

YOUSOO KIM

Curriculum Vitae

Lab Address

Department of Applied Chemistry, The University of Tokyo
7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan

Surface and Interface Science Laboratory, RIKEN,
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Current Positions

Professor, Depart of Applied Chemistry, The University of Tokyo

Chief Scientist, Director of Surface and Interface Science Laboratory, RIKEN

Adjunct Professor, Div. of Materials Science, Saitama University

Adjunct Professor, Dept. Applied Chemistry, Kyushu University

Adjunct Professor, Dept. Chemistry, Gwangju Institute of Science and Technology

Adjunct Professor, Dept. Chemistry, Seoul National University

Adjunct Professor, College of Science, University of the Philippines Diliman

Education

1987-1991: Department of Chemistry, Seoul National University (B.S.)

1991-1993: Department of Chemistry, Seoul National University (M.S.)

(Advisor; Professor Hasuck Kim)

Thesis Title: "Study on electrochemical behaviors of heteropolymolybdates
whose heteroatom was substituted by transition metals "

1996-1999: Department of Applied Chemistry, University of Tokyo (Dr. Eng.)

(Advisor; Professor Akira Fujishima)

Dissertation title: "Optical manipulation of fullerene-based materials"

Professional Positions

1999-2002: Special Postdoctoral Researcher, RIKEN

2002-2006: Research Scientist, RIKEN

2006-2009: Senior Research Scientist, RIKEN

2010-2015: Associate Chief Scientist, RIKEN

2015-Present: Chief Scientist, RIKEN

2022-Present: Professor, The University of Tokyo

2011-Present: Adjunct Professor, Div. of Materials Science, Saitama University, Japan

2017-Present: Adjunct Professor, Dept. Applied Chemistry, Kyusyu University, Japan

2018-Present: Adjunct Professor, College of Science, Univ. of the Philippines Diliman

2018-Present: Adjunct Professor, Dept. Physics, National Chung Hsing University, Taiwan

2018-Present: Adjunct Professor, Dept. Chemistry, GIST, Korea

2019-Present: Adjunct Professor, Dept. Chemistry, Seoul National University, Korea

Awards and Honors

Sep. 2003: Publication Award (The Surface Science Society of Japan)

Mar. 2008: Young Scientist Award (The Physical Society of Japan)

Nov. 2009: Sir Martin Wood Prize (Millennium Science Forum)

Sep. 2016: International Academic Prize (Japan Society of Molecular Science)

Apr. 2018: Commendation for Science and Technology by the MEXT (MEXT)

Jul. 2018: Nanoprobe Prize (Japan Science and Technology Agency)

Mar. 2019: Academic Award, Chemical Society of Japan

Oct. 2019: Publication Award, The Japan Society of Vacuum and Surface Science

Professional Organizations

Japanese Chemical Society, member since 1997

Japanese Physical Society, member since 1999

The Surface Science Society of Japan, member since 2001

The Japan Society of Applied Physics, member since 2001

Japan Society of Molecular Science, member since 2003

The Adhesion Society of Japan, member since 2019

Korean Scientists and Engineers Association in Japan, Vice President since 2010

List of Publications (Original)

