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Transition metal compounds with S/N-functionalized NHC ligands: structures, redox properties and electrocatalytic activity

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Citation

Luo, S. (2017, October 17). *Transition metal compounds with S/N-functionalized NHC ligands: structures, redox properties and electrocatalytic activity*. Retrieved from <https://hdl.handle.net/1887/54936>

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Author: Luo, S.

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Issue Date: 2017-10-17

List of publications

‘Composition and Structure about Several Tourmaline Minerals’

S. Luo, X. Wu, Q. Hu, J. Wang, C. Liu, Y. Sun, *China Ceramics*, 2010, 3-7.

‘Structural characterization of a new decavanadate compound with organic molecules and inorganic ions’

S. Luo, X. Wu, Q. Hu, J. Wang, C. Liu, Y. Sun. *J. Struct. Chem.* 2012, 53, 915-920.

‘Synthesis, structure, and luminescent properties of 2 novel 5-chlorhydroxybenzoate-imidazole metal-organic complexes’

H. Chen, S. Luo, X. Wu, Y. Wang, B. Hu, C. Hu, G. Huang, Q. Du, *Turk. J. Chem.* 2014, 38, 79-87.

‘Nickel Complexes of Pyridine-Functionalized N-Heterocyclic Carbenes: Syntheses, Structures, and Activity in Electrocatalytic Hydrogen Production’

S. Luo, M.A. Siegler, E. Bouwman, *Eur. J. Inorg. Chem.* 2016, 4693-4700.

‘Dinuclear nickel complexes of thiolate-functionalized carbene ligands and their electrochemical properties’

S. Luo, M.A. Siegler, E. Bouwman, submitted.

‘Pyridyl pendant arms of Ni-NHC complexes as proton shuttles in HER reaction’

S. Luo, D.F. Bruggeman, M.A. Siegler, and E. Bouwman, submitted.

‘Nickel complexes with pyridine-amide functionalized carbene ligands: synthesis, structure and electrocatalytic activity on HER’

S. Luo, M.A. Siegler, E. Bouwman, manuscript in preparation.

‘Cobalt(III) complexes with tridentate/tetradentate carbene ligands: synthesis, structure and electrocatalytic properties’

S. Luo, M.A. Siegler, E. Bouwman, manuscript in preparation.

Curriculum Vitae

Siyuan Luo was born in Wuhan, Hubei Province, China on August 21st, 1989. In 2007, she graduated from Wuhan No.3 high school in Wuhan, China. After the university entrance exam in 2007, she was admitted to the China University of Geosciences (Wuhan), where she studied with a major of materials chemistry from 2007 to 2011. In 2011, she obtained her BSc degree on the thesis entitled “Synthesis and Structural Characterization of a New Decavanadate Compound with Organic Molecules and Inorganic Ions” under the supervision of Prof. X. Wu. In 2011, she was admitted to the successive postgraduate and doctoral program in the major of rock and mineral materials under the supervision of Prof. X. Wu in the China University of Geosciences (Wuhan).

In September 2013, she started her PhD research in the group Metals in Catalysis, Biomimetics & Inorganic Materials at Leiden University under the supervision of Prof. dr. E. Bouwman, with a scholarship from the Chinese Scholarship Counsel. During her PhD studies, she supervised one MSc and two BSc students, and she participated in the Leiden University PhD courses “Time management”, “Effective communication”, “On being a scientist”, “Communication in Science”, as well as the HRSMC summer school on “Advanced Metal-Organic Chemistry and Catalysis” in Deurne, the Netherlands in 2014. She successfully applied for a travel grant with the Leiden University Fund / Kroese-Duijsters Fonds (2016) for attending the ICCC conference.

Parts of the results reported in this thesis were presented at meetings and conferences:

- Advanced Metal-Organic Chemistry and Catalysis (AMOCC) summer school in Deurne, 2014, poster presentation.
- Netherlands’ Chemistry and Catalysis Conference (NCCC) XVI in Noordwijkerhout, 2015, poster presentation.
- 42nd International Conference on Coordination Chemistry (ICCC) in Brest, France, 2016, poster presentation. (6110/07-06-20161L, Kroese - Duijsters)
- Reedijk (LIC) symposium in Leiden, 2016, poster presentation.
- HRSMC symposium in Leiden, 2016, poster presentation.
- NWO Chains conference in Veldhoven, 2016, oral presentation.

