Juanjuan **HUANG**, Ph.D

Assistant beamline scientist, Advanced Photon Source, Argonne National Laboratory
Homepage: https://cathybrook.github.io

PROFESSIONAL HISTORY

10/2023 – present **Lemont, USA**	***Assistant Beamline scientist*** the Advanced Photon Source, Argonne National Laboratory
10/2022 – 9/2023 **Lemont, USA**	***Postdoctoral Appointee*** the Advanced Photon Source, Argonne National Laboratory
01/2018 – 07/2022 **Munich, Germany**	***Doctoral researcher*** Department of physics, Technical University of Munich (TUM)
12/2019 – 03/2020 **Menlo Park, USA**	***Short-term research scholar*** BL6-2c (TXM), Stanford Synchrotron Radiation Lightsource (SSRL)
2016 & 2017, ~10 mo **Grenoble, France**	***Master's researcher*** ID26 (photon-in photon-out spectroscopy), European Synchrotron Radiation Facility (ESRF)
2012 – 2015 **Guangzhou, China**	***Bachelor's researcher*** Sun Yat-Sen (Zhong Shan) University

EDUCATION

01/2018 – 07/2022	**Ph.D (Doktor der Naturwissenschaften) in Physics** *Thesis supervisor: Prof. Dr. Franz Pfeiffer* *Physics department, Technical University of Munich (TUM); click here for PhD thesis*
09/2015 – 08/2017	**Master of Science (dual degree) in Materials Science exploiting Large-Scale Facilities** *Ludwig-Maximilians-University Munich (LMU)* *Université de Montpellier II (UM2)*
09/2011 – 08/2015	**Bachelor of Science in Chemistry** *Sun Yat-Sen (Zhong Shan) University (SYSU, top 10 universities in China)*

INTERNATIONAL CONFERENCES (selected)

06/2024 **Invited speaker**	**International Symposium on Compact Synchrotron X-ray Sources 2024** *"Dispersive X-ray Absorption Spectroscopy at the Munich Compact Light Source (MuCLS) and the Advanced Photon Source (APS)"*
03/2021 **Invited speaker**	Symposium: **X-ray Spectroscopy beyond Beamlines** *"Dispersive X-ray absorption spectroscopy with an inverse Compton source"*
08/2020 **Invited speaker**	Webinar: **Global XAS Journal Club** *"Energy Dispersive X-ray absorption spectroscopy at the Munich Compact Light Source"*

INVITED GUEST LECTURES/TALKS (selected)

03/2025 **The University of Texas at Austin, Austin, USA**
"Dispersive X-ray Absorption Spectroscopy at the Munich Compact Light Source (MuCLS) and the Advanced Photon Source (APS)"

03/2019 **The University of Wurzburg, Wurzburg, Germany**
"Energy Dispersive X-ray absorption spectroscopy at the Munich Compact Light Source"

09/2018 **The Hungarian Academy of Sciences, Budapest, Hungary**
"Energy Dispersive X-ray absorption spectroscopy at the Munich Compact Light Source"

AWARDS

2023 • Impact Argonne Award for extraordinary effort in the successful relocation of 20-ID and 11-ID-D user programs to 25-ID (*multiple recipients*)
2017 • Labex CheMiSyst prize (ranked 1st in the Chemistry department of UM2 for year 2017)
2015 - 2017 • Erasmus Mundus Scholarship 43,000 €
2011 – 2013 • Outstanding Student Scholarship, Sun Yat-Sen (Zhong Shan) University
2011 - 2012 • Outstanding Student Scholarship, Sun Yat-Sen (Zhong Shan) University

