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Research Keywords

Disease mechanism, Fluorescent sensors, Molecular imaging, Proteomics, Drug development

Academic Career

B.Sc., 1985, Fudan University; M.A., 1987, Columbia University (advisor: Ronald Breslow); Ph.D., 1991, Princeton University (advisor: Daniel Kahne); Postdoctoral Training, 1991–1993, Harvard University (advisor: Stuart L. Schreiber); Assistant Professor (1993–1999), Associate Professor (1999–2000), Professor (2000–2004), Chair Professor of Chemistry (2005–2021), Morningside Professor in Chemical Biology (2007–2021), The University of Hong Kong; Chair Professor of Chemical Biology (2021–present), Westlake University

Selected Publications

Y.-S. Li, X.-Y. Bai, D. Yang*. Development and application of cationic Nile blue probes in live-cell super-resolution imaging and specific targeting to mitochondria. *ACS Central Sci.* 2024, 10, 1221–1230.

L. Chen#, T.-H. Yang#, X. Sun, C. C. L. Wong,* D. Yang*. Protein Tyrosine Amination: Detection, Imaging and Chemoproteomic Profiling with Synthetic Probes. *J. Am. Chem. Soc.* 2024, 146, 11944–11954.

W. Wang#, N.-K. Wong#, S.-L. Bok, Y. Xu, Y. Guo, L. Xu, M.-L. Zuo, C. M. St. Croix, G.-W. Mao, A. Kapralov, H. Bayir, V. E. Kagan, D. Yang*. Visualizing Cardiolipin In Situ with HKCL-1M, a Highly Selective and Sensitive Fluorescent Probe. *J. Am. Chem. Soc.* 2023, 145, 11311–11322.

S.-Y. Dai, D. Yang*. A Visible and Near-Infrared Light Activatable Diazo-Coumarin Probe for Fluorogenic Protein Labeling in Living Cells. *J. Am. Chem. Soc.* 2020, 142, 17156–17166.

F.-F. Shen, S.-Y. Dai, N.-K. Wong, S. Deng, A. S.-T. Wong, D. Yang*. Mediating K⁺/H⁺ Transport on Organelle Membranes to Selectively Eradicate Cancer Stem Cells by a Small Molecule. *J. Am. Chem. Soc.* 2020, 142, 10769–10779.

S. Ye, N. Hananya, O. Green, H.-S. Chen, A. Q. Zhao, J.-G. Shen, D. Shabat*, D. Yang*. A Highly Selective and Sensitive Chemiluminescent Probe for Real-Time Monitoring of Hydrogen Peroxide in Cells and Animals. *Angew. Chem. Int. Ed.* 2020, 59, 14326–14330.

X.-Y. Bai, K. K.-H. Ng, J. J. Hu, S. Ye, D. Yang*. Small Molecule-based Fluorescent Sensors for Selective Detection of Reactive Oxygen Species in Biological Systems. *Annu. Rev. Biochem.* 2019, 88, 605–633.

S. Ye, J. J. Hu, D. Yang*. Tandem Payne/Dakin Reaction: A New Strategy for Hydrogen Peroxide Detection and Molecular Imaging. *Angew. Chem. Int. Ed.* 2018, 57, 10173–10177.

Why My Lab?

My lab can offer...

Molecular probes for detection and imaging of reactive oxygen species, cardiolipin, Abeta plaques, protein

nitration and amination, and super-resolution imaging.