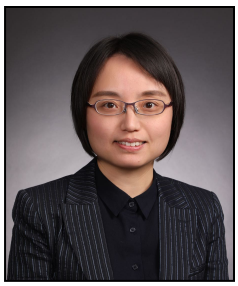
Curriculum Vitae



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Research Interests

- 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

Education

2002-2007	**Tsinghua University** Ph.D. in Chemistry	**Beijing, China**
1998-2002	**Hunan University** Bachelor in Chemistry	**Changsha, China**

Research and Working Experience

2016-present	Principal Investigator, Associate Professor, Department of Chemistry, Tsinghua University, China
2011-2016	Associate Professor, Department of Chemistry, Tsinghua University, China
2007-2011	Humboldt & Max-Planck Postdoctoral fellow, Max-Planck-Institut für Molekulare Physiologie, Abteilung Chemische Biologie, Germany

Academic Service

2022-present	Editorial Board Member, *Journal of Peptide Science* (Wiley)
2019-present	Editorial Board Member, *Bioorganic Chemistry* (Elsevier)
2020	Guest Editor, Special Issue, *Journal of Organic Chemistry* (ACS)

Teaching Activities

"Organic Chemistry A2", "Organic Chemistry H1 Seminar", and "Chemical Biology"

Honors and Awards

2022	"Design Star" Award, the 4th National Competition of Blended Teaching Innovative Design in Chinese Colleges and Universities
2020	The 1st prize in the 9th Teaching Contest for Young Teachers in Tsinghua University
2019	Honored with the element "phosphorus" on Periodic Table of Chinese Younger Chemists
2015	Honored with "Rising Star" in the 8th Chemical Protein Synthesis Meeting (Berlin)
2018	Peptide Application Special Awards (The 15th Chinese International Peptide Symposium)
2015	Asian Core Program/Advanced Research Network Lectureship Award

Publications (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**, 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*, e20220031.
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.