Abstract Submitted
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**Photophysical Study of Novel Perylene Analogues for Biophysical Applications**[1] JORGE PALOS-CHÁVEZ, MARK PENICK, GEORGE NEGRETE, LORENZO BRANCALEON — Perylene and perylene derivatives have been shown to be useful in a variety of photoinitiated applications, such as molecular dyes, organic solar cells, etc. Recently we started the characterization of novel 3,9-perylene analogues which could potentially lead to the synthesis of novel molecules with improved ability to separate charges. We have characterized the basic photophysical properties of these molecules, and we are currently investigating the photochemistry that leads to photoproducts in chlorinated compounds. Spectroscopic measurements show the substantial changes in photophysical parameters consistent with the conversion of the original compounds into photoproducts. SEM and AFM imaging show that these photoproducts form ordered particles. Mass spectrometry studies have confirmed the presence of these photoproducts as well. Additional studies are underway concerning the use of these novel perylene analogues in binding to biological structures such as proteins. It is hoped that these compounds will prove useful for biophysical applications, specifically in studying the manipulation of protein conformation via physical methods.

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