



## Shannon Yan

Assistant Professor of Biology

### Bio

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#### ACADEMIC APPOINTMENTS

- Assistant Professor, Biology

#### PROFESSIONAL EDUCATION

- PhD, University of California, Berkeley , Chemistry (2015)
- BS, National Taiwan University , Chemistry (2006)

#### LINKS

- Yan Lab @ Stanford: <https://www.yanlabstanford.org/>

### Publications

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#### PUBLICATIONS

- **Cell protrusions and contractions generate long-range membrane tension propagation.** *Cell*  
De Belly, H., Yan, S., Borja da Rocha, H., Ichbiah, S., Town, J. P., Zager, P. J., Estrada, D. C., Meyer, K., Turlier, H., Bustamante, C., Weiner, O. D.  
2023; 186 (14): 3049-3061.e15
- **Mechanical regulation of the helicase activity of Zika virus NS3.** *Biophysical journal*  
Cao, X., Liu, K., Yan, S., Li, S., Li, Y., Jin, T., Liu, S.  
2022; 121 (24): 4900-4908
- **The development of single molecule force spectroscopy: from polymer biophysics to molecular machines.** *Quarterly reviews of biophysics*  
Bustamante, C., Yan, S.  
2022; 55: e9
- **The Biogenesis of SRP RNA Is Modulated by an RNA Folding Intermediate Attained during Transcription.** *Molecular cell*  
Fukuda, S., Yan, S., Komi, Y., Sun, M., Gabizon, R., Bustamante, C.  
2020; 77 (2): 241-250.e8
- **ATP-dependent force generation and membrane scission by ESCRT-III and Vps4.** *Science (New York, N.Y.)*  
Schöneberg, J., Pavlin, M. R., Yan, S., Righini, M., Lee, I. H., Carlson, L. A., Bahrami, A. H., Goldman, D. H., Ren, X., Hummer, G., Bustamante, C., Hurley, J. H.  
2018; 362 (6421): 1423-1428
- **Ribosome excursions during mRNA translocation mediate broad branching of frameshift pathways.** *Cell*  
Yan, S., Wen, J. D., Bustamante, C., Tinoco, I.  
2015; 160 (5): 870-881
- **Direct measurement of the mechanical work during translocation by the ribosome.** *eLife*  
Liu, T., Kaplan, A., Alexander, L., Yan, S., Wen, J. D., Lancaster, L., Wickersham, C. E., Fredrick, K., Noller, H., Tinoco, I., Bustamante, C. J.

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- **Frameshifting dynamics.** *Biopolymers*  
Tinoco, I., Kim, H. K., Yan, S.  
2013
- **Mode specificity in reactions of Cl with CH<sub>2</sub> stretch-excited CH<sub>2</sub>D<sub>2</sub>(v<sub>1</sub>, v<sub>6</sub> = 1).** *The journal of physical chemistry. A*  
Riedel, J., Yan, S., Liu, K.  
2009; 113 (52): 14270-6
- **Tracking the energy flow along the reaction path.** *Proceedings of the National Academy of Sciences of the United States of America*  
Yan, S., Wu, Y. T., Liu, K.  
2008; 105 (35): 12667-72
- **A simple yet effective multipass reflector for vibrational excitation in molecular beams.** *The Review of scientific instruments*  
Riedel, J., Yan, S., Kawamata, H., Liu, K.  
2008; 79 (3): 033105
- **Unraveling multicomponent images by extended cross correlation analysis.** *The journal of physical chemistry. A*  
Zhang, B., Yan, S., Liu, K.  
2007; 111 (38): 9263-8
- **Pair-correlated dynamics of Cl+CHD<sub>3</sub>(u<sub>1</sub>=1) reaction:: Effects of probe laser frequency** *CHINESE JOURNAL OF CHEMICAL PHYSICS*  
Yan, S., Liu, K.  
2007; 20 (4): 333-338
- **Do vibrational excitations of CHD<sub>3</sub> preferentially promote reactivity toward the chlorine atom?** *Science (New York, N.Y.)*  
Yan, S., Wu, Y. T., Zhang, B., Yue, X. F., Liu, K.  
2007; 316 (5832): 1723-6
- **Disentangling mode-specific reaction dynamics from overlapped images.** *Physical chemistry chemical physics : PCCP*  
Yan, S. S., Wu, Y. T., Liu, K.  
2007; 9 (2): 250-4
- **Unusual ambiphilic carbenoid equivalent in amide cyclopropanation.** *Organic letters*  
Lin, K. W., Yan, S., Hsieh, I. L., Yan, T. H.  
2006; 8 (11): 2265-7