

# Dapeng Liu

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## RESEARCH EXPERIENCE

### King Abdullah University of Science and Technology(KAUST)

*Postdoctoral Researcher, FASFTER Lab*

*Jeddah, Saudi Arabia*

*Jan 2024 - now*

### The Chinese University of HongKong(CUHK)

*Postdoctoral Research Associate, Advanced Laser Diagnostic Lab*

*Hongkong, China*

*Sep 2022 - Aug 2023*

## EDUCATION

### Clean Combustion Research Center, KAUST

*Master and Ph.D. degree*

Awards **Bernard Lewis Fellowship**

*Jeddah, Saudi Arabia*

*Aug 2015 - Dec 2021*

### Xi'an Jiaotong University (XJTU)

*Bachelor degree(**top 15%**)*

Awards outstanding student

*Xi'An, China*

*Sep 2010 - Jul 2014*

## PUBLICATION

### 1. Investigation of Cyclopentene + OH and Cyclopentene Thermal Decomposition Reactions

Dapeng Liu, Fathi Khaled, Wei Ren, Aamir Farooq

*Combustion and Flame, 2024*

[click me]

### 2. Heptanone isomers as a biofuel: Reactivity with OH radicals

Dapeng Liu, Fathi Khaled, Aamir Farooq

*Proceedings of the Combustion Institute, Accepted*

[click me]

### 3. A theoretical and Experimental Study of 2-Ethylfuran + OH Reaction

Li Fu, Dapeng Liu, ... ,HongBo Ning\*, Wei Ren\*, Aamir Farooq

*Combustion and Flame, 2024*

[click me]

### 4. Allylic-Alkylic C-C Bond Thermal Decomposition in 1-Butene and 1-Pentene

Chengyu Zhou, Dapeng Liu\*, Aamir Farooq\*

*Combustion and Flame, 2024*

[click me]

### 5. Investigation of thermal decomposition of nitrobenzene: An energetic material

Dapeng Liu, Aamir Farooq

*Combustion and Flame, 2023*

[click me]

### 6. Gamma-valerolactone (GVL) as Biofuel: Investigation of GVL Thermal Decomposition and GVL + OH Reaction

Dapeng Liu, Aamir Farooq

*Combustion and Flame, 2023*

[click me]

### 7. Pressure Hydrogen Oxy-combustion in the Presence of High Levels of H<sub>2</sub>O and CO<sub>2</sub>

Ashkan Beigzadeh, Mohammed Alabbad, Dapeng Liu, ... ,Eric Croiset,Aamir Farooq.

*Combustion and Flame, 2022*

[click me]

8. The effect of hydrogen bonding on the reactivity of OH radicals with prenol and isoprenol: a shock tube and multi-structural torsional variational transition state theory study  
Mohamed, Samah Y., Manuel Monge-Palacios, ... , Dapeng Liu, Aamir Farooq, S. Mani Sarathy.  
*Physical Chemistry Chemical Physics*, 2022 [click me]
9. Investigation of cyclohexene thermal decomposition and cyclohexene + OH reactions  
Dapeng Liu, Aamir Farooq  
*Combustion and Flame*, 2022 [click me]
10. Investigation of the kinetics of conjugated diolefins using UV absorption spectroscopy  
Dapeng Liu, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2022 [click me]
11. Reaction Kinetics of OH Radicals with 1,3,5-Trimethyl Benzene: An Experimental and Theoretical Study  
Dapeng Liu, Binod R. Giri, Tam V.-T. Mai, Lam K. Huynh, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2022 [click me]
12. A comprehensive study on low-temperature oxidation chemistry of cyclohexane. II. Experimental and kinetic modeling investigation  
Jiabiao Zou, Hanfeng Jin, Dapeng Liu, ..., Yuyang Li  
*Combustion and Flame*, 2021 [click me]
13. Symmetric ethers as bioderived fuels: Reactivity with OH radicals  
Myriam Belmekki, Binod R Giri, Dapeng Liu, Aamir Farooq  
*Energy and Fuels*, 2021 [click me]
14. First aromatic ring formation by the radical-chain reaction of vinylacetylene and propargyl  
Hanfeng Jin, Lili Xing, Dapeng Liu, Junyu Hao, Jiuzhong Yang, Aamir Farooq  
*Combustion and Flame*, 2021 [click me]
15. On the Redox Reactions between Allyl Radicals and NO<sub>x</sub>  
Dapeng Liu, Milán Szőri, Béla Viskolcz, Et-touhamiEssbar, Binod Giri, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2020 [click me]
16. Kinetics and Thermochemistry of Cyclichexadienes Reactions with OH Radicals  
Dapeng Liu, Milán Szőri, Béla Viskolcz, Lam K. Huynh, Binod Giri, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2020 [click me]
17. High Temperature Branching Ratio of Acetaldehyde + OH Reaction  
Dapeng Liu, Binod Giri, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2020 [click me]
18. A high temperature shock tube study of phenyl recombination reaction using laser absorption spectroscopy  
Hanfeng Jin, Dapeng Liu, Binod Giri, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2020 [click me]
19. Chemical kinetics of hydroxyl reactions with cyclopentadiene and indene  
Hanfeng Jin, Dapeng Liu, Jiabiao Zou, Junyu Hao, Can Shao, Mani Sarathy, Aamir Farooq  
*Combustion and Flame*, 2020 [click me]
20. Insights into the Reactions of Hydroxyl Radical with Diolefins from Atmospheric to Combustion Environments  
Fethi Khaled, Binod Giri, Dapeng Liu, Emmanuel Assaf, Christa Fittschen, Aamir Farooq  
*The Journal of Physical Chemistry A*, 2020 [click me]

