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**Surface Dislocation of Al Films on Ag(111)** BO XU, ERKUANG ZHU, CHAO LU, YONGJUN TIAN, Yanshan University — Ordered dislocation structures of metal surfaces are of particularly interests because they can provide templates for building nanostructures with novel electronic, magnetic, and catalytic properties. Here we report two dislocation structures formed for Al on Ag(111). Depending on substrate temperate, Al films demonstrate distinct surface structures. At room temperature, Al nanocrystals with the (111) orientation are formed. At 500 K, a herringbone reconstruction, similar with the well known Au(111) reconstruction surface, is formed, while at 600K, a trigonal reconstruction surface is formed. Molecular self assembly processes on these surfaces are investigated.

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