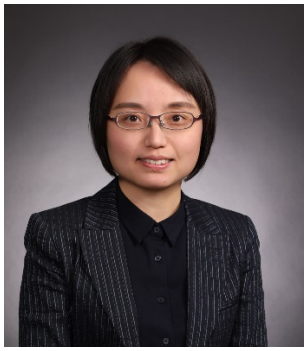

CHEN, Yong Xiang

Principal Investigator, Associate Professor, Department of Chemistry, Tsinghua University

Contact

Address: Life Science Building 332, Tsinghua University, Beijing 100084

Email：chen-yx@mail.tsinghua.edu.cn

Tel：+86-10-62772259

Web of Science ResearcherID: D-4792-2017

https://www.webofscience.com/wos/author/record/D-4792-2017

ORCID: 0000-0003-3518-0139

Brief Bibliography

YongXiang Chen graduated from Hunan University with a B.S. degree in 2002. Then, she received a Ph.D. degree under the guidance of Prof. Yan-Mei Li from Tsinghua University in 2007 after which she had worked in the group of Prof. Herbert Waldmann at Max-Planck Institution of Molecular Physiology in Dortmund as an Alexander von Humboldt postdoctoral fellow. Since 2011, she has joined Tsinghua University as associate professor in the Department of Chemistry. Since 2016, she has become the tenure-track associate professor (Principal Investigator) in the Department of Chemistry, Tsinghua University.

Her current research interests include: Developing synthetic tools toward protein and peptide with various modifications; Mechanistic elucidation of multi-modifications on protein's activity in biological events; Biomedical application of protein and peptide.

She is teaching the courses "Organic Chemistry A2", "Organic Chemistry H1 Seminar", and "Chemical Biology" for undergraduates.

Honors and Awards

- Honored with the element "phosphorus" on Periodic Table of Chinese Younger Chemists (2019)
- Honored with "Rising Star" in the 8th Chemical Protein Synthesis Meeting (2019, Berlin)
- Peptide Application Special Awards, the 15th Chinese International Peptide Symposium (2018, Shenzhen)
- "Design Star" Award, the 4th National Competition of Blended Teaching Innovative Design in Chinese Colleges and Universities (2022)

- The 1st prize in the 9th Teaching Contest for Young Teachers in Tsinghua University (2020)

Invited Talks

- The 12th Chinese National Conference on Chemical Biology, Dalian, China (2023)
- Young Scholar Forum on Chemical Biology, organized by Professional Committee of Chemical Biology, Chinese Chemical Society, Virtual (2023)
- The 14th Australian Peptide Conference, Surfers Paradise, Australia (online talk, 2022)
- The 2nd Postdoctoral Annual Academic Conference on Molecular Sciences, Beijing, China (2022)
- The 27th American Peptide Symposium, Whistler, Canada (not be able to attend due to pandemic, 2022)
- Pacifichem 2021— "Advancing Frontiers in Peptide and Protein Science with Nano-to-Macro Molecular Solutions, New Technologies in Polyamide Synthesis and Applications" symposium, Virtual (2021)
- The 16th Chinese International Peptide Symposium, Hefei, China (2020)
- The 11th Chinese National Conference on Chemical Biology, Guangzhou, China (2019)
- HKU Chemical Biology Symposium 2018, Hongkong, China (2018)
- The 7th Sino-German Frontiers of Chemistry Symposium, Munich, Germany (2018)
- The 15th Chinese International Peptide Symposium, Shenzhen, China (2018)
- The 11th National Conference on Phosphorus Chemistry and Chemical Engineering, Wuhan, China (2017)
- Asian Chemical Biology Initiative 2017 Ulaanbaatar Meeting, Ulaanbaatar, Mongolia (2017)
- CCS 11th National Symposium on Natural Organic Chemistry, Shanghai, China (2016)

Publications

(in inverse chronological order, since 2016-present, as corresponding author *)

