UNIVERSITY OF South Carolina
Molinaroli College of Engineering and Computing

Frederick L. Dryer

Educational Foundation
Distinguished Research Professor

Mechanical Engineering
300 Main Street, Rm A-122
University of South Carolina
Columbia, SC 29208

Email: DryerF@mailbox.sc.edu
Cell: 609-306-1028
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Research Gate: https://www.researchgate.net/profile/Frederick_Dryer
Google Scholar: http://scholar.google.com/citations?user=-zDOiYQAAAAJ&hl=en
Academic E Tree: https://academictree.org/etree/peopleinfo.php?pid=497109

Dr. Dryer (BAE'66, Rensselaer Polytechnic Institute) obtained his Ph.D. in Aerospace and Mechanical Sciences at Princeton University (1972) and has been engaged in combustion, propulsion, and energy conversion research for more than 55 years. He served on the Professional Research Staff from 1971 – 1981, joined the tenured faculty in Mechanical and Aerospace Engineering in 1981, became emeritus in 2013, and continued as a Research Scholar on the professional staff until 2015. Dr. Dryer joined the University of South Carolina in 2016 as an Educational Foundation Distinguished Research Professor in Mechanical Engineering. His extensive research facilities are part of the *Fuels, Energy Conversion, and Propulsion Technologies Research* laboratory at the University of South Carolina housed in the McNair Center.

Dr. Dryer is actively engaged in experimental and computational research topics involving the interactions of fluid dynamics, multi-phase chemistry and physical chemistry, chemical kinetics, energetics, and heat transfer. His research has focused on applications-driven needs for advancing dynamic performance, increasing energy resource (carbon) utilization efficiency, reducing air-pollutant emissions, and mitigating fire-safety-related hazards associated with gaseous and liquid flammable production and use. His combustion and reaction dynamics experience encompasses a wide range of fuels, from hydrogen, syngas, natural gas, chemical process, and low BTU gases to individual liquid hydrocarbon and oxygenated species, their mixtures, petroleum-derived real fuels (including different types of gasoline, diesel fuel, HFO's, and crude oil), and hydrogenated and oxygenated alternative components derived from natural gas, bio-resources, and waste, to "E-fuels", including hydrogen, methanol, ethanol, and ammonia, as energy carrier/storage media generated from (nuclear and renewable) power.

Other topical areas of interest include chemistry/chemical kinetic and physical property effects on the combustion of hazardous wastes and solid materials (in terms of ignition processes, combustion/reaction dynamics, and emissions generation/abatement); U.S. energy security and reductions in net-cycle-carbon and toxic emissions; fire-safety on earth and in low gravity environments; solid-phase/gas phase interactions, including droplet burning, particle burning, and catalytic interactions in reacting flows; performance of energetic materials for propulsion; conversion of hazardous materials (that initially contain metals, nitrogen, and/or halogens) to benign products; performance and emissions properties of internal combustion engines, including hydrocarbons, nitrogen oxides, aerosol particulates; in-cylinder lubricant effects on engine combustion behaviors and emissions; and gas-phase soot, coke particulate formation, and sulfur/ash (metals) component effects in energy conversion, chemical processing, and incineration.

Dr. Dryer has published extensively and consulted for the government, industry, and the legal profession. His services on advisory committees include efforts for the National Materials Advisory Board/National Research Council, NASA, DOE-BES, DARPA, ARO, and NIST. He is a former associate editor and editorial board member of *Combustion Science and Technology*, co-editor for the Proceedings of the 26th and 27th International Symposiums on Combustion, and a former editorial board member of the *International Journal of Chemical Kinetics* and of *Progress in Energy and Combustion Science*. He is currently a Fellow (2018) of the International Combustion Institute (2000 Silver Medal, 2012 Egerton Gold Medal; 1976/1981/2014 plenary speaker), a member of the American Society of Mechanical Engineers (Fellow), the Society of Automotive Engineers (Fellow), the American Institute of Aeronautics and Astronautics (Associate Fellow; 2014 Propulsion and Combustion Medal), the American Chemical Society, and the National Fire Protection Association. Dr. Dryer was elected to the National Academy of Engineering in both the Mechanical and Aerospace sections in 2021.

