



Personal details

Email: m.huelsey(at)tum.de
Nationality: German
Year of Birth: 1993

Professional Appointments

2024 – now **Rudolf Mößbauer Tenure Track Assistant Professor**
Technical University of Munich (TUM)
Department of Chemistry and Institute of Advanced Science

2022 – 2024 **Schmidt Science Fellow in Chemistry**
Massachusetts Institute of Technology
Advisor: Prof. Yogesh Surendranath (Department of Chemistry)
Co-Advisor: Prof. Yuriy Román-Leshkov (Department of Chemical Engineering)

2021 **Research Fellow in Chemical Engineering**
National University of Singapore
Advisor: Prof. Ning Yan

Education

2017 – 2021 **Ph.D. in Chemical Engineering**
National University of Singapore
Advisor: Prof. Ning Yan
Thesis: Single-Atom Catalysts Supported on Polyoxometalates – Applications, Spectroscopic and Spectrometric Studies

2019 Academic exchange Oct-2019-Dec-2019
ETH Zurich
Advisor: Prof. Javier Pérez-Ramírez

2015 – 2017 **M.Sc. in Chemistry**
Heidelberg University
Advisor: Prof. Yuriy Román-Leshkov (*Massachusetts Institute of Technology*)
Thesis: Transition Metal based Catalysts and their use in Lignin Depolymerization and Upgrading

2012 – 2015 **B.Sc. in Biochemistry**
Heidelberg University
Advisor: Prof. Nora Kulak, Chemistry (*Free University of Berlin*)
Thesis: Anthraquinonyl-cyclen complexes and their interaction with DNA

Funding Acquisition

2024	“Nanyang Assistant Professorship”, Nanyang Technological University, Singapore, 1,500,000 SGD, PI, Grant awarded (declined)
2022	“Advanced Scientometrics for Tackling the Reproducibility Crisis in STEM”, Schmidt Futures, 250,000 USD, Submitted (Co-PI)
2020	“Experimental and Theoretical Study on Polyoxometalates Supported Single-Atom Catalysts for Hydrogenation Reaction”, Major Research Project, National Natural Science Foundation China, proposed budget: 800,000 RMB, Grant awarded

Awards and Honors

2024	Rudolf Mößbauer Tenure Track Professorship
2024	Nanyang Assistant Professorship (declined)
2022 – 2024	Schmidt Science Fellowship
2020	Young Scientist Travel Support Prize (for ICC 2020)
2019	ChemCatChem Best Poster Award SACC 2019
2018	Best Poster Award AM30
2017 – 2021	SINGA scholarship
2015 – 2016	Germany Scholarship
2015	DAAD Rise
2012	Emmy-Noether Award

Publications – refereed

^ denotes co-first authorship

* denotes (co)-corresponding authorship

40. **Max J. Hülsey**,[^] Bryan Tang,[^] Sophia Weng, Yogesh Surendranath,* “Hydronium ions inhibit CO₂ reduction on coinage metals”
In preparation.
39. **Max J. Hülsey**,[^] Geng Sun,[^] Bin Zhang,[^] Yao Xu, Shipeng Ding, Sie Shing Wong, Ying Zheng, Shinya Furukawa, Hiroyuki Asakura, Yongqiang Cheng, Zili Wu, Rui Si, Ding Ma, Philippe Sautet,* Ning Yan,* “Zero-valent Pd atoms anchored on polyoxometalate for low temperature hydrodeoxygenation”
Under review.
Preprint: <https://doi.org/10.26434/chemrxiv.13414691.v1>
38. **Max J. Hülsey**, Onyu Jung, Daniel Bregante, Sophia Weng, Wei Lun Toh, Yogesh Surendranath,* “pH swing and CO₂ uptake measurements under electrolysis by differential electrochemical mass spectrometry”
Under review.
37. Jinqian Chang, Sikai Wang, **Max J. Hülsey**, Shi Nee Lou, Xinbin Ma,* Ning Yan*, “Electrothermal Conversion of Methane to Methanol at Room-Temperature with Phosphotungstic Acid”
Under review.
Preprint: <https://doi.org/10.21203/rs.3.rs-3575070/v1>
36. Sikai Wang, Hua An, **Max J. Hülsey**, Geng Sun, Qian He, Ning Yan*, “Sulfite-enhanced Aerobic Methane Oxidation to Methanol over Reduced Phosphomolybdate”
ACS Catal., **2024**, 14, 4352-4361. <https://doi.org/10.1021/acscatal.4c00234>

