

## Kang Hyun Park, Ph.D.

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**Business:** Room 420(Office), Department of Chemistry, Pusan National UNIV. 30, Jangjeon-dong, Geumjeong-gu, Busan, 609-735 Korea

**E-mail:** chemistry@pusan.ac.kr

**Fax:** (+82)-51-980-5200

**Web:** www.chemistry.or.kr

**Research Area** Catalysis, Nanocatalysis, Nanomaterials, Organometallics

Synthesis of new nanocatalysts & applications for organic reactions

Fabrications & applications of Nanomaterials

Organometallic chemistry of f- and d-block transition metal complexes

New organometallic catalysts for efficient organic synthesis

Transition-metal promoted organic synthesis and homogeneous catalysis

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**DATE OF BIRTH** April. 25, 1976

### EDUCATION

2000. 03. – 2005. 02. Department of Chemistry, Seoul National University.

Advisor: Professor Young Keun Chung

1996. 03. – 2000. 02. Department of Chemistry, Kyungpook National University.



### EXPERIENCE

2008 ~ present Assistant professor, Associate professor / Dept. of Chemistry, Pusan National University

2007 ~ 2007 Research professor / Dept. of Chemistry, Sungkyunkwan University

2006 ~ 2007 Senior Research Scientist / Dept. of Chemistry, Sungkyunkwan University

2005 ~ 2006 Post-doctoral fellow / Dept. of Chemistry, Seoul National University

### AWARDS

May 2003 Brain Korea 21 awardees for Outstanding Research (Department

of Chemistry, Seoul National University  
November 2003 Brain Korea 21 awardees for Outstanding Research (Department  
of Chemistry, Seoul National University  
November 2010 TJ Park Science Fellowship (TJ Park Foundation)  
July 2013 LG Yonam Fellowship (LG Yonam Foundation)

## PUBLICATIONS

81. Balaji Mohan, Sori Hwang, Seongwan Jang, Kang Hyun Park\* "Ultrasound Assisted, Transition Metal-Free Synthesis of Diaryl Tellurides from Aryl Boronic Acids: A Possible Free-Radical Mechanism" *synlett*, article first published online, 2014
80. Hyung Ju Park, Nak-Jin Choi, Hyuntae Kang, Moon Youn Jung, Kang Hyun Park\*, Dae-Sik Lee\* "CuO Nanocubes Gas Sensor for Ethanol Detection" *Sensor Letters*, 2014, Vol. 12, No. x
79. Hyung Ju Park, Nak-Jin Choi, Hyuntae Kang, Moon Youn Jung, Jeong Won Park, Kang Hyun Park\*, Dae-Sik Lee\* "A ppb- level Formaldehyde Gas Sensor Based on CuO Nanocubes Prepared Using a Polyol Process" *Sensors and Actuators B*, **2014**, 203, 282-288.
78. Hyunje Woo, Kyoungcho Lee and Kang Hyun Park\* "Optimized dispersion and stability of hybrid Fe<sub>3</sub>O<sub>4</sub>/Pd catalysts in water for Suzuki coupling reactions: Impact of organic capping agents" *ChemCatChem*, **2014**, 6, 1635-1640.
77. Balaji Mohan, Sori Hwang, Hyunje Woo and Kang Hyun Park\* "Transition metal free synthesis of diaryl vinyl selenides: A simple synthetic approach with high selectivity" *Tetrahedron*, **2014**, 70, 2699-2702.
76. Aram Kim, Dongwoo Shin, Mijong Kim, Chohye Yoon, Hyunjoon Song\* and Kang Hyun Park\* "Facile synthesis of multipodal MnO nanocrystals and its catalytic performance" *Eur. J. Inorg. Chem*, **2014**, 8, 1279–1283.
75. Aram Kim, Ji chan Park, Mijong Kim, Eunjung Heo, Hyunjoon Song, and Kang Hyun Park\* "Suzuki Coupling Reaction Using Hybrid Pd Nanoparticles" *J. Nanosci. Nanotechnol*, **2014**, 14, 1872-1883.