21. QCL-Based Dual-Comb Spectrometer for Multi-Species Measurements at High Temperatures and High Pressures  
Guangle Zhang, Raphael Horvath, Dapeng Liu, Markus Geiser, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2020 [click me]
22. A mid-infrared diagnostic for benzene using a tunable difference-frequency-generation laser  
Mohammad Khaled Shakfa, Mhanna Mhanna, Hanfeng Jin, Dapeng Liu, Khalil Djebbi, Marco Marangoni, Aamir Farooq  
*Sensors*, 2020 [click me]
23. Cyclic Ketones as Future Fuels: Reactivity with OH Radicals (journal cover paper)  
Dapeng Liu, Binod Giri, Aamir Farooq  
*The Journal of Physical Chemistry A*, 2019 [click me]
24. A shock tube kinetic study on the branching ratio of methanol + OH reaction  
Dapeng Liu, Binod Giri, Aamir Farooq  
*Proceedings of the Combustion Institute*, 2018 [click me]
25. A theoretical and shock tube kinetic study on hydrogen abstraction from phenyl formate  
Hongbo Ning, Dapeng Liu, Junjun Wu, Liuhao Ma, Wei Ren, Aamir Farooq  
*Physical Chemistry Chemical Physics*, 2018 [click me]
26. H-Abstraction by OH From Large Branched Alkanes: Overall Rate Measurements and Site-Specific Tertiary Rate Calculations  
Dapeng Liu, Fethi Khaled, Binod Giri, Emmanuel Assaf, Christa Fittschen, Aamir Farooq  
*The Journal of Physical Chemistry A*, 2017 [click me]

## ORAL PRESENTATION

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1. A shock tube kinetic study on the reaction of 1,3 and 1,4-cyclohexadiene + OH (oral presentation)  
Dapeng Liu, Binod Giri, Milán Szőri, Béla Viskolcz, Lam K. Huynh, Aamir Farooq  
*38th international symposium on combustion, 2021, Adelaide, Australia* [click me]
2. On the Redox Reactions between Allyl Radicals and NO<sub>x</sub> (oral presentation)  
Dapeng Liu, Binod Giri, Milán Szőri, Béla Viskolcz, Aamir Farooq  
*38th international symposium on combustion, 2021, Adelaide, Australia* [click me]
3. High Temperature Branching Ratio of Acetaldehyde + OH Reaction (oral presentation)  
Dapeng Liu, Binod Giri, Aamir Farooq  
*38th international symposium on combustion, 2021, Adelaide, Australia* [click me]
4. A shock tube kinetic study on Branching Ratio of Methanol + OH Reaction (best poster award)  
Dapeng Liu, Binod Giri, Aamir Farooq  
*KAUST Research Workshop: Physics of Turbulent Combustion, 2019, Thuwal, Saudi Arabia* [click me]
5. A shock tube kinetic study on the reaction of cyclopentanone/cyclohexanone + OH (oral presentation)  
Dapeng Liu, Binod Giri, Aamir Farooq  
*The 11th U.S. National Combustion Meeting, 2019, Pasadena, U.S.A* [click me]
6. A shock tube study on the branching ratios of OH + methanol (oral presentation)  
Dapeng Liu, Binod Giri, Aamir Farooq  
*37th international symposium on combustion, 2018, Dublin, Ireland* [click me]
7. High-temperature rate constant measurement for the reaction of GVL with OH (oral presentation)  
Dapeng Liu, Fethi Khaled, Aamir Farooq  
*11th Asia-Pacific Conference on Combustion, 2017, Sydney, Australia* [click me]

