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(54) **METHOD OF FORMING A CATALYTICALLY ACTIVE MATERIAL FOR ELECTROCHEMICAL ENERGY CONVERSION**

(57) The present invention relates to a method of forming a catalytically active material on a two- or three-dimensional current carrier by a step of contacting the current carrier comprising a transition metal with gaseous boron halide. It is also concerned with an electrode comprising the catalytically active material on a two- or three-dimensional current carrier and an electrolyzer comprising the electrode. Moreover, the invention relates to a method of catalysis using the catalytically active material on the current carrier.

Fig. 3