74. Seunghwan Lee, Young Eui Jung, Doo Yong Lee, Jong Seung Bae, Won Jae Lee, Kang Hyun Park, Sang-Don Bu, Sungkyun Park\* "Oxygen partial pressure dependent electrical conductivity type conversion of phosphorus doped ZnO thin films" *Journal of Physics D: Applied Physics*, **2014**, 47, 065306.
73. Hyunje Woo, Kyoungcho Lee, Sungkyun Park and Kang Hyun Park\* "Magnetically Separable and Recyclable Fe<sub>3</sub>O<sub>4</sub>-Supported Ag Nanocatalysts for Reduction of Nitro Compounds and Selective Hydration of Nitriles to Amides in Water" *Molecules*, **2014**, 19(1), 699-712
72. Hyunje Woo, Kang Hyun Park\* "Hybrid Au nanoparticles on Fe<sub>3</sub>O<sub>4</sub>@polymer as efficient catalyst for reduction of 4-nitrophenol" *Catalysis Communication*, **2014**, 46, 133-137.
71. Hyunje Woo, Mohan Balaji, Eunjung Heo, Ji Chan Park, Hyunjoon Song and Kang Hyun Park\* "CuO hollow nanosphere catalyzed cross-coupling of aryl iodides with thiols" *Nanoscale Research Letters*, **2013**, 8, 390.
70. Yohan Lee, Seongwan Jang, Chang-Woo Cho, Jong-Seong Bae, Sungkyun Park, Kang Hyun Park\* "Recyclable Rhodium Nanoparticles: Green Hydrothermal Synthesis, Characterization, and Highly Catalytic Performance in Reduction of Nitroarenes" *J. Nanosci. Nanotechnol.* **2013**, 13, 7477-7481.
69. Balaji Mohan, Hyuntae Kang, and Kang Hyun Park\* "A copper-based ionic liquid as inexpensive and efficient catalyst for the [3+2] cycloaddition of azides and terminal alkynes", *Inorganic Chemistry Communication*, **2013**, 35, 239-241.
68. Balaji Mohan, Hyunje Woo, Seongwan Jang, Seungwan Lee, Sungkyun Park, and Kang Hyun Park\* "Synthesis of Monodisperse Cu Nanoparticles in Ionic Liquids: A synthetic and catalytic approach of in-situ nanoparticles" *Solid State Sciences*, **2013**, 22, 16-20.
67. Hyunje Woo , Hyuntae Kang , Aram Kim , Seongwan Jang , Ji Chan Park , Sungkyun Park , Byeong-Su Kim , Hyunjoon Song and Kang Hyun Park\* "Azide-Alkyne Huisgen [3+2] Cycloaddition Using CuO Nanoparticles" *Molecules(invited review)*, **2012**, 17(11), 13235-13253.
66. Ha Rim Choi, Hyunje Woo, Seongwan Jang, Jae Young Cheon, Chungho Kim, Jongnam Park, Kang Hyun

Park,\* and Sang Hoon Joo\*

"Ordered Mesoporous Carbon Supported Colloidal Pd Nanoparticle Model Catalysts for Suzuki Coupling Reactions: Impact of Organic Capping Agents" *ChemCatChem*, **2012**, 4(10), 1587-1594.

**65.** Ju Hyun Kim, Ji Hoon Park, Young Keun Chung\*, Kang Hyun Park

"Ruthenium Nanoparticle-Catalyzed, Controlled and Chemoselective Hydrogenation of Nitroarenes using Ethanol as a Hydrogen Source" *Adv. Synth. Catal.*, **2012**, 354(13), 2412-2418.

**64.** Ji Chan Park, A Young Kim, Jae Young Kim, Sungkyun Park, Kang Hyun Park\* and Hyunjoon Song\*

"ZnO–CuO core–branch nanocatalysts for ultrasound-assisted azide–alkyne cycloaddition reactions" *Chem. Commun.*, **2012**, 48, 8484-8486.

**63.** TaeWoo Kwon‡, Hyun Je Woo‡, Young Ha Kim, Hyun Ju Lee, Kang Hyun Park, Sungkyun Park\*, and BuHyun Youn\*

"Optimizing Hemocompatibility of Surfactant-coated Silver Nanoparticles in Human Erythrocytes" *J. Nanosci. Nanotechnol.*, **2012**, 12, 6168-6175.

**62.** Mijong Kim, Eunjung Heo, Aram Kim, Ji Chan Park, Hyunjoon Song\*, Kang Hyun Park\*

"Synthesis of Pd/SiO<sub>2</sub> Nanobeads for Use in Suzuki Coupling Reactions by Reverse Micelle Sol-gel Process" *Catalysis Letters*, **2012**, 142(5), 588-593.

