found not only in the existence of uranyl fluorescence in the system studied and the agreement of the spectral regions for the emission of fluorescence of oxidized uranocene solutions and the chemiluminescence but also in the identical effect of the concentration of $H_2SO_4$ and HCl on the total chemiluminescence in the autooxidation of uranocenes and the reported chemiluminescence of uranyl observed in aqueous solutions in the reaction of $U^{4+}$ and $O_3$ [3].

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# ELECTROCHEMICALLY INDUCED FAVORSKII REARRANGEMENT.

# THE CONVERSION OF BENZYL KETONES TO ESTERS OF 3-PHENYLPROPIONIC ACIDS

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The Favorskii rearrangement is a convenient method for the conversion of α-haloketones by the action of bases to carboxylic acids with the same number of carbon atoms [1].

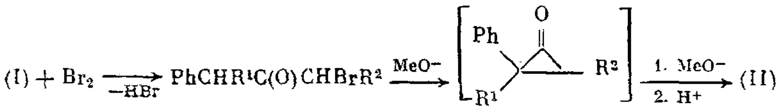
In previous work [2], we reported an electrochemical variant of the haloform rearrangement involving the conversion of methyl ketones into esters of carboxylic acids with the loss of one carbon atom. Under analogous conditions, benzyl ketones undergo a conversion, which is similar to the Favorskii rearrangement. The electrochemical oxidation of $PhCHR^1C(O)CH_2R^2$ (Ia)-(Ic), where $R^1 = R^2 = H$ (a), $R^1 = H$, $R^2 = Me$ (b), and $R^1 = Me$, $R^2 = H$ (c), in methanol in a diaphragmless cell in the presence of 1.5 equivalents of NaBr gives $PhCHR^1CHR^2CO_2Me$ (IIa)-(IIc) in 50-60% yield.

The proposed reaction mechanism is as follows:

$$\text{on the anode } 2Br^- - 2e \rightarrow Br_2$$

$$\text{on the cathode } 2MeOH + 2e \rightarrow 2MeO^- + H_2$$

in solution



A total of 7.5 F current per mole (I) at a current density of 220 $mA/cm^2$ was passed through a diaphragmless electrolyzer equipped with a platinum anode and brass cathode containing 20 mmoles (I), 30 mmoles NaBr, and 20 ml methanol at 30°C. The structures of (IIa)-(IIc) were supported by PMR spectral data. Product (IIa) was obtained in 52% yield, bp 110-112°C (4 mm). Product (IIb) was obtained in 54% yield, bp 124-126°C (15 mm). Product (IIc) was obtained in 60% yield, bp 122-124°C (14 mm).

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