

Internal Webinar

Water Oxidation by Dinuclear Mixed-Valence Cobalt Complexes: Importance of Coordinated Water

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Water oxidation (WO) using earth abundant metal catalyst has acquired an emerging interest in recent years as an alternative of fossil fuels. However, a well-designed WO catalyst that can perform in a rational way is still under quest. In our recent findings, we have demonstrated that the oxygen evolution can be tuned through a proper design of the metal coordination environment. The enhancement in the catalytic activity is mainly due to the presence of metal coordinated water that facilitates the geminal O–O bond formation. We have explained these phenomena experimentally as well as theoretically.

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