35. Karl S. Westendorff, **Max J. Hülsey**, Thejas S. Wesley, Yuriy Román-Leshkov,* Yogesh Surendranath,* “Electric Field-Driven Proton Transfer Promotes Brønsted Acid Catalysis by Orders of Magnitude” *Science*, **2024**, 383, 757-763. <https://doi.org/10.1126/science.adk4902>
34. Sikai Wang, Victor Fung, **Max J. Hülsey**, Xiaocong Liang, Zhiyang Yu, Jinqian Chang, Andrea Folli, Richard J. Lewis, Graham J. Hutchings,* Qian He,* Ning Yan*, “H₂-reduced phosphomolybdate promotes room-temperature aerobic oxidation of methane to methanol” *Nat. Catal.*, **2023**, 6, 895-905. <https://doi.org/10.1038/s41929-023-01011-5>
33. Thejas S. Wesley,[^] **Max J. Hülsey**,[^] Noah Lewis,[^] Karl S. Westendorff,[^] Ethan Crumlin,* Yuriy Román-Leshkov,* Yogesh Surendranath,* “Metal nanoparticles supported on a nonconductive oxide undergo pH-dependent spontaneous polarization” *Chem. Sci.*, **2023**, 14, 7154-7160. [10.1039/D3SC00884C](https://doi.org/10.1039/D3SC00884C)
32. **Max J. Hülsey**,* Sikai Wang, Bin Zhang, Shipeng Ding, Ning Yan,* “Single-atom catalysts with molecular definition” *Acc. Chem. Res.*, **2023**, 56, 561-572. <https://doi.org/10.1021/acs.accounts.2c00728>
31. Jinqian Chang,[^] **Max J. Hülsey**,[^] Sikai Wang, Maoshuai Li, Xinbin Ma,* Ning Yan*, “Electro-thermal Water Gas Shift Reaction with Pd₁/CsSMA Single Atom Catalyst at Room Temperature” *Angew. Chem. Int. Ed.*, **2023**, 62, e202218265. <https://doi.org/10.1002/ange.202218265>
30. Ying Zheng, Qiang Wang, Qi Yang, Sikai Wang, **Max J. Hülsey**, Shipeng Ding, Shinya Furukawa, Maoshuai Li, Ning Yan, Xinbin Ma “Boosting the hydroformylation activity of Rh/CeO₂ single-atom catalyst by tuning surface deficiencies” *ACS Catal.*, **2023**, 13, 7243-7255. <https://doi.org/10.1021/acscatal.3c00810>
29. Hua An, Geng Sun, **Max J. Hülsey**, Philippe Sautet, Ning Yan,* “Demonstrating the electron-proton transfer mechanism of aqueous phase 4-nitrophenol hydrogenation using unbiased electrochemical cells” *ACS Catal.*, **2022**, 12, 15021-15027. <https://doi.org/10.1021/acscatal.2c03133>
28. Sie Shing, **Max J. Hülsey**, Hua An, Ning Yan,* “Quantum Yield Enhancement in Photocatalytic HCOOH Decomposition to H₂ under Periodic Illumination” *Catal. Sci. Technol.*, **2022**, 12, 5217-5228. <https://doi.org/10.1039/D2CY00935H>
27. Ricca Rahman Nasaruddin,* **Max J. Hülsey**, Jianping Xie,* “Enhancing catalytic properties of ligand-protected gold-based 25-metal atom nanoclusters by silver doping” *Mol. Catal.*, **2022**, 518, 112095. <https://doi.org/10.1016/j.mcat.2021.112095>
26. **Max J. Hülsey**,[^] Victor Fung,[^] Xudong Hou, Jishan Wu, Ning Yan,* “Hydrogen spillover and its relation to catalysis: observations on structurally defined single-atom sites” *Angew. Chem. Int. Ed. (Very Important Paper)*, **2022**, 61, e202208237. <https://doi.org/10.1002/anie.202208237>
25. **Max J. Hülsey**, Sambath Baskaran, Shipeng Ding, Sikai Wang, Hiroyuki Asakura, Shinya Furukawa, Shibo Xi, Qi Yu, Cong-Qiao Xu, Jun Li,* Ning Yan,* “Identifying Key Descriptors for the Single-atom Catalyzed CO Oxidation” *CCS Chem*, **2022**, 4, 3296-3308. <https://doi.org/10.31635/ccschem.022.202201914>