**61.** Mijong Kim, Ji Chan Park, Aram Kim, Kang Hyun Park\*, and Hyunjoon Song\*

"Porosity Control of Pd@SiO<sub>2</sub> Yolk-Shell Nanocatalysts by the Formation of Nickel Phyllosilicate, and Its Influence on Suzuki Coupling Reactions" *Langmuir*, **2012**, 28(15), 6441-6447.

**60.** Jung Ik Son, Aram Kim, Hui-Bog Noh, Hyun Ju Lee, Yoon-Bo Shim\*, Kang Hyun Park \*

"Synthesis and Catalytic Hydrogen Transfer Reaction of Ruthenium(II) Complex" *Bull. Korean Chem. Soc.*, **2012**, 33(1), 319-321.

**59.** Yan Li, Yun Jin Kim, A. Young Kim, Kyujoon Lee, Myung Hwa Jung, Nam Hwi Hur, Kang Hyun Park\*, and Won Seok Seo\*

"Highly Stable and Magnetically Recyclable Mesoporous Silica Spheres Embedded with FeCo/Graphitic Shell Nanocrystals for Supported Catalysts" *Chem. Mater.*, **2011**, 23(24), 5398-5403.

- 58.** Yuri Choi, Hee Son Bae, Eunyong Seo, Seonwan Jang, Kang Hyun Park,\* and Byeong-Su Kim\*  
"Hybrid gold nanoparticle-graphene oxide nanosheets as active catalysts for highly efficient reduction of nitroarenes" *J. Mater. Chem.*, **2011**, 21, 15431-15436.
- 57.** Ji Chan Park, Eunjung Heo, Aram Kim, Mijong Kim, Kang Hyun Park\*, and Hyunjoon Song\*  
"Extremely Active Pd@pSiO<sub>2</sub> Yolk-Shell Nanocatalysts for Suzuki Coupling Reactions of Aryl Halides" *J. Phys. Chem. C*, **2011**, 115 (32) 15772-75777.
- 56.** Amardeep Singh, Srikanta Patra, Jeong-Ah Lee, Kang Hyun Park, Haesik Yang\*  
"An artificial enzyme-based assay: DNA detection using a peroxidase-like copper-creatinine complex" *Biosensors and Bioelectronics*, **2011**, 26, 4798– 4803.
- 55.** Aram Kim, Bhawana Sharma, Byeong-Su Kim,\* and Kang Hyun Park\*  
"Double Hydrophilic Block Copolymer Nanoreactor for Synthesis of Copper Nanoparticle and Application in Click Chemistry" *J. Nanosci. Nanotechnol.*, **2011**, 11, 6162-6166.
- 54.** A Young Kim, Hee Seon Bae, Suhwan Park, Sungkyun Park,\* Kang Hyun Park \*  
"Silver Nanoparticle Catalyzed Selective Hydration of nitriles to Amides in Water under Neutral Conditions" *Catalysis Letters*, **2011**, 141(5), 685-690.
- 53.** Ji Chan Park, Hyun Ju Lee, Hyun Seok Jung, Mijong Kim, Hae Jin Kim, Kang Hyun Park,\* and Hyunjoon Song\*  
"Gram-Scale Synthesis of Magnetically Separable and Recyclable Co@SiO<sub>2</sub> Yolk-Shell Nanocatalysts for Phenoxy carbonylation Reactions" *ChemCatChem*, **2011**, 3(4), 755-760.
- 52.** Tae Hwan Noh, Eunjung Heo, Kang Hyun Park, and Ok-Sang Jung\*  
"Motion of an Isolated Water Molecule within a Flexible Coordination Cage: Structural Properties and Catalytic Effects of Ionic Palladium(II) Complexes" *J. Am. Chem. Soc.*, **2011**, 133(5), 1236-1239.
- 51.** Jee Young Kim, Ji Chan Park, Hyunjoon Song, and Kang Hyun Park\*  
"Cu<sub>2</sub>O Nanocubes Catalyzed Difunctionalization Reaction of Vinyl Arenes with Cyclic Ethers" *Bull. Korean Chem. Soc.*, **2010**, 31(12), 3509-3510.

