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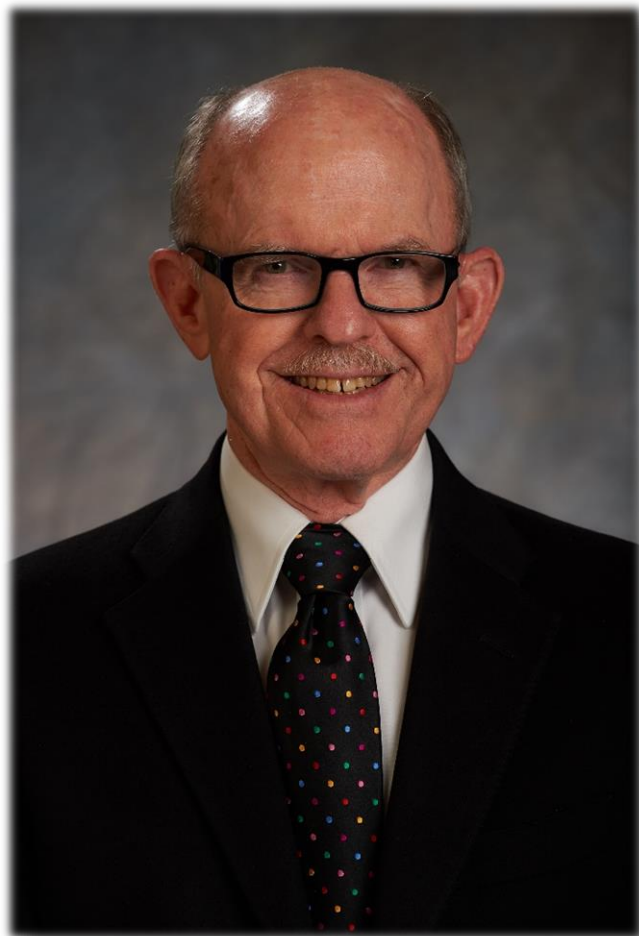
PROFESSOR KENDALL N. HOUK

Department of Chemistry and Biochemistry
University of California, Los Angeles

“PERICYCLIC REACTIONS: THEORY, MECHANISMS, DYNAMICS, AND ROLE IN BIOLOGY”

Friday, February 18, 2022 – 11:30 a.m.

**Life Sciences Center II Room 130
197 University Ave., Newark, NJ**



Biographical Sketch: K. N. Houk received his A.B., M.S., and Ph.D. degrees at Harvard, working with R. B. Woodward on experimental tests of orbital symmetry selection rules. In 1968, he joined the faculty at Louisiana State University, moved to the University of Pittsburgh in 1980, and to UCLA in 1986. From 1988-1990, he was Director of the Chemistry Division of the National Science Foundation. He was Chairman of the UCLA Department of Chemistry and Biochemistry from 1991-1994. He was the Saul Winstein Chair in Organic Chemistry from 2009-2021 and is now Distinguished Research Professor.

Abstract: Pericyclic reactions were defined by Woodward and Hoffmann in the 1960s. Pericyclic reactions are concerted processes involving a cyclic reorganization of bonding. I will describe computational studies focusing on four recent discoveries: 1) defining mechanisms of these reactions in terms of dynamics of bonding changes; 2) finding ambimodal polypericyclic transition states that give more than one product; 3) explaining orbital symmetry forbidden reactions that nevertheless occur readily; and 4) identifying the role of pericyclic reactions in biosynthesis, catalyzed by a class of enzymes that we have named pericyclases.



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HOST

STACEY BRENNER-MOYER

All Those Interested Are

Welcome to Attend!

Directions:

<https://www.newark.rutgers.edu/MAPS>

For parking e-mail:

syb26@newark.rutgers.edu