CHANG WOO MYUNG

chang.w.myung@gmail.com

PERSONAL INFORMATION

Nationality: Korean

Born: 14 February 1989 (Seoul, Korea)

Address: Building LUI USI-Campus Via Giuseppe Buffi 13, 6900 Lugano, Switzerland

Mobile Numbers: (+82) 10-4927-9043 or (+82) 52-217-5403 (office)

Web Page: https://scholar.google.co.kr/citations?user=YqlmqKYAAAAJ&hl=en (google scholar)
http://www.researcherid.com/rid/V-2298-2018 (research id)
https://changwmyung.github.io/ (github)

POSITION

3/19-11/19 Postdoctoral researcher, Center for Superfunctional Materials (CSM), Ulsan National Institute of Sci. and Tech. (UNIST). (w/ Prof. Kwang S. Kim)

12/19- Postdoctoral researcher, ETH Zürich & Università della Svizzera italiana (USI).
(w/ Prof. Michele Parrinello)

EDUCATION

9/14-2/19 Ulsan National Institute of Sci. and Tech. (UNIST), Chemistry, Ph.D.
(Supervisor: Prof. Kwang S. Kim)

9/12-8/14 Pohang Univ. of Sci. and Tech. (POSTECH), M.S.

3/07-8/12 Pohang Univ. of Sci. and Tech. (POSTECH), B.S.

EXPERIENCE

12/16-2/17 Visiting scholar, Rutgers University, Development of non-equilibrium Anderson impurity solver on the Keldysh contour. (Prof. Kristjan Haule)

PUBLICATIONS

1. S. Sultan, M. Ha, D. Y. Kim, J. N. Tiwari*, C. W. Myung*, A. Meena, T. J. Shin, K. H. Chae, & K. S. Kim* (*co-corresponding), Superb water splitting activity of the electrocatalyst $Fe_3Co(PO_4)_4$ designed with computation-aid. *Nat. Commun.* (2019) (accepted).

2. S. Kajal, G.-H. Kim, C. W. Myung, J. Kim, Y. Shin, J. Jeong, A. Jana, J. Y. Kim, Kwang S. Kim, Thermally stable, barium stabilized α-$CsPbI_3$ perovskite solar cells. (2019) *J. Mater. Chem. A* **7**, 21740-21746 (2019).

3. J. N. Tiwari, A. M. Harzandi, M. Ha, S. Sultan, C. W. Myung, H. J. Park, D. Y. Kim, P. Thangavel, A. N. Singh, P. Sharma, S. S. Chandrasekaran, F. Salehnia, J.-W. Jang, H. S. Shin, Z. Lee, & Kwang S. Kim, High-performance hydrogen evolution by Ru single-atoms and nitrided-Ru nanoparticles implanted on N-doped graphitic sheet. *Adv. Ener. Mater.* 1900931 (2019) (cover). [IF: 24.88].

4. S. Sultan, J. N. Tiwari, A. N. Singh, S. Zhumagali, M. Ha, C. W. Myung, P. Thangavel, K. S. Kim, Single Atoms and Clusters Based Nano-Materials for Hydrogen Evolution, Oxygen Evolution

Reactions, and full Water Splitting. *Adv. Ener. Mater.* **9**, 1900624 (2019). [IF: 24.88].

5. T. Yoon†, G.-H. Kim†, C. W. Myung†, S. Kajal, J. Jeong, J. Y. Kim, & K. S. Kim (†equally contributed), Ambient-stable cubic-phase hybrid perovskite reaching the shockley-queisser fill factor limit via hydrazinium chloride additive-assisted process. *ACS Appl. Energy Mater.* **1**, 5865-5871 (2018).

6. J. N. Tiwari, S. Sultan, C. W. Myung, T. Yoon, N. Li, M. Ha, A. M. Harzandi, H. J. Park, D. Y. Kim, S. S. Chandrasekaran, W. G. Lee, V. Vij, H. Kang, T. J. Shin, H. S. Shin, G. Lee, Z. Lee, & K. S. Kim, Multicomponent electrocatalyst with ultralow Pt loading and high hydrogen evolution activity. *Nat. Energy* **3**, 773–782 (2018). [IF: 46.859].

7. C. W. Myung, G. Lee, & K. S. Kim, La-doped $BaSnO_3$ electron transport layer for perovskite solar cells, *J. Mater. Chem. A*, **6**, 23071-23077 (2018). [IF: 10.73].

8. S. Javaid, C. W. Myung, B. Rakshit, K. S. Kim, & G. Lee, Highly hydrophobic fluorographene based system as an interlayer for electron transport in organic-inorganic perovskite solar cells. *J. Mater. Chem. A* **6**, 18635-18640 (2018). [IF: 10.73].

9. C. W. Myung, S. Javaid, K. S. Kim, & G. Lee, Rashba-Dresselhaus effect in inorganic/organic lead iodide perovskite interfaces. *ACS Energy Lett.* **3**, 1294—1300 (2018). [IF: 16.33].

10. C. W. Myung, J. Yun, G. Lee, & K. S. Kim, A new perspective on the role of A-site cations in perovskite solar cells. *Adv. Energy Mater.* **8**, 1702898 (2018) (inside front cover). [IF: 24.88].

11. S. Javaid†, C. W. Myung†, J. Yun, G. Lee, & K. S. Kim (†equally contributed), Organic cation steered interfacial electron transfer within organic–inorganic perovskite solar cells. *J. Mater. Chem. A* **6**, 4305-4312 (2018) (back cover). [IF: 10.73].

