

# Wonwoo Nam

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## Education

California State University, Los Angeles	B.S.	1985	Chemistry
University of California, Los Angeles	Ph.D.	1990	Chemistry

## Professional Career

Postdoctoral Fellow	UCLA	1990 – 1991
Assistant Professor	Hong Ik University	1991 – 1994
Associate Professor	Ewha Womans University	1994 – 2000
Professor	Ewha Womans University	2000 – present
Director	Center for Biomimetic Systems	2003 – present
Distinguished Professor	Ewha Womans University	2005 – present

## Current Activities as an Editorial Board Member in International Journals

Associate Editor: *Chemical Science*, 2011 – 2013  
Editorial Advisory Board; *Accounts of Chemical Research*, 2006 – 2011  
Editorial Board; *Bioinorganic Reaction Mechanism*, 2011 – 2015  
Editorial Advisory Board; *Inorganic Chemistry*, 2010 – 2012  
Editorial Advisory Board; *Dalton Transactions*, 2009 – 2012  
Editorial Advisory Board; *Journal of Inorganic Biochemistry*, 2007 – 2013  
Editorial Advisory Board; *Chemistry An Asian Journal*, 2010 – 2013  
Editorial Advisory Board; *Journal of Biological Inorganic Chemistry*, 2003 – 2011  
Fellow, Korean Academy of Science and Technology, 2002 – present  
Council Member, Society of Biological Inorganic Chemistry, 2007 – present

## Awards

Named as a Role Model Scientist, Korea Science Foundation, 2008  
The 3<sup>rd</sup> Kyeong-Am Academic Award, 2007  
The 5<sup>th</sup> DuPont Science and Technology Award, 2006  
Korean Chemical Society Award, 2006  
Monthly Best Scientist Award by Ministry of Science and Technology of Korea, 2005  
The 1<sup>st</sup> Ewha Academic Award, 2005  
Best Research Paper by Korean Federation of Science and Technology Societies, 2004  
Korean Chemical Society Award in Division of Inorganic Chemistry, 2003  
Excellent Research Award at Ewha Womans University, 2001

Young Scientist Award (President Award), 2000

### **Major Symposium Activity (2000 – Present)**

Organizer, ChemComm Symposium, 2010 (Seoul, Korea and Osaka, Japan)

Co-Organizer, Pacifichem 2010, 2010 (Hawaii, USA)

Organizer, AsBIC-IV, 2008 (Jeju Island, Korea)

Organizer, 1<sup>st</sup> International Bioinorganic Chemistry Symposium, 2006 (Seoul, Korea)

Organizer, Pacifichem 2005, 2005 (Hawaii, USA)

Organizer, 11<sup>th</sup> Asian Chemical Congress, 2005 (Seoul, Korea)

International Advisory Committee, Asian Biological Inorganic Chemistry, 2003 - present

International Advisory Committee, Asian Coordination Chemistry Conference, 2007- present

International Advisory Committee, Activation of Dioxygen and Homogeneous Catalytic Oxidation, 1999 - present

Co-Organizer, Pacifichem 2000, 2000 (Hawaii, USA)

### **Invited Professorship**

1. University of Hong Kong, Honorary Professor, 2007 – 2012

2. Nanjing University, Concurrent Professor, 2007 – present

3. Osaka University, Distinguished Scientist in COE Program, 2007 – present

### **Some Selected Papers**

(1) Nam, W. *Acc. Chem. Res.* **2007**, *40*, 465; Guest editorial in a special issue on “Dioxygen Activation by Metalloenzymes and Models”.

(2) Nam, W. *Acc. Chem. Res.* **2007**, *40*, 522-531.

(3) Fukuzumi, S.; Kishi, T.; Kotani, H.; Lee, Y.-M.; Nam, W. *Nature Chem.* **2011**, *3*, 38-41.

(4) Fukuzumi, S.; Morimoto, Y.; Kotani, H.; Naumov, P.; Lee, Y.-M.; Nam, W. *Nature Chem.* **2010**, *2*, 756-759.