8. Shock Tube Rates Measurements for H-Abstraction by OH from Nine Large Alkanes (poster)

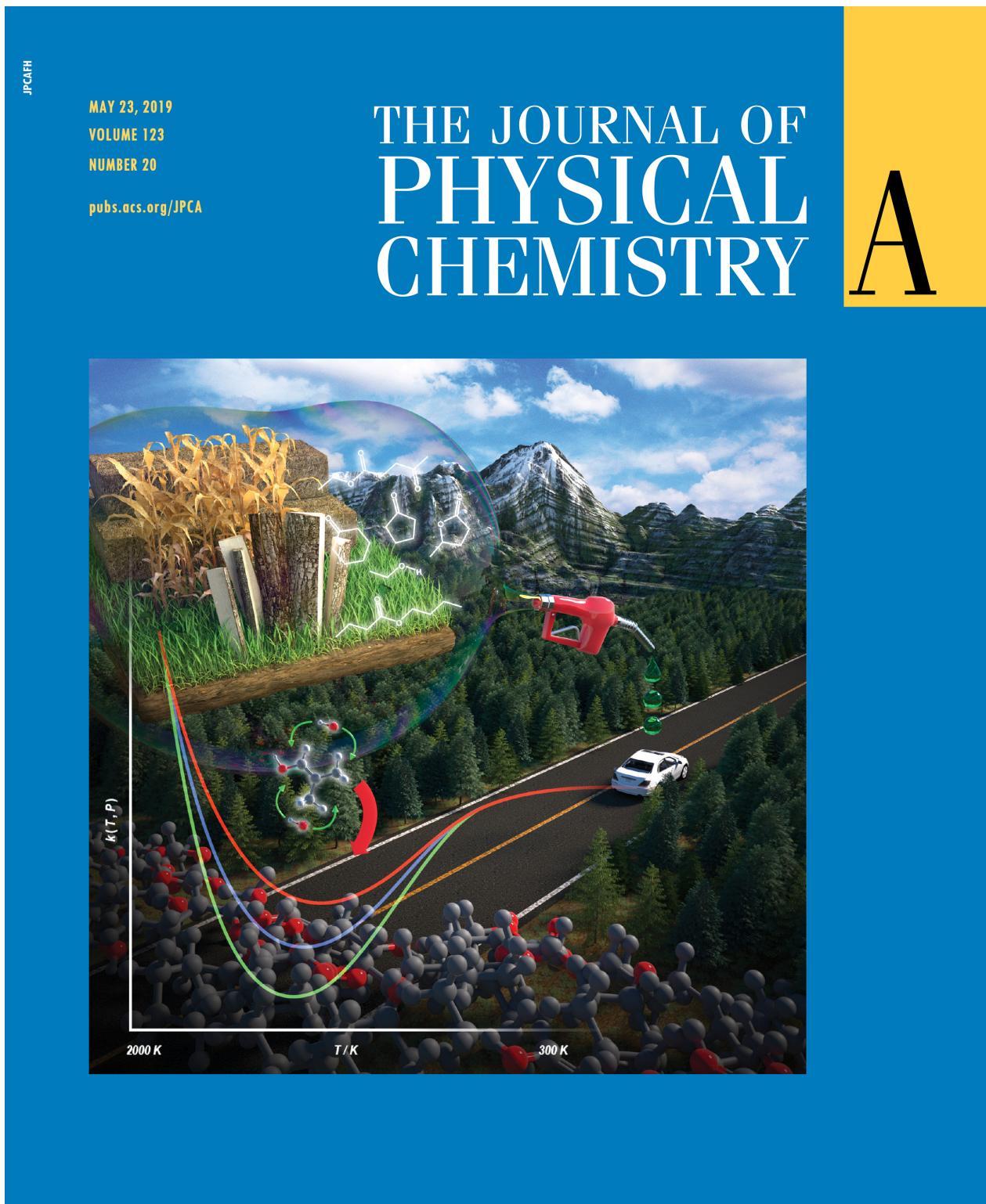
Dapeng Liu, Fethi Khaled, Binod Giri, Aamir Farooq

*8th European Combustion Meet, 2017, Dubrovnik, Croatia*

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## PROJECT HIGHLIGHTS

Our work, "OH + Cyclic-ketone", is highlighted in journal cover JPCA, 2019



## BERNARD LEWIS FELLOWSHIP

- Dr. Dapeng Liu received Bernard Lewis Fellowship  
*39th International Symposium on Combustion, Vancouver*

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