1. Orbital-resolved visualization of single-molecule photocurrent channels, Miyabi Imai-Imada, Hiroshi Imada*, Kuniyuki Miwa, Yusuke Tanaka, Kensuke Kimura, Inhae Zoh, Rafael B. Jaculbia, Hiroko Yoshino, Atsuya Muranaka, Masanobu Uchiyama and Yousoo Kim*, **Nature** 603 (2022) 829-834.
2. Dissociation of Single O₂ Molecules on Ag(110) by Electrons, Holes, and Localized Surface Plasmons, Minhui Lee, Emiko Kazuma, Jaehoon Jung, Michael Trenary and Yousoo Kim*, **Chem. Rec.** (2022) e202200011 (1-12).
3. Atomically precise delineation of As antisite defect states from undoped gallium arsenide host lattice by STM/STS measurements and DFT calculations, Maria Herminia M. Balgos, Mary Clare S. Escaño*, Rafael B. Jaculbia, Tien Quang Nguyen, Elizabeth Ann P. Prieto, Elmer S. Estacio, Arnel A. Salvador, Armando S. Somintac, Masahiko Tani, Norihiko Hayazawa* and Yousoo Kim*, Accepted to be published in **Phys. Status Solidi (B)** [DOI:10.1002/pssb.202100652].
4. Stepping beyond cyclic voltammetry: Obtaining the electronic and structural properties of electrified solid-liquid interfaces, Raymond A Wong, Yasuyuki Yokota* and Yousoo Kim*, **Curr. Opin. Electrochem.** 34 (2022) 100964.
5. Dissociation mechanism of a single O₂ molecule chemisorbed on Ag(110), Minhui Lee, Emiko Kazuma, Chi Zhang, Michael Trenary, Jun Takeya, Jaehoon Jung and Yousoo Kim*, **J. Phys. Chem. Lett.** 12 (2021) 9868-9873.
6. Localized graphitization on diamond surface as a manifestation of dopants, Francesca Celine I. Catalan, Le The Anh, Junepyo Oh, Emiko Kazuma, Norihiko Hayazawa, Norihito Ikemiya, Naoki Kamoshida, Yoshitaka Tateyama, Yasuaki Einaga and Yousoo Kim*, **Adv. Mater.** 27 (2021) 2103250, 1-5
7. Graphite electrodes immersed in nonaqueous Li⁺ electrolytes studied with a combined ultrahigh vacuum-electrochemistry approach, Raymond Wong, Yasuyuki Yokota*, Emiko Kazuma, Motoyuki Oniki and Yousoo Kim*, **J. Phys. Chem. C** 125 (2021) 21093-21100. [Cover Article]
8. Monatomic iodine dielectric layer for multimodal optical spectroscopy of dye molecules on metal surfaces, Yasuyuki Yokota*, Raymond A. Wong, Misun Hong, Norihiko Hayazawa and Yousoo Kim*, **J. Am. Chem. Soc.** 143 (2021) 15205-15214.

9. Boron position-dependent surface reconstruction and electronic states of boron-doped diamond(111) surfaces: an ab initio study,
Le The Anh, Francesca Celine I. Catalan, Yusoo Kim, Yasuaki Einaga and Yoshitaka Tateyama*,
Phys. Chem. Chem. Phys. 23 (2021) 15628-15634.
10. Visualization of frontier molecular orbital separation of a single thermally activated delayed fluorescence emitter by STM,
Inhae Zoh, Miyabi Imai-Imada*, Jaehyun Bae, Hiroshi Imada, Youichi Tsuchiya, Chihaya Adachi and Yusoo Kim*,
J. Phys. Chem. Lett. 12 (2021) 7512-7518.
11. Underpotential deposition of silver on gold for surface catalysis of plasmon-enhanced reduction of 4-nitrothiophenol,
Misun Hong, Yasuyuki Yokota*, Raymond Wong, Norihiko Hayazawa, Emiko Kazuma and Yusoo Kim*,
J. Phys. Chem. C 125 (2021) 16569-16575.
12. Single-molecule laser nanospectroscopy with micro-electron volt energy resolution,
Hiroshi Imada*, Miyabi Imai-Imada, Kuniyuki Miwa, Hidemasa Yamane, Takeshi Iwasa, Yusuke Tanaka, Naoyuki Toriumi, Kensuke Kimura, Nobuhiko Yokoshi, Atsuya Muranaka, Masanobu Uchiyama, Tetsuya Taketsugu, Yuichiro K. Kato, Hajime Ishihara and Yusoo Kim*,
Science 373 (2021) 95-98.
13. Chemical identification and bond control of skeletons in a coupling reaction,
Chi Zhang, Rafael B. Jaculbia, Yusuke Tanaka, Emiko Kazuma, Hiroshi Imada, Norihiko Hayazawa, Atsuya Muranaka, Masanobu Uchiyama and Yusoo Kim*,
J. Am. Chem. Soc. 143 (2021) 9461-9467.
14. Terahertz-field-driven scanning tunneling luminescence spectroscopy,
Kensuke Kimura, Yuta Morinaga, Hiroshi Imada*, Ikufumi Katayama*, Kanta Asakawa, Katsumasa Yoshioka, Yusoo Kim* and Jun Takeda*,
ACS Photonics 8 (2021) 982-987.
15. Molecular scale assessments of electrochemical interfaces: in situ and ex situ approaches,
Yasuyuki Yokota and Yusoo Kim*,
Chem. Lett. 50 (2021) 297-304.
16. Solid electrolyte interphase revealing interfacial electrochemistry on highly oriented pyrolytic graphite in water-in-salt electrolyte,
Yena Kim (§), Misun Hong (§), Hyunjeong Oh, Yusoo Kim, Hiroshi Suyama, Shinji Nakanishi, and Hye Ryung Byon*, [(§) These authors contributed equally to this work.].
J. Phys. Chem. C 124 (2020) 20135-20142.
17. Tunable optical transition in 2H-MoS₂ via direct electrochemical engineering of vacancy defect

