

Dapeng Liu

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WORK EXPERIENCE

King Abdullah University of Science and Technology(KAUST)

Postdoc Researcher, Chemical Kinetics and Laser Sensors Lab

Jeddah, Saudi Arabia

Jan 2024 - now

The Chinese University of HongKong(CUHK)

Postdoc Research Associate, Advanced Laser Diagnostic Lab

Hongkong, China

Sep 2022 - Aug 2023

EDUCATION

Clean Combustion Research Center, KAUST

Master and PhD 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

PUBLICATIONS

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

Dapeng Liu, Fathi Khaled, Wei Ren, Aamir Farooq

Under Review

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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

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

Chengyu Zhou, Dapeng Liu*, Aamir Farooq*

Combustion and Flame, 2024

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

Dapeng Liu, Aamir Farooq

Combustion and Flame, 2023

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

Dapeng Liu, Aamir Farooq

Combustion and Flame, 2023

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7. Pressure Hydrogen Oxy-combustion in the Presence of High Levels of H₂O and CO₂

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

Combustion and Flame, 2022

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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_x**
[Dapeng Liu](#), Milán Szőri, Béla Viskolcz, Et-touhami Essbar, Binod Giri, Aamir Farooq
Proceedings of the Combustion Institute, 2020 [click me]
16. **Kinetics and Thermochemistry of Cyclohexadienes 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]

PRESENTATIONS

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_x (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)**

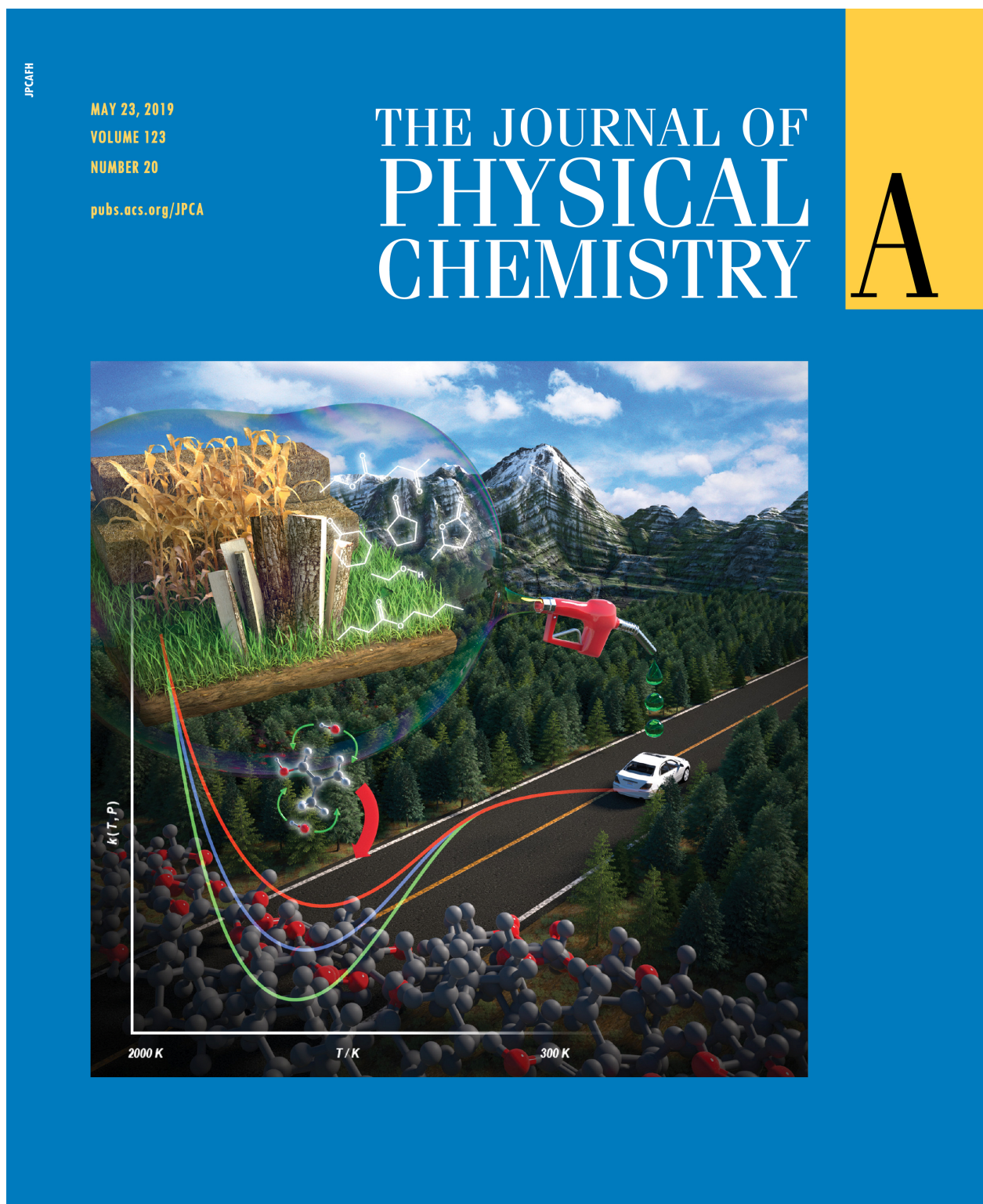
Dapeng Liu, Fethi Khaled, Binod Giri, Aamir Farooq

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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