24. Chia Wei Lim,[^] **Max J. Hülsey**,[^] Ning Yan,* “Non-Faradaic Promotion of Ethylene Hydrogenation Under Oscillating Potentials”
JACS Au, **2021**, 1, 536-542. (featured in AAAS EurekAlert, phys.org, and NUS News)
<https://doi.org/10.1021/jacsau.1c00044>
23. **Max J. Hülsey**, Geng Sun, Philippe Sautet, Ning Yan,* “Observing single-atom catalytic sites during reactions with electrospray ionization mass spectrometry”
Angew. Chem. Int. Ed., **2021**, 60, 4764-4773. <https://doi.org/10.1002/anie.202011632>
22. **Max J. Hülsey**,[^] Chia Wei Lim,[^] Sie Shing Wong, Ning Yan,* “Coverage-dependant formic acid oxidation reaction kinetics determined by oscillating potentials”
Mol. Catal., **2021**, 504, 111482. <https://doi.org/10.1016/j.mcat.2021.111482>
21. Shipeng Ding, **Max J. Hülsey**, Qian He, Hiroyuki Asakura,* Min Gao,* Jun-ya Hasegawa, Tsunehiro Tanaka, Ning Yan,* “Ionic Liquid-Stabilized Single-atom Rh Catalyst against Leaching”
CCS Chem., **2021**, 3, 1814-1822. <https://doi.org/10.31635/ccschem.021.202101063>
20. Yaxuan Jing, Yanqing Wang, Shinya Furukawa, Chengyang Sun, **Max J. Hülsey**, Yong Guo, Xiaohui Liu, Ning Yan,* “Towards the circular economy: converting aromatic plastic wastes back to arenes over Ru/Nb₂O₅ catalyst”
Angew. Chem. Int. Ed., **2021**, 60, 5527-5535. <https://doi.org/10.1002/anie.202011063>
19. Fanghua Li, **Max J. Hülsey**, Ning Yan, Yanjun Dai, Chi-Hwa Wang,* “Co-transesterification of waste cooking oil, algal oil and dimethyl carbonate over sustainable nanoparticle catalysts”
Chem. Eng. J., **2021**, 405, 127036. <https://doi.org/10.1016/j.cej.2020.127036>
18. Shipeng Ding, Hsi-An Chen, Okorn Mekasuwandumrong, **Max J. Hülsey**, Xinpu Fu, Qian He, Joongjai Panpranot, Chia-Min Yang, Ning Yan,* “High-temperature Flame Spray Pyrolysis Induced Stabilization of Pt Single-Atom Catalysts”
Appl. Catal. B Environ., **2021**, 281, 119471. <https://doi.org/10.1016/j.apcatb.2020.119471>
17. **Max J. Hülsey**, Chia Wei Lim, Ning Yan,* “Promoting heterogeneous catalysis beyond catalyst design”
Chem. Sci., **2020**, 11, 1456-1468. <https://doi.org/10.1039/C9SC05947D>
16. Qiming Sun, Benjamin W. J. Chen, Ning Wang, Qian He, Albert Chang, Chia-Min Yang, Hiroyuki Asakura, Tsunehiro Tanaka, **Max J. Hülsey**, Chi-Hwa Wang, Jihong Yu,* Ning Yan,* “Zeolite-Encaged Pd-Mn Nanocatalysts for CO₂ Hydrogenation and Formic Acid Decomposition”
Angew. Chem. Int. Ed., **2020**, 132, 20358-20366. <https://doi.org/10.1002/anie.202008962>
15. Song Song,[^] Jiafu Qu,[^] Peijie Han,[^] **Max J. Hülsey**, Guping Zhang, Yunzhu Wang, Shuai Wang, Dongyun Chen,* Jianmei Liu,* Ning Yan,* “Visible-Light-Driven Amino Acids Production from Biomass-based Feedstocks over Ultrathin CdS Nanosheets”
Nat. Commun., **2020**, 11, 4899. <https://doi.org/10.1038/s41467-020-18532-3>
14. Shipeng Ding,[^] Yalin Guo,[^] **Max J. Hülsey**, Bin Zhang, Hiroyuki Asakura,* Lingmei Liu, Yu Han, Min Gao, Jun-ya Hasegawa,* Botao Qiao,* Tao Zhang, Ning Yan,* “Electrostatic Stabilization of Single-Atom Catalysts by Ionic Liquids” (featured in Chem, Eurekalert, phys.org, etc.)
Chem, **2019**, 5, 1-13. <https://doi.org/10.1016/j.chempr.2019.10.007>
13. Shipeng Ding, **Max J. Hülsey**, Javier Pérez-Ramírez,* Ning Yan,* “Transforming energy with single-atom catalysts”
Joule, **2019**, 3, 1-33. <https://doi.org/10.1016/j.joule.2019.09.015>