(5) Cho, J.; Sarangi, R.; Annaraj, J.; Kim, S. Y.; Kubo, M.; Ogura, T.; Solomon, E. I.; Nam, W. *Nature Chem.* **2009**, *1*, 568-572.

(6) Bukowski, M. R.; Koehntop, K. D.; Stubna, A.; Bominaar, E. L.; Halfen, J. A.; Münck, E.; Nam, W.; Que, L., Jr. *Science* **2005**, *310*, 1000-1002.

(7) Rohde, J.-U.; In, J.-H.; Lim, M. H.; Brennessel, W. W.; Bukowski, M. R.; Stubna, A.; Münck, E.; Nam, W.; Que, L., Jr. *Science* **2003**, *299*, 1037-1039.

### **Research Interest**

1. Biomimetic studies of heme and nonheme iron enzymes

2. Metal-dioxygen intermediates in dioxygen activation chemistry

3. Water oxidation

4. Sensors for metal ions in biological systems

## List of Publications (2000 – 2011)

1. Shunichi Fukuzumi\*; Takashi Kishi; Hiroaki Kotani; Yong-Min Lee; Wonwoo Nam\* “Highly Efficient Photocatalytic Oxygenation Reactions Using Water as an Oxygen Source” *Nature Chemistry* **2011**, 3(1), 38-41. (SCI, ISSN No. 1755-4330)
2. Ritimukta Sarangi\*; Jaeheung Cho; Wonwoo Nam; Edward I. Solomon\* “XAS and DFT Investigation of Mononuclear Cobalt(III) Peroxo Complexes: Electronic Control of the Geometric Structure in CoO<sub>2</sub> versus NiO<sub>2</sub> Systems” *Inorg. Chem.* **2011**, 50, 614-620. (SCI, ISSN No. 0020-1669)
3. Yuma Morimoto; Hiroaki Kotani; Jiyun Park; Yong-Min Lee; Wonwoo Nam\*; Shunichi Fukuzumi\* “Metal-Ion Coupled Electron Transfer of a Non-heme Oxoiron(IV) Complex: Remarkable Enhancement of the Electron-Transfer Rates with Sc<sup>3+</sup>” *J. Am. Chem. Soc.* **2011**, 133(3), 403-405. (SCI, ISSN No. 0002-7863)
4. Sam P. de Visser\*; Reza Latifi; Laleh Tahsini; Wonwoo Nam\* “The Axial Ligand Effect on Aliphatic and Aromatic Hydroxylation by Non-heme Iron(IV)-oxo Biomimetic Complexes” *Chem.-Asian J.* **2011**, 6, 493-504. (SCI, ISSN No. 1861-4728)
5. Yu Jin Choi; Kyung-Bin Cho; Minoru Kubo; Takashi Ogura; Kenneth D. Karlin; Jaeheung cho\*; Wonwoo Nam\* “Spectroscopic and computational characterization of Cu<sup>II</sup>-OOR (R = H or cumyl) complexes bearing a Me<sub>6</sub>-tren ligand” *Dalton Trans.* **2011**, 40, 2234-2241. (SCI, ISSN No. 1477-9226)
