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5. Current appointment:
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6. Educational background:
- April 1986, B.Sc. Tokyo Institute of Technology, Department of Polymers and Polymeric Materials
- 1988~1989, Ministry of Education, Science and Culture Scholarship for study-abroad-programs, Department of Physics, Institute for Polymers and Organic Solids, University of California, Santa Barbara (supervisor: Prof. Alan J. Heeger)
- April 1989, M.E. Tokyo Institute of Technology, Department of Polymers and Polymeric Materials
- April 1992, Ph.D. Tokyo Institute of Technology, Department of Polymers and Polymeric Materials,
  Research: Studied the synthesis of polyacetylene films and excitonic properties of polyacetylene using spectroscopic techniques

7. Professional background:
- April 1992~August 2006, Central Technical Research Laboratory, Nippon Oil Co., Ltd. (Present: ENEOS Co.)
  Research: Focused on materials and device research and development in the energy and environment field, including energy-saving electrochromic dimming glass and organic solar cells
- August 2006~August 2011, Project Associate Professor, The University of Tokyo
- August 2011~April 2023, Project Professor, Academic-Industrial Joint Laboratory for Renewable Energy of RCAST, The University of Tokyo
- April 2023~present, Institute for Advanced Science and Technology affiliated Initiatives for Global Security and Energy Transition, The University of Tokyo
  Research: Primarily engaged in fundamental research for practical application of organic solar cells, particularly organic-inorganic hybrid solar cells. Recently, focusing on fundamental research for ultra-efficient solar cells using colloidal quantum dots.

