

Abstract Submitted  
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**Conformation-controlled networking of H-bonded assemblies on surfaces** M. ENACHE, M. MATENA, M. STOEHR, University of Basel, Switzerland, T.A. JUNG, Paul-Scherrer-Institute, Switzerland, A. LLANES-PALLAS, D. BONIFAZI, Universita di Trieste, Italy — In order to prepare networks that could undergo phase transitions through a thermally-induced inversion of the molecular conformation leading to a variation of the intermolecular interactions, directional intermolecular forces can be regarded as promising candidates. In particular, H-bonding interactions will be exploited since their intermolecular interaction strength and geometry can be controlled by the number and arrangement of available H-bonding donor or acceptor moieties. We studied the 2D self-organization of a conjugated molecule bearing terminal 2,6-di(acylamino)pyridine moieties [1], which are well-known to form H-bonds, on a Ag(111) surface by STM. The hexagonal porous network, which is formed for room temperature deposition, is transformed into a close-packed rhombic pattern by a thermally induced trans-cis inversion of the terminal groups. This transformation can be explained by the fact that the system wants to minimize its energy: at the same time the free surface energy is minimized while the number of H-bonds per terminal group is doubled from two to four. [1] A. Llanes-Pallas et al., *Angew. Chem. Int. Ed.* 2008, 47, 7726

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