**Two-dimensional assemblies of banana-shaped liquid crystal molecules with short alkyl chains at solid/liquid interface**


## Abstract

Two-dimensional assemblies of a series of banana-shaped liquid crystal molecules with short alkyl chains, (LC, n = 5, 6), are investigated at the solid/liquid interface on graphite surface by using scanning tunneling microscopy (STM) under ambient conditions. The high-resolution STM images of the LC0 assemblies demonstrated a lamel)ae structure with bright bands and dark stripes, in which the alkyl chains of neighboring rows were either interdigitated or tail-to-tail due to the van der Waals interactions. The results in this paper are different with other reported banana-shaped liquid crystals, in which the core may play a dominant role in the self-assembly and the solvent molecules may also play a role in the assemblies. It may be helpful in understanding the assembly mechanism of banana-shaped liquid crystal molecules.