Education

Ph.D. – Aerospace and Mechanical Sciences - Princeton University, 1972
M. A. – Aerospace and Mechanical Sciences - Princeton University, 1968
Bachelor of Aeronautical Engineering – Rensselaer Polytechnic Institute, 1966

Professional History

2016 – Present	Distinguished Research Professor, Mechanical Engineering, University of South Carolina
2015 – Present	Professorial Fellow, Mechanical Engineering, University of Melbourne, Australia
2013 – Present	Professor Emeritus, Senior Scholar, Mechanical and Aerospace Engineering, Princeton
1983 – 2013	Professor, Mechanical and Aerospace Engineering, Princeton University
1987 – 1990	Associate Dean of Academic Affairs, School of Engineering and Applied Science, Princeton University
1984 – 1987	Undergraduate Departmental Representative, Mechanical and Aerospace Engineering, Princeton University
1982 – 1983	Associate Professor, Mechanical and Aerospace Engineering, Princeton University
1977 – 1982	Lecturer, Mechanical and Aerospace Engineering, Princeton University
1976 – 1981	Research Engineer, Mechanical and Aerospace Engineering, Princeton University
1972 – 1976	Professional Research Staff Member of Guggenheim Laboratories for the Aerospace Propulsion Sciences, Princeton University
1971 – 1972	Research Associate, Princeton University

Professional Activities and Honors:

Professional Memberships:

The Societies of Sigma Gamma Tau, Sigma Xi, Tau Beta Pi, American Chemical Society, American Society of Automotive Engineers (Fellow), American Institute of Aeronautics and Astronautics (Associate Fellow), American Society of Engineering Educators, American Society of Mechanical Engineers (Fellow), The International Combustion Institute (Fellow), National Fire Protection Association.

Honors:

2021 Fellow, National Academy of Engineering - Mechanical and Aerospace Sections.

2018 Fellow - The International Combustion Institute, Pittsburgh, PA.

2014 Propulsion and Combustion Award - American Institute of Aeronautics and Astronautics.

2012 Alfred C. Egerton Gold Medal - The International Combustion Institute.

2011 Fellow - American Society of Mechanical Engineers.

2010 Associate Fellow, American Institute of Aeronautics and Astronautics.

2008 Fellow - Society of Automotive Engineers.

2000, Silver Medal - The International Combustion Institute (28th International Combustion Symposium).

National Committee and Advisory Board Memberships:

Committee Member, “The Chemistry of Urban Wildfires”, National Academy of Sciences (2022). ISBN 978-0-309-27705-1 | DOI 10.17226/26460 https://doi.org/10.17226/26460

Committee Member,”2019-2020 Assessment of the Army Research Laboratory (2021)”, NAE Report ISBN 978-0-309-09407-8. https://doi.org/10.17226/26325

Committee Member, “Peer Review of Interim Report on Computational Fluid Dynamics Model for Predicting Wellhead Oil-Burning Efficiency at Bench and Intermediate Scales (2021)” NAE Report ISBN 978-0-309-68297-8. https://doi.org/10.17226/26211

International Scientific Advisory Board, Cluster of Excellence “Tailor Made Fuels from Biomass”, RWTH, Aachen, Germany 2008 – 2017.

National Materials Advisory Board/National Research Council Committee to Identify Needs to Foster Improved Fire Safety in the United States 2002–2003. https://doi.org/10.17226/10777

Committee on Fire Safe Fuels for Aircraft, National Materials Advisory Board, Commission on Engineering and Technical Systems, National Research Council, 1996–1997. https://doi.org/10.17226/5871

Committee on Energy Conservation in the Processing of Industrial Materials, National Materials Advisory Board, Commission on Engineering and Technical Systems, National Research Council, 1990–1993.

https://doi.org/10.17226/4970

NASA Scientific Advisory Panel on Atmospheric Effects of Aviation Project (AEAP), Earth Sciences and Applications Divisions, 1993–1995. Atmospheric Effects of Stratospheric Aircraft: A Third Program Report (R.K. Stolarski, H..L. Wesoky, eds.), Chapter 5 (Chair): Engine Emissions Trace Chemistry Sub-Committee, NASA Atmospheric Advisory Panel on Atmospheric Effects of Stratospheric Aircraft (AESA), https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19940019631.pdf

1990 - 1993 Member, NASA Atmospheric Advisory Panel on Atmospheric Effects of Stratospheric Aircraft (AESA), Earth Sciences and Applications Divisions, Office of Space Science and Applications. https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19920009879.pdf

National Academy of Sciences NRC Panel on Impacts of Diesel Powered Light Duty Vehicles, 1979-1980. Published, Nov. 1982. NAS Publication *ISBN-10: 0309032431; ISBN-13: 978-0309032438 ISBN*

National Academy of Sciences NRC Carbon Monoxide Control Assessment Panel, 1980. Sub panel, taken from light Duty Vehicle Study to consider Automotive Three-Way Catalyst Phase-in date delay to 1985.

