

# Organic electrosynthesis using toluates as simple and versatile radical precursors.

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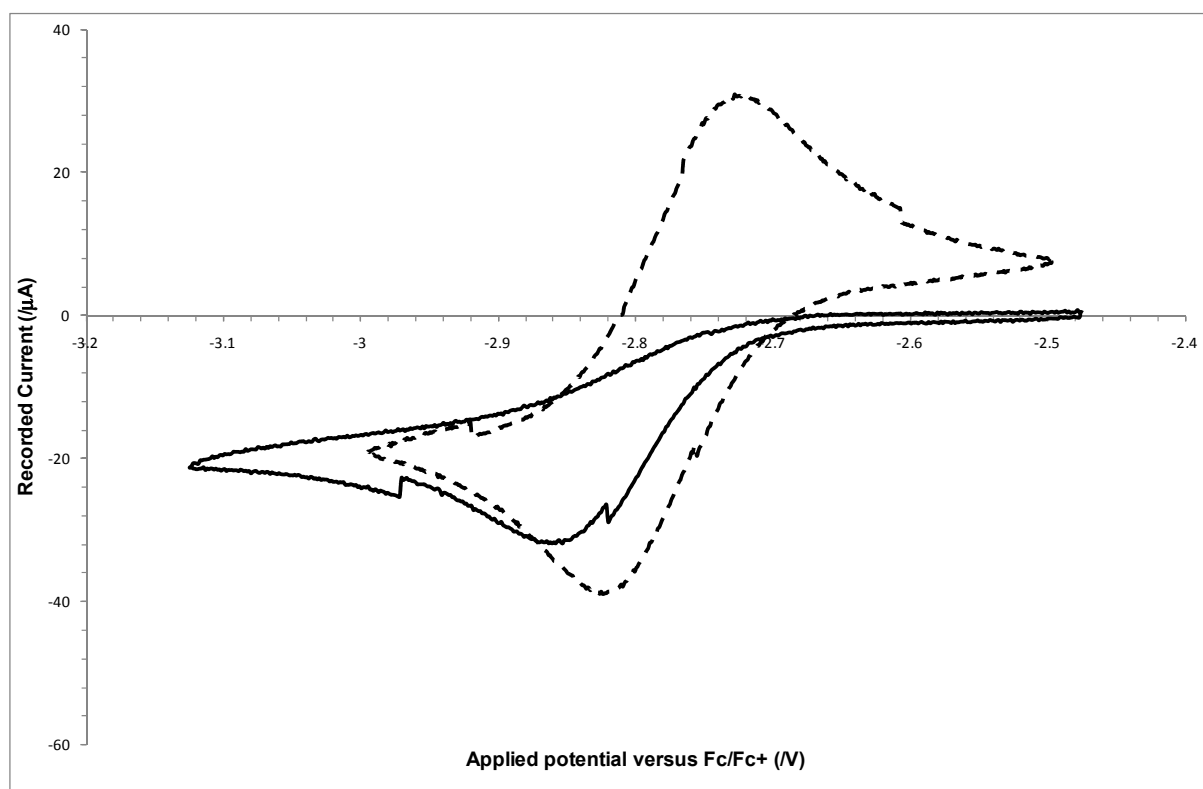
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### **General Experimental Section.**

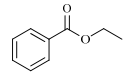
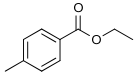
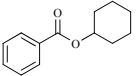
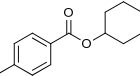
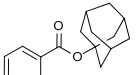
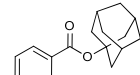
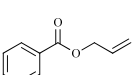
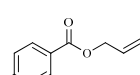
- Cyclic voltammograms were recorded on a potentiostat PAR model 283 using PowerSuite software. DigitalSimulation were performed using DigiElch software.
- DMF was purchased from Acros and used directly as received without any further purification. Acetonitrile was distilled over  $\text{CaH}_2$ .
- Tetrabutylammonium tetrafluoroborate was prepared by treating an aqueous solution of tetrabutylammonium bromide with a stoichiometric amount of  $\text{HBF}_4$ . The resulting precipitate was filtered, washed with distilled water until neutral, washed with ether and then dried at  $80^\circ\text{C}$  under vacuum during one night.

### **Ethyl toluate and allyl toluate's voltammogram.**



Cyclic voltammogram of ethyl toluate (doted line) ( $10^{-3}$  M) and allyl toluate (thick line) ( $10^{-3}$  M) in DMF containing 0.1 M  $\text{NBu}_4\text{BF}_4$ . Glassy carbon working electrode/platinum foil counter electrode/reference electrode : Pt wire/sweeping rate 150 mV/s

**Rate of decomposition of aromatic esters radical anions.**

Entry	Aromatic ester	$k / s^{-1}$ in $CH_3CN$	Aromatic ester	$k / s^{-1}$ in $CH_3CN$	$k / s^{-1}$ in DMF
1		0.012		0.013	0.091
2		0.025		0.048	0.097
3		0.32		0.81	0.20
4		Too fast		Too fast	

All data were measured with  $10^{-3}$  M in analyte.