

Accepted Manuscript

Title: Using Brønsted-Evans-Polanyi relations to predict electrode potential-dependent activation energies

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PII: S0920-5861(18)30312-2
DOI: <https://doi.org/10.1016/j.cattod.2018.03.048>
Reference: CATTOD 11331

To appear in: *Catalysis Today*

Received date: 23-12-2017
Revised date: 26-2-2018
Accepted date: 25-3-2018

Please cite this article as: Akhade SA, Nidzyn RM, Rostamikia G, Janik MJ, Using Brønsted-Evans-Polanyi relations to predict electrode potential-dependent activation energies, *Catalysis Today* (2018), <https://doi.org/10.1016/j.cattod.2018.03.048>

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Using Brønsted-Evans-Polanyi relations to predict electrode potential-dependent activation energies

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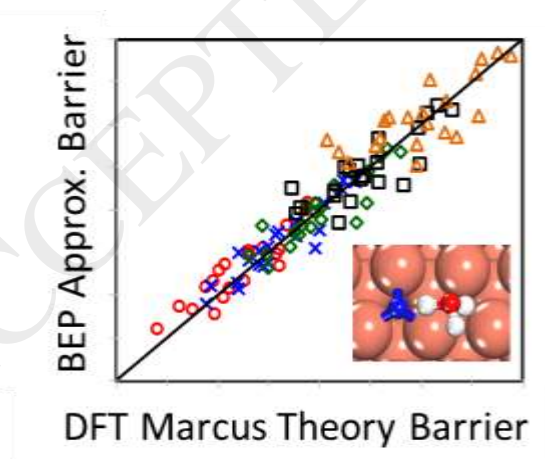
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HIGHLIGHTS

- Heyrovsky-like mechanisms are preferred for O-H and N-H formation
- Tafel-like mechanisms are generally preferred for C-H bond formation
- BEP relationships hold reasonably well for X-H (X=O, N, C) bond formations at constant voltage
- BEP relationships differ among O-H, N-H, and C-H formations

GRAPHICAL ABSTRACT



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