



Figure (a) is the STM constant-current topography (-1.3 V, 100 pA) of naphthalocyanine on graphite, in which the contrast modulation unit cell is marked. This image has been Fourier filtered and the resultant inverse Fourier filtered image is shown in figure (b). Contrast modulation is clearly seen and its unit cell is marked. Inset of (b) is the Fourier transform of (a). The spots corresponding to the molecular lattices and the graphite lattices are marked with corresponding unit vectors (spots used for the inverse Fourier transform) and angle between the unit vectors. One of the molecular lattices (\vec{A}) is aligned along one of the graphite lattices (\vec{a}). Image (c) shows a geometrical model of molecular super-lattice on the graphite lattice elucidated

by trial and error method using (a) and (b). \vec{A} , \vec{B} are the molecular lattice unit vectors and \vec{a} , \vec{b} , \vec{c} are the unit graphite lattice vectors. This image is used to find the exact values of molecular lattice vectors ($\vec{A} = \vec{B} = 1.927 \text{ nm}$) and the angle between these vectors ($\alpha = 96.103^\circ$).