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# Nanohybridization of molybdenum oxide with tungsten molybdenum oxide nanowires for solution-processed fully reversible switching of energy storing smart windows

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## ABSTRACT

A multi-functional electrochromic material which modulates light over a wide spectral range and stores electrical energy is an intriguing substance, which would lead to a variety of novel applications, such as smart windows for energy-efficient buildings, solar power storage, nonemissive displays, electronic paper, optoelectronic switches, and variable-reflectance mirrors/surfaces. Developing such a versatile material entails merging the electrochromic phenomenon with electrical-chemical energy conversions in an electrochromic-battery platform. However, the challenges related to transition metal oxide electrochromic-batteries include poor energy storage, low optical contrast, and high fabrication cost. Here, we demonstrate the synthesis of aqueous nanocrystalline colloidal molybdenum oxide in a matrix of tungsten

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