



ORGANIC CHEMISTRY SEMINAR

Energizing the Next Wave of OLED Growth through Chemistry and Scientific Leadership



CHARLES J. STANTON Ph.D

ADESIS, Inc.

WEDNESDAY

May 6th, 2026 @4:00

219 BRL

Phosphorescent organic light-emitting diode (PHOLED) performance is fundamentally governed by molecular design choices that balance emission color, efficiency, device lifetime, and manufacturability. This talk highlights how ligand engineering and electronic structure control in cyclometalated organometallic emitters enable systematic color tuning and stability optimization, while revealing practical trade-offs in thermal behavior, solubility, and processing. Through a selected case study, the evolution from simple tris-cyclometalated complexes to advanced heteroleptic architectures is used to illustrate structure–property relationships (SPR) critical to commercial OLED success. The presentation also emphasizes that sustained innovation in advanced materials industries depends on strong scientific leadership, aligning multidisciplinary teams, integrating discovery with device and manufacturing realities, and cultivating a culture that translates molecular insight into long-term technological impact. Charles John Stanton III, Ph.D., is a Senior R&D Manager of Chemistry Discovery Research at Adesis, a role he was promoted to in 2026. He joined Adesis in 2016 and brings more than 20 years of experience in the scientific field, spanning both academic and industrial research environments. An accomplished and innovative people leader, Charles is recognized for building and mentoring high-performing teams dedicated to addressing complex scientific challenges. His research focuses on the design and synthesis of novel organic and organometallic materials for use in next-generation OLED technologies.

A proud Delawarean since 2016, Charles is passionate about mentoring and developing the next generation of scientific leaders in the state. In 2024, he was selected to participate in the Leadership Delaware Inc. (LDI) program, a prestigious initiative designed to cultivate visionary leaders across community, nonprofit, political, and corporate sectors. During his time in LDI, Charles was honored with the 2024 Strine Award by his cohort, a testament to his commitment to making a meaningful impact in Delaware. Charles earned his Ph.D. in organic/organometallic chemistry from the University of Georgia in 2016, where his research focused on developing novel catalysts for CO₂ conversion. His work led to the discovery of several promising and cost-effective CO₂ reduction catalysts. He has authored numerous peer-reviewed articles and holds over 20 patents. Before joining Adesis, Charles was a successful discovery medicinal chemist at Wyeth Research in Princeton, NJ. Charles currently serves on the Board of Directors for Junior Achievement of Delaware and the Advancement Committee for the Charter School of Wilmington. Charles lives in North Wilmington with his wife and three children. He enjoys attending his kids' sporting events, playing pickleball, and expanding his extensive vinyl collection.