8. Scientific achievements

List of part of the publications

1) “Ultra-Thin SnOx Buffer Layer Enables High-efficiency Quantum Junction Photovoltaics”, Yuwen Jia, Haibin Wang, Yinglin Wang, Chao Wang, Xiaofei Li, Takaya Kubo, Yichun Liu, Xintong Zhang, and Hiroshi Segawa, Adv. Sci. 2022, 9, 2204725.
2) Takaya Kubo, Haibin Wang, and Hiroshi Segawa, “Solution-processed Quantum Dot Solar Cells”, (***Springer Handbook of Inorganic Photochemistry***, Springer Handbook of Inorganic Photochemistry, eBook ISBN 978-3-030-63713-2, Print ISBN: 978-3-030-63712-5, 2022).
3) “Spectral Splitting Solar Cells Constructed with InGaP/GaAs Two-junction Subcells and Infrared PbS Quantum Dot/ZnO Nanowire Subcells”, Haibin Wang, Shoichiro Nakao, Naoya Miyashita, Yusuke Oteki, Maxime Giteau, Yoshitaka Okada, Tatsuya Takamoto, Hidenori Saito, Shinichi Magaino, Katsuhiko Takagi, Tetsuya Hasegawa, Takaya Kubo, Takumi Kinoshita, Jotaro Nakazaki, and Hiroshi Segawa, ***ACS Energy Lett***. 2022, **7**, 2477–2485.
4) “Emission Spectroscopy Investigation of the Enhancement of Carrier Collection Efficiency in $AgBiS_2$-Nanocrystal/ZnO-Nanowire Heterojunction Solar Cells”, Yun Xiao, Haibin Wang, Fumiyasu Awai, Naoyuki Shibayama, Takaya Kubo, Hiroshi Segawa, ***ACS Appl. Mater. Interfaces.***, 2022, **14**, 6994–7003.
5) “The Effect of Water on Colloidal Quantum Dot Solar Cells”, Wanli Ma, Guozheng Shi, Haibin Wang, Yaohong Zhang, Chen Cheng, Tianshu Zhai, Botong Chen, Xinyi Li, Ryota Jono, Xinnan Mao, Yang Liu, Xuliang Zhang, Xufeng Ling, Yannan Zhang, Xing Meng, Yifan Chen, Steffen Duhm, Liang Zhang, Tao Li, Lu Wang, Shiyun Xiong, Takashi Sagawa, Takaya Kubo, Hiroshi Segawa, Qing Shen, and Zeke Liu, ***Nat. Commun.***, 2021, **12**, 4381.
6) “Highly Stable Interdigitated PbS Quantum Dot and ZnO Nanowire Solar Cells with an Automatically Embedded Electron-Blocking Layer”, Haibin Wang, Moana Desbordes, Yun Xiao, Takaya Kubo, Keishi Tada, Takeru Bessho, Jotaro Nakazaki, and Hiroshi Segawa, ***ACS Appl. Energy Mater.***, 2021 **4**, 5918–5926.
7) “A Perspective on Materials Design and Optimization for Next Generation Solar Cell and Light-Emitting Technologies”, Sergei Manzhos, Chu-Chen Chueh, Giacomo Giorgi, Takaya Kubo, Saianand Gopalan, Johann Lüder, Prashant Sonar, Manabu Ihara, ***J. Phys. Chem. Lett.***, 2021, **12**, 4638−4657.
8) “High-Performance Electron-Transport-Layer Free Quantum Junction Solar Cells with Improved Efficiency Exceeding 10%”, Yuwen Jia, Haibin Wang, Yinglin Wang, Naoyuki Shibayama, Takaya Kubo, Yichun Liu, Xintong Zhang, and Hiroshi Segawa, ***ACS Energy Lett***., 2021, **6**, 493−500.
9) “Eco-Friendly $AgBiS_2$ Nanocrystal/ZnO Nanowire Heterojunction Solar Cells with Enhanced Carrier Collection Efficiency”, Yun Xiao, Haibin Wang, Fumiyasu Awai, Naoyuki Shibayama, Takaya Kubo, Hiroshi Segawa, ***ACS Appl. Mater. Interfaces***, 2021, **13**, 3969−3978.
10) “Limiting Factor of Photovoltaic Performance for Solution-Phase Ligand-Exchanged PbS Quantum Dot Solar Cell”, Takeshi Fukuda, Haibin Wang, Akihiro Takahashi, Kazuya Takahira, Takaya Kubo, Hiroshi Segawa, ***Sol. Energy Mater Sol. Cells***, 2019, **195**, 220-227.
11) “Solution-Processed Short-wave Infrared PbS Colloidal Quantum Dot / ZnO Nanowire Solar Cells Giving High Open Circuit Voltage”, Haibin Wang, Takaya Kubo, Jotaro Nakazaki, and Hiroshi Segawa, ***ACS Energy Lett.***, 2017, **2**, 2110-2015.
12) “Enhanced carrier transportation distance in colloidal PbS QD-based solar cells using ZnO nanowires”, Haibin Wang, Victoria Gonzalez-Pedro, Takaya Kubo, Francisco Fabregat-Santiago, Juan Bisquert, Yoshitaka Sanehira, Jotaro Nakazaki, and Hiroshi Segawa, ***J. Phys. Chem. C***, 2015, **119**, 27265-27274.
13) “Efficiency Enhancement of PbS Quantum Dot/ZnO Nanowire Bulk-Heterojunction Solar Cells by Plasmonic Silver Nanocubes”, Tokuhisa Kawawaki, Haibin Wang, Takaya Kubo, Koichiro Saito, Jotaro Nakazaki, Hiroshi Segawa, and Tetsu Tatsuma, ***ACS Nano***, 2015, **9**, 4165-4172.
14) “PbS colloidal quantum dot/ZnO based bulk-heterojunction solar cells with high stability under continuous light soaking”, Haibin Wang, Takaya Kubo, Jotaro Nakazaki, and Hiroshi Segawa*, ***Phys Status Solidi Rapid Res Lett.***, 2014, **8**, 961-965.
15) “PbS-Quantum-Dot-Based Heterojunction Solar Cells Utilizing ZnO Nanowires for High External Quantum Efficiency in the Near-Infrared Region”, Haibin Wang, Takaya Kubo, Jotaro Nakazaki, Takumi Kinoshita, and Hiroshi Segawa, ***J. Phys. Chem. Lett.***, 2013, **4**, 2455-2460.