

Dapeng Liu

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RESEARCH EXPERIENCER

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

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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 Szóri, 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 Szóri, 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, Lihao 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

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

JPCA FH

MAY 23, 2019
VOLUME 123
NUMBER 20
pubs.acs.org/JPCA

THE JOURNAL OF PHYSICAL CHEMISTRY

A

$k(T, P)$

2000 K T/K 300 K

BERNARD LEWIS FELLOWSHIP

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

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