50. Ji Chan Park, Jae Young Kim, Eunjung Heo, Kang Hyun Park\*, Hyunjoon Song\*

"Platinum-Centered Yolk-Shell Nanosturcture Formation by Sacrificial Nickel Spacers" *Langmuir*, **2010**, *26*, 16469-16473.

49. Hyuntae Kang, Hyun Seok Jung, Jee Young Kim, Ji Chan Park, Mijong Kim, Hyunjoon Song\*, Kang Hyun Park\*

"Immobilized CuO Hollow Nanospheres Catalyzed Alkyne-Azide Cycloadditions" *J. Nanosci. Nanotechnol.*, **2010**, *10*, 6504-6509.

48. Hyuntae Kang, Hyun Ju Lee, Ji Chan Park, Hyunjoon Song, Kang Hyun Park\*

"Solvent-Free Microwave Promoted [3+2] Cycloaddition of Alkyne-Azide in Uniform CuO Hollow Nanospheres" *Topics in Catalysis*, **2010**, *53*, 523-528.

47. Ji Chan Park, Hyun Ju Lee, Jae Young Kim, Kang Hyun Park\*, and Hyunjoon Song\*

"Catalytic Hydrogen Transfer of Ketones over Ni@SiO<sub>2</sub> Yolk-Shell Nanocatalysts with Tiny Metal Cores" *J. Phys. Chem. C*, **2010**, *114*, 6381-6388.

46. Jee Young Kim, Ji Chan Park, Hyuntae Kang, Hyunjoon Song\* and Kang Hyun Park\*

"CuO Hollow Nanostructures Catalyzed [3+2] Cycloaddition of Azides with Terminal Alkynes" *Chem. Commun.*, **2010**, *46*, 439 – 441.

45. A Young Kim , Hyun Ju Lee , Ji Chan Park , Hyunju Kang , Haesik Yang , Hyunjoon Song and Kang Hyun Park\*

"Highly Efficient and Reusable Copper-catalyzed N-arylation of Nitrogen-containing Heterocycles with Aryl Halides" *Molecules*, **2009**, *14*(12), 5169-5178.

44. Ji Chan Park, Hyun Ju Lee, Jung Up Bang, Kang Hyun Park,\* and Hyunjoon Song\*

"Chemical transformation and morphology change of nickel-silica hybrid nanostructures via nickel phyllosilicates" *Chem. Commun.*, **2009**, *47*, 7345-7347.

43. Jagotamoy Das, Heonjo Kim, Kyungmin Jo, Kang Hyun Park, Sangyong Jon, Kwangyeol Leeb and Haesik Yang\*

"Fast catalytic and electrocatalytic oxidation of sodium borohydride on palladium nanoparticles and its application to ultrasensitive DNA detection" *Chem. Commun.*, **2009**, 43, 6394-6396.

**42.** Jee Young Kim, Ji Chan Park, Aram Kim, A Young Kim, Hyun Ju Lee, Hyunjoon Song,\* and Kang Hyun Park\*

"Cu<sub>2</sub>O Nanocubes-Catalyzed Cross-Couplings of Aryl halides with phenols via Ullmann coupling" *Eur. J. Inorg. Chem.*, **2009**, 28, 4219-4223.

**41.** Jee Young Kim, Ji Hoon Park, Ok-Sang Jung, Young Keun Chung, and Kang Hyun Park\*

"Heterogenized Catalysts Containing Cobalt-Rhodium Heterobimetallic Nanoparticles for Olefin Hydroformylation" *Catalysis Letters*, **2009**, 128, 483-486.

**40.** Kang Hyun Park \*, Seongjin Kim, and Young Keun Chung

"Ruthenium-NHC Complexes Immobilized on MCF: Application to Catalytic Ring-Closing Metathesis" *Bull. Korean Chem. Soc.*, **2008**, 29, 2057.

**39.** Kang Hyun Park, Jaewon Choi, Hae Jin Kim, Dong-Hwa Oh, Joung Real Ahn, and Seung Uk Son

"Unstable Single-Layered Colloidal TiS<sub>2</sub> Nanodisks" *Small*, **2008**, 4(7), 945-950.

**38.** Kang Hyun Park, Jiseul Chun, Jaewon Choi, Hae Jin Kim, and Seung Uk Son

"Low-temperature synthesis of ultrathin Sb<sub>2</sub>S<sub>5</sub> nanofibers and their application as highly selective Pb-adsorbents in water" *Chem. Commun.*, **2008**, (14), 1659-1661.

