

# Current Projects

## Remodeling and optimization of Laboratory Exhaust System

Laboratory exhaust system is a critical building services infrastructure that supports the operation of the laboratory and its fume hoods (FHs). The laboratory exhaust fan operates in 24/7/365, consuming a significant amount of energy. Over the years, a lot of FHs have been upgraded to low flow type with auto sash. Existing exhaust system cannot operate stably under this much reduced demand and is operating at higher speed unnecessarily.

The proposed work can bring the following benefits.

- Improved performance of laboratory exhaust system in terms of reliability, flexibility, resilience, and safety.
- Reduction in the recurring maintenance cost by substantial decrease in equipment.
- Surrender of some roof space for other usage by decommission of multiple standby exhaust fans and air ducts.
- Energy saving.
- Reduce noise nuisance to nearby residential buildings at night (11pm-7am) by shutting off selected clusters after the re-grouping.

