
Special Seminar in Energy Research
at the
University of Pennsylvania

*Interface Chemistry for Organic
Electronics and Opto-electronics*

Abstract

Organic semiconductors have attracted interest for electronic applications due to their potential for use in low-cost, large-area, flexible electronic devices. Here we will report on recent developments pertaining to surface modifiers and dopants that could impact the charge injection/collection processes in organic light emitting diodes, organic field effect transistors, and organic photovoltaic devices. In particular, we will examine how phosphonic acids assemble on ITO substrates, the impact of the surface dipole on the work function of the ITO and electron transfer kinetics across surface modifiers. We will also discuss the development of metallocenes-based dimers as n-dopants and very briefly described metal dithiolene complexes as p-dopants for organic semiconductors and their impact of device performance.



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1:00 PM