

# Correction to “Photocatalyzed Reduction of Bicarbonate to Formate: Effect of ZnS Crystal Structure and Positive Hole Scavenger”

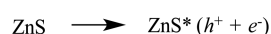
Daniel P. Leonard, Hanqing Pan, and Michael D. Heagy\*

ACS Appl. Mater. Interfaces 2015, 7 (44), 24543–24549. DOI: 10.1021/acsami.5b06054

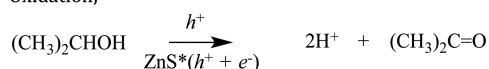
We wish to point out that the excited state oxidation state of Zn in Scheme 1 of the proposed mechanism was

## Scheme 1. Proposed Mechanism for the Conversion of Bicarbonate to Formate

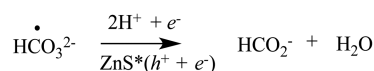
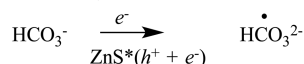
Illumination;



Oxidation;



Reduction;



erroneously assigned as (IV), i.e.,  $(\text{Zn}^{4+}\text{-S}^{2-})$ . A revised scheme and two corrected sentences have been included for consideration as a correction to this mechanism that more closely resembles the excited state of ZnO in reference 42 of the article. This error does not affect the conclusions of the article.

Corrections for the concluding paragraph in the Results and Discussion section should read:

More recently, a similar complex was reported for zinc oxide in the form of  $\text{ZnO}^*(h^+ + e^-)$  upon UV excitation with graphene oxide.<sup>42</sup> On the basis of the chemical similarities between ZnO and ZnS, as well as our control experiments involving bicarbonate and  $\text{CO}_2$ -saturated solutions, we propose the following redox mechanism (Scheme 1) that invokes  $\text{ZnS}^*(h^+ + e^-)$  as the photoexcited semiconductor and takes bicarbonate into account as the substrate undergoing reduction.

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