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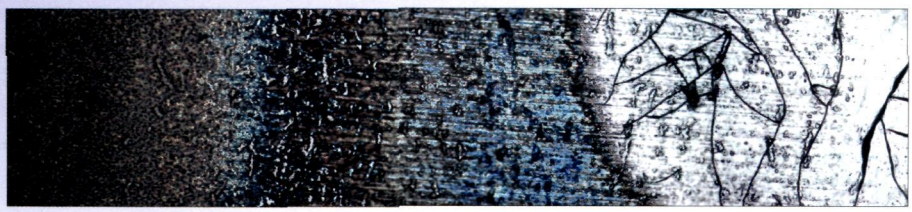

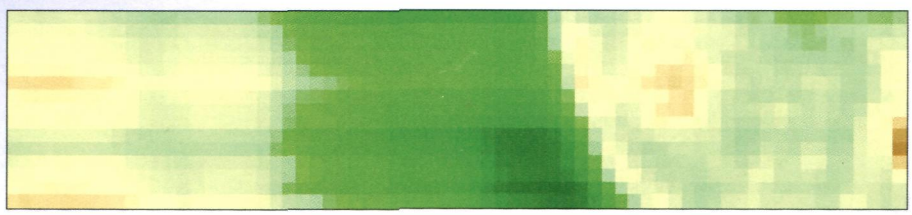

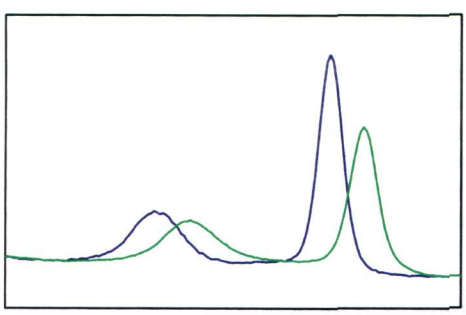

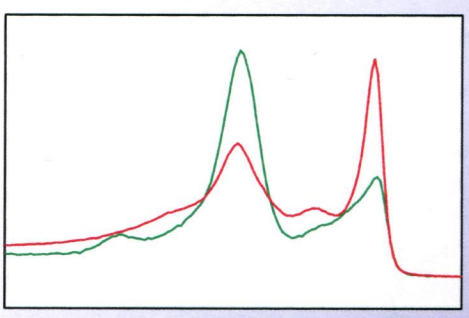

TiO_2 Doping Enhances the Catalytic Activity of RuO_2 through Charge Transfer (see page 5A)

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ON THE COVER: TiO_2 doping enhances the catalytic activity of RuO_2 through charge transfer. The optical image displays DSA-type electrode where pure RuO_2 (right) and TiO_2-doped RuO_2 (left) coatings are separated by TiO_2. The scanning electrochemical microscopy shows the UME tip response from the OER activity on the substrate electrode, indicating a higher electrochemical activity for the TiO_2-doped RuO_2 even though the Ru content in the mixed $(Ru_{1-x}:Ti_x)O_2$ coating is considerably lower compared with pure RuO_2 coating. X-ray photoelectron spectroscopy suggests that the electrocatalytic enhancement for OER on the mixed $(Ru_{1-x}:Ti_x)O_2$ coating is promoted through a charge transfer from the RuO_2 to the TiO_2, which provides new and more reactive sites designated as activated $RuO_2^{\delta+}$. See page 6126.

Articles

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