12. Zhenhua Zhang, Liyuan Zhang, **Max J. Hülsey**, Ning Yan,* “Zirconia phase effect in Pd/ZrO₂ catalyzed CO₂ hydrogenation into formate”
Mol. Catal., **2019**, 475, 110461. <https://doi.org/10.1016/j.mcat.2019.110461>
11. Zhenhua Zhang, Liyuan Zhang, Siyu Yao, Xiaozhe Song, Weixin Huang, **Max J. Hülsey**,* Ning Yan,* “Support-dependent rate-determining step of CO₂ hydrogenation to formic acid on metal oxide supported Pd catalysts”
J. Catal., **2019**, 376, 57-67. <https://doi.org/10.1016/j.jcat.2019.06.048>
10. **Max J. Hülsey**,[^] Bin Zhang,[^] Zhirui Ma, Hiroyuki Asakura, David N. Do, Wei Chen, Tsunehiro Tanaka, Peng Zhang, Zili Wu, Ning Yan,* “In situ Spectroscopy-Guided Engineering of Rhodium Single-Atom Catalysts for CO Oxidation”
Nat. Commun., **2019**, 10, 1330. <https://doi.org/10.1038/s41467-019-09188-9>
9. **Max J. Hülsey**, Jiaguang Zhang, Ning Yan,* “Harnessing the Wisdom in Colloidal Chemistry to make Stable Single-Atom Catalysts”
Adv. Mater., **2018**, 30 (47), 1802304. <https://doi.org/10.1002/adma.201802304>
8. **Max J. Hülsey**, Huiying Yang, Ning Yan,* “Sustainable routes for the synthesis of renewable heteroatom-containing chemicals”
ACS Sustain. Chem. Eng., **2018**, 6 (5), 5694-5707.
<https://doi.org/10.1021/acssuschemeng.8b00612>
7. **Max J. Hülsey**,* “Shell Biorefinery: A Comprehensive Introduction”
Green Energy Environ., **2018**, 3 (4), 318-327. <https://doi.org/10.1016/j.gee.2018.07.007>
6. Ricca Rahman Nasaruddin, Qiaofeng Yao, Tiankai Chen, **Max J. Hülsey**, Ning Yan,* Jianping Xie,* “Hydride-Induced Ligand Dynamic and Structural Transformation of Gold Nanoclusters during Catalytic Reaction”
Nanoscale, **2018**, 10, 23113-23121. <https://doi.org/10.1039/C8NR07197G>
5. Eric Anderson, Michael L. Stone, **Max J. Hülsey**, Gregg T. Beckham,* Yuriy Román-Leshkov,* “Kinetic Studies of Lignin Solvolysis and Reduction for the Production of Monomers by Flow-through Reductive Catalytic Fractionation”
ACS Sustain. Chem. Eng., **2018**, 6 (6), 7951–7959 (Editor’s choice).
<https://doi.org/10.1021/acssuschemeng.8b01256>
4. Jan Hormann, Jaroslav Malina, Oliver Lemke, **Max J. Hülsey**, Stefanie Wedepohl, Jan Potthoff, Claudia Schmidt, Ingo Ott, Bettina G. Keller, Viktor Brabec, Nora Kulak,* “Multiply intercalator-substituted Cu(II) cyclen complexes as DNA condensers and DNA/RNA synthesis inhibitors”
Inorg. Chem., **2018**, 57 (9), 5004-5012. <https://doi.org/10.1021/acs.inorgchem.8b00027>
3. Weiping Deng,[^] Yunzhu Wang,[^] Sui Zhang, Krishna M. Gupta, **Max J. Hülsey**, Hiroyuki Asakura, Lingmei Liu, Yu Han, Eric M Karp, Gregg T. Beckham, Paul J. Dyson, Jianwen Jiang, Tsunehiro Tanaka, Ye Wang, Ning Yan,* “Catalytic amino acid production from biomass-derived intermediates” (featured in Chem, Chin. J. Catal., The Straits Times, phys.org, etc.)
Proc. Natl. Acad. Sci. U. S. A., **2018**, 115, 5093-5098. <https://doi.org/10.1073/pnas.1800272115>
2. Sudipta De, Maria V. Babak, **Max J. Hülsey**, Wee Han Ang,* Ning Yan,* “Designed precursor for the controlled synthesis of highly active atomic and sub-nanometric platinum catalysts on mesoporous silica”
Chem. Asian J., **2018**, 13(8), 1053-1059. <https://doi.org/10.1002/asia.201800125>