6. Reza Latifi; Laleh Tahsini; Baharan Karamzadeh; Nasser Safari; Wonwoo Nam\*; Sam P. de Visser\* “Manganese substituted Compound I of cytochrome P450 biomimetics: A comparative reactivity study of MnV-oxo versus MnIV-oxo species” *Arch. Biochem. Biophys.* 2011, 507, 4-13. (SCI, ISSN No. 0003-9861)
7. Hiroaki Kotani; Tomoyoshi Suenobu; Yong-Min Lee; Wonwoo Nam\*; Shunichi Fukuzumi\* “Photocatalytic Generation of a Nonheme Oxoiron(IV) Complex with Water as an Oxygen Source” *J. Am. Chem. Soc.* **2011**, 133(10), 3249-3251. (SCI, ISSN No. 0002-7863)
8. Jiyun Park; Yuma Morimoto; Yong-Min Lee; Wonwoo Nam\*; Shunichi Fukuzumi\* “Metal Ion Effect on the Switch of Mechanism from Direct Oxygen Transfer to Metal Ion-Coupled Electron Transfer in the Sulfoxidation of Thioanisoles by a Nonheme Oxoiron(IV) Complex” *J. Am. Chem. Soc.* **2011**, 133(14), 5236-5239. (SCI, ISSN No. 0002-7863)
9. Mi Sook Seo; Nam Hee Kim; Kyung-Bin Cho; Jeong Eun So; Seon Kyung Park; Martin Clémancey; Ricardo Garcia-Serres; Jean-Marc Latour\*; Sason Shaik\*; Wonwoo Nam\* “A mononuclear nonheme iron(IV)-oxo complex which is more reactive than cytochrome P450 model compound I” *Chemical Science* **2011**, in press. (DOI: 10.1039/c1sc00062d)
10. Shunichi Fukuzumi\*, Hiroaki Kotani, Tomoyoshi Suenobu, Seungwoo Hong, Yong-Min Lee, and Wonwoo Nam\* “Contrasting Effects of Axial Ligands on the Electron-Transfer vs Proton-Coupled Electron-Transfer Reductions of Non-Heme Oxoiron(IV) Complexes” *Chem.-Eur. J.* **2010**, 16(1), 354-361. (ISSN: 0947-6539)
11. Jaeheung Cho\*, Yong-Min Lee, Sung Yeon Kim, and Wonwoo Nam\* “Synthesis and crystal structure of nickel(II) complexes with bis(5-methyl-2-thiophenemethyl)(2-pyridylmethyl)amine” *Polyhedron* **2010**, 29,446-450. (ISSN: 0277-5387)
12. Sam P. de Visser, Joan Selverstone Valentine, and Wonwoo Nam\* “A Biomimetic Ferric Hydroperoxo Porphyrin Intermediate” *Angew. Chem. Int. Ed.* **2010**, 49, 2099-2101. (SCI, ISSN No. 1433-7851)
13. Jaeheung Cho, Jaeyoung Woo, and Wonwoo Nam\* “An "End-on" Chromium(III)-Superoxo Complex: Crystallographic and Spectroscopic Characterization and Reactivity in C-H Bond Activation of Hydrocarbons” *J. Am. Chem. Soc.* **2010**, 132, 5958-5959. (SCI, ISSN No. 0002-7863)
14. Youngmin You, Elisa Tomat, Kevin Hwang, Tatjana Atanasijevic, Wonwoo Nam, Alan

