

Publications – Ömer L. GülderUniversity of Toronto Institute for Aerospace Studies

Identifiers for Bibliometric Data

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Journal manuscripts submitted / under review

- [S.1] R. Sawanni and Gülder, Ö. L. A tractable methodology for assessing the pressure scaling of sooting processes in a counterflow diffusion flame at 1 to 6 bar, *Under review*, submitted December 2023.
- [S.2] Sung, R., Young, N.G., Razavi, M.R., Canteenwalla, P., Chishty, W., and Gülder, Ö. L. Thermal stability and coking propensity assessment of alternative aviation turbine fuels using a novel experimental methodology, *Under review*, submitted December 2023.

Refereed Journal Publications

- [J.1] R. B. Vishwanath, P. Carniglia, J. Weber, and Gülder, Ö. L. Effects of *n*-pentanol blending on soot formation in swirl-stabilized turbulent spray flames of Jet A-1 in a laboratory gas turbine combustor, *Fuel*, Vol.357, 129971, 2024.
doi:10.1016/j.fuel.2023.129971
- [J.2] Vishwanath, R.B. and Gülder, Ö. L. Hydrogen enrichment enhances soot formation in swirl-stabilized non-premixed turbulent combustion of ethylene in a model gas turbine combustor, *Proceedings of the Combustion Institute*, Vol.39, pp.889-898, 2023.
doi:10.1016/j.proci.2022.07.160
- [J.3] Yang, S.S. and Gülder, Ö. L. Impact of *n*-butanol substitution in ethylene on soot yields in laminar diffusion flames at pressures 3 to 10 bar, *Combustion and Flame*, Vol. 245. 112236, 2022.
doi:10.1016/j.combustflame.2022.112326

- [J.4] Kheirkhah, S. and Gülder, Ö. L. A revisit to the validity of flamelet assumptions in turbulent premixed combustion and implications for future research, *Combustion and Flame*, Vol. 239, 111635, 2022.
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- [J.8] Weber, J. K., Razavi, M. R., Carniglia, P., and Gülder, Ö. L. Comments on the Experimental Study of the Combustion and Emission Characteristics of Lower Alcohols in a Constant Volume Vessel, *Energy and Fuels*, Vol. 35(15), pp. 12753-12757, 2021.
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- [J.9] Yang, S. S. and Gülder, Ö. L. Sooting propensity dependence on pressure of ethylbenzene, p-xylene, o-xylene and n-octane in laminar diffusion flames, *Combustion and Flame*, Vol. 227, pp. 202-213, 2021.
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- [J.10] Yang, S. S. and Gülder, Ö. L. Ethanol supplement increases soot yields in nitrogen-diluted laminar ethylene diffusion flames at pressures from 3 to 5 bar, *Combustion and Flame*, Vol. 227, pp. 1-10, 2021.
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- [J.11] Yang, S. S. and Gülder, Ö. L. Sooting characteristics of ethanol-ethylene blends in laminar coflow diffusion flames up to 10 bar, *Combustion and Flame*, Vol. 225, pp. 39-47, 2021.
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- [J.12] Rault M. T., Vishwanath, B. R., Gülder, Ö. L. Spray characteristics, velocity field, and soot formation in turbulent swirl-stabilized spray flames in a model combustor fueled with n-butanol/Jet A-1 blends, *Fuel*, Vol. 287, 119452, 2021.
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Refereed Conference Papers

- [C.1] Razavi, M. R. and Gülder, Ö. L. Pyrolysis and soot formation of liquid fuels in a micro flow reactor, 18th International Conference on Flow Dynamics, Sendai, Japan, November 6 - 8, 2023.
- [C.2] Vishwanath, R. B., Carniglia, P. A., Weber, J. K., Gülder, Ö. L. "Soot formation in swirl-stabilized spray combustion of Jet A-1 doped with n-pentanol in a laboratory gas turbine combustor", 12th Mediterranean Combustion Symposium, Luxor, Egypt, January 23 – 26, 2023.
- [C.3] Vishwanath, R. B., Carniglia, P. A., Weber, J. K., Gülder, Ö. L. "Influence of n-pentanol blending on soot in spray combustion of kerosene", 17th International Conference on Flow Dynamics, Sendai, Japan, November 9 - 11, 2022.
- [C.4] Rault, M. T., Gülder, Ö. L. "Influence of ethanol blending on soot in spray combustion of kerosene", 16th International Conference on Flow Dynamics, Sendai, Japan, November 6 - 8, 2019.
- [C.5] Karataş, A. E., Gigone, B., Gülder, Ö. L. "Soot aggregate morphology in laminar methane diffusion flames at elevated pressures up to 30 bar", 11th Mediterranean Combustion Symposium, Tenerife, Spain, June 16 – 20, 2019.
- [C.6] Karatas, A. E., Gigone, B., Gülder, Ö. L. "Pressure Effects on Soot Morphology in Laminar Methane Diffusion Flames", 12th Asia-Pacific Conference on Combustion, Fukuoka, Japan, July 1 – 5, 2019.
- [C.7] Commodo, M., Karataş, A. E., De Falco, G., Minutolo, P., D'Anna, A., Gülder, Ö.L., "Raman spectroscopy of soot sampled from high-pressure diffusion flames", Proceedings of the European Combustion Meeting, Lisbon, 2019.
- [C.8] Griffin, E. A., Gülder, Ö. L., "High Pressure Soot Formation in Laminar Diffusion Flames of C2-C4 Olefins", 15th International Conference on Flow Dynamics, Sendai, Japan, November 7 - 9, 2018.

