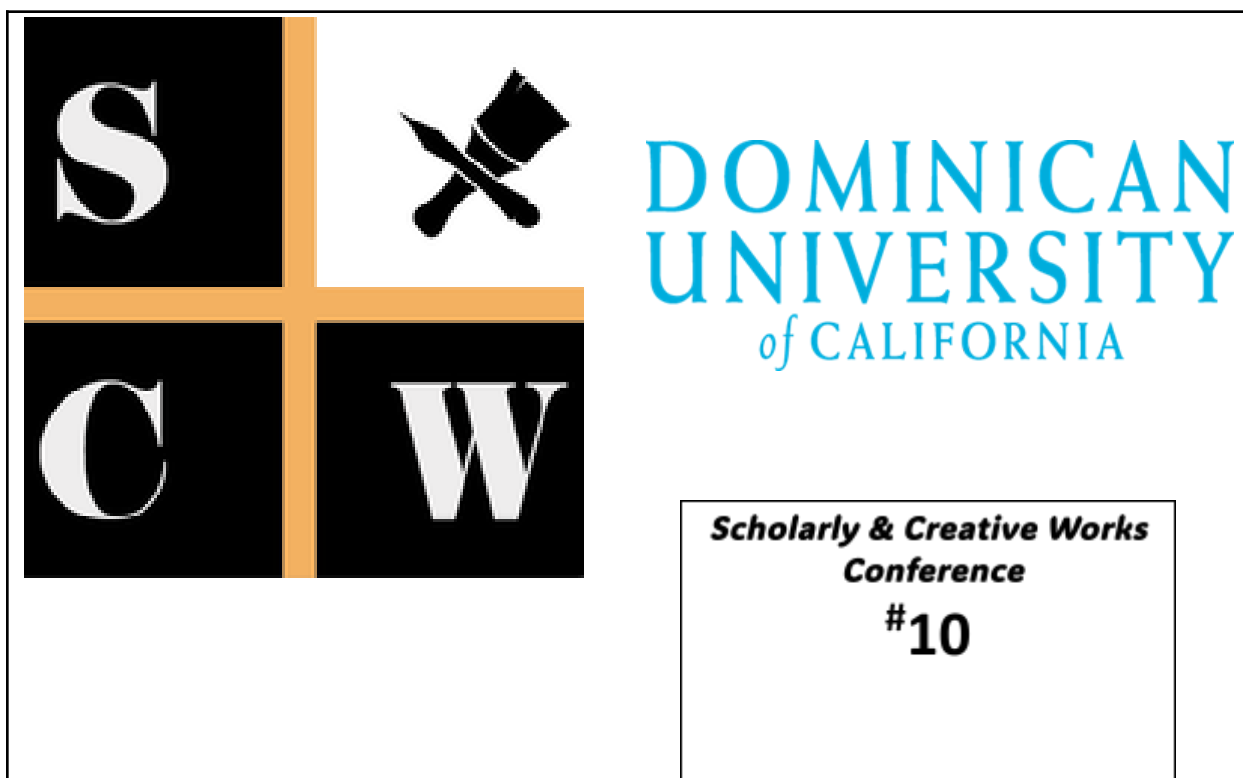




Presenter: KatieAnn Nguyen

Session & Time: Science I / 4:30 to 6:30pm

Room: Science Building

Discipline: Chemistry

Faculty Mentor: Christine Koh

Digital Portfolio URL:

<https://sites.google.com/students.dominican.edu/katieannnguyen/home?authuser=0>

Title: Formation and degradation of unstable species in aerosols

Abstract:

Aerosols are small particles suspended as solids or liquids in air. It can be produced naturally or by human activities. Aerosols are composed of stable substances but also of very reactive species such as radicals. Radicals are chemical species that have at least one unpaired electron making them highly reactive and unstable. In our research group, formation and degradation pathways of these radicals within aerosols produced from wildfires or anthropogenic activities are studied using spectroscopic tools. Physical size distribution and density is traced using light scattering techniques. Identification of chemical species, including intermediates or products, is achieved from various light absorption measurements. Current project is on studying the degradation mechanism of organic molecules, catechol, a chemical waste from the industry, and on studying the change in bacterial aerosols under various environmental stressors.