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Education and Professional Experience

- University of California Los Angeles, Los Angeles, CA, USA** 2022.7 – present
Postdoctoral Scholar Fellow
Advisor: Professor Prineha Narang
- California Institute of Technology (Caltech), Pasadena, CA, USA** 2016.9 – 2022.6
Doctor of Philosophy in Chemistry
Thesis Advisor: Professor Thomas F. Miller III
- University of Science and Technology of China (USTC), Hefei, China** 2012.9 – 2016.6
Bachelor of Science (Honored) in Chemical Physics

Research Experience

- Capturing Nuclear Quantum Effects at Classical Efficiency: A Path-Integral Approach** 2017.1 – 2022.6
Doctor of Philosophy Thesis, with Prof. Thomas F. Miller III,
Division of Chemistry and Chemical Engineering, Caltech
- Surface Scattering of H/D Atom from Graphene** 2019.4 – 2019.5
Visiting Scholar, with Prof. Alec M. Wodtke,
International Center for Advanced Studies of Energy Conversion, University of Goettingen
- Quantum Dissipation Theory in Hybrid System-Bath Dynamics** 2015.4 – 2016.6
Undergraduate Thesis, with Prof. Ruixue Xu and Prof. Yijing Yan
Hefei National Laboratory for Physical Sciences at the Microscale, USTC

Publications

- [6] T. Begušić, X. Tao, and T. F. Miller III, “Equilibrium–nonequilibrium ring-polymer molecular dynamics for nonlinear spectroscopy”, *J. Chem. Phys.*, 156.13 (2022): 131102.
- [5] H. Jiang,* X. Tao,* M. Kammler, F. Ding, A. Wodtke, A. Kandratsenka, T. F. Miller III, and O. Bünermann, “Small nuclear quantum effects in scattering of H and D from graphene”, *J. Phys. Chem. Lett.* 12.7 (2021): 1991-1996.
- [4] X. Tao, P. Shushkov, and T. F. Miller III, “Microcanonical rates from ring-polymer molecular dynamics: Direct-shooting, stationary-phase, and maximum-entropy approaches”, *J. Chem. Phys.*, 152.12 (2020): 124117.
- [3] X. Tao, P. Shushkov, and T. F. Miller III, “Simple flux-side formulation of state-resolved thermal reaction rates for ring-polymer surface hopping”, *J. Phys. Chem. A* 123.13 (2019): 3013-3020.
- [2] X. Tao, P. Shushkov, and T. F. Miller III, “Path-integral isomorphic Hamiltonian for including nuclear quantum effects in non-adiabatic dynamics”, *J. Chem. Phys.*, 148.10 (2018): 102327.
- [1] R. Xu, X. Tao, Y. Wang, Y. Liu, H. Zhang, and Y. Yan, “A hierarchical-equation-of-motion based semiclassical approach to quantum dissipation”, *Chin. J. Chem. Phys.*, 31.4 (2018): 608.