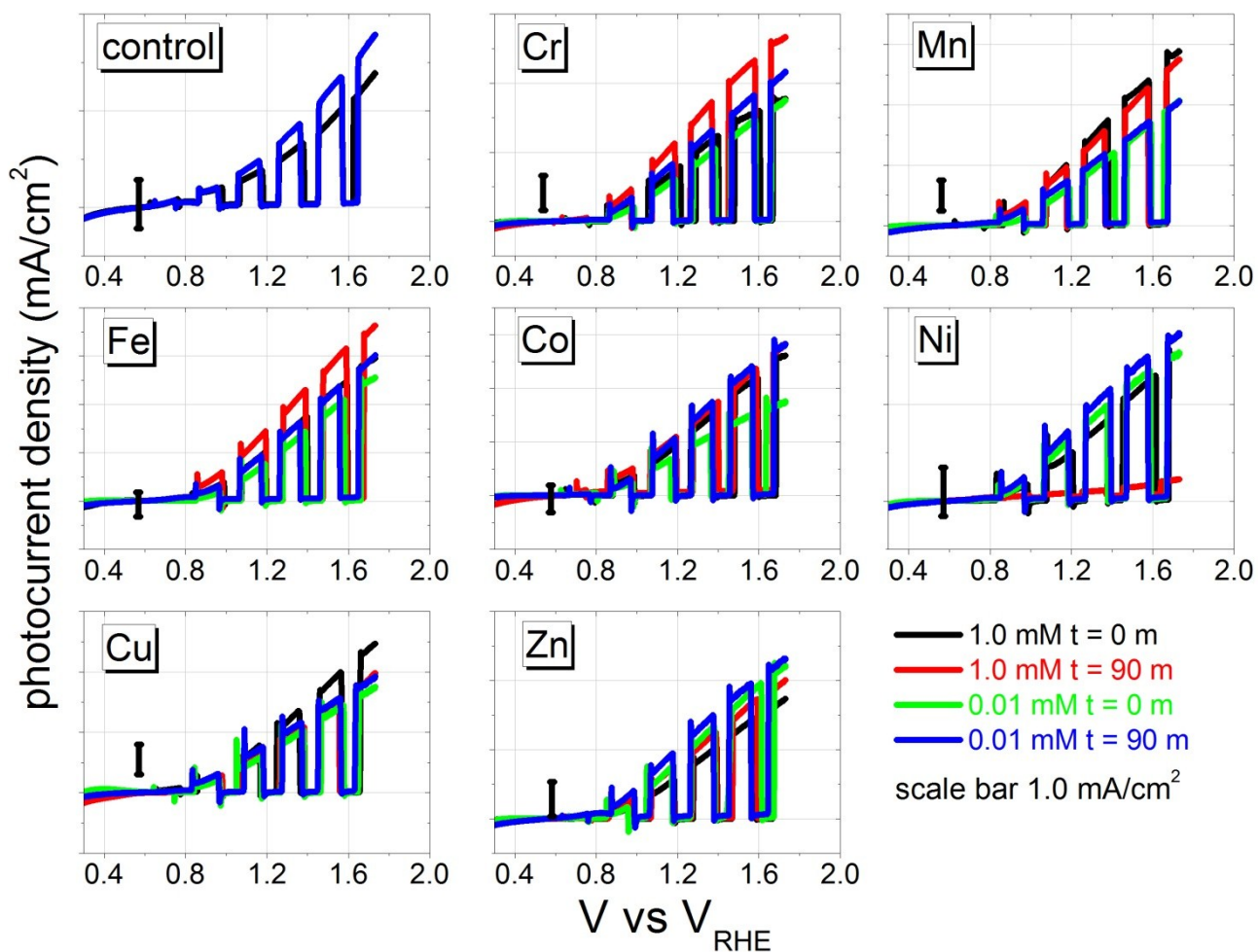


# Supporting Information

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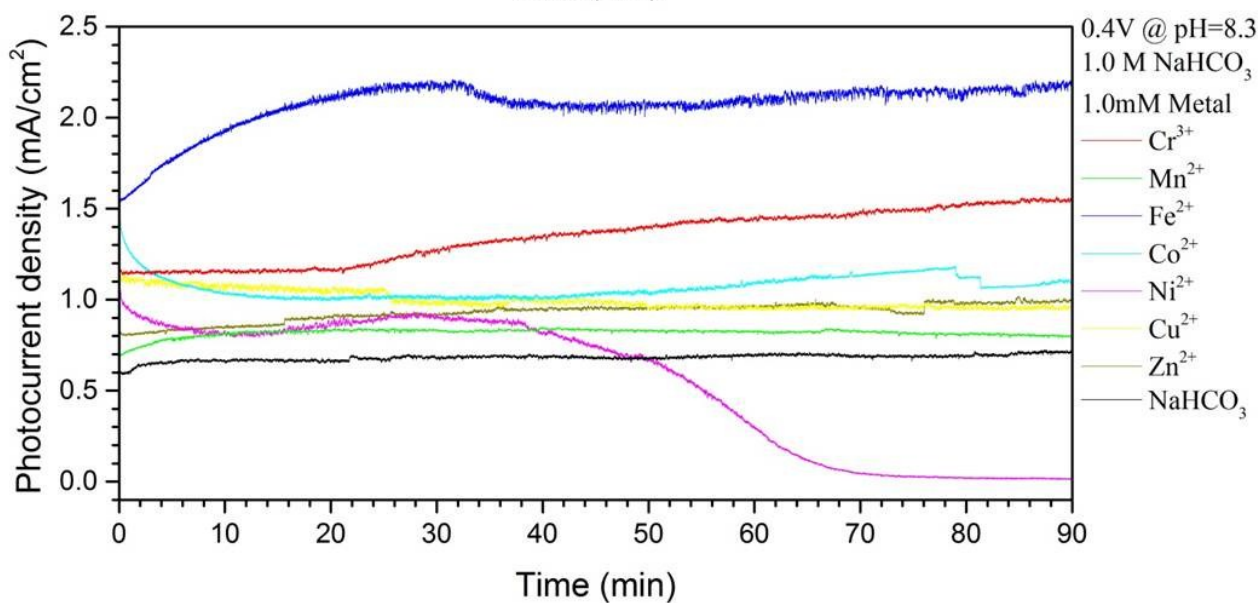
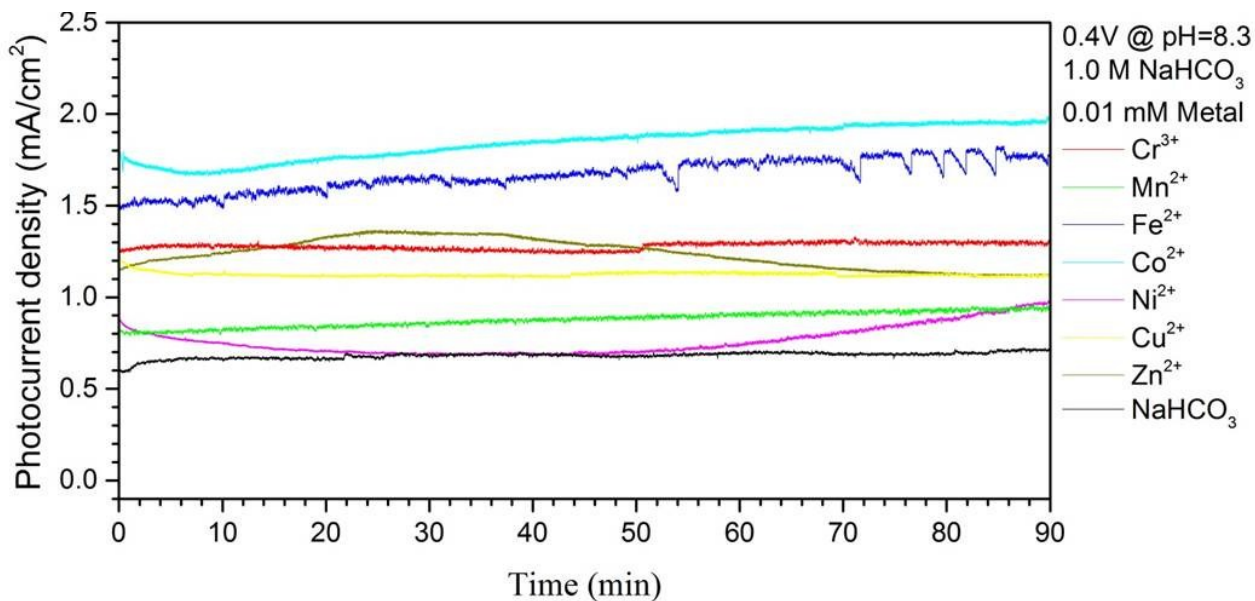