- P. Jasanoff and Stephene J. Lippard\* “Manganese displacement from Zinpyr-1 allows zinc detection by fluorescence microscopy and magnetic resonance imaging” *Chem. Commun.* **2010**, *46*, 4139-4141. (SCI, ISSN No. 1359-7345)
15. Kyung-Bin Cho, Sason Shaik\* and Wonwoo Nam\* “Theoretical predictions of a highly reactive non-heme Fe(IV)=O species with a high-spin ground state: Exchange-enhanced reactivity” *Chem. Commun.* **2010**, *46*, 4511-4513. (SCI, ISSN No. 1359-7345)
  16. Yong-Min Lee; Seungwoo Hong; Yuma Morimoto; Woonsup Shin\*; Shunichi Fukuzumi\*; Wonwoo Nam\* “Dioxygen Activation by a Nonheme Iron(II) Complex: Formation of an Iron(IV)-Oxo Intermediate via H-Atom Abstraction by a Putative Iron(III)-Superoxo Species” *J. Am. Chem. Soc.* **2010**, *132(31)*, 10668-10670. (SCI, ISSN No. 0002-7863)
  17. Shunichi Fukuzumi\*; Yuma Morimoto; Hiroaki Kotani; Panče Naumov; Yong-Min Lee; Wonwoo Nam\* “Crystal structure of a metal ion-bound oxoiron(IV) complex and implications for biological electron transfer” *Nature Chemistry* **2010**, *2*, 756-759. (SCI, ISSN No. 1755-4330)
  18. Sun Hee Kim; Hyejin Park; Mi Sook Seo; Minoru Kubo; Takashi Ogura; Jan Klajn; Daniel T. Gryko; Joan Selverstone Valentine; Wonwoo Nam\* “Reversible O-O Bond Cleavage and Formation between Mn(IV)-Peroxo and Mn(V)-Oxo Corroles” *J. Am. Chem. Soc.* **2010**, *132(40)*, 14030-14032. (SCI, ISSN No. 0002-7863)
  19. Sarvesh C. Sawant; Xiujuan Wu; Jaeheung Cho; Kyung-Bin Cho; Sun Hee Kim; Mi Sook Seo; Yong-Min Lee; Minoru Kubo; Takashi Ogura; Sason Shaik; Wonwoo Nam\* “Water as an Oxygen Source: Synthesis, Characterization, and Reactivity Studies of a Mononuclear Nonheme Mn(IV)-Oxo Complex” *Angew. Chem. Int. Ed.* **2010**, *49(44)*, 8190-8194. (SCI, ISSN No. 1433-7851)
  20. Yejee Han; Yong-Min Lee; Mariappan Mariappan; Shunichi Fukuzumi\*; Wonwoo Nam\* “Manganese(V)-Oxo Corroles in Hydride-Transfer Reactions” *Chem. Commun.* **2010**, *46(43)*, 8160-8162.
  21. Jaeheung Cho; Ritimukta Sarangi; Hye Yeon Kang; Jung Yoon Lee; Minoru Kubo; Takashi Ogura; Edward I. Solomon; Wonwoo Nam\* “Synthesis, Structural, and Spectroscopic Characterization and Reactivities of Mononuclear Cobalt(III)-Peroxo Complexes” *J. Am. Chem. Soc.* **2010**, *132(47)*, 16977-16986.
  22. Aidan R. McDonald; Michael R. Bukowski; Erik R. Farquhar; Timothy A. Jackson; Kevin D. Koehntop; Mi Sook Seo; Raymond F. De Hont; Audria Stubna; Jason A. Halfen; Eckard Münck\*; Wonwoo Nam\*; Lawrence Que, Jr.\* “Sulfur versus Iron Oxidation in an Iron-Thiolate Model Complex” *J. Am. Chem. Soc.* **2010**, *132(48)*, 17118-17129.
  23. Jihae Yoon, Samuel A. Wilson, Yu Kyeong Jang, Mi Sook Seo, Kasi Nehru, Britt Hedman, Keith O. Hodgson, Eckhard Bill, Edward I. Solomon, and Wonwoo Nam\* “Mononuclear Non-Heme Iron(IV)-and Iron(V)-Oxo Complexes in Oxygenation Reactions” *Angew. Chem. Int. Ed.* **2009**, *48*, 1257-1260. (ISSN: 1433-7851)
  24. Jung Yoon Lee, Yong-Min Lee, Hiroaki Kotani, Wonwoo Nam\* and Shunichi Fukuzumi\* “High-Valent Manganese(V)-Oxo Porphyrin Complexes in Hydride Transfer Reactions” *Chem. Commun.* **2009**, 704-706. (ISSN: 1359-7345)
  25. Jamespandi Annaraj, Soohee Kim, Mi Sook Seo, Yong-Min Lee; Youngmee Kim, Sung-Jin Kim, Young S. Choi, Ho G. Jang and Wonwoo Nam\* “An Iron(II) Complex with a N3S2 Thioether Ligand in the Generation of an Iron(IV)-Oxo Complex and its Reactivity in Olefin Epoxidation” *Inorg. Chim. Acta* **2009**, *362*, 1031-1034.
  26. Yong-Min Lee, Sunder N. Dhuri, Sarvesh C. Sawant, Jaeheung Cho, Minobu Kubo, Takashi Ogura, Shunichi Fukuzumi\* and Wonwoo Nam\* “Water as an Oxygen Source in the Generation of Mononuclear Nonheme Iron(IV)-Oxo Complexes” *Angew. Chem. Int. Ed.* **2009**, *48*, 1803-1806.
  27. Soo Jeong Kim, Reza Latifi, Hye Yeon Kang, Wonwoo Nam\*, and Sam P. de Visser\* “Activation of hydrocarbon C-H bonds by iodobenzene: How does it compare with iron(IV)-oxo oxidants?” *Chem. Commun.* **2009**, 1562-1564.

