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Group Web: <https://yu-lab-chem.com/>

Work Experience:

2025-present, Assistant Professor,
University of Colorado Boulder, Boulder, USA
Research in p-block element catalysis; inert structure activation; etc.

2021-2025, Postdoctoral Fellow,
University of Chicago, Chicago, USA
Advisor: Professor Guangbin Dong
Research in C-C chemical bonds activation

Education:

2017-2020, PhD with “*Summa Cum Laude*”, in organic chemistry,
RWTH University, Aachen, Germany
Advisor: Professor Frederic W. Patureau
Research in selective cross-dehydrogenative coupling reactions

2013-2016, Master, in organic chemistry,
Shanghai Institute of Organic Chemistry, CAS, Shanghai, China
Advisor: Professor Guozhu Zhang
Research in gold-catalyzed cyclization reactions

2009-2013, Bachelor, in chemistry,
Shanghai Normal University, Shanghai, China
Advisor: Professor Nengqin Jia and Professor Chusen Huang

Publications and Patents:

1. [Congjun Yu](#), Yibin Xue, Liyan Kan, Linda Yiu, Guangbin Dong, “Catalytic C-Demethylation of Phenols and Anilines Enabled by a Removable Mono-Directing Group” *ChemRxiv*, **2025**, DOI: 10.26434/chemrxiv-2025-r0r7n.

2. Congjun Yu, Linda Yiu, Zining Zhang, Guangbin Dong, “Site-Selective Catalytic Saturation of Unactivated Arenes via Directed 6π -Activation”, *Nature Catalysis* **2025**, 8, 931–938.
3. Congjun Yu, Zining Zhang, Guangbin, Dong, “Split cross-coupling via Rh-catalysed activation of unstrained aryl–aryl bonds”, *Nature Catalysis* **2024**, 7, 432–440.
4. Congjun Yu, Raolin Huang, Frederic W. Patureau, “Direct Dehydrogenative Access to Unsymmetrical Phenones”, *Angew. Chem. Int. Ed.* **2022**, 61, e202201142.
5. Congjun Yu, Bunyamin Ozkaya, Frederic W. Patureau, “Electro-Oxidative Selective Esterification of Methyl arenes and Benzaldehydes”, *Chem. Eur. J.* **2021**, 27, 3682.
6. Congjun Yu, Jesús Sanjosé-Orduna, Frederic W. Patureau, Mónica H. Pérez-Temprano, “Emerging unconventional organic solvents for C–H bond and related functionalization reactions”, *Chem. Soc. Rev.* **2020**, 49, 1643.
7. Congjun Yu, Frederic W. Patureau, “Regioselective Oxidative Arylation of Fluorophenols”, *Angew. Chem. Int. Ed.* **2019**, 58, 18530.
8. Congjun Yu, Frederic W. Patureau, “Cu-Catalyzed Cross-Dehydrogenative ortho-Aminomethylation of Phenols”, *Angew. Chem. Int. Ed.* **2018**, 57, 11807.
9. Yue Zhao, Congjun Yu, Wenjing Liang, Iuliana L. Atodiresei and Frederic W. Patureau, “TEMPO-mediated late stage photochemical hydroxylation of biaryl sulfonium salts”, *Chem. Commun.* **2022**, 58, 2846.
10. Xingben Wang, Congjun Yu, Iuliana L. Atodiresei, Frederic W. Patureau, “Phosphine-Catalyzed Dearomative [3 + 2] Cycloaddition of Benzoxazoles with a Cyclopropanone”, *Org. Lett.* **2022**, 24, 1127.
11. Raolin Huang, Congjun Yu, Frederic W. Patureau, “Electrochemical Dehydrogenative Acetalization Protection of Alcohols with Tetrahydrofuran”, *ChemElectroChem* **2021**, 8, 3943.
12. Yue Zhao, Congjun Yu, Wenjing Liang, Frederic W. Patureau, “Photochemical (Hetero-)Arylation of Aryl Sulfonium Salts”, *Org. Lett.* **2021**, 23, 6232.
13. Congjun Yu, Xiaodong Ma, Bin Chen, Bencan Tang, Robert S. Paton, Guozhu Zhang, “Dual Gold-Catalyzed Three-Component Reaction: Efficient Synthesis of Indene-Fused Esters, Acids, and Lactones through Gold Vinylidene Intermediates”, *Eur. J. Org. Chem.* **2017**, 1561.
14. Congjun Yu, Bin Chen, Tian Zhou, Qingshan Tian, Guozhu Zhang, “Gold(I)-Catalyzed Tandem Transformation with Dienes: Rapid Access to Linear Cyclopentenone-Fused Polycyclic Molecules”, *Angew. Chem. Int. Ed.* **2015**, 54, 10903.
15. Chen Bin, Yu Congjun, Zhang Guozhu, “A Novel Method to Prepare Multisubstituted Pyrazoles” *Chin. J. Org. Chem.* **2015**, 35, 625.
16. Chusen Huang, Ti Jia, Congjun Yu, Amin Zhang, Nengqin Jia, “An ES IPT based fluorescent probe for highly selective and ratiometric detection of periodate”, *Biosensors and Bioelectronics* **2015**, 63, 513–518.

Service For Community:

1. Youth Editorial Board Member of *Carbon and Hydrogen*, 2026-2027.

2. Demo Presenters of **South Side Science Festival**, Chicago, 2024.

Awards, Interests, Skills:

1. Chinese government award for **outstanding self-finance students abroad**, 2020.
2. RWTH Aachen University, **Borchers-Plakette award**, Aachen, 2020.
3. Oral presentation at the **12th New Year's Symposium (NYS)**, Aachen, January 2020.
4. Poster presentation at the **21st European Symposium on Organic Chemistry (ESOC)**, Vienna, July 2019.
5. **Outstanding Student of Chinese Academy of Sciences**, 2016.
6. Poster presentation at the **16th Tetrahedron Symposium Asia Edition**, Shanghai, November 2015.
7. Speaker for **science popularization activities** at Shanghai Lingling Middle School, Shanghai, Dec. 2014.
8. **Outstanding Graduate of Shanghai Normal University**, 2013.
9. Second Prize in the **7th Chemical Experiments Contest** at Shanghai Normal University, 2011.
10. Excellent Member of the **7th Nanotechnology and Applications Training Course**, Shanghai, 2011.
11. Volunteer Star of the **Shanghai World Expo**, 2010.