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4 Fig. S1. Representative J-V curves of hematite electrodes in different metal ion solutions

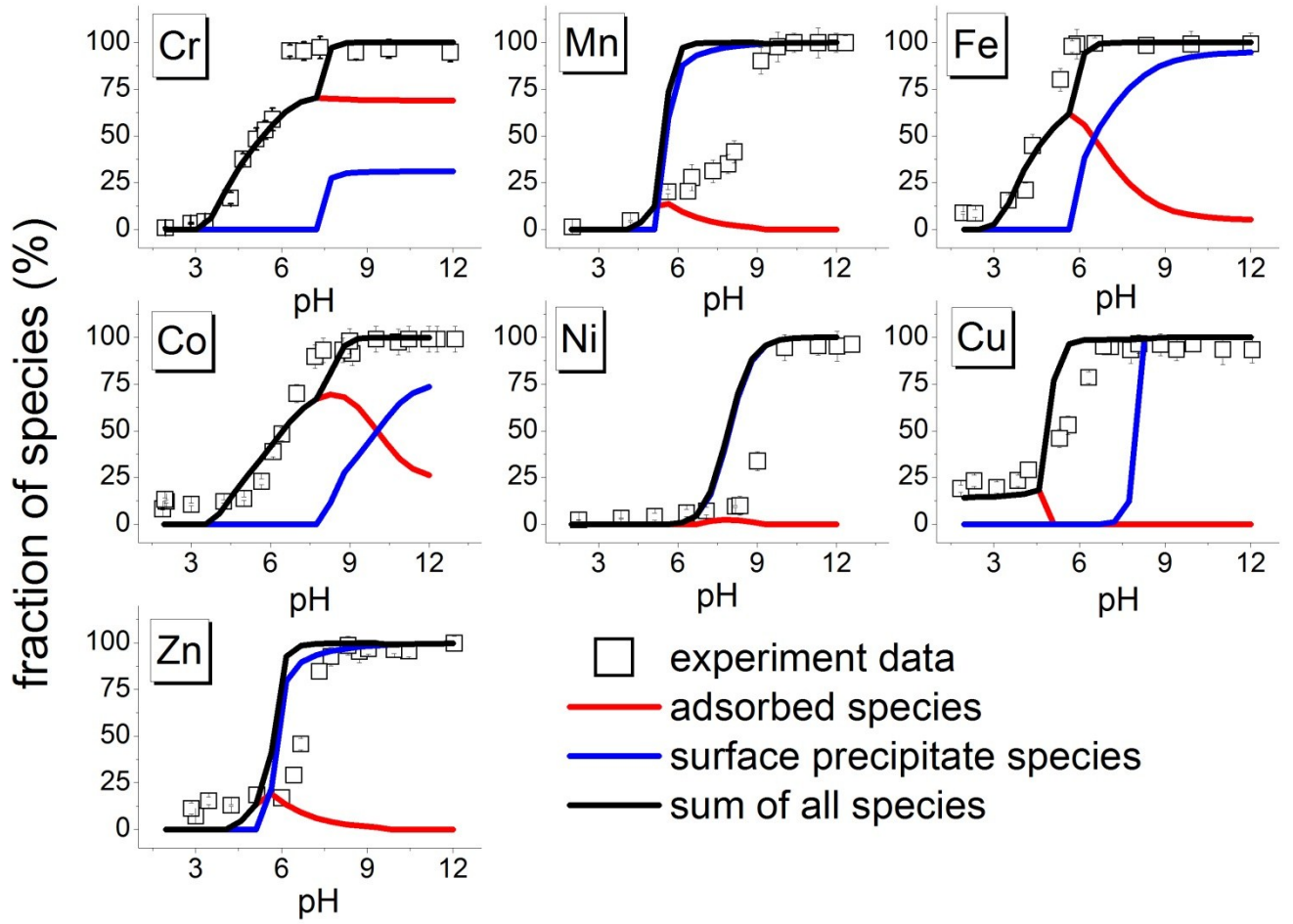
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7  
8 Fig. S2. Representative J-t curves of hematite electrodes with 0.4 V<sub>SCE</sub> applied bias in different  
9 metal ion solutions.

