Electrochemical Studies of Fc-labeled Peptide Monolayers on Gold - H.-B. Kraatz (University of Saskatchewan)

Electrochemistry has been used extensively to investigate the kinetics of electron transfer (ET) through selfassembled monolayers (SAMs) of molecules connected to a gold surface through a gold-thiolate linkage.^[1] These studies have yielded а range of information regarding the distance dependence and the influence of solvation on ET in systems as varied as alkanethiols and thiol-terminated DNA. In an effort to study the ET through peptides and to investigate the influence of secondary peptide structure on the ET kinetics, we have recently developed synthetic strategy to a class of peptide conjugates carrying a ferrocenoyl (Fc) electrophore at the N-terminus electrophore.^[2] Here we report the synthesis of a series of Fc-oligoproline cystamines [Fc-Pron-CSA]2 and other Fc-oligopeptide cystamine, and the formation and characterization of stable Fc-peptide monolayers on gold.

The synthetic strategy employed for the synthesis of the Fc-oligopeptide cystamines and for the formation of Fcpeptide-cystamine monolayers on gold is summarized in Figure 1. The results of electrochemical studies of these monolayers will be discussed.

Figure 1



References

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