1. Liu, D.; Liu, Y.; Duan, H.-Z.; Chen, X.; Wang, Y.; Wang, T.; Yu, Q.; **Chen, Y.-X.***; Lu, Y.*, Customized synthesis of phosphoprotein bearing phosphoserine or its nonhydrolyzable analog. *Synthetic and Systems Biotechnology* **2023,** *8* (1), 69-78.
2. Duan, H.-Z.; Hu, C.; Li, Y.-L.; Wang, S.-H.; Xia, Y.; Liu, X.*; Wang, J.*; **Chen, Y.-X.***, Genetically Encoded Phosphine Ligand for Metalloprotein Design. *Journal of the American Chemical Society* **2022**, *14* (50), 22831-22837.
3. Chang, R.; Chen, J.-L.; Zhang, G.-Y.; Li, Y.; Duan, H.-Z.; Luo, S.-Z.; **Chen, Y.-X.***, Intrinsically Disordered Protein Condensate-Modified Surface for Mitigation of Biofouling and Foreign Body Response. *Journal of the American Chemical Society* **2022**, *144* (27), 12147-12157.

4. Chang, R.; Liu, Y.-J.; Zhang, Y.-L.; Zhang, S.-Y.; Han, B.-B.; Chen, F.*; **Chen, Y.-X.***, Phosphorylated and Phosphonated Low-Complexity Protein Segments for Biomimetic Mineralization and Repair of Tooth Enamel. *Advanced Science* **2022**, *9*(6), 2103829.
5. Wu, J.-J.; Chen, F.-Y.; Han, B.-B.; Zhang, H.-Q.; Zhao, L.; Zhang, Z.-R.; Li, J.-J.; Zhang, B.-D.; Zhang, Y.-N.; Yue, Y.-X.; Hu, H.-G.; Li, W.-H.; Zhang, B.*; **Chen, Y.-X.***; Guo, D.-S.*; Li, Y.-M.*, CASTING: A Potent Supramolecular Strategy to Cytosolically Deliver STING Agonist for Cancer Immunotherapy and SARS-CoV-2 Vaccination. *CCS Chemistry* **2022**, DOI: 10.31635/ccschem.022.202201859.
6. Li, Y.; Chang, R.; **Chen, Y.-X.***, Recent Advances in Post-polymerization Modifications on Polypeptides: Synthesis and Applications. *Chemistry-an Asian Journal* **2022,** *17*(14), e202200318.
7. Hu, J.; Sun, X.-M.; Su, J.-Y.; Zhao, Y.-F.; **Chen, Y.-X.***, Different phosphorylation and farnesylation patterns tune Rnd3-14-3-3 interaction in distinct mechanisms. *Chemical Science* **2021**, *12* (12), 4432-4442.
8. Zhu, P.-C.; **Chen, Y.-X.***, Facile Synthesis of Boc-Protected Selenocystine and its Compatibility with Late-Stage Farnesylation at Cysteine Site. *Protein and Peptide Letters* **2021,** *28* (6), 603-611.
9. Li, F.-Y.; Zhang, Z.-F.; Voss, S.; Wu, Y.-W.; Zhao, Y.-F.; Li, Y.-M.; **Chen, Y.-X.***, Inhibition of K-Ras4B-plasma membrane association with a membrane microdomain-targeting peptide. *Chemical Science* **2020**, *11* (3), 826-832.
10. Duan, H.-Z.; Nie, Z.-K.; Li, Y.; **Chen, Y.-X.***, Unremitting progresses for phosphoprotein synthesis. *Current Opinion in Chemical Biology* **2020,** *58*, 96-111.
11. Hackenberger, C. P. R.*; Dawson, P. E.*; **Chen, Y.-X.***; Hojo, H.*, Modern Peptide and Protein Chemistry: Reaching New Heights. *Journal of Organic Chemistry* **2020,** *85* (3), 1328-1330.
12. Han, B.-B.; Pan, Y.-C.; Li, Y.-M.; Guo, D.-S.*; **Chen, Y.-X.***, A host-guest ATP responsive strategy for intracellular delivery of phosphopeptides. *Chemical Communications* **2020,** *56* (41), 5512-5515.
13. Zhang, Y.-L.; Chang, R.; Duan, H.-Z.; **Chen, Y.-X.***, Metal ion and light sequentially induced sol-gel-sol transition of a responsive peptide-hydrogel. *Soft Matter* **2020,** *16* (33), 7652-7658.
14. Duan, H.-Z.; Chen, H.-X.; Yu, Q.; Hu, J.; Li, Y.-M.; **Chen, Y.-X.***, Stereoselective synthesis of a phosphonate pThr mimetic via palladium-catalyzed gamma-C(sp(3))-H activation for peptide preparation. *Organic & Biomolecular Chemistry* **2019,** *17* (8), 2099-2102.
15. Gao, N.; Huang, Y.-P.; Chu, T.-T.; Li, Q.-Q.; Zhou, B.; **Chen, Y.-X.***; Zhao, Y.-F.; Li, Y.-M.*, TDP-43 specific reduction induced by Di-hydrophobic tags conjugated peptides. *Bioorganic Chemistry* **2019,** *84*, 254-259.
16. Chen, H.-X.; Kang, J.; Chang, R.; Zhang, Y.-L.; Duan, H.-Z.; Li, Y.-M.; **Chen, Y.-X.***, Synthesis of alpha,alpha-Difluorinated Phosphonate pSer/pThr Mimetics via Rhodium-Catalyzed Asymmetric Hydrogenation of beta-Difluorophosphonomethyl