and surface S-C bond,

Younghee Park, Seunghyun Shin, Young-Joon An, Jong-Guk Ahn, Geumbi Shin, Chaehyeon Ahn, Jiwon Bang, Jaeyoon Baik, Yusoo Kim, Jaehoon Jung* and Hyunseob Lim*,

ACS Appl. Mater. Interfaces. 12 (2020) 40870-40878.

18. Controlling the resonance Raman effect in tip-enhanced Raman spectroscopy using a thin insulating film,
Rafael Jaculbia, Norihiko Hayazawa, Hiroshi Imada, and Yusoo Kim,
Appl. Spectrosc. 74 (2020) 1391-1397.
19. Probing consequences of anion-dictated electrochemistry on the electrode/monolayer/electrolyte interfacial properties,
Raymond A. Wong, Yasuyuki Yokota*, Mitsuru Wakisaka, Junji Inukai, and Yusoo Kim*,
Nature Commun. 11 (2020) 4194.
20. Homogeneous dispersion of aromatic thiolates in the binary self-assembled monolayer on Au(111) via displacement revealed by tip-enhanced Raman spectroscopy,
Misun Hong, Yasuyuki Yokota*, Norihiko Hayazawa, Emiko Kazuma and Yusoo Kim*,
J. Phys. Chem. C 124 (2020) 13141-13149.
21. Single-molecule study of a plasmon-induced reaction for a strongly chemisorbed molecule,
Emiko Kazuma, Minhui Lee, Jaehoon Jung, Michael Trenary and Yusoo Kim*,
Angew. Chem. Int. Ed. 59 (2020) 7960-7966.
22. Centimeter-scale and highly crystalline 2D alcohol: evidence for graphenol (C₆OH),
Hyunseob Lim, Younghee Park, Minhui Lee, Jong-Guk Ahn, Bao-Wen Li, Da Luo, Jaehoon Jung*, Rodney Ruoff* and Yusoo Kim*,
Nano Lett. 20 (2020) 2107-2112.
23. True bulk As-antisite defect in GaAs(110) identified by DFT calculations and probed by STM/STS measurements,
Mary Clare Escaño*, Maria Herminia Balgos, Tien Quang Nguyen, Elizabeth Ann Prieto, Elmer Estacio, Arnel Salvador, Armando Somintac, Rafael Jaculbia, Norihiko Hayazawa, Yusoo Kim and Masahiko Tani,
Appl. Surf. Sci. 511 (2020) 145590.
24. Unusual electrochemical properties of low-doped boron-doped diamond electrodes containing sp² carbon,
Jing Xu, Yasuyuki Yokota, Raymond A. Wong, Yusoo Kim and Yasuaki Einaga*,
J. Am. Chem. Soc. 142 (2020) 2310-2316.
25. Single-molecule resonance Raman effect in a plasmonic nanocavity,
Rafael B. Jaculbia, Hiroshi Imada*, Kuniyuki Miwa, Takeshi Iwasa, Masato Takenaka, Bo Yang, Emiko Kazuma, Norihiko Hayazawa*, Tetsuya Taketsugu and Yusoo Kim*,