Editorial Activities:

Editorial Board, *Progress in Energy and Combustion Science*, 2002–2005.

Co-organizer, of the Droplets and Sprays Colloquium for the 29th Symposium on Combustion, Sapporo, Japan, July 21–26, 2002.

Editorial Board, International Journal of Chemical Kinetics, 1997–2002.

Co-editor (and Co-chair, Publication Committee) 27th Symposium Proceedings, Boulder CO, The International Combustion Institute, Pittsburgh, PA, July 1998.

Co-editor (and Co-chair, Publication Committee) 26th Symposium Proceedings, The International Combustion Institute, Pittsburgh, PA, 1996.

Editorial Board, *Combustion Science and Technology*, 1986–1991.

Associate Editor, *Combustion Science and Technology*, 1977-1986.

Review Activities:

Proposal Review: ACS, ARO, DOE, NASA, NSF, ONR, NIST Technical Proposals.

Reviewer: Combust. Flame, Combust. Sci. Tech., Energy and Fuels, Enviro Sci. Tech., Fuel, Int. J. Heat Transfer, Int. J. Chem. Kin., J. Phys. Chem., Proc. Combust. Ins., AIAA, ACS, ASME, and AICHE Journals.

Selected Invitations:

Invited Contributor, Mathematical modelling of gas-phase complex reaction systems: Pyrolysis and Combustion, T. Faravelli, F. Manenti, E. Ranzi eds., Computer Aided Chemical Engineering Series, Vol 45 Elsevier, (2019). Co Author, Chapter 10.

Invited Speaker, Panel on Industrial Impacts of the Institute, 37th International Symposium on Combustion, Dublin, IRE, August 2, 2018.

Invited Speaker, “Toward Major Improvements in Efficiency and Emissions of Internal Combustion Piston Engines”, 33rd American Society for Gravitational and Space Research Conference, Seattle WA, 25-28 October 2017,

Invited Speaker, “Combustion and Emissions Properties of Heavy Oils”, King Abdullah Science and Technology Future Fuels Workshop, Thuwal SA, March 7-9, 2016.

Invited Plenary Speaker, 35th International Symposium on Combustion, “Chemical Kinetic and Combustion Characteristics of Transportation Fuels”, San Francisco, CA, August 8, 2014.

Invited Speaker, “Emulating the Combustion Behavior of Real Petroleum-Derived and Alternative Fuels”, *Bilger Plenary Lecture, 2011 Proceedings of the Australian Combustion Symposium,* University of Newcastle, Whitesands Conference Centre, Shoal Bay Resort and Spa, NSW Australia, Nov. 29 – Dec. 1.

Invited Speaker, “Surrogate Mixtures for Describing Real Fuel Combustion: Challenges and Recent Progress,” *Technology Watch Day on Future Biofuels*, Tailor-Made Fuels from BioMass (TMFB), RWTH Aachen University, Aachen City, Germany, May 24, 2011.

Invited Speaker, “Recent Studies on High-Hydrogen-Content Power Generation and Liquid Jet Aircraft Fuels,” *GE Energy Combustion Symposium, GE Energy*, Greenville, SC, January 25−26, 2011.

Invited Topical Paper, “Surrogate Mixtures for Describing Real Fuel Combustion: Challenges and Recent Progress,” 7th *US National Combustion Meeting (Combustion Institute)*, Georgia Institute of Technology, Atlanta, GA, March 20−23, 2011.

Invited Speaker, College of Engineering & CS MMAE Distinguished Speaker Series, University of Central Florida, Orlando, FL, November 18−19, 2010.

Invited Speaker, *20th Italian National Heat Transfer Conference*, Maratea, Italy. June 25 – 27, 2002.

Hottel Lecturer, *Hottel Lecture Series on Energy and Combustion*, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, 1991.