PUBLICATIONS

1) Dispersive X-ray Absorption Spectroscopy Using a Convexly Bent Bragg Crystal Analyzer.
J. Huang, A. Tornheim, X. Shi, M. Wolfman, Y. Chen, S. M. Heald, S. D. Kelly, G. Sterbinsky, *in revision.*
2) In-device Battery Failure Analysis.
G. Qian, G. Zan, J. Li, D. Meng, T. Sun, V. Thampy, A. M. Yanyachi, X. Huang, H. Yan, Y. S. Chu, S. Gul, **J. Huang**, S. D. Kelly, S. J. Lee, J. S. Lee, W. Yun, P. Cloetens, P. Pianetta, K. Zhao, O. A. Ezekoye, Y. Liu. *Adv. Mater.* 2025, 2416915.
3) Engineering a Cu-Pd paddle-wheel metal–organic framework for selective CO2 electroreduction.
R. Zhang, Y. Liu, P. Ding, **J. Huang**, M. Dierolf, S. D. Kelly, X. Qiu, et al. *Angew. Chem. Int. Ed.* 2024, 63 (51). e202414600.
4) On the Mechanism of Catalytic Decarboxylation of Carboxylic Acids on Carbon-Supported Palladium Hydride.
F. Deng, **J. Huang**, E. Ember, K. Achterhold, M. Dierolf, A. Jentys, Y. Liu, F. Pfeiffer, J.A. Lercher. *ACS. Catal.* 2021, 14625-14634.
5) Laboratory-scale *in situ* X-ray absorption spectroscopy of a palladium catalyst on a compact inverse-Compton scattering X-ray beamline.
J. Huang, F. Deng, B. Günther, K. Achterhold K, Y. Liu, A. Jentys, J.A. Lercher, Dierolf, F. Pfeiffer. *J. Anal. Atom Spectrom.*, 2021, 36, 2649-2659.
6) Simultaneous Two-Color X-Ray Absorption Spectroscopy Using Laue Crystals at an Inverse-Compton Scattering X-Ray Facility.
J. Huang, B. Günther, K. Achterhold K, M. Dierolf, F. Pfeiffer. *J. Synchrotron Radiat.* 2021, 28, 6.
7) Energy-Dispersive X-ray Absorption Spectroscopy with an Inverse Compton Source.
J. Huang, B. Günther, K. Achterhold K, Y. Cui, B. Gleich, M. Dierolf, F. Pfeiffer. *Sci. Rep.*, 2020, 10, 8772.
8) The Versatile X-ray Beamline of the Munich Compact Light Source: Design, Instrumentation and Applications.
B. Günther, R. Gradl, C. Jud, E. Eggl, **J. Huang**, S. Kulpe, K. Achterhold, B. Gleich, M. Dierolf, F. Pfeiffer. *J. Synchrotron Rad.*, 2020, 27, 5.
9) Targeting the ubiquitin-proteasome pathway to overcome anti-cancer drug resistance.
S. Narayanan, C.-Y. Cai, Y. G. Assaraf, H.-Q. Guo, Q. Cui, L. Wei, **J. Huang**, C. R. Ashby Jr, Z.-S. Chen. *Drug Resist. Updat.*, 2020, 48, 100663.
10) Long non-coding RNAs regulate drug resistance in cancer.
K. Liu, L. Gao, X. Ma, J.-J. Huang, J. Chen, L. Zeng, C. R. Ashby, C. Zou, Z.-S. Chen. *Mol. Cancer*, 2020, 19(1).
11) A self-assembled Ru–Pt metallacage as a lysosome-targeting photosensitizer for 2-photon photodynamic therapy.
Z. Zhou, J. Liu, **J. Huang**, T. W. Rees, Y. Wang, H. Wang, X. Li, H. Chao, and P. J. Stang. *Natl. Acad. Sci.*, 2019, 116(41), 20296-20302.
12) An organoruthenium complex overcomes ABCG2-mediated multidrug resistance via multiple mechanisms

Zeng, J. Li, C. Zhang, Y.-K. Zhang, W. Zhang, **J. Huang**, C. R. Ashby, Z.-S. Chen, and H. Chao. *Chem. Commun.*, 2019, 55(26), 3833-3836.