**37.** Kang Hyun Park , Ilhwae Ku, Hae Jin Kim and Seung Uk Son

"NHC-Based Submicroplatforms for Anchoring Transition Metals" *Chem. Mater.*, **2008**, 20(5), 1673-1675.

**36.** Kwonho Jang, So Yeon Kim, Kang Hyun Park, Eunjoon Jang, Shinae Jun, and Seung Uk Son

"Shape-controlled synthesis of silver sulfide nanocrystals by understanding the origin of mixed-shape evolution" *Chem. Commun.*, **2007**, (42), 4474-4476.

**35.** Seongjin Kim, Soo Young Choi, Young Tak Lee, Kang Hyun Park, Helmut Sitzmann and Young Keun Chung

"Synthesis of Chromium N-Heterocyclic Carbene Complexes Using Chromium Fischer Carbenes as a Source

of Chromium Carbonyls” *J. Organomet. Chem.*, **2007**, 692(24), 5390-5394.

**34.** Kang Hyun Park, Kwonho Jang, Yoonhee Cho, Jiseul Chun, Hae Jin Kim, Dwight A. Sweigart, and Seung Uk Son

“Mn Quinonoid Core-Rh Quinonoid Shell Organometallic Nanospheres as Atom Economical Semiheterogeneous Catalysts in Carbene Transfer Reactions” *Adv. Mater.*, **2007**, 19(19), 2547-2551.

**33.** Jangwon Seo, Sehoon Kim, Young-Shin Lee, Oh-Hoon Kwon, Kang Hyun Park, Soo Young Choi, Young Keun Chung, Du-Jeon Jang and Soo Young Park

“Enhanced solid-state fluorescence in the oxadiazole-based excited-state intramolecular proton-transfer (ESIPT) material: Synthesis, optical property, and crystal structure” *J. Photoch. Photobio. A.*, **2007**, 191, 51-58.

**32.** Kang Hyun Park, Jaewon Choi, Hae Jin Kim, Jin Bae Lee and Seung Uk Son

“Synthesis of Antimony Sulfide Nanotubes with Ultrathin Walls via Gradual Aspect Ratio Control of Nanoribbons” *Chem. Mater.*, **2007**, 19, 3861-3863.

**31.** Soo Young Choi, Sang Ick Lee, Kang Hyun Park, Young Keun Chung

“Sequential Diels-Alder and Cobalt Octacarbonyl Catalyzed Pauson-Khand Reactions in the Formation of Polycyclic Enones” *Synlett*, **2007**, 1857-1862.

**30.** Kang Hyun Park, Il Gu Jung, Young Keun Chung, and Jin Wook Han

“Activation of C—Cl Bonds in Chloroalkanes by Nickel Oxide Nanoparticles: Formation of Tetrasubstituted Ammonium Salts from Tertiary Amines.” *Adv. Synth. Catal.*, **2007**, 349, 411-416.

**29.** Kang Hyun Park, Kwonho Jang, Hae Jin Kim and Seung Uk Son

“Near-monodisperse Tetrahedral Rh Nanoparticles on Charcoal: Shape Dependent Catalytic Activities in Hydrogenation of Arenes” *Angew. Chem. Int. Ed.*, **2007**, 46, 1152-1155.

**28.** Kang Hyun Park, Kwonho Jang, Soyoung Kim, Hae Jin Kim, and Seung Uk Son

“Phase-Controlled One-Dimensional Shape Evolution of InSe Nanocrystals” *J. Am. Chem. Soc.*, **2006**, 128, 14780-14781.



