

## Metal-Organic Frameworks for Luminescent Sensing and White LED

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Metal-organic frameworks (MOFs) are a new family of organic-inorganic hybrid materials and have received tremendous attention in the past decades due to their exceptional tunability and structural diversity. The luminescent properties of MOF materials cannot only be generated from the metal ions/clusters and organic linkers (two basic components for MOFs) but can also be tuned by guest molecules/ions and the interplay/interactions among these different components. Such unique characteristics enable the luminescent MOFs to be very promising multifunctional materials for light-emitting devices. By encapsulating the organic dyes with different emitting color into pore spaces of luminescent MOFs to form MOFs dye composites, the combination of the emissions from MOFs and the dyes can be elaborately tuned and thus realize the efficient white emission with high color quality. Furthermore, the resultant MOFs dye composite exhibits a high quantum yield because that the confinement and isolation of the MOFs efficiently restrict the aggregation-caused quenching of the dyes. Such a strategy can be easily expanded to other luminescent MOFs and dyes, thus opening a new perspective for the development of white light emitting materials.