Effects of Monolayer Bi on the Self-Assembly of DBBA on Au(111)

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Highlights

- A collective phase transition is dependent on the coverage on Au(111) while a hexamer phase is independent on coverage on Bi-3×√3-Au(111) surface.
- The results reveal the competing between intermolecular interactions and interfacial interactions.
- There is no GNRs formed on Bi-3×√3-Au(111) after annealing.
- Density functional theory (DFT) calculations confirm the configuration change of DBBA molecule on Au(111) and Bi-3×√3-Au(111) surface and the important role of the substrate assistance to form GNRs.