- 27.** Kang Hyun Park, Kwonho Jang, Seung Uk Son, and Dwight A. Sweigart  
“Self-Supported Organometallic Rhodium Quinonoid Nanocatalysts for Stereoselective Polymerization of Phenylacetylene” *J. Am. Chem. Soc.*, **2006**, 128, 8740-8741.
- 26.** Kang Hyun Park, Kwonho Jang, and Seung Uk Son  
“Synthesis, Optical Properties and Self-Assembly of Ultrathin Hexagonal In<sub>2</sub>S<sub>3</sub> Nanoplates” *Angew. Chem. Int. Ed.*, **2006**, 45, 4608 -4612.
- 25.** Kang Hyun Park, Soo Young Choi, So Yeon Kim, and Young Keun Chung  
“Selectivity in Cobalt Carbonyl-Mediated Cycloaddition of Dienes” *Synlett*, **2006**, 527-536.
- 24.** Kang Hyun Park, Young Keun Chung  
“Immobilized Co/Rh Heterobimetallic Nanoparticle-Catalyzed Pauson–Khand-Type Reaction” *Adv. Synth. Catal.*, **2005**, 347, 854-866.
- 23.** So Yeon Kim, Kang Hyun Park and Young Keun Chung  
“Manganese(IV) dioxide-catalyzed synthesis of quinoxalines under microwave irradiation” *Chemical Communications*, **2005**, 1321-1323.
- 22.** Kang Hyun Park, Young Keun Chung  
“The Pauson–Khand-Type Reaction Catalyzed by Transition Metal Nanoparticles” *Synlett* (Account), **2005**, 545-559.
- 21.** Kang Hyun Park, So Yeon Kim and Young Keun Chung  
“Cyclohydrocarbonylation of substituted alkynes and tandem cyclohydrocarbonylation–CO insertion of -keto alkynes catalyzed by immobilized Co–Rh heterobimetallic nanoparticles” *Organic & Biomolecular Chemistry*, **2005**, 3, 395-398.
- 20.** Kang Hyun Park, Il Gu Jung, Young Keun Chung  
“Synthesis of Coumarins Catalyzed by Heterobimetallic Co/Rh Nanoparticles” *Synlett*, **2004**, 2541-2544.
- 19.** Seung Uk Son, Kang Hyun Park, Young-Shin Lee, Bo Yun Kim, Cheol Ho Choi, Myoung Soo Lah, Yun Hee Jang, Du-Jeon Jang, and Young Keun Chung

"Synthesis of Ru(II) Complexes of N-Heterocyclic Carbenes and Their Promising Photoluminescence Properties in Water" *Inorganic Chemistry*, **2004**, *43*, 6896-6898.

**18.** Kang Hyun Park, Il Gu Jung, and Young Keun Chung

"A Pauson-Khand-Type Reaction between Alkynes and Olefinic Aldehydes Catalyzed by Rhodium/Cobalt Heterobimetallic Nanoparticles: An Olefinic Aldehyde as an Olefin and CO Source" *Organic Letters*, **2004**, *6*, 1183-1186.

**17.** Kang Hyun Park, Il Gu Jung, So Yeon Kim, and Young Keun Chung

"Immobilized Cobalt/Rhodium Heterobimetallic Nanoparticle-Catalyzed Silylcarbocyclization and Carbonylative Silylcarbocyclization of 1,6-Enynes" *Organic Letters*, **2003**, *5*, 4967-4970.

**16.** Il Gu Jung, Seung Uk Son, Kang Hyun Park, Kee-Choo Chung, Jo Woong Lee, and Young Keun Chung

"Synthesis of Novel Pd-NCN Pincer Complexes Having Additional Nitrogen Coordination Sites and Their Application as Catalysts for the Heck Reaction" *Organometallics*, **2003**, *22*, 4715-4720.

**15.** Kang Hyun Park, So Yeon Kim, Seung Uk Son, Young Keun Chung

"Use of Rhodium N-Heterocyclic Carbene Complexes in Catalytic Cyclization and Hydrosilylation of 1,6-Enynes to 2-Methyl-1-silylmethylidene-2-cyclopentane" *Eur. J. Org. Chem.*, **2003**, 4341-4345. **(Cover)**

**14.** Kang Hyun Park, Seung Uk Son and Young Keun Chung

"Immobilized heterobimetallic Ru/Co nanoparticle-catalyzed Pauson-Khand-type reactions in the presence of pyridylmethyl formate" *Chem. Commun.*, **2003**, 1898-1899.

**13.** Seung Uk Son, Kang Hyun Park, Seung Jung Lee, B. Moon Kim, Young Keun Chung

"Efficient Synthesis of Highly Functionalized Triquinane Derivatives through Dicobalt Octacarbonyl-Catalyzed Cycloaddition of Diyne with Diene under Carbon Monoxide Followed by Cleavage of a Double Bond" *Synlett*, **2003**, 1101-1104.

**12.** Seung Uk Son, Kang Hyun Park, Bo Yun Kim, and Young Keun Chung

"Construction of Cylindrical Nanotubular Materials by Self-Assembly of Co(NCS)<sub>2</sub> with Bent-Building Blocks Having Diimidazole Rings" *Crystal Growth & Design*, **2003**, *3*, 507-512.

