

Abstract Submitted
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C₆₀ on nanostructured Nb-doped SrTiO₃(001) surfaces¹ BO XU, CHAO LU, ERKUANG ZHU, ZHONGYUAN LIU, YONGJUN TIAN, Yanshan University, Qinhuangdao, Hebei 066004, China — Nanostructured SrTiO₃(001) surfaces were carefully calibrated with respect to Si(111)-(7×7) surface using STM. The surface patterns for observed nanostructures were assigned. Sequential C₆₀ deposition onto these nanostructured templates reveals distinct growth modes, including discrete small C₆₀ islands on *c*(4×2) reconstruction surface, parallel one-dimensional C₆₀ chains on (6×2)dilines, C₆₀ double-chains on (8×2)trilines, epitaxial C₆₀ close packed adlayers over (11×2)tetralines, and two-dimensional ordered C₆₀ dimer arrays on (7×6)waffles. These structural diversities mainly stem from the relatively strong adsorbate-substrate interactions as well as the surface topography demands. The nanostructured oxide surfaces as templates are thus with great potentials in the molecular nanoarchitecture.

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