alpha-(Acylamino)acrylates. *Organic Letters* **2018,** *20* (11), 3278-3281.

17. Huang, S.-Q.; Han, B.-B.; Li, Y.-M.; **Chen, Y.-X.***, A site-specific branching poly-glutamate tag mediates intracellular protein delivery by cationic lipids. *Biochemical and Biophysical Research Communications* **2018,** *503* (2), 671-676.
18. Hu, J.; Zhu, P.; Li, Y.; **Chen, Y.-X.***, Synthesis of Ras proteins and their application in biofunctional studies. *Chinese Chemical Letters* **2018,** *29* (7), 1043-1050.
19. Yu, Q.; Sun, J.; Huang, S.; Chang, H.; Bai, Q.; **Chen, Y.-X.***; Liang, D.*, Inward Budding and Endocytosis of Membranes Regulated by de Novo Designed Peptides. *Langmuir* **2018,** *34* (21), 6183-6193.
20. Zhang, S.-Y.; Sperlich, B.; Li, F.-Y.; Al-Ayoubi, S.; Chen, H.-X.; Zhao, Y.-F.; Li, Y.-M.; Weise, K.; Winter, R.*; **Chen, Y.-X.***, Phosphorylation Weakens but Does Not Inhibit Membrane Binding and Clustering of K-Ras4B. *ACS Chemical Biology* **2017,** *12* (6), 1703-1710.
21. Kang, J.; Chen, H.-X.; Huang, S.-Q.; Zhang, Y.-L.; Li, F.-Y.; Li, Y.-M.; **Chen, Y.-X.***, Facile synthesis of Fmoc-protected phosphonate pSer mimetic and its application in assembling a substrate peptide of 14-3-3 zeta. *Tetrahedron Letters* **2017,** *58* (26), 2551-2553.
22. Gao, N.; Chu, T. T.; Li, Q. Q.; Lim, Y. J.; Qiu, T.; Ma, M. R.; Hu, Z. W.; Yang, X. F.; **Chen, Y.-X.***; Zhao, Y. F.; Li, Y. M.*, Hydrophobic tagging-mediated degradation of Alzheimer's disease related Tau. *RSC Advances* **2017,** *7* (64), 40362-40366.
23. Shi, L.; Chen, H.; Zhang, S. Y.; Chu, T. T.; Zhao, Y. F.; **Chen, Y.-X.***; Li, Y. M.*, Semi-synthesis of murine prion protein by native chemical ligation and chemical activation for preparation of polypeptide--thioester. *Journal of Peptide Science* **2017,** *23* (6), 438-444.
24. Chu, T.-T.; Gao, N.; Li, Q.-Q.; Chen, P.-G.; Yang, X.-F.; **Chen, Y.-X.***; Zhao, Y.-F.; Li, Y.-M.*, Specific Knockdown of Endogenous Tau Protein by Peptide-Directed Ubiquitin-Proteasome Degradation. *Cell Chemical Biology* **2016,** *23* (4), 453-461.
25. Li, L.; Zhang, S.-Y.; Li, Y.-M.; **Chen, Y.-X.***, Dual-labeling of ubiquitin proteins by chemoselective reactions for sensing UCH-L3. *Molecular Biosystems* **2016,** *12* (6), 1764-1767.
26. He, Y.-H.; Li, Y.-M.; **Chen, Y.-X.***, Phosphorylation regulates proteolytic efficiency of TEV protease detected by a 5(6)-carboxyfluorescein-pyrene based fluorescent sensor. *Talanta* **2016,** *150*, 340-345.