13) Interfering with DNA High - Order Structures using Chiral Ruthenium (II) Complexes.
S. Zou, G. Li, T. W. Rees, C. Jin, **J. Huang**, Y. Chen, L. Ji, and H. Chao. *Chem. Eur. J.*, 2018, 24(3), 690-698.

14) Oncosis-inducing cyclometalated iridium (iii) complexes.
R. Guan, Y. Chen, L. Zeng, T. W. Rees, C. Jin, **J. Huang**, Z.-S. Chen, L. Ji, and H. Chao. *Chem. Sci.*, 2018, 9(23), 5183-5190.

15) Crossfire for two-photon photodynamic therapy with fluorinated ruthenium (II) photosensitizers.
K. Qiu, J. Wang, C. Song, L. Wang, H. Zhu, H. Huang, **J. Huang**, H. Wang, L. Ji, and H. Chao. *ACS Appl. Mater. Interfaces, 2017, 9(22), 18482-18492.*

16) Rational design of NIR-emitting iridium (III) complexes for multimodal phosphorescence imaging of mitochondria under two-photon excitation.
C. Jin, R. Guan, J. Wu, B. Yuan, L. Wang, **J. Huang**, H. Wang, L. Ji, and H. Chao, *Chem. Commun.*, 2017, 53(75), 10374-10377.

17) Two-photon Luminescent Metal Complexes for Bioimaging and Cancer Phototherapy.
Y. Chen, R. Guan, C. Zhang, **J. Huang**, L. Ji, H. Chao. *Coord. Chem. Rev.* 2016, 310, 16-40.

18) Real-time tracking mitochondrial dynamic remodeling with two-photon phosphorescent iridium (III) complexes. H. Huang, L. Yang, P. Zhang, K. Qiu, **J. Huang**, Y. Chen, J. Diao, J. Liu, L. Ji, J. Long, and H. Chao. *Biomaterials*, 2016, 83, 321-331.

19) Mitochondrial Dynamics Tracking with Two-Photon Phosphorescent Terpyridyl Iridium(III) Complexes
Y. Chen, R. Guan, C. Zhang, **J. Huang**, L. Ji, H. Chao. *Coord. Chem. Rev.* 2016, 310, 16-40.

20) Highly Charged Ruthenium(II) Polypyridyl Complexes as Lysosome-Localized Photosensitizers for Two-Photon Photodynamic Therapy.
H. Huang, P. Zhang, P. Qiu, **J. Huang**, Y. Chen, L. Ji, and H. Chao, *Sci. Rep*, 2016(1), 20887.

21) Noncovalent Ruthenium(II) Complexes–Single-Walled Carbon Nanotube Composites for Bimodal Photothermal and Photodynamic Therapy with Near-Infrared Irradiation.
P. Zhang, H. Huang, **J. Huang**, H. Chen, J. Wang, K. Qiu, D. Zhao, L. Ji, and H. Chao. *ACS. Appl. Mater. Interfaces*, 2015, 7 (41), 23278-23290.

22) Unexpected High Photothemal Conversion Efficiency of Gold Nanospheres upon Grafting with Two-Photon Luminescent Ruthenium(II) Complexes: A Way Towards Cancer Therapy?
P. Zhang, J. Wang, H. Huang, B. Yu, K. Qiu, **J. Huang**, S. Wang, L. Jiang, G. Gasser, L. Ji, H. Chao, *Biomaterials*, 2015, 63, 102-114.

23) A Dendritic Nano-Sized Hexanuclear Ruthenium(II) Complex as a One and Two-Photon Luminescent Tracking Non-Viral Gene Vector.
K. Qiu, B. Yu, H. Huang, P. Zhang, **J. Huang**, S. Zou, Y. Chen, L. Ji, H. Chao. *Sci. Rep.*, 2015, 5, 10707.