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## Educational Background

- 2010-2015  
2010-2015 Korea University (Ph.D Inorganic chemistry)
- 2007-2010  
Korea University (M.S Inorganic chemistry)
- 2002-2007  
Ajou University (B.S Chemistry)

## Major Careers

- 2020-present: Department of Chemistry, Hallym University, Assistant Professor
- 2017-2020: Department of Chemistry, Sejong University, Assistant Professor
- 2016-2017: Korea Basic Science Institute at Korea University, Research Professor
- 2015-2016: Department of Chemistry, Korea University, Research Professor
- 2010 Department of Chemistry, University of California, Berkeley, Visiting Scholar

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## Publications

- 46. Song, J. H.; Lee, G.; Lee, W. R.\*; Lim, K.S.\* "Novel Heterometallic Lanthanide Complex Using Cobalt Tripod Ligands: Synthesis, Crystal Structure Analysis, and Magnetic and Proton Conduction Behavior", Bull. Korean Chem. Soc. 2020, 41, 1044.
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- 41. Kim, H.; Lee, H. Y.; Kang, D. W.; Kang, M.; Choe, J. H.; Lee, W. R.; Hong, C. S. "Control of the Metal Composition in Bimetallic Mg/Zn(dobpdc) Constructed from a One-Dimensional Zn-based Template", *Inorg. Chem.* 2019, 58, 14107.
- 40. Song, J. H.; Kim, D. W.; Kang, D. W.; Lee, W. R.; Hong, C. S. "Humidity-triggered single-crystal-to-single-crystal structural transformations in a Zn(II) coordination polymer displaying unusual activation energy change in proton conductivity", *Chem. Commun.* 2019, 55, 9713.
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- 38. Kang, D. W.; Kang, M.; Moon, M.; Kim, H.; Eom, S.; Choe, J. H.; Lee, W. R.; Hong, C. S. "PDMS-Coated Hypercrosslinked Porous Organic Polymers Modified via Double Postsynthetic Acidifications for Ammonia Capture", *Chem. Sci.* 2018, 9, 6871.
- 37. Shee, N. K., Hong, C. S., Lee, W. R., Kim, H. J. "Crystal structure of {(E)-2-[{(3,4-dimethoxyphenylimino)methyl]phenolato}N,O1}bis[2-(pyridin-2-yl)phenyl-κ<sup>2</sup>C1,N]iridium(III) dichloromethane disolvate", *Acta Cryst.* 2018, E74, 1107.
- 36. Lee, W. R.; Kim, J. E.; Lee, S. J.; Kang, M.; Kang, D. W.; Lee, H. Y.; Hiremath, V.; Seo, J. G.; Jin, H.; Moon, D.; Cho, M.; Jung, Y.; Hong, C. S. "Diamine-Functionalization of a Metal-Organic Framework Adsorbent for Superb Carbon Dioxide Adsorption and Desorption Properties", *ChemSusChem* 2018, 11, 1694.
- 35. Kim, I.†; Ko, K. C. †; Lee, W. R. †; Cho, J. † († contributed equally to this work); Moon, J. H.; Moon, D.; Sharma, A.; Lee, J. Y.; Kim, J. S; Kim, S. "Calix[n]triazoles and Related Conformational Studies", *Org. Lett.* 2017, 19, 5509
- 34. Lim, K. S.†; Lee, W. R.† († contributed equally to this work); Lee, H. G.; Kang, D. W.; Song, J. H.; Hilgar, J.; Rinehart, D. J.; Moon, D. H.; Hong, C. S. "Control of Interchain Antiferromagnetic Coupling in Porous Co(II)-based Metal-Organic Frameworks by Tuning Aromatic Linker Length: How Far Does

Magnetic Interaction Propagate?", Inorg. Chem. 2017, 56, 7443.

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- 27. Park, M. K.; Lim, K. S.; Park, J. H.; Song, J. H.; Kang, D. W.; Lee, W. R.; Hong, C. S. "Two- and three-dimensional Zn(II) coordination polymers constructed from mixed ligand systems: interpenetration, structural transformation, and sensing behavior", CrystEngComm 2016, 18, 4349. (Invited paper)
- 26. Yeon, J. S.; Lee, W. R.; Kim, N. W.; Jo, H.; Lee, H.; Song, J. H.; Lim, K. S.; Kang, D. W.; Seo, J. G.; Moon, D.; Wiers, B.; Hong, C. S. "Homodiamine-Functionalized Metal-Organic Frameworks with MOF-74 Type Extended Structure for Superior Selectivity of CO<sub>2</sub> over N<sub>2</sub>", J. Mater. Chem. A 2015, 3, 19177.
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- 16. Lee, W. R.; Hwang, S. Y.; Ryu, D. W.; Lim, K. S.; Han, S. S.; Moon, D.; Choi, J.; Hong, C. S. "Diamine-Functionalized Metal-Organic Framework: Exceptionally High CO<sub>2</sub> Capacities from Ambient Air and Flue Gas, Ultrafast CO<sub>2</sub> Uptake Rate, and Adsorption Mechanism", *Energy Environ. Sci.* 2014, 7, 744.
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Containing Schiff-Base Ligand and Its Unusually High Catecholase-like Activity", Bull. Kor. Chem. Soc. 2013, 34, 2731.

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- 5. Koo, B. H.; Lim, K. S.; Ryu, D. W.; Lee, W. R.; Koh, E. K.; Hong, C. S. "Unique Tetranuclear Er(III)

Cluster Exhibiting Field-Induced Single-Molecule Magnetism", Chem. Commun. 2012, 48, 2519.

- 4. Yoon, J. H.; Lee, W. R.; Ryu, D. W.; Lee, J. W.; Yoon, S. W.; Suh, B. J.; Kim, H. C.; Hong, C. S. "End-To-End Azide-Bridged Mn(III) Chain Compounds: Field-Induced Magnetic Phase Transitions and Variation of T<sub>c</sub> To 38 K Depending on Side Groups of Schiff Bases", Inorg. Chem. 2011, 50, 10777.
- 3. Ryu, D. W.; Lee, W. R.; Lee, J. W.; Yoon, J. H.; Kim, H. C.; Koh, E. K.; Hong, C. S. "Magnetic Metal-Organic Framework Constructed from a Paramagnetic Metalloligand Exhibiting a Significant Sorption and Reversible Magnetic Conversions", Chem. Commun. 2010, 46, 8779.
- 2. Lee, W. R.; Ryu, D. W.; Lee, J. W.; Yoon, J. H.; Koh, E. K.; Hong, C. S. "Microporous Lanthanide-Organic Frameworks with Open Metal Sites: Unexpected Sorption Propensity and Multifunctional Properties", Inorg. Chem. 2010, 49, 4723.
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