- [C.9] Wang, Y.-L., Gülder, Ö. L., "Soot Formation in Swirl-Stabilized Spray Combustion of Jet A-1 in a Model Gas Turbine Combustor", Asian Congress on Gas Turbines, Marioka, Japan, August 22-24, 2018.
- [C.10] Wang, W., Karataş, A. E., Groth, C. P. T., and Gülder, Ö. L., "Experimental and numerical study of laminar flame extinction for syngas and syngas-methane blends", 10th Mediterranean Combustion Symposium, Naples, Italy, September 17-21, 2017.
- [C.11] Wang, W., Karataş, A. E., Groth, C. P. T., and Gülder, Ö. L., "Combined experimental and numerical study of ethanol laminar flame extinction", 10th Mediterranean Combustion Symposium, Naples, Italy, September 17-21, 2017.
- [C.12] Joo, P. H., Christensen, M., Griffin, E., Gigone, B., Gülder, Ö. L., "Soot primary particle size dependence on combustion pressure in laminar ethylene diffusion flames", 10th Mediterranean Combustion Symposium, Naples, Italy, September 17-21, 2017.
- [C.13] Chatterjee, S., and Gülder, Ö. L., "Soot concentration and primary particle size in swirl-stabilized non-premixed turbulent flames of ethylene and air", 10th Mediterranean Combustion Symposium, Naples, Italy, September 17-21, 2017.
- [C.14] Tamadonfar, P., and Gülder, Ö. L., "On the validity of the Damköhler's hypothesis in premixed turbulent combustion", 13th International Conference on Flow Dynamics, Sendai, Japan, October 10 - 12, 2016.
- [C.15] Chatterjee, S., and Gülder, Ö. L., "Soot concentration distribution of swirl-stabilized non-premixed propane/air flames in a gas turbine model combustor", XXIV ICTAM, 21-26 August 2016, Montreal, Canada.
- [C.16] Karatas, A. E., Gülder, Ö. L., "Pressure dependence of sooting propensity in laminar diffusion flames of ethylene-air diluted with carbon dioxide and nitrogen", presented at the 36th Combustion Symposium (International), August 2016, Seoul, Korea.
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- [C.18] Tamadonfar, P., and Gülder, Ö. L., "Effects of mixture composition and turbulence intensity on flame front structure and burning velocities of premixed turbulent hydrocarbon-air Bunsen flames", 12th International Conference on Flow Dynamics, Sendai, Japan, October 27 – 29, 2015.
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- [C.21] Kheirkhah, S., and Gülder, Ö. L., "Local Consumption Speed of Turbulent Premixed V-shaped Flames of Methane-Air", 11th International Conference on Flow Dynamics, Sendai, Japan, October 8-10, 2014.
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- [C.27] Karataş, A. E., and Gülder, Ö. L., "Influence of carbon dioxide and nitrogen dilution on soot formation in laminar diffusion flames of ethylene/air at pressures up to 20 atm", 8th Mediterranean Combustion Symposium (on CD), September 2013, Cesme, Izmir.
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- [C.29] Karatas, A. E., Intasopa, G., and Gülder, Ö. L., "Soot measurements in laminar diffusion flames of n-heptane diluted with nitrogen or helium at pressures from 2 to 7 atmospheres", Proceedings of 9th Asia-Pacific Conference on Combustion, May 19-22, 2013, Gyeongju, Korea.
- [C.30] Shahbazian, N., Groth, C.P.T., and Gülder, Ö.L., "Comparative study of algebraic and transported FSD models for LES of premixed flames in flamelet and thin reaction zone regimes", AIAA Aerospace Sciences Meeting, AIAA Paper No. 2013-1138, 2013.
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