

Supplementary Information

Formation of Active Sites in Copper-Exchanged Zeolites for the Direct Methane-to-Methanol Conversion

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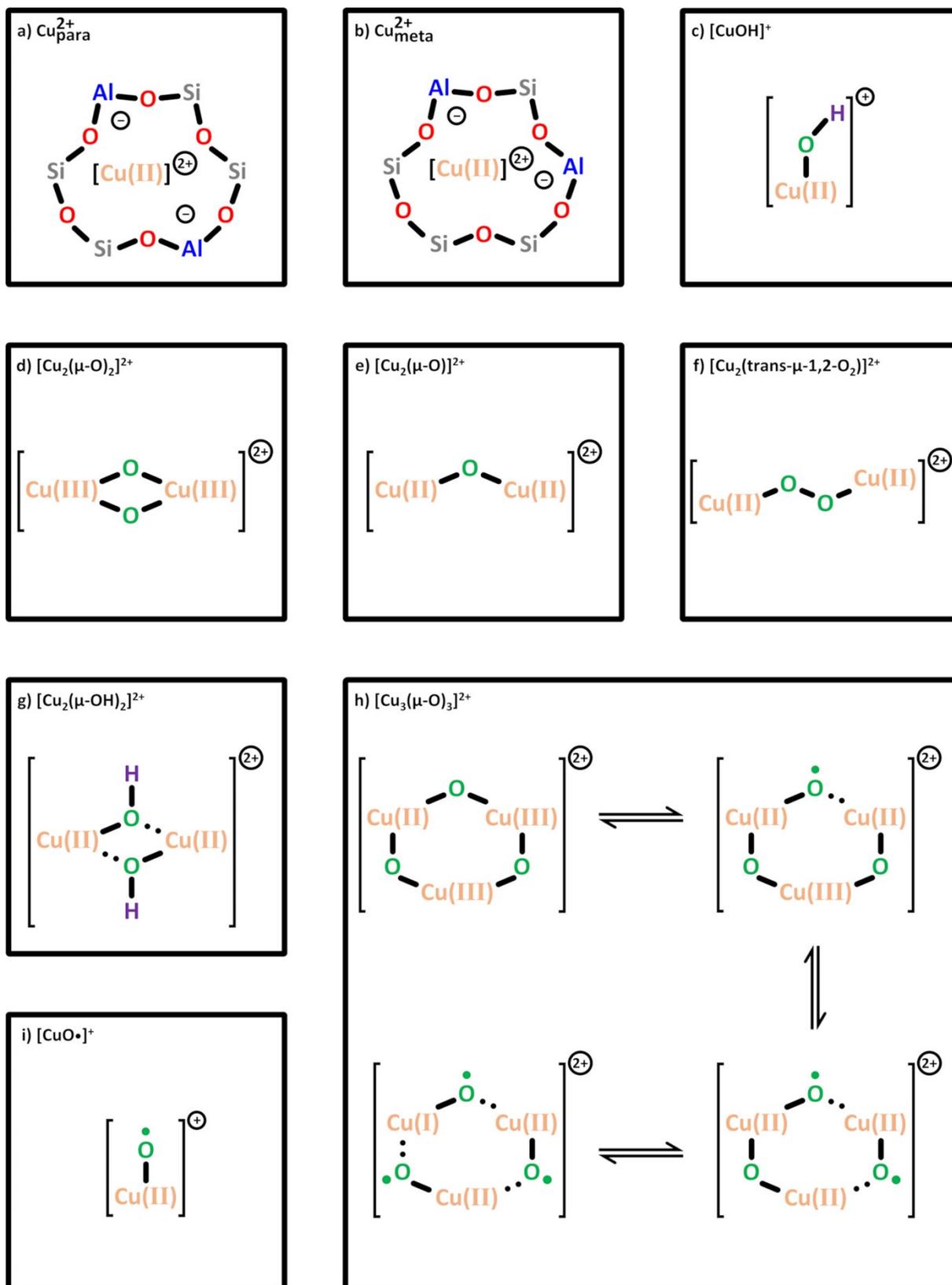
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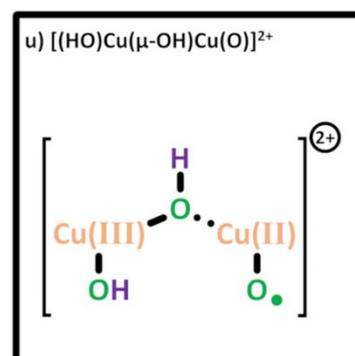
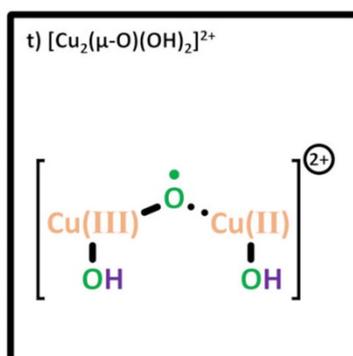
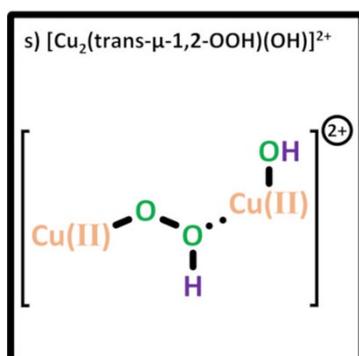
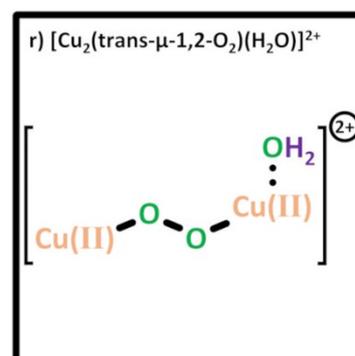
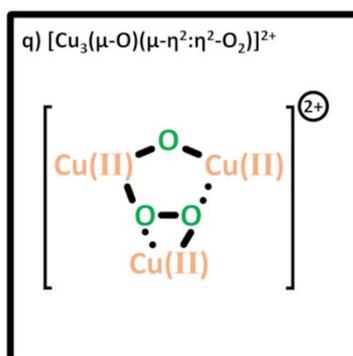
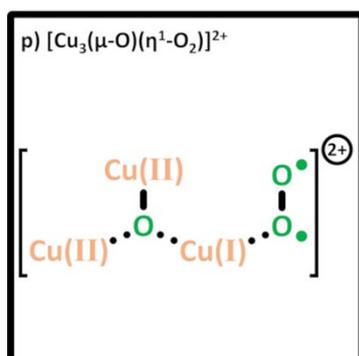
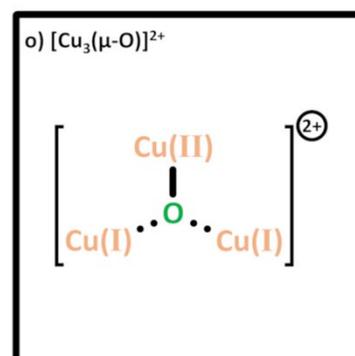
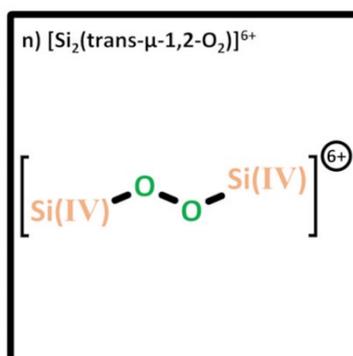
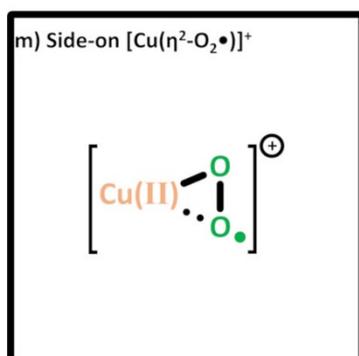
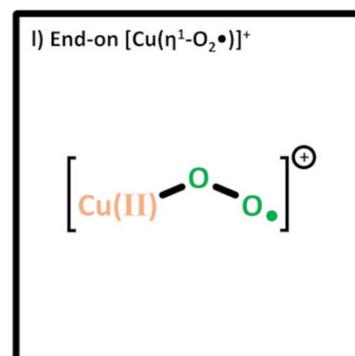
