

Abstract Submitted  
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**Atomic structure and strain of Ge wetting layer on silicon** HAO CHEN, BOQUAN LI, University of Illinois at Urbana-Champaign, JIANGUO ZHENG, Northwestern University, JIAN-MIN ZUO, University of Illinois at Urbana-Champaign — The atomic structure of Ge wetting layer grown on Si(001) surfaces by chemical vapor deposition at several substrate temperatures under UHV was characterized by low energy electron diffraction and cross sectional high-resolution scanning transmission microscopy. The Ge film is atomically flat with sharp interface with silicon. The surface lattice constant changes with Ge coverage. At high Ge coverage on stepped Si surface, surface relaxation is observed near step edges. The ability to modify Si surface lattice with Ge has many applications.

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