Invited Contributor, (with C.K. Westbrook), "Chemical Kinetics and Modeling of Combustion Processes", Invited Paper, *18th International Symposium on Combustion*, The Combustion Institute, Pittsburgh, PA, 1981, p. 749

Invited Contributor, "Water Addition to Practical Combustion Systems - Concepts and Applications", *16th International Symposium on Combustion*, The Combustion Institute, Pittsburgh, PA, 1977, p. 279.

Industrial Scientific Advisory Boards

Technology Advisory Council, Arq UK Management Limited, London	2019 – 2022
Science Advisory Board, Knite Corporation, Princeton, NJ.	2005 – present
Environmental Advisory Board, NetJets Inc., Woodbridge, NJ.	2007 – 2010
Science Advisory Board, ORYXE International, Irvine, CA.	2005 – 2009

Graduate Students, Postdoctoral Students, and Professional Staff Associates

See the following academic tree:- https://academictree.org/etree/peopleinfo.php?pid=497109

Patents

(with G.J. Green, and D.E. Walsh), "Droplet Generation Apparatus", European Patent No. 85302157.4-, May 20, 1985; U.S. Patent No. 4,819,831 April 11, 1989. Assigned to Mobil Oil Corporation, NY, NY.

(with S.H. Won and S. Dooley), “A Measurement Process for the Determination of the Mixture Averaged Molecular Weight of Complex Mixtures”, US Patent 9,410,876 B2, Aug 9, 2016. Assigned to Princeton University

(with T.I. Farouk and S.H. Won), “A Methodology and System for Reforming Liquid Fuel to Tailor Engine Combustion and Emissions Properties”, U.S. Patent Application 62/319,324, April 7, 2016; Patent US10704509 (2020). Assigned to University of South Carolina.

Archival Publications, 2012 – Present

- H. Han, S. Saxena, R. Gautam, M. Wang, F. Angikath, F. L. Dryer, and B. Dally, “Synergistic and Antagonistic Interaction Effects During the Co-gasification of Polyethylene and Polystyrene in Supercritical Water”, *Fuel*, 416 (2026) 138524. https://doi.org/10.1016/j.fuel.2026.138524
- F. Angikath, S. Saxena, F. L. Dryer, H. Han, and B. Dally, “A Novel Free Radical Mechanism Based Model for Predicting Gasification Metrics and Synergistic Interactions in Supercritical Water Gasification of Plastics”, *Fuel*, 404, Part A (2026) 136182. https://doi.org/10.1016/j.fuel.2025.136182
- M. K. Yoon, F. L. Dryer, M. P. Burke, and S. H. Won, “Kinetic Coupling Effects on the Extinction Limits of Diffusion Flames of Hydrocarbons Blended with Ammonia”, *Proc Combust Ins*, **41** (2025) 105801. https://doi.org/10.1016/j.proci.2025.105801
- T. Shealy, F. L. Dryer, and S. H. Won, "Experimental Observation of Ammonia Blending and Cracking on Lean Blow-Out Behaviors in a Model Gas Turbine Combustor." ASME. *J. Eng. Gas Turbines Power*, 2025; 147(12): 121017. https://doi.org/10.1115/1.4069484
- D. Dietrich, T. Krausse, V. Nayagam, T. Farouk, F. L. Dryer, and F. Williams, “Low temperature n-Dodecane Droplet Combustion Experiments Aboard the International Space Station”, Microgravity Science and Technology (2024) 36:31. https://link.springer.com/article/10.1007/s12217-024-10115-x
- B. Saha, S. Vedachalam, A. K. Paul, A. K. Dalai, S. Saxena, W. L. Roberts, and F. L. Dryer, “Microwave-assisted Solvent De-asphalting of Heavy Fuel Oil and Process Parameters Optimization”, Fuel (2023) 351 128818. https://doi.org/10.1016/j.fuel.2023.128818

