal–Metal Bonds: From Fundamentals to Applications."

Inorg. Chem., **2017**, *56*, 7577– 7581

<http://dx.doi.org/10.1021/acs.inorgchem.7b01330> (Editorial of an ACS Select virtual issue:

<http://pubs.acs.org/page/vi/metal-metal-bonds> top 1 most read paper in Inorganic Chemistry in **2017**)

[2]

Gladysz, J. A.*; Bedford, R. B.; Fujita, M.; Gabbaï, F. P.; Goldberg, K. I.; Holland, P. L.; Kiplinger, J. L.; Krische, M. J.; Louie, J.; Lu, C. C.; Norton, J. R.; Petrukhina, M. A.; Ren, T.; Stahl, S. S.; Tilley, T. D.; Webster, C. E.;

White, M. C.; Whiteker, G. T. "*Organometallics Roundtable 2013–2014*."

Organometallics **2014**, *33*, 1505- 1527

<http://dx.doi.org/10.1021/om500253z>

[1]

Lu, C. C.*; Meyer, K.* "Small-Molecule Activation by Reactive Metal Complexes." *Eur. J.*

Inorg. Chem. **2013**, 3731-3732

<http://dx.doi.org/10.1002/ejic.201300825>