28. Jeehee Yoon, Mi Sook Seo, Youngmee Kim, Sung-Jin Kim, Sungho Yoon\*, Ho G. Jang and Wonwoo Nam\* "Synthesis and Reactivity of a Mononuclear Manganese(II) Complex Having Pseudo-Seven Coordination Environment" *Bull. Kor. Chem. Soc.* **2009**, *30*(3), 679-682.
29. Jamespandi Annaraj, Jaeheung Cho, Yong-Min Lee, Sung Yeon Kim, Reza Latifi, Sam P. de Visser\* and Wonwoo Nam\* "Structural Characterization and Remarkable Axial Ligand Effect on the Nucleophilic Reactivity of a Nonheme Manganese(III)-Peroxo Complex" *Angew. Chem. Int. Ed.* **2009**, *48*, 4150-4153.
30. Sam P. de Visser\*, Laheh Tahsini and Wonwoo Nam\* "How Does the Axial Ligand of Cytochrome P450 Biomimetic Influence the Regioselectivity of Aliphatic versus Aromatic Hydroxylation?" *Chem.-Eur. J.* **2009**, *15*, 5577-5587.
31. Laheh Tahsini, Mojtaba Bagherzadeh, Sam P. de Visser\* and Wonwoo Nam\* "Fundamental Differences in NADH Hydroxylation by Compound I and Compound II Mimics of Cytochrome P450" *Inorg. Chem.* **2009**, *48*, 6661-6669.
32. Jaeheung Cho, Ritimukta Sarangi, Jamespandi Annaraj, Sung Yeon Kim, Minobu Kubo, Takashi Ogura, Edward I. Solomon\* and Wonwoo Nam\* "Geometric and Electronic Structure and Reactivity of a Mononuclear 'Side-On' Nickel(III)-peroxo Complex" *Nat. Chem.* **2009**, *1*, 568-572.
33. Yaeun Kang, Hui Chen, Yu Jin Jeong, Wenzhen Lai, Eun Hae Bae, Sason Shaik\*, and Wonwoo Nam\* "Enhanced Reactivities of Iron(IV)-Oxo Porphyrin  $\pi$ -Cation Radicals in Oxygenation Reactions by Electron-Donating Axial Ligands" *Chem.-Eur. J.* **2009**, *15*, 10039-10046.
34. Seungwoo Hong, Yong-Min Lee, Woonsup Shin\*, Shunichi Fukuzumi\*, and Wonwoo Nam\* "Dioxygen Activation by Mononuclear Nonheme Iron(II) Complexes Generates Iron-Oxygen Intermediates in the Presence of an NADH Analog and Proton" *J. Am. Chem. Soc.* **2009**, *131*, 13910-13911.
35. Devesh Kumar, Laleh Tahsini, Sam P. de Visser\*, Hye Yeon Kang, Soo Jeong Kim, and Wonwoo Nam\* "The Effect Porphyrin Ligands on the Regioselective Dehydrogenation versus Epoxidation of Olefins by Oxoiron(IV) Mimics of Cytochrome P450" *J. Phys. Chem. A* **2009**, *113*, 11713-11722.
36. Chellaiah Arunkumar, Yong-Min Lee, Jung Yoon Lee, Shunichi Fukuzumi\*, and Wonwoo Nam\* "Hydrogen Atom Abstraction Reactions by Manganese(V)- and Manganese(IV)-Oxo Porphyrins Complexes in Aqueous Solution" *Chem.-Eur. J.* **2009**, *15*(43), 11482-11489.
37. Shunichi Fukuzumi\*, Naofumi Fujioka, Hiroaki Kotani, Kei Okubo, Yong-Min Lee, and Wonwoo Nam\* "Mechanistic Insights into Hydride-Transfer and Electron-Transfer Reactions by a Manganese(IV)-Oxo Porphyrin Complex" *J. Am. Chem. Soc.* **2009**, *131*(47), 17127-17134.
38. Yong-Min Lee, Hiroaki Kotani, Tomoyoshi Suenobu, Wonwoo Nam\*, Shunichi Fukuzumi\* "Fundamental Electron-Transfer Properties of Nonheme Oxoiron(IV) Complexes" *J. Am. Chem. Soc.* **2008**, *130*, 434-435.
39. Hajime Hirao, Lawrence Que, Jr, Wonwoo Nam, Sason Shaik\* "A TSR Rationale for Counterintuitive Axial Ligand Effects on the C-H Activation Reactivity of Nonheme Fe(IV)=O Oxidants" *Chem.-Eur. J.* **2008**, *14*, 1740-1756. (ISSN: 0947-6539)
40. Sam P. de Visser\*, Yong-Min Lee, Wonwoo Nam\* "Mechanism of oxygen atom transfer between two nonheme iron centres" *Eur. J. Inorg. Chem.* **2008**, 1027-1030.
41. Ah-Rim Han, Yu Jin Jeong, Yaeun Kang, Jung Yoon Lee, Mi Sook Seo and Wonwoo Nam\* "Direct evidence for an iron(IV)-oxo porphyrin p-cation radical as an active oxidant in catalytic oxygenation reactions" *Chem. Commun.* **2008**, 1076-1078.
42. Sunder N. Dhuri; Mi Sook Seo; Yong-Min Lee; Hajime Hirao; Yong Wang; Wonwoo Nam\*; Sason Shaik\* "Experiment and Theory Reveal the Fundamental Difference between Two-State and Single-State Reactivity Patterns in Nonheme Fe(IV)=O versus Ru(IV)=O Oxidants" *Angew. Chem. Int. Ed.* **2008**, *47*, 3356-3359.