- Nat. Nanotechnol.** 15 (2020) 105-110.
26. Scanning tunneling microscopic investigations for studying conformational change of underlying Cu(111) and Ni(111) during graphene growth,
Jong-Guk Ahn, Jiwon Bang, Jaehoon Jung, Yusoo Kim, and Hyunseob Lim*,
Surf. Sci. 693 (2020) 121526.
27. Development of tip-enhanced Raman spectroscopy based on a scanning tunneling microscope in a controlled ambient environment,
Maria Vanessa Balois, Norihiko Hayazawa, Chi Chen, Emiko Kazuma, Yasuyuki Yokota, Yusoo Kim and Takuo Tanaka*,
Jpn. J. Appl. Phys. 58 (2019) SI0801.
28. Atomically-resolved interface imaging and terahertz emission measurements of gallium arsenide epilayers,
Maria Herminia Balgos, Rafael Jaculbia, Elizabeth Ann Prieto, Masahiko Tani, Elmer Estacio, Arnel Salvador, Armando Somintac, Norihiko Hayazawa*, and Yusoo Kim*,
J. Appl. Phys. 126 (2019) 235706.
29. Self-assembly growth of an upright molecular precursor with a rigid framework,
Songpol Chaunchaiyakul, Chi Zhang, Hiroshi Imada, Emiko Kazuma, Fumitaka Ishiwari, Yoshiaki Shoji, Takanori Fukushima*, and Yusoo Kim*,
J. Phys. Chem. C 123 (2019) 31272-31278.
30. Visualization of subnanometric local phonon modes in a plasmonic nanocavity via tip-enhanced Raman spectroscopy in ambient,
Maria Vanessa Balois, Norihiko Hayazawa, Satoshi Yasuda, Katsuyoshi Ikeda, Bo Yang, Emiko Kazuma, Yasuyuki Yokota, Yusoo Kim, and Takuo Tanaka*,
NPJ 2D Mater. Appl. 3 (2019) 38.
31. Atomic-scale visualization of the stepwise metal-mediated dehalogenative cycloaddition reaction pathways: competition between radicals and organometallic intermediates,
Chi Zhang, Emiko Kazuma, and Yusoo Kim*,
Angew. Chem. Int. Ed. 58 (2019) 17736-17744.
32. Characteristics of sulfur atoms adsorbed on Ag(100), Ag(110), and Ag(111) as probed with scanning tunneling microscopy: experiment and theory,
Peter M. Spurgeon, Da-Jiang Liu, Holly Walen, Junepyo Oh, Hyun Jin Yang, Yusoo Kim, and Patricia A. Thiel,
Phys. Chem. Chem. Phys. 21 (2019) 10540-10551.
33. Selective triplet exciton formation in a single molecule,
Kensuke Kimura, Kuniyuki Miwa, Hiroshi Imada*, Miyabi Imai-Imada, Shota Kawahara, Jun Takeya, Maki Kawai, Michael Galperin*, Yusoo Kim*,

