

Lu-Yin Wang is a Ph.D. candidate at the University of Toronto Institute for Aerospace Studies. She received her B.S. in Physics and B.S. in Aeronautics and Astronautics from National Cheng Kung University in Taiwan in 2011. Her undergraduate research involved the investigation of pitch angle distributions and fluxes of electrons in Earth's magnetotail at the dipolarization phases during solar substorm events. This work provided a better understanding of the physics behind electron acceleration in the magnetotail plasma sheet and has been published in several conferences and the Journal of Geophysical Research. She completed her M.S.E. in Aerospace Engineering from the University of Michigan in 2012, and then joined the Ford Motor Company as a driveline NVH engineer. Wang started her Ph.D. program at the University of Toronto in 2014, and is currently working with the Combustion and Propulsion Group under the supervision of Professor Ömer L. Gülder. Her research focuses on the soot aerosol formation mechanisms in swirl-stabilized turbulent combustion. She is using various laser-based diagnostics to investigate the influence of turbulence-chemistry interactions on soot formation and oxidation in spray combustion. Alternative fuels such as alcohols, alcohol-derived biojets and hydrocarbon mixtures are used in her experiments. The role of biofuel additives on soot formation will be examined. Her work aims to contribute to the understanding of soot processes in swirl-stabilized combustors.