43. Kasi Nehru, Yukyeong Jang, Sunok Oh, Frédéric Dallemer, Wonwoo Nam\*, Jinheung Kim\* "Oxidation of hydroquinones by a nonheme iron(IV)-oxo species" *Inorg. Chim. Acta* **2008**, 361(8), 2563-2567.
44. YuJin Jeong, Yaeun Kang, Ah-Rim Han, Yong-Min Lee, Hiroski Kotani, Shunichi Fukuzumi\*, and Wonwoo Nam\* "Hydrogen Atom Abstraction and Hydride Transfer Reactions by Iron(IV)-Oxo Porphyrins" *Angew. Chem. Int. Ed.* **2008**, 47, 7321-7324.
45. Timothy A. Jackson, Jan-Uwe Rohde, Mi Sook Seo, Chivukula Sastri, Raymond DeHont, Takehiro Ohta, Teizo Kitagawa, Eckard Münck\*, Wonwoo Nam\*, and Lawrence Que Jr.\* "Axial Ligand Effects on the Geometric and Electronic Structures of Nonheme Oxoiron(IV) Complexes" *J. Am. Chem. Soc.* **2008**, 130, 12394-12407.
46. Shunichi Fukuzumi\*, Hiroaki Kotani, Yong-Min Lee, Wonwoo Nam\* "Sequential Electron-Transfer and Proton-Transfer Pathways in Hydride-Transfer Reactions from NADH Analogs to Non-Heme Oxoiron(IV) Complexes and p-Chloranil. Detection of Radical Cations of NADH Analogs in Acid-Promoted Hydride-Transfer Reaction" *J. Am. Chem. Soc.* **2008**, 130(45), 15134-15142.
47. Yoon Jung Jang, Byung-Hyang Kwon, Byung-Hoon Choi, Chang Hwan Bae, Mi sook Seo, Wonwoo Nam, Seog K.Kim\* "Intercalation of bulky  $\Delta,\Delta$ - and  $\Lambda,\Lambda$ -bis-Ru(II) complex between DNA base pairs" *J. Inorg. Biochem.* **2008**, 102, 1885-1891.
48. Youngrae Jo, Jamespandi Annaraj, Mi Sook Seo, Yong-Min Lee, Sung Yeon Kim, Jaeheung Cho\*, and Wonwoo Nam\* "Reactivity of a Cobalt(III)-Peroxo Complex in Oxidative Nucleophilic Reactions" *J. Inorg. Biochem.* **2008**, 102, 2155-2159.
49. Sam P. de Visser\* and Wonwoo Nam\* "The Effect and Influence of cis-Ligands on the Electronic and Oxidizing Properties of Nonheme Oxoiron Biomimetics. A Density Functional Study" *J. Phys. Chem. A* **2008**, 112, 12887-12895.