- A. Robinson, S. J. Lim, A. K. Alwahaibi, A. Z. Danowicz, D. Török, B. Windom, F. L. Dryer, and S. H. Won, "Elucidating NO Coupling Effects on Ignition of Toluene Reference Fuels by Chemical Functional Group Analysis", *Proc Combust Ins* **39**. In Press https://doi.org/10.1016/j.proci.2022.08.100
- T. I. Farouk and F. L. Dryer, "Extinction Characteristics of Isolated n-Alkane Fuel Droplets During Low Temperature Cool Flame Burning in Air", *Proc Combust Ins* **39** (2023) 2471 – 2481. https://doi.org/10.1016/j.proci.2022.07.094
- M. E. Harries, D. T. Allen, O. Adetona, M. L. Bell, M. S. Black, J. L. Burgess, F. L. Dryer, A. L. Holder, A. Mascareñas, F. L. Rosario-Ortiz, A. A. Stec, B. J. Turpin, and J. T. Zelikoff, "A Research Agenda for the Chemistry of Fires at the Wildland−Urban Interface: A National Academies Consensus Report", *Environ Sci Technol* 2022, **56**, 15189−15191. https://doi.org/10.1021/acs.est.2c07015
- S. J. Lim, A. K. Alwahaibi, F. L. Dryer, and S. H. Won, "Impacts of Preferential Vaporization on Flashback Behaviors of Multi-Component Liquid Fuels, *Combust Flame*, **245** (2022) 112300. https://doi.org/10.1016/j.combustflame.2022.112300
- V. R. Hasti, P. Kundu, S. Som, S. H. Won, F. L. Dryer, and J. P.Gore, "Computation of Conventional and Alternative Jet Fuel Sensitivity to Lean Blowout", *J Energy Ins,* **101** (2022) 19-31. https://doi.org/10.1016/j.joei.2021.12.006
- S. H. Won, S. J. Lim, S. Nates, A. K. Alwahaibi, F. L. Dryer, F. Farid, and M. Hase, "Combustion Characteristics of Crude Oils for Gas Turbine Applications by DCN measurements and NMR Spectroscopy", *Proc Combust Ins* **38** (2021) 5463-5473. https://doi.org/10.1016/j.proci.2020.06.184
- T. I. Farouk, S. H. Won, and F. L. Dryer, "Sub-millimeter Sized Multi-component Jet Fuel Surrogate Droplet Combustion: Physicochemical Preferential Vaporization Effects", *Proc Combust Ins* **38** (2021) 3313-3323. https://doi.org/10.1016/j.proci.2020.06.200
- S. F. Ahmed, A. C. Aghdam, F. L. Dryer and T. I. Farouk, "Multidimensional simulations of Mckenna-driven Flow Tube Configuration: Investigating Non-ideality in NOx Formation Flow Tube Experiments", *Combust Flame* **223** 511–524 (2021). https://doi.org/10.1016/j.combustflame.2020.10.011
- D. Carpenter, S. Nates, F. L. Dryer, and S. H. Won, "Evaluating Ignition Propensity of High Cycloparaffinic Content Alternative Jet Fuel by a Chemical Functional Group Approach, *Combust Flame* **223** 243-253 (2021). https://doi.org/10.1016/j.combustflame.2020.09.024
- S. Dooley, S. H. Won, and F. L. Dryer, "Surrogate Fuels and Combustion Characteristics of Liquid Transportation Fuels", Chapter 10 in *Computer-Aided Chemical Engineering Mathematical Modelling of Gas-Phase Complex Reaction Systems: Pyrolysis and Combustion* (T. Faravelli, F. Manenti, E. Ranzi, eds.) Elsevier B.V. **45** 513 – 592 (2019). ISBN: 978-0-12-819579-6
- S. H. Won, N. Rock, S.J. Lim, S. Nates, D. Carpenter, B. Emerson, T. Lieuwen, T. Edwards, and F. L. Dryer, "Preferential Vaporization Impacts on Lean Blow-Out of Liquid Fueled Combustors", *Combust Flame* **205** 295-3-4 (2019). https://doi.org/10.1016/j.combustflame.2019.04.008
- T. I. Farouk, D. Dietrich, and F. L Dryer, "Three Stage Cool Flame Droplet Burning Behavior of n-Alkane Droplets at Elevated Pressure Conditions: Hot, Warm and Cool Flame", *Proc Combust Ins* **37** 3353-3361 (2019). https://doi.org/10.1016/j.proci.2018.09.015
- M. F. Alam, A. C. Aghdt, F. L Dryer and T. I. Farouk, "Oscillatory Cool Flame Combustion Behavior of Submillimeter Sized n-Alkane Droplet under Near Limit Conditions", *Proc Combust Ins* **37** 3383-3391 (2019). https://doi.org/10.1016/j.proci.2018.05.151
- F. M. Haas, S. H. Won, F. L. Dryer, and C. Pera, "Lube Oil Chemistry Influences on Autoignition as Measured in an Ignition Quality Tester", *Proc Combust Ins* **37** 4645-4654 (2019). https://doi.org/10.1016/j.proci.2018.06.165
- K. Dussan, S. H. Won, A. Ure, F. L Dryer, and S. Dooley, "Chemical Functional Group Descriptor for Ignition Propensity of Large Hydrocarbon Liquid Fuels", *Proc Combust Ins* **37** 5083-5093 (2019). https://doi.org/10.1016/j.proci.2018.05.151
- F. E. Alam, S. H. Won, F. L. Dryer, and T. I. Farouk, "Ozone-Assisted Cool Flame Combustion of Sub-millimeter Sized n-alkane Droplets at Atmospheric and Higher Pressure", *Combust Flame* **195** 220-231 (2018). https://doi.org/10.1016/j.combustflame.2018.01.015
- S. H. Won, F. M. Haas, S. Dooley, F. L. Dryer, and T. Edwards, "Reconstruction of Chemical Structure of Real Fuel by Surrogate Formulation Based Upon Combustion Property Targets", *Combust Flame* **183** 39-49 (2017). https://doi.org/10.1016/j.combustflame.2017.04.032

