

## Exploring Free Radical Mechanisms in the Gas Phase and at Interfaces

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Reactions of small free radicals (e.g., OH, CH, CN, C<sub>3</sub>H<sub>3</sub>) in the gas phase and at the gas-liquid interface initiate and propagate complex chemical schemes in combustion, planetary atmospheres, and the interstellar medium. In aqueous aerosols, the confinement of the reactants near the air-water interface leads to the complex behavior of the particle reactive uptake with particle composition. In the gas phase, branching ratios between different reaction pathways are highly dependent on the reactant's structure and the gas temperature. The presentation will discuss the experimental and theoretical investigations of OH and CH reactivity with a series of hydrocarbon reactants in the gas phase and at the air-water interface. The effects of resonance stabilization and surface-bulk partitioning will be highlighted.



Date: Mon, Nov 11, 2024  
Time: 3:30-4:30 pm  
Location: Clark Hall 312