

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2020-125
Project Title:	Investigation of local and transboundary contributions to ozone formation and pollution episodes in Hong Kong
Principal Investigator:	Dr Wang Zhe, Division of Environment and Sustainability, The Hong Kong University of Science and Technology
Total Approved Grant:	\$1,200,000
Duration:	1/7/2021 to 30/6/2024
Project Status/Remarks:	On-going
Project Scope:	<p>Photochemical ozone pollution has long been a major air pollution problem in Hong Kong. As a result of various control measures implemented by the government over the years, the local emissions of ozone precursors, i.e., nitrogen oxides and volatile organic compounds, were on a downward trend. Paradoxically, the ground-level ozone in Hong Kong has been exhibiting an increasing trend in the past decades. While local ozone production has been reduced considerably, the background ozone has increased significantly, especially regional transport from the Pearl River Delta and eastern China. The objectives of this project are as follows –</p> <ol style="list-style-type: none"> (a). To identify the major ozone precursors from local and regional transport during ozone episodes through a concurrent upwind-downwind continuous measurement; (b). To determine the key sensitive precursors and major contributing sources to ozone formation in Hong Kong under typical and episodic meteorological conditions; (c). To quantify the relative contributions of local emission and regional transport during ozone episodic events through joint efforts of field observations and model investigation; and (d). To assess the effectiveness of local and regional control measures scenarios to support the formulation of control policies.
Summary of the Findings/Outcomes:	To be available upon completion of the project