



第268回 OPERA研究交流セミナー

第259回 ISIT有機光エレクトロニクス研究特別室セミナー

第326回 未来化学創造センターセミナー



日時: 2025年10月23日(木) 11:00～

場所: ISI棟3階 セミナー室

A Glowing Legacy: How Quinine Inspires Single-Chromophore Emitters with Delayed Emission

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In this seminar, I will present three interconnected research threads from my group exploring the photophysical properties of quinine and its analogues. First, we investigate how different counterions in quinine salts influence the formation of excimers and dimers at high concentrations and reveal fundamental principles about molecular aggregation and emission. Second, we examine just how 'close' molecular fragments need to be to activate through-space charge transfer (TSCT) in quinine analogues, and how we can tune this interaction to generate delayed emission from single-chromophore systems. Finally, we explore whether these advantageous properties can be retained when we move beyond the quinoline scaffold entirely, opening pathways to new emitter designs. This single-chromophore approach offers a significant advantage: with only one triplet state to manage, we can achieve better control over energy loss mechanisms, which is a critical step toward more efficient light-emitting materials and more sensitive molecular probes.

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