1. Xi Chen, Huiying Yang, **Max J. Hülsey**, Ning Yan,* “One-step Synthesis of N-heterocyclic Compounds from Carbohydrates over Tungsten-based Catalysts”
ACS Sustain. Chem. Eng., **2017**, 5 (11), 11096-11104.
<https://doi.org/10.1021/acssuschemeng.7b03048>

Talks and posters

40. **Max J. Hülsey**, Yogesh Surendranath, Hydronium ions inhibit CO₂ reduction on coinage metals but not molecular active sites, **Laboratory for Electrochemical Interfaces (MIT DMSE & NSE)**, August, 2024 (**Invited**)
39. **Max J. Hülsey**, Yogesh Surendranath, Interfacial CO₂ exchange kinetics measured by differential electrochemical mass spectrometry, **American Chemical Society Fall Meeting**, August, 2024 (**Invited**)
38. **Max J. Hülsey**, Yogesh Surendranath, Transient Kinetic Isotope Analysis Reveals Interfacial CO₂ Dissolution Kinetics, **MIT Postdoc Poster Symposium**, June, 2024
37. **Max J. Hülsey**, Yogesh Surendranath, Interfacial CO₂ exchange kinetics measured by differential electrochemical mass spectrometry, **Catalysis Gordon Research Seminar**, June, 2024 (**Invited**)
36. **Max J. Hülsey**, Controlling the local reaction environment to drive catalysis, Department Seminar, **Nanyang Technological University**, February, 2024 (**Invited**)
35. **Max J. Hülsey**, The interplay of thermochemical and electrochemical catalysis, Department Seminar, **Ruhr-Universität Bochum**, February, 2024 (**Invited**)
34. **Max J. Hülsey**, Sustainable Hydrogen Production through Intermediate Temperature Processes, Department Seminar, **Technical University of Munich**, January, 2024 (**Invited**)
33. **Max J. Hülsey**, Yogesh Surendranath “Interfacial CO₂ exchange kinetics measured by differential electrochemical mass spectrometry”, **North American Meeting**, June, 2023
32. **Max J. Hülsey**, Yogesh Surendranath “CO₂ uptake and interfacial pH swing measurements by differential electrochemical mass spectrometry”, **American Chemical Society Spring Meeting**, March, 2023
31. **Max J. Hülsey** “Controlling the local reaction environment to drive catalysis”, Department seminar, **Rice University**, March, 2023 (**Invited**)
30. **Max J. Hülsey**, Yogesh Surendranath “Metal nanoparticles supported on a nonconductive oxide undergo pH-dependent spontaneous polarization”, **Reactions at Surfaces Gordon Research Conference**, February, 2023
29. **Max J. Hülsey** “Controlling the local reaction environment to drive catalysis”, Department seminar, **New York University**, Februar, 2023 (**Invited**)
28. **Max J. Hülsey**, Yogesh Surendranath “Differential electrochemical mass spectrometry reveals interfacial CO₂ uptake”, **American Institute of Chemical Engineers Annual Meeting**, November, 2022
27. **Max J. Hülsey**, Ning Yan “Dynamic Promotion of Heterogeneous Catalysis By Oscillating Electric Potentials”, **American Institute of Chemical Engineers Annual Meeting**, November, 2022
26. **Max J. Hülsey**, Ning Yan “Hydrogen spillover and its relation to catalysis”, **American Institute of Chemical Engineers Annual Meeting**, November, 2022

