Mo-doped $BiVO_4/Cu_xO$ photocatalyst film with enhanced photoelectrochemical properties

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The design of multilayer oxide films heterojuctions for photoanodes enables the control of charge transport/transfer and optical properties, and thus leads to efficient photoelectrochemical performance. In this research, a Mo-doped $BiVO_4/Cu_xO$ based photoanode was fabricated by sequential spin coating method on an FTO substrate followed by thermal treatment. First, bottom Mo-$BiVO_4$ layers were deposited, and subsequently Cu_xO layers were loaded. Copper oxide contents were controlled by varyring gas concentrations composed with N_2 and air. The synthesized photoanodes were examined by SEM, TEM, XRD, UV-vis as well as electrochemical measurements.