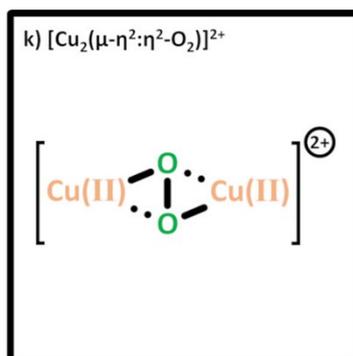
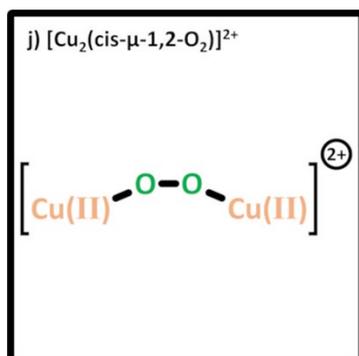
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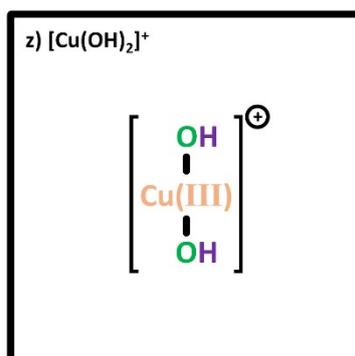
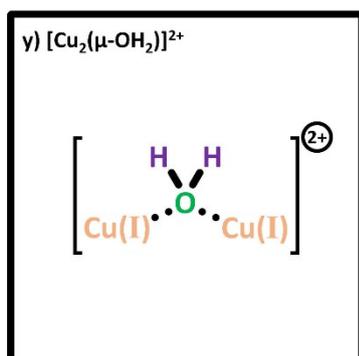
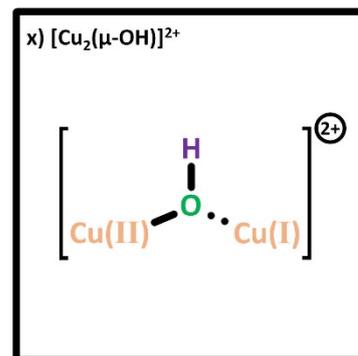
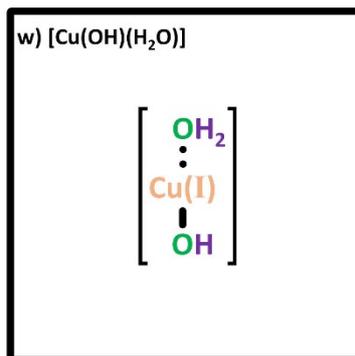
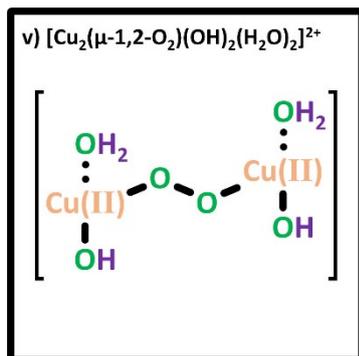
⁺ These authors have contributed equally to this work



Scheme S1a-i. Lewis structures of Cu(II) species and selected intermediates, as well as their corresponding names, potential resonance structures, and Cu oxidation states. Dotted bonds correspond to dative interactions. Color code: Al = blue, Si = grey, framework O = red, Cu = orange, extra-framework O = green, H = violet.



Scheme S1j-u. Lewis structures of Cu(II) species and selected intermediates, as well as their corresponding names, potential resonance structures, and Cu oxidation states. Dotted bonds correspond to dative interactions. Color code: Al = blue, Si = grey, framework O = red, Cu = orange, extra-framework O = green, H = violet.



Scheme S1v-z. Lewis structures of Cu(II) species and selected intermediates, as well as their corresponding names, potential resonance structures, and Cu oxidation states. Dotted bonds correspond to dative interactions. Color code: Al = blue, Si = grey, framework O = red, Cu = orange, extra-framework O = green, H = violet.