

# Secondary oxidants produced during heterogeneous processing of aromatic pollutants by gaseous ozone

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Photo by A. Eugene of Ph.D. Students Elizabeth Pillar and Ruixin Zhou.

A research study performed by the [Environmental Chemistry group](#) of the University of Kentucky reports the production of secondary oxidants such as hydroxyl (HO) and hydroperoxyl (HO<sub>2</sub>) radicals, and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) during the heterogeneous processing of aromatic pollutants by gaseous ozone.

The work shows how the heterogeneous oxidation of catechol, a model compound representing the fraction of [aromatic hydrocarbons](#) surfaces present in particulate matter, proceeds under variable relative humidity.

Remarkably, the authors identified that polyhydroxylated biphenyls and terphenyls products are produced during reactions expected to proceed under atmospheric conditions.

The article published in the *Journal of Physical Chemistry A* on October 15 ([DOI: 10.1021/acs.jpca.5b07914](https://doi.org/10.1021/acs.jpca.5b07914)) contributes to the [cutting edge research](#) on environmental chemistry and aerosol processes highlighted by the journal.

Provided by University of Kentucky

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