

Abstract Submitted
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STM study of monolayer MoS₂ synthesized by Chemical Vapor Deposition ADAM MILLS, CHUANHUI CHEN, Virginia Polytechnic Institute and State University, YIFEI YU, LINYUI CAO, North Carolina State University, CHANGGANG TAO, Virginia Polytechnic Institute and State University — Monolayer molybdenum disulfide (MoS₂), an atomically thin transition-metal dichalcogenide semiconductor with a direct band gap, as opposed to an indirect band gap in bulk MoS₂, has recently captured a lot of research interest for its distinctive optical and electronic properties, and potential applications such as field effect transistors, optoelectronic devices and chemical sensors. Using scanning tunneling microscopy, we have investigated monolayer MoS₂ synthesized by chemical vapor deposition. The structural and electronic properties of monolayer MoS₂ grown on glassy carbon and other substrates will be presented. We will also discuss our preliminary scanning tunneling spectroscopy measurements on these samples.

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