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(54) **BINARY ALLOYS AND OXIDES THEREOF FOR ELECTROCATALYTIC REDUCTION OF CARBON DIOXIDE**

(57) In one aspect, systems for providing oxygenated organic products are described. In some embodiments, a system comprises an electrochemical cell including an electrolyte solution comprising CO₂, and an electrode comprising an alloy and/or mixture of metal oxides. The electrode comprises an electrocatalytic site for reduction of CO₂ to CO, wherein CO is incorporated into the oxygenated organic products. In some embodiments, the alloy comprises at least one of a transition metal and post-transition metal. Moreover, metal oxides of the electrode can comprise at least one of a transition metal oxide and post-transition metal oxide.

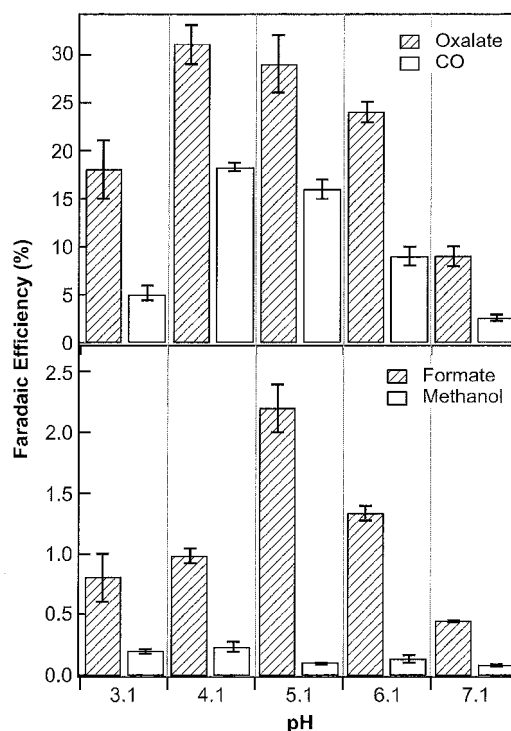


FIG. 7



EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 21 January 2025	Examiner Ritter, Thomas
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



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Application Number

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X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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