

Abstract Submitted
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Growth of aligned Mo_6S_6 nanowires on a $\text{Cu}(111)$ ¹ MARAL AMIN-POUR, DUY LE, University of Central Florida, Department of Physics, Orlando FL 32816-2385, USA, DEZHENG SUN, Pierce Hall, University of California, Riverside, CA 92521, USA; Department of Physics, Columbia University, New York, NY 10027, USA, WENHAO LU, CHEN WANG, QUAN MA, LUDWIG BARTELS, Pierce Hall, University of California, Riverside, CA 92521, USA, TALAT S. RAHMAN, University of Central Florida, Department of Physics, Orlando FL 32816-2385, USA — We report the possibility of using the $\text{Cu}(111)$ surface for growing molybdenum sulfide nanowire (Mo_6S_6) based on density functional theory and scanning tunneling microscopy investigations [1]. A small lattice mismatch between the nanowires and strong substrate interactions lead to epitaxial growth of the nanowires at alignment with the substrate crystallographic axes and at a preferred inter-wire separation.

[1] Duy Le, Dezheng Sun, Wenhao Lu, Maral Aminpour, Chen Wang, Quan Ma, Talat S. Rahman, Ludwig Bartels

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