Electrochemical oxidation of amides of type Ph$_2$CHCONHAr

Tatiana Golub and James Y. Becker*

Department of Chemistry, Ben-Gurion University of the Negev, Beer Sheva 84105, Israel

Supplementary information includes:

* All products described in this manuscript, except for complex 10, are simple and their spectral data are straightforward and match the known literature. The 1:1 complex between aziridinone 3 (thermally unstable in its pure form) and 2,4-dinitroaniline has been fully characterized and its spectral data (IR, UV-Vis, $^1$H NMR, $^{13}$C NMR, GC-MS and HR-ESI) are attached.

* Three specimens of CVs.

* A correlation between oxidation potentials with sigma-Hammett constants.
$M + H$

HR ESI 10 (1:1 complex of $\pi^2 + 2\pi$ dimers)
GC-MS of 10

(affords two components)
Ph₂CHCNH-O-Br

1mM in CH₃CN-LiClO₄ (0.1M)
Bias voltage dependence of the polymerization of 4-[1-(2,4-dimethoxybenzyl)-2-phenylethyl]-1,2,3,4-tetrahydroisoquinoline (Ph₂CH·CH·NH·) into poly(4-[1-(2,4-dimethoxybenzyl)-2-phenylethyl]-1,2,3,4-tetrahydroisoquinoline)

1 mM in CH₃CN-LiClO₄ (0.1 M)

Current (A)

Potential (V)

Cycled #1
- (4V) dimethoxy ox, Cycle #1
- (4V) diphenylmethoxy 1, Cycle #1

20 mV/s

100

50
Ph₂C(CH₂CNH)O⁻Me

1 mM in CH₃CN-LiClO₄ (0.1 M)
Oxidation potential, V
(vs. Ag/AgCl)

Hammett $\sigma$ constant

Y = 0.5659x + 1.7645
R^2 = 0.9505