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EDUCATION

- | | | |
|------------|---|----------|
| PhD | Pohang University of Science and Technology (POSTECH)
Department of Chemistry
Advisor: Kimoon Kim | Feb 2021 |
| BS | Sungkyunkwan University (SKKU)
Department of Chemistry | Feb 2015 |

EXPERIENCE

- | | | |
|---|--|-------------------|
| Teaching Assistant | | 2015.08 – 2015.12 |
| Pohang University of Science and Technology (POSTECH), Pohang, Korea | | |
| Samsung SDI CO., Ltd. | | 2014.06 – 2014.08 |
| Summer Internship: R&D Center, Li-ion Battery Lab, Seoul, Korea | | |
| BISCO, Inc. | | 2013.06 – 2013.08 |
| Summer Internship: R&D Center, Polymer Adhesive Lab, Illinois, U.S.A. | | |
| Military Service | | 2011.02 – 2013.01 |
| Republic of Korea Army, Honorable Discharge, Sergeant. | | |

PUBLICATIONS

([†]equal contribution, *corresponding author)

1. **J. Koo**, K. Kim*, “Pseudomorphic Transformation of Iron-based Microporous Metal-Organic Frameworks to Mesoporous Iron Phosphate” *Inorganic. Chimica. Acta.*, **2021**, 516, 120113
2. **J. Koo**,[†] I. Kim,[†] Y. Kim, D. Cho, I-C. Hwang, R. D. Mukhopadhyay, H. song, Y. H. Ko, A. Dhamija, H. Lee, W. Hwang, S. Kim, M-H. Baik, K. Kim*, “Gigantic Porphyrinic Cages” *Chem.*, **2020**, 6, 3374-3384
3. M. Kim, [†] **J. Koo**,[†] S. U. Ryu, K. S. Bejoymohandas, Y. H. Rhee, K. Kim,* T. Park,* “Convenient Fluorination of Thiophene-based Heterocycles to Effectively Tune the Electronic and Structural Properties of Organic Semiconductors”, *J. Am. Chem. Soc.*, **2020**, Submitted
4. X. Yu, B. Wang, Y. Kim, J. Park, S. Ghosh, B. Dhara, R. D. Mukhopadhyay, **J. Koo**, I. Kim, S. kim, I-C. Hwang*, S. Seki*, D. M. Guldi*, M-H. Baik*, K. Kim*, “Supramolecular Fullerene Tetramers Concocted with Porphyrin Boxes Enable Efficient Charge Separation and Delocalization” *J. Am. Chem. Soc.*, **2020**, 142, 29, 12596–12601.
5. W. J. Lee, E. Y. Park, D. Choi, D. Lee, **J. Koo**, J. G. Min, Y. Jung, S. B. Hong, K. Kim, C. Kim, S. Kim. “Colloidal Porous AuAg Alloyed Nanoparticles for Enhanced Photoacoustic Imaging” *ACS Appl. Mater. Interfaces*, **2020**, 12, 29, 32270–32277
6. H. Kim, M. Sohail, C. Wang, M. R. Lopez, K. Baek, **J. Koo**, M. W. Seo, S. Kim, J. S. Foord*, S. O. Han*, “Facile One-Pot Synthesis of Bimetallic Co/Mn-MOFs@Rice Husks, and its Carbonization for Supercapacitor Electrodes” *Sci. Rep.*, **2019**, 9, 8984.
7. R. D. Mukhopadhyay,[†] Y. Kim,[†] **J. Koo**,[†] K. Kim*, “Porphyrin Boxes” *Acc. Chem. Res.* **2018**, 51, 11, 2730–2738.
8. Y. Kim, **J. Koo**, I-C. Hwang, R. D. Mukhopadhyay, S. Hong, J. Yoo, A. A. Dar, I. Kim, D. Moon, T. J. Shin, Y. H. Ko, K. Kim*, “Rational Design and Construction of Hierarchical Superstructures Using Shape-Persistent Organic Cages: Porphyrin Box-Based Metallosupramolecular Assemblies” *J. Am. Chem. Soc.* **2018**, 140, 14547–14551.
9. D. Kim, J. K. Choi, S. M. Kim, I. Hwang, **J. Koo**, S. Choi, S. Hwan Cho, K. Kim,* I. S. Lee, “Confined Nucleation and Growth of PdO Nanocrystals in a Seed-Free Solution inside Hollow Nanoreactor” *ACS Appl. Mater. Interfaces.*, **2017**, 9, 29992–30001.
10. **J. Koo**, I-C. Hwang, X. Yu, S. Saha, Y. Kim, K. Kim. “Hollowing out MOFs: hierarchical micro- and mesoporous MOFs with tailorable porosity via selective acid etching” *Chem. Sci.*, **2017**, 8, 6799-6803.
11. K. M. Park, H. Kim, J. Murray, **J. Koo**, K. Kim*, “A facile preparation method for nanosized

MOFs as a multifunctional material for cellular imaging and drug delivery” *Supramolecular Chemistry*, **2016**, 29, 6, 441-445.

12. Y. Kim, R. Haldar, H. Kim, **J. Koo**, K. Kim*, “Guest-Dependant Thermal Response of the Flexible MOF $Zn_2(BDC)_2(DABCO)$ ” *Dalton Trans.*, **2016**, 45, 4187–4192.
13. Y. Kim, T. Yang, G. Yun, M. B. Ghasemian, **J. Koo**, E. Lee, S. J. Cho, K. Kim*, “Hydrolytic Transformation of Microporous MOFs to Hierarchical Micro- and Mesoporous MOFs” *Angew. Chem. Int. Ed.* **2015**, 54, 13273–13278.

AWARDS

1. Best poster award at the Korean Chemical Society, Gwangju, Korea **2017.08**
2. Best poster award at ICC2018, Sendai, Japan, **2018. 08**
3. CSC research awards. **2020. 12**

REFERENCES

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