- Nature** 570 (2019) 210-213.
34. On-surface evolution of meso-isomerism in two-dimensional supramolecular assemblies, Juyeon Park (§), Ju-Hyung Kim* (§), Sunmi Bak, Kazukuni Tahara, Jaehoon Jung*, Maki Kawai, Yoshito Tobe*, and Yusoo Kim*,
Angew. Chem. Int. Ed. 58 (2019) 9611-9618.
35. In-situ spectroscopic study on the surface hydroxylation of diamond electrodes, Seiji Kasahara, Taiga Ogose, Norihito Ikemiya, Takashi Yamamoto, Keisuke Natsui, Yasuyuki Yokota, Raymond A. Wong, Shota Iizuka, Nagahiro Hoshi, Yoshitaka Tateyama, Yusoo Kim, Masashi Nakamura, Yasuaki Einaga*,
Anal. Chem. 91 (2019) 4980-4986.
36. Many-body states description of single-molecule electroluminescence driven by scanning tunneling microscope, Kuniyuki Miwa, Hiroshi Imada, Miyabi Imai-Imada, Kensuke Kimura, Michael Galperin* and Yusoo Kim*,
Nano Lett. 19 (2019) 2803-2811.
37. Dimensionality control of self-assembled azobenzene derivatives on a gold surface, Hyo Won Kim*, Jaehoon Jung, Mina Han, JiYeon Ku, Young Kuk, and Yusoo Kim*,
J. Phys. Chem. C 123 (2019) 8859-8864.
38. Characteristics of sulfur atoms adsorbed on Ag(100), Ag(110), and Ag(111) as probed with scanning tunneling microscopy: experiment and theory, Peter M. Spurgeon, Da-Jiang Liu, Holly Walen, Junepyo Oh, Hyun Jin Yang, Yusoo Kim, and Patricia A. Thiel*,
Phys. Chem. Chem. Phys. 21 (2019) 10540-10551.
39. Organic molecular tuning of many-body interaction energies in air-suspended carbon nanotubes, Shunsuke Tanaka, Keigo Otsuka, Kensuke Kimura, Akihiro Ishii, Hiroshi Imada, Yusoo Kim and Yuichiro K. Kato*,
J. Phys. Chem. C 123 (2019) 5776-5781.
40. Ultrafast vibrational dynamics of CO ligands on RuTPP/Cu(110) under photodesorption conditions, Takuma Omiya, Yusoo Kim, Rasmita Raval and Heike Arnolds*,
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41. Systematic assessment of benzenethiol self-assembled monolayers on Au(111) as a standard sample for electrochemical tip-enhanced Raman spectroscopy, Yasuyuki Yokota, Norihiko Hayazawa, Bo Yang, Emiko Kazuma, Francesca Celine Inserto Catalan and Yusoo Kim*,

- J. Phys. Chem. C** 123 (2019) 2953-2963.
42. Mechanistic studies of plasmon chemistry on metal catalysts,
Emiko Kazuma and Yusoo Kim*,
Angew. Chem. Int. Ed. 58 (2019) 4800-4808.
43. Scanning probe microscopy for real-space observations of local chemical reactions induced by localized surface plasmon,
Emiko Kazuma, and Yusoo Kim*,
Phys. Chem. Chem. Phys. 21 (2019) 19720-19731.
44. Energy-level alignment of a single molecule on ultrathin insulating film,
Miyabi Imai-Imada, Hiroshi Imada, Kuniyuki Miwa, Jaehoon Jung, Tomoko K Shimizu, Maki Kawai, Yusoo Kim*,
Phys. Rev. B 98 (2018) 201403(R), 1-6.
45. STM studies of photochemistry and plasmon chemistry on metal surfaces,
Emiko Kazuma, Jaehoon Jung, Hiromu Ueba, Michael Trenary, Yusoo Kim*,
Prog. Surf. Sci. 93 (2018) 146-162.
46. Discerning the redox-dependent electronic and interfacial structures in electroactive self-assembled monolayers,
Raymond A Wong, Yasuyuki Yokota, Mitsuru Wakisaka, Junji Inukai, Yusoo Kim*,
J. Am. Chem. Soc. 140 (2018) 13672-13679
47. Fabrication of sharp gold tips by three-electrode electrochemical etching with high controllability and reproducibility,
Bo Yang, Emiko Kazuma, Yasuyuki Yokota, Yusoo Kim*,
J. Phys. Chem. C 122 (2018) 16950-16955.
48. Intense THz emission in high quality MBE-grown GaAs film with thin n-doped buffer,
Sheryl Ann B. Vizcara, Lorenzo P. Lopez, John Daniel E. Vasquez, Maria Herminia M. Balgos, Daisuke Hashizume, Norihiko Hayazawa, Yusoo Kim, Masahiko Tani, Armando S. Somintac, Arnel A. Salvador, Elmer S. Estacio,
Opt. Mater. Express 8 (2018) 1463-1471.
49. Real-space and real-time observation of a plasmon-induced chemical reaction of a single molecule,
Emiko Kazuma, Jaehoon Jung, Hiromu Ueba, Michael Trenary, Yusoo Kim*,
Science 360 (2018) 521-526.
50. Sulfur atoms adsorbed on Cu(100) at low coverage: characterization and stability against complexation,
Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyun Jin Yang, Peter M. Spurgeon, Yusoo Kim, Patricia A. Thiel*,