25. **Max J. Hülsey**, Yuriy Román-Leshkov, Yogesh Surendranath “Sustainable catalysis on dynamic active sites”, **American Institute of Chemical Engineers Annual Meeting**, November, 2022
24. **Max J. Hülsey**, “Dynamics of catalytic active sites”, **Chemistry Student Seminar MIT Chemistry**, October, 2022
23. **Max J. Hülsey**, Yogesh Surendranath “Transient Kinetic Isotope Analysis Reveals Interfacial CO₂ dissolution kinetics”, **Electrochemistry Gordon Research Conference**, September, 2022
22. **Max J. Hülsey**, “Polyoxometalate-Supported Single-Atom Catalysts”, **Catalysis Gordon Research Conference**, June, 2022
21. **Max J. Hülsey**, “Catalytic technologies for a decarbonized chemical economy”, **Shanghai Jiaotong University – China-UK Low Carbon College**, March, 2022 (**Invited**)
20. **Max J. Hülsey**, Victor Fung, Ning Yan “Hydrogen spillover and its relation to catalysis”, **Catalysis Talks**, April, 2021 (**Invited**)
19. **Max J. Hülsey**, Victor Fung, Ning Yan “Hydrogen spillover and its relation to catalysis”, **Just Another Webinar Series (JAWS)**, February, 2020
18. **Max J. Hülsey**, Ning Yan “Dynamic promotion of heterogeneous catalysis by oscillating electric potentials”, **Catalysis Talks**, December, 2020
17. **Max J. Hülsey**, Ning Yan “Polyoxometalate-Supported Single-Atom Catalysts”, **2020 Virtual AIChE Annual Meeting**, November, 2020
16. **Max J. Hülsey**, Geng Sun, Philippe Sautet, Ning Yan “Observing Single-Atom Catalytic Sites during Reactions Using Electrospray Ionization Mass Spectrometry”, **2020 Virtual AIChE Annual Meeting**, November, 2020
15. **Max J. Hülsey**, Bin Zhang, Shipeng Ding, Hiroyuki Asakura, Zili Wu, Philippe Sautet, Ning Yan “Low-Temperature Hydrodeoxygenation By Polyoxometalate-Supported Pd₁ Single-Atom Catalysts”, **2020 Virtual AIChE Annual Meeting**, November, 2020
14. **Max J. Hülsey**, Sambath Baskaran, Jun Li, Ning Yan “Establishing Non-Linear Scaling Relations for Single-Atom Catalysts”, **The 3rd International Symposium on Single-Atom Catalysis** (cancelled due to COVID-19), Pacific Grove, United States of America, June, 2020
13. **Max J. Hülsey**, Geng Sun, Zili Wu, Philippe Sautet, Ning Yan “Low-temperature hydrodeoxygenation using polyoxometalate-supported Pd₁ single-atom catalysts”, **17th International Congress on Catalysis 2020 Vision** (cancelled due to COVID-19), San Diego, United States of America, June, 2020 (supported by the Young Scientist Travel Support Prize)
12. **Max J. Hülsey**, Bin Zhang, Hiroyuki Asakura, Tsunehiro Tanaka, Ning Yan “In situ Spectroscopy-Guided Engineering of Rhodium Single-Atom Catalysts for CO Oxidation”, **The 8th Asia Pacific Congress on Catalysis**, Bangkok, Thailand, August, 2019