**11. Kang Hyun Park, Seung Uk Son and Young Keun Chung**

“Pauson-Khand Reactions Catalyzed by Entrapped Rhodium Complexes” *Tetrahedron Letts*, **2003**, *44*, 2827-2830.

**10. Kang Hyun Park, Seung Uk Son, and Young Keun Chung**

“Sequential Actions of Palladium and Cobalt Nanoparticles Immobilized on Silica: One-Pot Synthesis of Bicyclic Enones by Catalytic Allylic Alkylation and Pauson-Khand Reaction” *Organic Letters*. **2002**, *4*, 4361-4363.

**9. Seung Uk Son, Kang Hyun Park, Il Gu Jung, Young Keun Chung, and Myoung Soo Lah**

“Reactions of  $\text{Fe}_2(\text{CO})_9$  with Azine Derivatives: Discovery of New Coordination Modes and Reactivity of New Bimetallic Compounds” *Organometallics*. 2002, *21*, 5366-5372.

**8. Seung Uk Son, Kang Hyun Park, and Young Keun Chung**

“Use of  $(\eta^4\text{-1-Azabuta-1,3-diene})\text{tricarbonyliron}$  as a Substitute for Cyclopentadiene in the Synthesis of Sandwich and Half-Sandwich Compounds” *Organometallics* 2002, *21*, 5071-5077.

**7. Seung Uk Son, Kang Hyun Park, and Young Keun Chung**

“Cobalt Nanoparticles on Charcoal: A Versatile Catalyst in the Pauson-Khand Reaction, Hydrogenation, and the Reductive Pauson-Khand Reaction” *Organic Letters*, **2002**, *4*, 3983-3986.

**6. Seung Uk Son, Kang Hyun Park, and Young Keun Chung**

“Sequential Actions of Cobalt Nanoparticles and Palladium(II) Catalysts: Three-Step One-Pot Synthesis of Fenestranes from an Enyne and an Alkyne Diester” *J. Am. Chem. Soc.*, **2002**, *124*, 6838-6839.

**5. Seung Uk Son, Kang Hyun Park, Seung Jung Lee, Hwimin Seo and Young Keun Chung**

“Synthesis of planar chiral (1,3-disubstituted arene) $\text{Mn}(\text{CO})_3^+$  cations via addition of nucleophiles to (oxocyclohexadienyl) $\text{Mn}(\text{CO})_3$  in the presence of chiral ligands” *Chem. Commun.* 2002, 1230-1231.

**4. Seung Uk Son, Se-Jung Paik, Kang Hyun Park, Young-A Lee, In Su Lee, and Young Keun Chung, D. A. Sweigart.**

“Reinvestigation of Nucleophilic Addition to the  $[(\text{naphthalene})\text{Mn}(\text{CO})_3]^+$  Cation: Hydrogen Migration in  $[(\text{exo-R-}\mu^5\text{-C}_{10}\text{H}_8)\text{Mn}(\text{CO})_3]^+$ ” *Organometallics*. **2002**. *21*, 239-242.

3. Seung Uk Son, Kang Hyun Park, Hwimin Seo, Young Keun Chung and Sueg-Geun Lee

"Catalytic asymmetric synthesis of cyclopentenones from propargyl malonates and allylic acetate by successive action of homogeneous palladium(II) and cobalt on charcoal catalysts in a one-pot reaction" *Chem. Commun.* **2001**, 2440-2441.

2. Seung Uk Son, Kang Hyun Park, Seung Jung Lee, Young Keun Chung, Dwight A. Sweigart

"Synthesis of Planar Chiral Synthesis of planar chiral tricarbonylcyclopentadienylmanganese complexes using a  $\text{Mn}(\text{CO})_3^+$  transfer reaction" *Chem. Commun.*, **2001**, 1290-1291.

1. Seung Uk Son, Kang Hyun Park, and Young Keun Chung

"Reaction of  $[(1\text{-H-Hydronaphthalene})\text{Mn}(\text{CO})_3]$  with Pyridine in the Presence of Halogenated Solvent: The Role of Ring-Slippage in  $[(1\text{-H-Hydronaphthalene})\text{Mn}(\text{CO})_3]$ ." *Organometallics*, **2000**, 19, 5241-5243.