Molybdenum application in photovoltaic energy storage

Can molybdenum-based materials be used in aqueous batteries?
In this review,we summarize the application of molybdenum-based materials in various kinds of aqueous batteries,which begins with LIBs and SIBs and then extends to multivalent ion batteries such as ZIBs and AIBs. Some new energy storage systems,such as ammonium-ion batteries,are also mentioned.

Are molybdenum based electrodes suitable for aqueous batteries?
Compared with typical carbon-based materials,molybdenum-based materials own a much higher specific capacitance,taking advantages of their multiple oxidation states that are in favor of fast charge storage [9,10],which are considered as promising electrode candidates for aqueous batteries.

Are molybdenum-based NPS efficient sources of energy conversion and storage?
However,molybdenum-based NPs (Mo-NPs) synthesized from greener routes are efficient sources of energy conversion and storage. Various methods have been employed for the production of metal NPs including precursors from three (solid,gas and liquid) states of matter exploiting different experimental strategies [8,9].

How do molybdenum (Mo) impregnated g-C3N4 nanotubes work?
Provided by the Springer Nature SharedIt content-sharing initiative Molybdenum (Mo) impregnated g-C3N4 (Mo-CN) nanotubes are fabricated via a thermal/hydrothermal processto augment photoelectrochemical properties during solar-driven water-splitting (SDWS) reactions.

Does molybdenum reduce recombination of photogenerated electron-hole pairs?
In Mo-CN nanotubes,Molybdenum may act as the photogenerated electron target to reducethe recombination of photogenerated electron-hole pairs. This observation and the separation efficiency of the photogenerated electrons and holes are confirmed by photoluminescence is also supported by impedance analysis (Fig. 8).

What are some problems with molybdenum based materials?
There are some problems in different molybdenum-based materials, such as poor conductivity, slow intercalation kinetics, structure collapse, electrode dissolution, and relatively low voltage platform in some aqueous systems (such as Zn//Mo batteries), which limit their further application.

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