- J. Phys. Chem. B** 122 (2018) 963-971.
51. Evolution of graphene growth on Pt(111): from carbon clusters to nanoislands, Hyo Won Kim*, Wonhee Ko, JiYeon Ku, Yousoo Kim, Seongjun Park, Sungwoo Hwang, **J. Phys. Chem. C** 121 (2017) 25074-25078.
52. Facet-dependent temporal and spatial changes in boron-doped diamond film electrodes due to anodic corrosion, Francesca Celine Catalan, Norihiko Hayazawa, Yasuyuki Yokota, Raymond Wong, Takeshi Watanabe, Yasuaki Einaga, Yousoo Kim*, **J. Phys. Chem. C** 121 (2017) 26742-26750.
53. Surface hydrogenation of boron-doped diamond electrodes by cathodic reduction, Seiji Kasahara, Keisuke Natsui, Takeshi Watanabe, Yasuyuki Yokota, Yousoo Kim, Shota Iizuka, Yoshitaka Tateyama, Yasuaki Einaga, **Anal. Chem.** 89 (2017) 11342-11347.
54. Long-distance excitation of nitrogen-vacancy centers in diamond via surface spin waves, Daisuke Kikuchi, Dwi Prananto, Kunitaka Hayashi, Abdelghani Laraoui, Norikazu Mizuochi, Mutsuko Hatano, Eiji Saitoh, Yousoo Kim, Carlos A. Meriles, Toshu An*, **Appl. Phys. Express** 10 (2017) 103004.
55. Nanoscale dehydrogenation observed by tip-enhanced Raman spectroscopy, Songpol Chaunchaiyakul, Agung Setiadi, Pawel Krukowski, Francesca Celine Catalan, Megumi Akai-Kasaya, Akira Saito, Norihiko Hayazawa, Yousoo Kim, Hideji Osuga and Yuji Kuwahara*, **J. Phys. Chem. C** 121 (2017) 18162-18168.
56. Rapid photochemical synthesis of sea-urchin-shaped hierarchical porous COF-5 and its lithography-free patterned growth, Soyoung Kim, Chibeom Park, Minkyung Lee, Intek Song, Jungah Kim, Minhui Lee, Jaehoon Jung, Yousoo Kim, Hyunseob Lim*, Hee Cheul Choi*, **Adv. Funct. Mater.** 27 (2017) 1700925.
57. Single molecule investigation of energy dynamics in a coupled plasmon-exciton system, Hiroshi Imada, Kuniyuki Miwa, Miyabi Imai-Imada, Shota Kawahara, Kensuke Kimura and Yousoo Kim*, **Phys. Rev. Lett.** 119 (2017) 013901, 1-6.
58. Desorption of CO from individual ruthenium porphyrin molecules on a copper surface by inelastic tunnelling process, Takuma Omiya, Paolo Poli, Heike Arnolds, Rasmita Raval, Mats Persson and Yousoo Kim*, **Chem. Comm.** 53 (2017) 6148-6151.
59. A direct pathway to molecular photodissociation on metal surfaces using visible light, Emiko Kazuma, Jaehoon Jung, Hiromu Ueba, Michael Trenary, Yousoo Kim*,