- T. M. Foong, M. J. Brear, K. J. Morganti, G. da Silva, Y. Yang, and F. L. Dryer, "Modeling End-Gas Autoignition of Ethanol/Gasoline Surrogate Blends in the Cooperative Fuel Research Engine", *Energy Fuels* **31** 2378-2389 (2017). http://dx.doi.org/10.1021/acs.energyfuels.6b02380
- F. E. Alam, F. M. Francis, T. I. Farouk, and F. L. Dryer, "Influence of Trace Nitrogen Oxides on Natural Gas Oxidation: Flow Reactor Measurements and Kinetic Modeling", *Energy Fuels* **31** 2360-2369 (2017). http://dx.doi.org/10.1021/acs.energyfuels.6b02369
- T. I. Farouk, Y. Xu, C. T. Avedisian, and F. L. Dryer, "Combustion Characteristics of Primary Reference Fuels (PRF) Droplets: Single Stage High Temperature Combustion to Multistage "Cool" Flame Behavior", *Proc Combust Ins* **36** 2585-2594 (2017). http://dx.doi.org/10.1016/j.proci.2016.07.066
- T. I. Farouk, F. L. Dryer, D. Dietrich, and F. E. Alam, "Isolated n-Decane Droplet Combustion – Dual Stage and Single Stage Transition to "Cool Flame" Droplet Burning" *Proc Combust Ins* **36** 2523-2530 (2017). http://dx.doi.org/10.1016/j.proci.2016.07.015
- S. F. Ahmed, J. Santner, F. L. Dryer, B. Padak, and T. I. Farouk, Conditions Relevant to Gas Turbine Operation, Part 2: NOx in High Hydrogen Content Fuel Combustion at Elevated Pressure", *Energy Fuels*, **30** 7691–7703 (2016). http://dx.doi.org/10.1021/acs.energyfuels.6b00421
- J. Santner, S. K. Ahmed, T. Farouk, and F. L. Dryer "Computational Study of NOx Formation at Conditions Relevant to Gas Turbine Operation: Part 1, *Energy Fuels* **30** 6745–6755 (2016). http://dx.doi.org/10.1021/acs.energyfuels.6b00420
- C-W. Zhou, Y. Li, E. O'Connor, K. P. Somers, S. Thion, C. Keesee, O. Mathieu, E. L. Petersen, T. A. DeVerter, M. A. Oehlschlaeger, G. Kukkadapu, C-J. Sung, M. Alrefae, F. Khaled, A. Farooq, P. Dirrenberger, P-A. Glaude, F. Battin-Leclerc, J. Santner, Y, Ju, T. Held, F. M. Haas, F. L. Dryer, and H. C. Curran, "A Comprehensive Experimental and Modeling Study of Isobutene Oxidation, *Combust Flame* **167** 353-379 (2016). http://dx.doi.org/10.1016/j.combustflame.2016.01.021
- S. H. Won, F. M. Haas, A. Tekawade, G. Kosiba, M.A. Oehlschlaeger, S. Dooley and F.L. Dryer, "Combustion Characteristics of C_4 iso-Alkane Oligomers: Experimental Characterization of iso-Dodecane as a Jet Fuel Surrogate Component", *Combust Flame* **165** 137-143 (2016). http://dx.doi.org/10.1016/j.combustflame.2015.11.006
- S. H. Won, P. S. Veloo, S. Dooley, J. Santner, F. M. Haas, Y. Ju, and F. L. Dryer, "Predicting the Global Combustion Behaviors of Petroleum-Derived and Alternative Jet Fuels by Simple Fuel Property Measurements", *Fuel* **168** 34-36 (2016). http://dx.doi.org/10.1016/j.fuel.2015.11.026
- F. E. Alam, F. L. Dryer, and T. I. Farouk, "Effectiveness of Xenon as a Fire Suppressant under Microgravity Combustion Conditions", *Combust Sci Technol* **188** 145-165 (2015). http://dx.doi.org/10.1080/00102202.2015.1085033
- F. M. Haas and F. L. Dryer, "Rate Coefficient Determinations for H + NO_2 → OH + NO from High Pressure Flow Reactor Measurements", *J Phys Chem A* ***119*** 7792–7801 (2015). Special Issue. http://dx.doi.org/10.1080/00102202.2015.1085033
- J. S. Heyne, S. Dooley, Z. Serinyel, F. L. Dryer, and H. C. Curran, "Decomposition Studies of Isopropanol in a Variable Pressure Flow Reactor", *Zeitschrift fur Physikalische Chemie* **229** 881–907 (2015). Special Issue. http://dx.doi.org/10.1515/zpch-2014-0630
- F. L. Dryer, "Chemical Kinetic and Combustion Characteristics of Transportation Fuels", *Proc Combust Ins* **35** 117-144 (2015). *Invited Plenary*. http://dx.doi.org/10.1016/j.proc.2014.09.008
- T. I. Farouk, M. C. Hicks, and F. L. Dryer, "Multistage Oscillatory "Cool Flame" Behavior for Isolated Alkane Droplet Combustion in Elevated Pressure Microgravity Condition", *Proc Combust Ins* **35** 1701–1708 (2015). http://dx.doi.org/10.1016/j.proci.2014.06.015
- E. A. Alam, Y. C. Liu, C. T. Avedisian, F. L. Dryer, and T.I. Farouk, "A Detailed Numerical Simulation of Spherically Symmetric n-Butanol Droplet Combustion and Comparisons with Experimental Data", *Proc Combust Ins* **35** 1693–1700 (2015). http://dx.doi.org/10.1016/j.proci.2014.06.043
- K. J. Morganti, T. M. Foong, M. J. Brear, G. da Silva, Y. Yang, and F. L. Dryer, "The Autoignition of Liquefied Petroleum Gas (LPG) in Spark-Ignition Engines", *Proc Combust Ins* **35** 2933–2940 (2015). http://dx.doi.org/10.1016/j.proci.2014.06.070

