Researcher Information Form

Name: Jiajie Diao

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Research Interest (1-2 Sentences): Dr. Diao has developed a series of biophysical/biochemical methods to study membrane fusion at the single particle level, and led the development of multiple new molecular probes and super-resolution assays for Quantitative analysis of sub-cellular dynamics.

Unique Resources/Techniques:
Super-resolution imaging, single molecule FRET

Representative Publications (5 Maximum, May use Hyperlink):
K.-N. Wang, X. Shao, Z. Tian, L.-Y. Liu, C. Zhang, C.-P. Tan, J. Zhang, P. Ling, F. Liu, Q. Chen, **J. Diao**, Z.-W. Mao. A continuously add-on probe reveals a nonlinear enlargement of mitochondria in light-activated oncosis. ***Adv. Sci.*** 8, 2004566 (2021).

H. Fang, S. Geng, M. Hao, Q. Chen, M. Liu, C. Liu, Z. Tian, C. Wang, T. Takebe, J.-L. Guan, Y. Chen, Z. Guo, W. He, **J. Diao**. Simultaneous Zn^{2+} tracking in multiple organelles using super-resolution morphology-correlated organelle identification in living cells. ***Nat. Commun.*** 12, 109 (2021).

Q. Chen, H. Fang, X. Shao, Z. Tian, S. Geng, Y. Zhang, H. Fan, P. Xiang, J. Zhang, X. Tian, K. Zhang, W. He, Z. Guo, **J. Diao**. A dual-labeling molecular probe to track functional mitochondria-lysosome interactions in live cells. ***Nat. Commun.*** 11, 6290 (2020).

Q. Chen, X. Shao, M. Hao, R. Guan, Z. Tian, M. Li, C. Wang, L. Ji, H. Chao, J.-L. Guan, **J. Diao**. Quantitative analysis of interactive behavior of mitochondria and lysosomes using structured illumination microscopy. ***Biomaterials*** 250, 120059 (2020).

H. Fang, S. Yao, Q. Chen, C. Liu, Y. Cai, S. Geng, Y. Bai, Z. Tian, A.L. Zacharias, T. Takebe, Y. Chen, Z. Guo, W. He, **J. Diao**. De novo-designed near-infrared nanoaggregates for super-resolution monitoring of lysosomes in cells, in whole organoids, and in vivo. ***ACS Nano*** 13, 14426 (2019).