12. Y. Park†, Y. S. Kim†, C. W. Myung†, R. A. Taylor, C. C. S. Chan, B. P. L. Reid, T. J. Puchtler, R. J. Nicholas, L. T. Singh, G. Lee, C.-C. Hwang, C.-Y. Park, & K. S. Kim (†equally contributed), Two-dimensional excitonic photoluminescence in graphene on a Cu surface. *ACS Nano* **11**, 3207-3212 (2017). [IF: 13.9].

13. M. R. Rezapour†, C. W. Myung†, J. Yun, A. Ghassami, N. Li, S. U. Yu, A. Hajibabaei, Y. Park, and K. S. Kim (†equally contributed) Graphene and graphene analogs toward optical, electronic, spintronic, green-chemical, energy-material, sensing, and medical applications. *ACS Appl. Mater. Interfaces* **9**, 24393-24406 (2017). [IF: 8.456].

14. B. Park, K. Kim, J. Park, H. Lim, P. T. Lanh, A. Jang, C. Hyun, C. W. Myung, S. Park, J. W. Kim, K. S. Kim, H. S. Shin, G. Lee, S. H. Kim, C. E. Park, & J. K. Kim, Anomalous Ambipolar Transport of Organic Semiconducting Crystals via Control of Molecular Packing Structures. *ACS Appl. Mater. Interfaces* **9**, 27839-27846 (2017). [IF: 8.456].

15. C. Hyun, J. Yun, W. J. Cho, C. W. Myung, J. Park, G. Lee, Z. Lee, K. Kim, & K. S. Kim Graphene edges and beyond: temperature driven structures and electromagnetic properties. *ACS Nano* **9**, 4669-4674 (2015). [IF: 13.9].

ENERGY MATERIALS (UNPUBLISHED)

1. C. W. Myung & Kwang S. Kim, Anharmonicity-driven exciton fine structure transition between dark singlet to bright Rashba spin-orbit co-helical exciton in lead halide perovskites. (to be submitted) (2019).

2. J. Kim, Kwang S. Kim*, & C. W. Myung* (*co-corresponding author) Superb band alignment, defect toleralance, and carrier injection property of SnO_2 electron transport layer for perovskite solar cells. *npj Computational Mater.* (2019) (in review).

3. Y. Park†, A. Jana†, C. W. Myung†, T. S. Yoon, T. J. Puchtler, C. C. Kocher, R. A. Taylor, & K. S. Kim (†equally contributed). Large enhancement of optical quantum efficiency of $MAPbBr_3$ by encapsulating graphene. *ACS Photonics* (2019) (in review).

4. J. Kim, C. W. Myung, & K. S. Kim, The origin of anchoring effect of $PbS/CsPbI_{3-x}Br_x$. (2019) (in preparation).

MACHINE LEARNING (UNPUBLISHED)

1. C. W. Myung, A. A. Hajibabaei, & K. S. Kim, *Ab initio* machine learning force fields. (in preparation).

2. A. N. Singh, M.-H. Kim, M. Ha, C. W. Myung*, J. Yun, D. Kumar, A. Meena, T. J. Shin, D.-H. Seo, H.-W. Lee*, K. S. Kim* (*co-corresponding author) Al doped Li-excess Li-Ni-Ru-O Rock-Salt Cathode for Durable Li-Ion Batteries of High Capacity. *Nat. Commun.* (2019) (submitted)

3. M. Ha, D. Y. Kim, M. Umer, D. Kumar, M. R. Rezapour, E. Oleiki, C. W. Myung*, & Kwang S. Kim* (*co-corresponding author) High-Throughput Computational Screening for Catalysts of Transition-Metal Single Atoms Embedded in N-doped Graphitic Carbon sheets for Superb Hydrogen Evolution Reaction. (2019) (to be submitted)

4. V. Gladkikh, D. Y. Kim, C. W. Myung, A. Hajibabaei, A. Jana, K. S. Kim, Machine Learning for Deriving the Correlation Formula between Band Gaps and Elemental Properties of ABX_3 Perovskites. (2019) (to be submitted)

HETEROGENEOUS CATALYSIS (UNPUBLISHED)

1. A. M. Harzandi, S. Shadman, M. Ha, C. W. Myung*, D. Y. Kim, H. J. Park, S. Sultan, W. Lee, P. Thangavel, W. J. Byun, S.-H. Lee, J. N. Tiwari*, T. J. Shin, Z. Lee, J. S. Lee, & K. S. Kim* (*co-corresponding author), Hydrogen evolution by immiscible bi-metallic single-atoms and nanoparticles embedded in N-doped graphitic matrix. *Adv. Ener. Mater.* (2019) (in review).

REFERENCES

Prof. Kwang Soo Kim

Address: Bldg. 103-403, Ulsan National Institute of Science and Technology (UNIST), UNIST-gil 50, Ulsan, Korea

Tel: (+82) 52-217-5410

E-mail: kimks@unist.ac.kr

Prof. Geunsik Lee

Address: Bldg. 108, Rm. 801-6, Ulsan National Institute of Science and Technology(UNIST), UNIST-gil 50, Ulsan, Korea

Tel: (+82) 52-217-5428

E-mail: gslee@unist.ac.kr

Prof. JunHee Lee

Address: EB2, Rm. 601-6, Ulsan National Institute of Science and Technology(UNIST), UNIST-gil 50, Ulsan, Korea

Tel: (+82) 52-217-2569

E-mail: junhee@unist.ac.kr