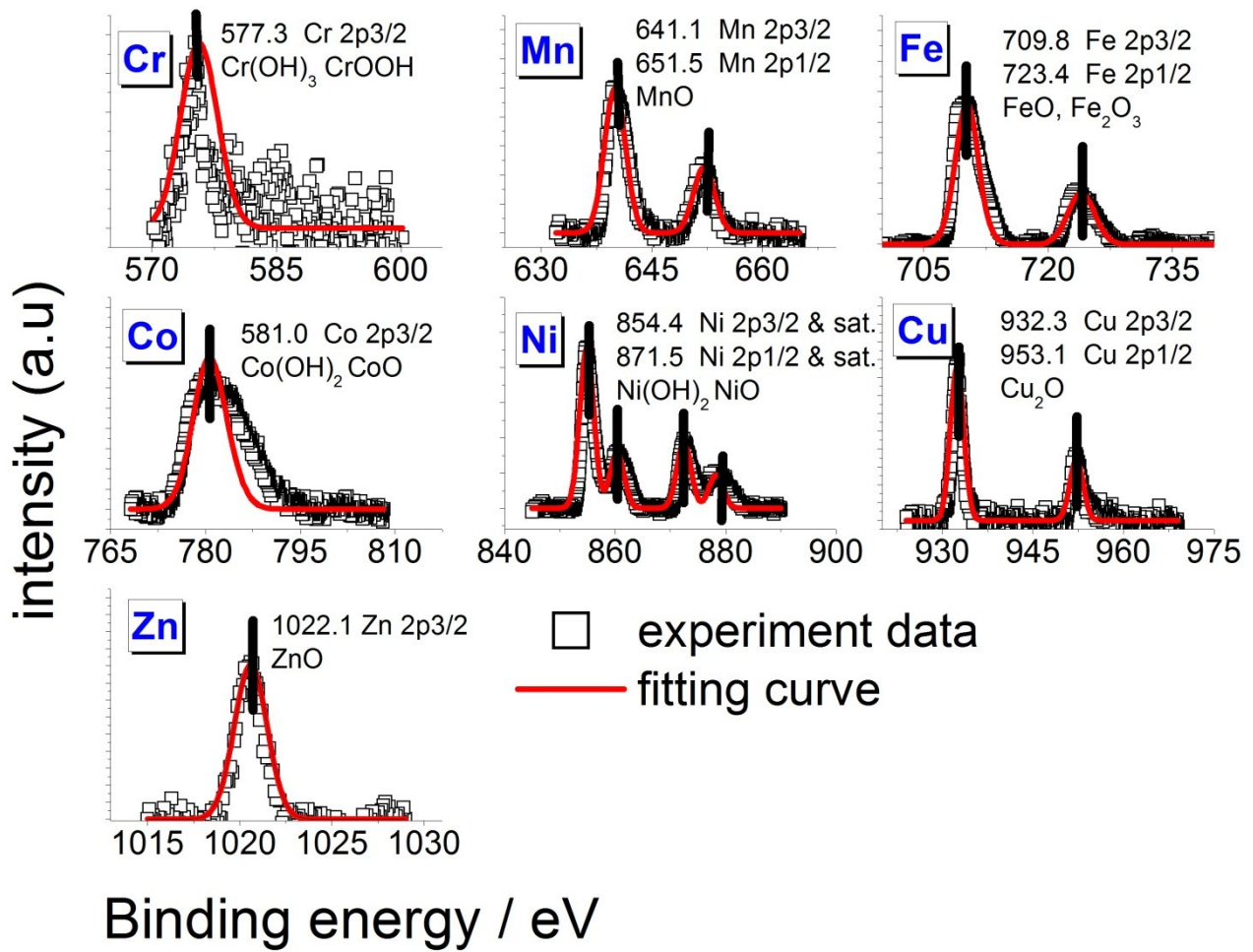
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12 Fig. S3 Representative simulation of the distribution of metal ions on the surface of hematite.

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14  
 15 Fig. S4 Representative XPS spectra on the surface of hematite after 90 min of illumination.  
 16  
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