11. **Max J. Hülsey**, Bin Zhang, Ning Yan “In situ Spectroscopy-Guided Engineering of Rhodium Single-Atom Catalysts for CO Oxidation”, **Southeast Asia Catalysis Conference 2019**, Singapore, May, 2019 (ChemCatChem Best Poster Award)
10. **Max J. Hülsey**, Bin Zhang, Hiroyuki Asakura, Tsunehiro Tanaka, Ning Yan “Heteropoly Acid-Supported Single-Atom Catalysts”, **AM30 Symposium Singapore – Advanced Emerging Soft Materials**, Singapore, December, 2018

9. **Max J. Hülsey**, Weiping Deng, Yunzhu Wang, Ning Yan, "Catalytic Amino Acid Production from Biomass", **2018 AIChE Meeting**, United States of America, November, 2018
8. **Max J. Hülsey**, Bin Zhang, Ning Yan, "Correlation between Atom-Support Interaction and Catalyst Stability & Activity: Implications from a Series of Heteropoly Acids Based Pt1 Catalysts", **2018 AIChE Meeting**, Pittsburgh, United States of America, November, 2018
7. **Max J. Hülsey**, Bin Zhang, Ning Yan, "In-Situ Spectroscopic Evidence for the Mars-Van Krevelen Mechanism in the Rh Single-Atom Catalyzed CO Oxidation", **2018 AIChE Meeting**, Pittsburgh, United States of America, November, 2018
6. **Max J. Hülsey**, Bin Zhang, Ning Yan, "Platinum single atoms supported on heteropoly acids – structure, Stability and Reactivity", **2018 International Symposium on Advancement and Prospect of Catalysis Science & Technology**, Sydney, Australia, July, 2018
5. **Max J. Hülsey**, Bin Zhang, Hiroyuki Asakura, Tsunehiro Tanaka, Peng Zhang, Ning Yan, "In-situ Spectroscopic Evidence for the Mars-van Krevelen Mechanism in the Rh Single-Atom Catalyzed CO Oxidation", **International Symposium on Relations between Homogeneous and Heterogeneous Catalysis**, Sydney, Australia, July, 2018
4. **Max J. Hülsey**, Bin Zhang, Ning Yan, "In-situ Spectroscopic Evidence for the Mars-van Krevelen Mechanism in the Rh Single-Atom Catalyzed CO Oxidation", **The 2nd International Symposium on Single-Atom Catalysis**, Beijing, China, June, 2018
3. **Max J. Hülsey**, Bin Zhang, Ning Yan, "In-situ Spectroscopic Evidence for the Mars-van Krevelen Mechanism in the Rh Single-Atom Catalyzed CO Oxidation", **9th Singapore Catalysis Society Forum**, Singapore, May, 2018
2. Bin Zhang, **Max J. Hülsey**, Hiroyuki Asakura, Ning Yan, "Atomically dispersed rhodium on Self-assembled phosphotungstic acid: structural features and catalytic CO oxidation properties", **2017 AIChE meeting**, Minneapolis, United States of America, October, 2017
1. Jan Hormann, **Max J. Hülsey**, Nora Kulak, "Copper complexes of novel anthraquinone-substituted cyclen derivatives for DNA binding", **13th International Symposium on Applied Bioinorganic Chemistry**, Galway, Ireland, June, 2015

