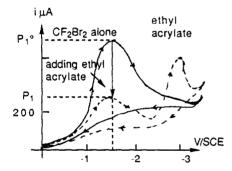
EVIDENCE FOR A TWO STEPS ELECTRON TRANSFER IN THE ELECTROCHEMICAL REDUCTION OF DIBROMODIFLUOROMETHANE AT CARBON

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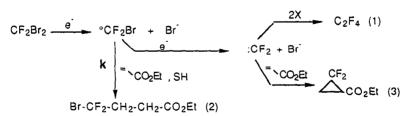
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In the presence of ethyl acrylate the height of the peak reduction of CF_2Br_2 (P_1°) is lowered (P_1). The ratio P_1/P_1° can be reduced to 1/2, depending with concentration of the olefin and speed of the cathodic scan.

From these data it is possible to derive the kinetic parameter of the reaction of the intermediate radical °CF₂Br on the olefin, yielding BrCF₂CH₂CH₂CO₂Et .

Reduction of CF₂Br₂ in the presence of ethyl acrylate.



Depending with the potential choosen for preparative scale electrolysis, the three compounds (1), (2), (3) are obtained.

These experiments outline the occurrence of an initial monoelectronic electrochemical transfer, during the reduction of CF₂Br₂, through the trapping of the intermediate radical °CF₂Br in the presence of an activated olefin.