

Stanford



Rui Xu

Postdoctoral Research Fellow, Mechanical Engineering

Bio

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Stanford University , ME-PHD (2019)
- Ph.D., Stanford University , Mechanical Engineering (2019)
- M.S., Northwestern University , Mechanical Engineering (2014)
- B.S., Shanghai Jiao Tong University , Mechanical Engineering (2012)

STANFORD ADVISORS

- Hai Wang, Postdoctoral Faculty Sponsor

LINKS

- Google Scholar: <https://scholar.google.com/citations?user=FiEGbaIAAAAJ&hl=en>

Research & Scholarship

LAB AFFILIATIONS

- Hai Wang, NanoEnergy Lab (9/12/2014)

Publications

PUBLICATIONS

- **Principle of large component number in multicomponent fuel combustion - a Monte Carlo study** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
Xu, R., Wang, H.
2019; 37 (1): 613–20
- **A high pressure shock tube study of pyrolysis of real jet fuel Jet A** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
Han, X., Liszka, M., Xu, R., Brezinsky, K., Wang, H.
2019; 37 (1): 189–96
- **A Physics-based approach to modeling real-fuel combustion chemistry - III. Reaction kinetic model of JP10** *COMBUSTION AND FLAME*
Tao, Y., Xu, R., Wang, K., Shao, J., Johnson, S. E., Movaghar, A., Han, X., Park, J., Lu, T., Brezinsky, K., Egolfopoulos, F. N., Davidson, D. F., Hanson, et al
2018; 198: 466–76
- **A physics based approach to modeling real-fuel combustion chemistry - IV. HyChem modeling of combustion kinetics of a bio-derived jet fuel and its blends with a conventional Jet A** *COMBUSTION AND FLAME*
Wang, K., Xu, R., Parise, T., Shao, J., Movaghar, A., Lee, D., Park, J., Gao, Y., Lu, T., Egolfopoulos, F. N., Davidson, D. F., Hanson, R. K., Bowman, et al
2018; 198: 477–89

- **A physics-based approach to modeling real-fuel combustion chemistry - II. Reaction kinetic models of jet and rocket fuels** *COMBUSTION AND FLAME*
Xu, R., Wang, K., Banerjee, S., Shao, J., Parise, T., Zhu, Y., Wang, S., Movaghar, A., Lee, D., Zhao, R., Han, X., Gao, Y., Lu, et al
2018; 193: 520–37
- **A physics-based approach to modeling real-fuel combustion chemistry - I. Evidence from experiments, and thermodynamic, chemical kinetic and statistical considerations** *COMBUSTION AND FLAME*
Wang, H., Xu, R., Wang, K., Bowman, C. T., Hanson, R. K., Davidson, D. F., Brezinsky, K., Egolfopoulos, F. N.
2018; 193: 502–19
- **Fuel effects on lean blow-out in a realistic gas turbine combustor** *COMBUSTION AND FLAME*
Esclapez, L., Ma, P. C., Mayhew, E., Xu, R., Stouffer, S., Lee, T., Wang, H., Ihme, M.
2017; 181: 82–99
- **Binary diffusion coefficients and non-premixed flames extinction of long-chain alkanes** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
Liu, C., Zhao, R., Xu, R., Egolfopoulos, F. N., Wang, H.
2017; 36 (1): 1523-1530
- **A Mixed Double-Sided Incremental Forming Toolpath Strategy for Improved Geometric Accuracy** *JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME*
Zhang, Z., Ren, H., Xu, R., Moser, N., Smith, J., Ndip-Agbor, E., Malhotra, R., Xia, Z. C., Ehmann, K. F., Cao, J.
2015; 137 (5)