



## Rishav Choudhary

Ph.D. Student in Mechanical Engineering, admitted Spring 2017

### Publications

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#### PUBLICATIONS

- **Measurement of time histories of stable intermediates during first stage ignition of n-heptane and its two isomers in a shock tube** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*  
Choudhary, R., Girard, J. J., Clees, S., Johnson, S. E., Shao, J., Davidson, D. F., Hanson, R. K., Aradi, A. A.  
2021; 38 (1): 957-965
- **High-speed imaging of n-heptane ignition in a high-pressure shock tube** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*  
Shao, J., Choudhary, R., Susa, A. J., Davidson, D. F., Hanson, R. K.  
2021; 38 (1): 911-918
- **Shock-induced ignition and pyrolysis of high-pressure methane and natural gas mixtures** *COMBUSTION AND FLAME*  
Shao, J., Ferris, A. M., Choudhary, R., Cassady, S. J., Davidson, D. F., Hanson, R. K.  
2020; 221: 364-70
- **A physics-based approach to modeling real-fuel combustion chemistry - VI. Predictive kinetic models of gasoline fuels** *COMBUSTION AND FLAME*  
Xu, R., Saggese, C., Lawson, R., Movaghar, A., Parise, T., Shao, J., Choudhary, R., Park, J., Lu, T., Hanson, R. K., Davidson, D. F., Egolfopoulos, F. N., Aradi, et al  
2020; 220: 475-87
- **The pyrolysis of propane** *INTERNATIONAL JOURNAL OF CHEMICAL KINETICS*  
Cassady, S. J., Choudhary, R., Boddapati, V., Pinkowski, N. H., Davidson, D. F., Hanson, R. K.  
2020
- **The Thermal Decomposition of Ethane** *Fuel*  
Cassady, S. J., Choudhary, R., Pinkowski, N. H., Shao, J., Davidson, D. F., Hanson, R. K.  
2020
- **Shock Tube Measurement of the  $\text{CH}_3 + \text{C}_2\text{H}_6 \rightarrow \text{CH}_4 + \text{C}_2\text{H}_5$  Rate Constant.** *The journal of physical chemistry. A*  
Shao, J., Wei, W., Choudhary, R., Davidson, D. F., Hanson, R. K.  
2019
- **A shock tube study of n-heptane, iso-octane, n-dodecane and iso-octane/n-dodecane blends oxidation at elevated pressures and intermediate temperatures** *FUEL*  
Shao, J., Choudhary, R., Peng, Y., Davidson, D. F., Hanson, R. K.  
2019; 243: 541-53
- **Measurement of the reaction rate of  $\text{H} + \text{O}_2 + \text{M} \rightarrow \text{HO}_2 + \text{M}$ , for  $\text{M}=\text{Ar}, \text{N}_2, \text{CO}_2$ , at high temperature with a sensitive OH absorption diagnostic** *COMBUSTION AND FLAME*  
Choudhary, R., Girard, J. J., Peng, Y., Shao, J., Davidson, D. F., Hanson, R. K.  
2019; 203: 265-78
- **Shock Tube Measurement of the  $\text{C}_2\text{H}_4 + \text{H} \rightarrow \text{C}_2\text{H}_3 + \text{H}_2$  Rate Constant** *JOURNAL OF PHYSICAL CHEMISTRY A*  
Shao, J., Choudhary, R., Peng, Y., Davidson, D. F., Hanson, R. K.

2019; 123 (1): 15–20

- **Shock tube study of the rate constants for  $\text{H} + \text{O}_2 + \text{M} \rightarrow \text{HO}_2 + \text{M}$  ( $\text{M} = \text{Ar}, \text{H}_2\text{O}, \text{CO}_2, \text{N}_2$ ) at elevated pressures** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*

Shao, J., Choudhary, R., Susa, A., Davidson, D. F., Hanson, R. K.

2019; 37 (1): 145–52

- **Ignition delay times of methane and hydrogen highly diluted in carbon dioxide at high pressures up to 300 atm** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*

Shao, J., Choudhary, R., Davidson, D. E., Hanson, R. K., Barak, S., Vasu, S.

2019; 37 (4): 4555–62

- **Demonstration of non-absorbing interference rejection using wavelength modulation spectroscopy in high-pressure shock tubes** *APPLIED PHYSICS B-LASERS AND OPTICS*

Wei, W., Peng, W., Wang, Y., Choudhary, R., Wang, S., Shao, J., Hanson, R. K.

2019; 125 (1)