- J. Am. Chem. Soc.** 139 (2017) 3115-3121.
60. Chemically induced topological zero mode at graphenic armchair edges,
Maxim Ziatdinov, Hyunseob Lim, Shintaro Fujii, Koichi Kusakabe, Manabu Kiguchi, Toshiaki Enoki
and Yusoo Kim*,
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61. A new analytical method for extracting precise structural parameters of epitaxial graphene from
Moiré patterns,
Hyunseob Lim, Hyun Jin Yang and Yusoo Kim*,
Adv. Mater. Interfaces 3 (2016) 1600826.
62. Real-space investigation of energy transfer in heterogeneous molecular dimers,
Hiroshi Imada, Kuniyuki Miwa, Miyabi Imai-Imada, Shota Kawahara, Kensuke Kimura and Yusoo
Kim*,
Nature 538 (2016) 364-367.
63. Single-molecule dynamics in the presence of strong intermolecular interactions,
Hyun Jin Yang, Michael Trenary, Maki Kawai and Yusoo Kim*,
J. Phys. Chem. Lett. 7 (2016) 4369-4373.
64. Formation of two-dimensional copper selenide on Cu(111) at very low selenium coverages,
Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyun Jin Yang, Yusoo Kim, Patricia A. Thiel*,
Chem. Phys. Chem. 17 (2016) 2137-2145.
65. Effects of molecule-insulator interaction on geometric property of a single phthalocyanine
molecule adsorbed on an ultrathin NaCl film,
Kuniyuki Miwa, Hiroshi Imada, Shota Kawahara, and Yusoo Kim*,
Phys. Rev. B, 93 (2016) 165419, 1-9.
66. Direct visualization of surface phase of oxygen molecules physisorbed on Ag(111) surface: A
two-dimensional quantum spin system,
Shunji Yamamoto, Yasuo Yoshida*, Hiroshi Imada, Yusoo Kim, and Yukio Hasegawa,
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67. Identification of Au-S complexes on Au(100),
Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyun Jin Yang, Yusoo Kim, and P. A. Thiel*,
Phys. Chem. Chem. Phys. 18 (2016) 4891-4901.
68. Seamless growth of a supramolecular carpet,
Ju-Hyung Kim, Jaehoon Jung*, Yu Seok Yang, Jean-Charles Ribierre, Chihaya Adachi, Maki Kawai,
Takanori Fukushima*, and Yusoo Kim*,
Nature Commun. 7 (2016) 10653, 1-9.
69. Lateral hopping of CO on Ag(110) by multiple overtone excitation,
Junepyo Oh, Hyunseob Lim, Ryuichi Arafune, Jaehoon Jung, Maki Kawai, and Yusoo Kim*,