50. Takashi Kamachi, Yong-Min Lee, Tomonori Nishimi, Jaeheung Cho, Kazunari Yoshizawa\*, and Wonwoo Nam\* "Combined Experimental and Theoretical Approach to Understand the Reactivity of Mononuclear Cu(II)-Hydroperoxo Complex in Oxygenation Reactions" *J. Phys. Chem. A* **2008**, 112, 13102-13108.
51. Mi Sook Seo, Ja Young Kim, Jamespandi Annaraj, Youngmee Kim, Yong-Min Lee, Sung-Jin Kim, Jinheung Kim\*, Wonwoo Nam\* "[Mn(tmc)(O<sub>2</sub>)]<sup>+</sup>: A Side-On Peroxido Manganese(III) Complex Bearing a Non-Heme Ligand," *Angew. Chem. Int. Ed.* **2007**, 46(3), 377-380.
52. Kasi Nehru, Mi Sook Seo, Jinheung Kim\*, Wonwoo Nam\* "Oxidative N-Dealkylation Reactions by Oxoiron(IV) Complexes of Nonheme and Heme Ligands: Evidence for a Single Electron Transfer Mechanism" *Inorg. Chem.* **2007**, 46(1), 293-298.
53. Woon Ju Song, Mi Sook Seo, Serena DeBeer George, Takehiro Ohta, Rita Song, Min-Jung Kang, Takehiko Tosha, Teizo Kitagawa, Edward I. Solomon, Wonwoo Nam\* "Synthesis, Characterization, and Reactivities of Manganese(V)-Oxo Porphyrin Complexes" *J. Am. Chem. Soc.* **2007**, 129(5), 1268-1277.
54. Hyunjung Park, Kwan Mook Kim, Areum Lee, Sihyun Ham, Wonwoo Nam, Jik Chin "Bioinspired Chemical Inversion of L-Amino Acids to D-Amino Acids" *J. Am. Chem. Soc.* **2007**, 129(6), 1518-1519.
55. Mi Sook Seo, Takashi Kamachi, Tomohisa Kouno, Koji Murata, Mi Joo Park, Kazunari Yoshizawa\*, Wonwoo Nam\* "Experimental and theoretical evidence for nonheme iron(III) alkylperoxo species as sluggish oxidants in oxygenation reactions" *Angew. Chem. Int. Ed.* **2007**, 46(13), 2291-2294.
56. Wonwoo Nam "High-Valent Iron(IV)-Oxo Complexes of Heme and Nonheme Ligands in Oxygenation Reactions" *Acc. Chem. Res.* **2007**, 40(7), 522-531. (ISSN: 0001-4842)
57. Wonwoo Nam "Guest Editorial - Dioxygen Activation by Metalloenzymes and Models" *Acc. Chem. Res.* **2007**, 40(7), 465.
58. Sam P.de Visser\*, Kyungeun Oh, Ah-Rim Han, Wonwoo Nam\* "Combined Experimental and Theoretical Study on Aromatic Hydroxylation by Mononuclear Nonheme Iron(IV)-Oxo Complexes" *Inorg. Chem.* **2007**, 46(11), 4632-4641. (ISSN:

- 0020-1669)
59. Kasi Nehru, Yu Keong Jang, Mi Sook Seo, Wonwoo Nam\*, Jinheung Kim\* "Oxidation of N-methylanilines by a nonheme iron(IV)-oxo complex" *Bull. Kor. Chem. Soc.* **2007**, 28(5), 843-846. (ISSN: 0253-2964)
  60. Min-Jung Kang, Woon Ju Song, Ah-Rim Han, Young S. Choi, Ho G. Jang\*, Wonwoo Nam\* "Mechanistic Insight into the Aromatic Hydroxylation by High-Valent Iron(IV)-Oxo Porphyrin  $\pi$ -Cation Radical Complexes" *J. Org. Chem.* **2007**, 72, 6301-6304. (ISSN: 0022-3263)
  61. Raju Nandhakumar, Yong-En Guo, Hyunjung Park, Lijun Tang, Wonwoo Nam, Kwan Mook Kim\* "A chiral ketone for enantioselective recognition of 1,2-amino alcohols" *Tetrahedron Lett.* **2007**, 48, 6582-6585. (ISSN: 0040-4039)
  62. Kasi Nehru, Soo Jeong Kim, In Young Kim, Mi Sook Seo, Youngmee Kim, Sung-Jin Kim, Jinheung Kim, Wonwoo Nam\* "A Highly Efficient Non-Heme Manganese Complex in Oxygenation Reactions" *Chem. Commun.* **2007**, 4623-4625. (ISSN: 1359-7345)
  63. Chivukula V. Sastri, Jimin Lee, Kyungeun Oh, Yoon Jin Lee, Junghyun Lee, Timothy A. Jackson, Hajime Hirao, Woon-sup Shin, Lawrence Que, Jr\*, Sason Shaik\*, Wonwoo Nam\* "Axial Ligand Tuning of a Nonheme Iron(IV)-Oxo Unit for Hydrogen Atom Abstraction" *Proc. Natl. Acad. Sci. U.S.A.* **2007**, 104(49), 19181-19186. (ISSN: 0027-8424)
  64. Kyungeun Oh, Hanyoung Lee, Ki-Hyun Kim, Youn Sang Kim, Wonwoo Nam, and Kwan Mook Kim\* "Colloids Produced by Simple Self-Assembly of Inorganic Tennis Balls and Nonrigid Polypyridyl Ligands" *Bull. Kor. Chem. Soc.* **2007**, 28(12), 1293-1294. (ISSN: 0253-2964)
  65. Matthew T. Kieber-Emmons, Jamespandi Annaraj, Mi Sook Seo, Katherine M. Van Heuvelen, Takehiko Tosha, Teizo Kitagawa, Thomas C. Brunold, Wonwoo Nam\*, Charles G. Riordan\* "Identification of an "end-on" Nickel-Superoxo Adduct, [Ni(tmc)(O<sub>2</sub>)]<sup>+</sup>" *J. Am. Chem. Soc.* **2006**, 128(44), 14230-14231. (ISSN: 0002-7863)
  66. Ki-Hyun Kim, Jung Su Park, Tae Yi Kang, Kyungeun Oh, Mi-Sook Seo, Youn Soo Sohn, Moo-Jin Jun, Wonwoo Nam\*, Kwan Mook Kim\* "Flexibility of Inorganic Tennis Ball Structures Inducing Anion Selectivity" *Chem. -Eur. J.* **2006**, 12(27), 7078-7083. (ISSN: 0947-6539)
  67. Minyoung You, Mi Sook Seo, Kwan Mook Kim, Wonwoo Nam\*, Jinheung Kim\* "Structure and Properties of a Nonheme Pentacoordinate Iron(II) Complex with a Macrocyclic Triazapyridinophane Ligand" *Bull. Korean Chem. Soc.* **2006**, 27(8), 1140-1143. (ISSN: 0253-2964)
  68. Jan-Uwe Rohde, Audria Stubna, Emile L. Bominaar, Eckard Munck\*, Wonwoo Nam\*, Lawrence Que, Jr\* "Nonheme Oxoiron(IV) Complexes of Tris(2-pyridylmethyl) amine with cis-Monoanionic Ligands" *Inorg. Chem.* **2006**, 45(16), 6435-6445. (ISSN: 0020-1669)
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