

Dapeng Liu

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AWARDS AND ACADEMIC DISTINCTIONS

Bernard Lewis Fellowship <i>39th International Combustion Symposium</i>	<i>Vancouver, Canada</i> <i>July 2022</i>
First Prize <i>Ph.D. Workshop of SRISEC 2022</i>	<i>Xi'AN, China</i> <i>Oct 2022</i>
Session Chair <i>40th International Combustion Symposium</i>	<i>Milano, Italy</i> <i>July 2024</i>
SAS-CI Young Talent (Inaugural Awardee) <i>14th SAS-CI Conference</i>	<i>Jeddah, Saudi Arabia</i> <i>Oct 2024</i>

RESEARCH EXPERIENCE

King Abdullah University of Science and Technology(KAUST) <i>Postdoctoral Researcher, FASTER Lab</i>	<i>Jeddah, Saudi Arabia</i> <i>Jan 2024 - now</i>
The Chinese University of HongKong(CUHK) <i>Postdoctoral Research Associate, Advanced Laser Diagnostic Lab</i>	<i>Hongkong, China</i> <i>Sep 2022 - Aug 2023</i>

EDUCATION

Clean Combustion Research Center, KAUST <i>Master and Ph.D. degree</i>	<i>Jeddah, Saudi Arabia</i> <i>Aug 2015 - Dec 2021</i>
Xi'an Jiaotong University (XJTU) <i>Bachelor degree</i>	<i>Xi'An, China</i> <i>Sep 2010 - Jul 2014</i>

BOOK CHAPTER (INVITED)

- Measurement of elementary reaction's rate coefficients(Elsevier Book)**
Dapeng Liu, Aamir Farooq
expected 06.2025 [click me]

REVIEW PAPER (INVITED)

- Recent advances in measurements of OH reactions**
Dapeng Liu, Aamir Farooq
in preparation [click me]

PUBLICATION

- Investigation of 1,3-Pentadiene Thermal Decomposition**
Dapeng Liu, Aamir Farooq
Under Review [click me]
- Allyl Radical Formation in Cyclopentyl decomposition**
Dapeng Liu, Aamir Farooq
Under Review [click me]

3. **Empirical Rate Rules for Hydroxyl Radical Reactions with Alkenes**
Dapeng Liu, Aamir Farooq
Combustion and Flame, 2025 [\[click me\]](#)
4. **Thermal Decomposition of Alkenes: Role of Allylic-Alkyl C-C Bond Cleavage**
Dapeng Liu, Aamir Farooq
Combustion and Flame, 2024 [\[click me\]](#)
5. **Investigation of Cyclopentene + OH and Cyclopentene Thermal Decomposition Reactions**
Dapeng Liu, Fathi Khaled, Wei Ren, Aamir Farooq
Combustion and Flame, 2024 [\[click me\]](#)
6. **Heptanone isomers as a biofuel: Reactivity with OH radicals**
Dapeng Liu, Fathi Khaled, Aamir Farooq
Proceedings of the Combustion Institute, 2024 [\[click me\]](#)
7. **A theoretical and Experimental Study of 2-Ethylfuran + OH Reaction**
Li Fu, Dapeng Liu, ... , HongBo Ning*, Wei Ren*, Aamir Farooq
Combustion and Flame, 2024 [\[click me\]](#)
8. **Allylic-Alkyl C-C Bond Thermal Decomposition in 1-Butene and 1-Pentene**
Chengyu Zhou, Dapeng Liu*, Aamir Farooq*
Combustion and Flame, 2024 [\[click me\]](#)
9. **Investigation of thermal decomposition of nitrobenzene: An energetic material**
Dapeng Liu, Aamir Farooq
Combustion and Flame, 2023 [\[click me\]](#)
10. **Gamma-valerolactone (GVL) as Biofuel: Investigation of GVL Thermal Decomposition and GVL + OH Reaction**
Dapeng Liu, Aamir Farooq
Combustion and Flame, 2023 [\[click me\]](#)
11. **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 [\[click me\]](#)
12. **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 [\[click me\]](#)
13. **Investigation of cyclohexene thermal decomposition and cyclohexene + OH reactions**
Dapeng Liu, Aamir Farooq
Combustion and Flame, 2022 [\[click me\]](#)
14. **Investigation of the kinetics of conjugated diolefins using UV absorption spectroscopy**
Dapeng Liu, Aamir Farooq
Proceedings of the Combustion Institute, 2022 [\[click me\]](#)
15. **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 [\[click me\]](#)
16. **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 [\[click me\]](#)
17. **Symmetric ethers as bioderived fuels: Reactivity with OH radicals**

- Myriam Belmekki, Binod R Giri, [Dapeng Liu](#), Aamir Farooq
Energy and Fuels, 2021 [\[click me\]](#)
18. **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 [\[click me\]](#)
19. **On the Redox Reactions between Allyl Radicals and NO_x**
[Dapeng Liu](#), Milán Szóri, Béla Viskolcz, Et-touhamiEssbar, Binod Giri, Aamir Farooq
Proceedings of the Combustion Institute, 2020 [\[click me\]](#)
20. **Kinetics and Thermochemistry of Cyclichexadienes Reactions with OH Radicals**
[Dapeng Liu](#), Milán Szóri, Béla Viskolcz, Lam K. Huynh, Binod Giri, Aamir Farooq
Proceedings of the Combustion Institute, 2020 [\[click me\]](#)
21. **High Temperature Branching Ratio of Acetaldehyde + OH Reaction**
[Dapeng Liu](#), Binod Giri, Aamir Farooq
Proceedings of the Combustion Institute, 2020 [\[click me\]](#)
22. **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 [\[click me\]](#)
23. **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 [\[click me\]](#)
24. **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 [\[click me\]](#)
25. **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 [\[click me\]](#)
26. **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 [\[click me\]](#)
27. **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 [\[click me\]](#)
28. **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 [\[click me\]](#)
29. **A theoretical and shock tube kinetic study on hydrogen abstraction from phenyl formate**
Hongbo Ning, [Dapeng Liu](#), Junjun Wu, Liuhaoma, Wei Ren, Aamir Farooq
Physical Chemistry Chemical Physics, 2018 [\[click me\]](#)
30. **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 [\[click me\]](#)
31. **Retro-Ene Decomposition of 1-Methylcyclohexene**

Dapeng Liu, Aamir Farooq

Under Review

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INVITED TALK

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 [click me]

PROJECT HIGHLIGHTS

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

JPCA#H

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

THE JOURNAL OF PHYSICAL CHEMISTRY

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BERNARD LEWIS FELLOWSHIP

- Dr. Dapeng Liu received Bernard Lewis Fellowship
39th International Symposium on Combustion, Vancouver, 2022

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SAS-CI YOUNG TALENT AWARD

Dr. Dapeng Liu received SAS-CI Young Talent Award as the inaugural awardee Jeddah, 2024