- Phys. Rev. Lett.** 116 (2016) 056101, 1-5.
70. Electron confinement in graphene nanoislands with free-electron-like energy dispersion, Hyo Won Kim, Seiji Takemoto, Emi Minamitani, Tomonari Okada, Takeshi Takami, Kenta Motobayashi, Michael Trenary, Maki Kawai, Nobuhiko Kobayashi, and Yusoo Kim*, **J. Phys. Chem. C** 120 (2016) 345-349.
71. The role of thermal excitation in the tunneling-electron-induced reaction: Dissociation of dimethyl disulfide on Cu(111), Kenta Motobayashi, Yusoo Kim, Michiaki Ohara, Hiromu Ueba, and Maki Kawai*, **Surf. Sci.** 643 (2016) 18-22.
72. Template-free synthesis of a molecular Solomon link via two-component self-assembly, Young Ho Song, Nem Singh, Jaehoon Jung, Hyunuk Kim, Eun-Hee Kim, Hae-Kap Cheong, Yusoo Kim, and Ki-Whan Chi*, **Angew. Chem. Int. Ed.** 55 (2016) 2007-2011.
73. Structurally Driven One-dimensional Electron Confinement in Sub-5-nm Graphene Nanowrinkles, Hyunseob Lim, Jaehoon Jung*, Rodney S. Ruoff, and Yusoo Kim*, **Nature Commun.** 6 (2015) 8601, 1-6.
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75. Long-range displacive reconstruction of Au(110) triggered by low coverage of sulfur, Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyun Jin Yang, Yusoo Kim and P. A. Thiel*, **J. Phys. Chem. C** 119 (2015) 21000-21010.
76. Spatially extended underscreened Kondo state from collective molecular spin, Emi Minamitani, Ying-Shuang Fu, Qi-Kun Xue, Yusoo Kim, and Satoshi Watanabe*, **Phys. Rev. B** 92 (2015) 075144, 1-5.
77. Atomic-scale luminescence measurement and theoretical analysis unveiling electron energy dissipation at a p-type GaAs(110) surface, Hiroshi Imada, Kuniyuki Miwa, Jaehoon Jung, Tomoko K Shimizu, Naoki Yamamoto, and Yusoo Kim*, **Nanotechnology** 26 (2015) 365402.
78. Atomic-scale dynamics of surface-catalyzed hydrogenation/dehydrogenation: NH on Pt(111), Zhu Liang, Hyun Jin Yang, Junepyo Oh, Jaehoon Jung, Yusoo Kim*, and Michael Trenary*, **ACS Nano** 9 (2015) 8303-8311.
79. Tunneling desorption of atomic hydrogen on the surface of titanium dioxide, Taketoshi Minato, Seiji Kajita, Chi-Lun Pang, Naoki Asao, Yoshinori Yamamoto, Takashi

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Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyunseob Lim, J. W. Evans, Yusoo Kim and P. A. Thiel*,
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Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyunseob Lim, J. W. Evans, Yusoo Kim and P. A. Thiel*,
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82. Electronic modulations in a single wall carbon nanotube induced by the Au(111) surface reconstruction,
Sylvain Clair, Hyung-Joon Shin, Yusoo Kim*, and Maki Kawai*,
Appl. Phys. Lett. 106 (2015) 053111, 1-4.
83. Action spectroscopy for single-molecule reactions – experiments and theory,
Yusoo Kim, Kenta Motobayashi, Thomas Frederiksen, Hiromu Ueba, and Maki Kawai,
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Holly Walen, Da-Jiang Liu, Junepyo Oh, Hyunseob Lim, James W. Evans, Christine Aikens, Yusoo Kim, and Patricia A. Thiel*,
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85. Adsorption of water dimer on platinum(111): identification of the $-\text{OH}\cdots\text{Pt}$ hydrogen bond,
Kenta Motobayashi, Líney Árnadóttir, Chikako Matsumoto, Eric M. Stuve, Hannes Jónsson,
Yusoo Kim, and Maki Kawai*,
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Tomoko K. Shimizu, Jaehoon Jung, Hiroshi Imada, and Yusoo Kim*,
Angew. Chem. Int. Ed. 126 (2014) 13949-13953.
87. Controlling orbital-selective Kondo effects in a single molecule through coordination chemistry,
Noriyuki Tsukahara, Emi Minamitani, Yusoo Kim, Maki Kawai, and Noriaki Takagi*,
J. Chem. Phys. 141 (2014) 054702, 1-9.
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Da-Jiang Liu, Holly Walen, Junepyo Oh, Hyunseob Lim, James W. Evans, Yusoo Kim, and Patricia A. Thiel*,
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89. Site-dependent electronic structures of a single molecule on a metal surface studied by scanning tunneling microscopy and spectroscopy,
Satoshi Katano, Masafumi Hori, Yusoo Kim, and Maki Kawai,

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