- J. Santner, F. M. Haas, F.L. Dryer, and Y. Ju, "High Temperature Oxidation of Formaldehyde and Formyl Radical: A Study of Laminar 1,3,5-Trioxane Burning Velocities", *Proc Combust Ins* **35** 687–694 (2015). http://dx.doi.org/10.1016/j.proci.2014.05.014
- A. Sudholt, C. Liming, C., J. Heyne, F. M. Haas, F. L. Dryer, and H. Pitsch, "Ignition Characteristics of a Bio-Derived Class of Saturated and Unsaturated Furans for Engine Applications", *Proc Combust Ins* **35** 2957-2965 (2015). http://dx.doi.org/10.1016/j.proci.2014.06.147
- S. M. Burke, U. Burke, R. Mc Donagh, O. Mathieu, I. Osorio, C. Keesee, A. Morones, E. L. Petersen, W. Wang, T. A. DeVerter, M. A. Oehlschlaeger, B. Rhodes, R. K. Hanson, D. F. Davidson, B. W. Weber, C.-J. Sung, J. Santner, Y. Ju, F. M. Haas, F. L. Dryer, E. N. Volkov, E. J. K. Nilsson, A. A. Konnov, M. Alrefae, F. Khaled, A. Farooq, P. Dirrenberger, P.-A. Glaude, F. Battin-Leclerc, and H. J. Curran, "An Experimental and Modeling Study of Propene Oxidation. Part 2: Ignition Delay Time and Flame Speed Measurements", *Combust Flame* **162** 296-314 (2015). http://dx.doi.org/10.1016/j.combustflame.2014.07.032
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