Supervisory experience

2022 – now	Karl Speas Westendorff <i>Massachusetts Institute of Technology</i>
2020 – now	Chia Wei Lim Sie Shing Wong Jinquan Chang Sikai Wang Hua An Chen Chen <i>National University of Singapore</i>

Teaching Experience

2020 – 2021	Guest Lecturer <i>National University of Singapore</i> Guest Lecturer for and involved in the conception and design of the new module 'Advanced topics in Catalysis'
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2017 – 2021

Graduate Teaching Assistant

National University of Singapore

Chemical Engineering Laboratory I & II, CN 2108 & 3108

Chemical Kinetics and Reactor Design, CN 2116

Chemical Engineering Thermodynamics, CN 2121

Chemical Engineering Principles and Practice II, CN2102

2014 – 2016

Student instructor

Heidelberg University

General and Inorganic Chemistry I

Inorganic Chemistry III

Physical Chemistry I

Academic Service

2024 – now

Chair of ‘the Intersection Between Thermal, Photo, and Electrocatalysis’ symposium for the 2024 AIChE Annual Meeting in San Diego,

2023 – now

Chair of the ‘Crossroads between thermal and electrocatalysis’ symposium for the 267th ACS National Meeting, Spring 2024

2023 – now

Independent reviewer for grant proposals for the *European Science Foundation (ESF)* & the *National Science Foundation (NSF)*

2023

Chair of the ‘Intersection Between Thermal and Electrocatalysis’ session for the 2023 AIChE Annual Meeting in Orlando

2023

Chair of the ‘Electrochemical CO₂ conversion IV’ session for the 28th North American Meeting

2023

Chair of the ‘Crossroads between thermal and electrocatalysis’ symposium for the 265th ACS National Meeting, Spring 2023

2022

Chair of the ‘Environmental Catalysis III: Emerging Catalytic Technologies’ session at the 2022 AIChE Annual Meeting

2022 – now

Early Career Editorial Board member of *Mol. Catal.*

2019 – 2021

Lead of the NUS ChBE literature club

2018 – now

Independent reviewer for manuscripts (~110 in total as of 12.01.2024) in *Chem*, *J. Am. Chem. Soc.*, *Nat. Commun.*, *Angew. Chem. Int. Ed.*, *ACS Catal.*, *Commun. Chem.*, *Appl. Catal. B*, *J. Catal.*, *Small*, *Mater. Today Chem.*, *ACS Sustain. Chem. Eng.*, *AIChE J.*, *Green Energy Environ.*, *Carbon Neutrality*, *Biomass Convers. Biorefin.*, *Mol. Catal.*, & *RSC Adv.*

2012 – 2015

Course speaker, member of the study commission & examination commission