Houk-Jung **Organic Colloquium**

"Proximity-enabled Reactivity for Biological Studies"

Abstract: To genetically introduce new chemical reactivity into live systems, we engineered the genetic code to encode a new class of unnatural amino acids (Uaas), the latent bioreactive Uaas. These Uaas, after being incorporated into proteins, specifically react with target natural amino acid residues via proximity-enabled reactivity, enabling the selective formation of new covalent linkages within and between proteins both *in vitro* and in live systems. These diverse reactivities, inaccessible to natural proteins, open doors to novel protein engineering, biological research, and therapeutic applications. I will present specific examples of using the proximity-enabled reactivity to probe ligand-receptor binding, to identify elusive protein-protein interactions, and to develop covalent protein drugs for cancer immunotherapy.

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UCLA College | Physical Sciences Chemistry & Biochemistry

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12:00 PM | ZOOM

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