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CORRECTION

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Correction: Suppressing carboxylate nucleophilicity with inorganic salts enables selective electrocarboxylation without sacrificial anodes

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Correction for 'Suppressing carboxylate nucleophilicity with inorganic salts enables selective electrocarboxylation without sacrificial anodes' by Nathan Corbin et al., Chem. Sci., 2021, DOI: 10.1039/D1SC02413B.

We regret that there was a minor error in the structure of the benzyl chloride in Scheme 2, Fig. 2 and the ESI. The structure of the benzyl chloride should be 4-methyl benzyl chloride but was instead given as 3-methyl benzyl. The correct figure and scheme are shown below, and the ESI has been updated.

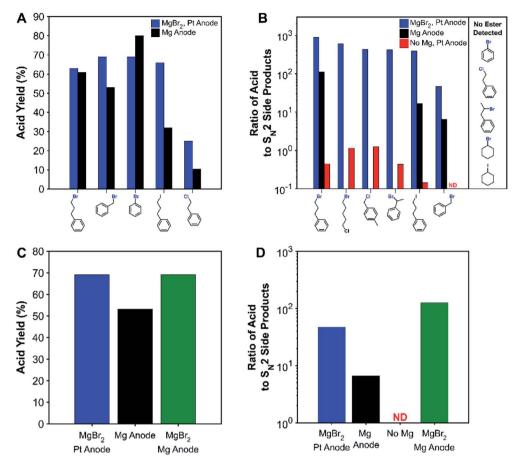


Fig. 2 (A) Comparison of acid yields for non-sacrificial-anode and sacrificial-anode carboxylation of various substrates. (B) Ratio of carboxylic acid to nucleophilic side products (ester + carbonate + alcohol) for various systems and substrates. Effect of adding MgBr₂ to the sacrificial-anode system on the (C) acid yield and (D) ratio of acid to S_N2 side products for benzyl bromide. Acid yields are tabulated in Table S6.† ND: acid not detected (acid-to- S_N2 ratio <0.1).

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Electrolyte

Scheme 2 Substrate scope for the sacrificial-anode-free electrochemical carboxylation of organic halides. ^aStandard reaction conditions: 100 mM electrolyte, 100 mM substrate, 100 mM MgBr₂, silver cathode, platinum anode, 20 sccm CO₂, 2.2 mL DMF, -20 mA cm⁻² for 3.5 h. TBA-Br was used for chlorinated substrates because bromide oxidizes more readily than chloride, and only a small amount of chloride was replaced by bromide (<1% for the alkyl chloride, \sim 4% for the benzylic chloride). Yields are referenced to the initial amount of substrate and were calculated from ¹H NMR spectroscopy using either 1,3,5-trimethoxybenzene or ethylene carbonate as internal standards. ^b-15 mA cm⁻² instead of -20 mA cm⁻². ^c150 mM MgBr₂ instead of 100 mM MgBr₂.

67%b (18a)

52% (19a)

8% (18a)

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

58%^b (19a)