**Supplementary information**

*SI 1: Rectilinear 1D moiré mathematical model*

In the case of rectilinear base and revealing layers, the geometric transformation predicting the layout of the 1D moiré image for given layouts of the base and revealing layers is a linear mapping, Eq. (2)[12]. It specifies the transformation of each point (x', y') of the base layer into the corresponding point (x, y) of the moiré image layer, as a function of the geometric layouts of the base layer given by the base band repetition vector $(t_x, t_y)$, and of the revealing layer, given by the revealing line grating period $T_r$ (Fig. 1(b)).

$$x = x' + \frac{t_x}{T_r - t_y} \cdot y' \qquad\qquad y = \frac{T_r}{T_r - t_y} \cdot y' \qquad\qquad (2)$$

On the other hand, the inverse mapping, which is also a linear transformation, allows the calculation of the layout of the base layer image as a function of the layout of the desired moiré image and of the selected revealing layer parameters. When inserting the height $t_y$ of the base band as *y'* ordinate into Eq. (2), the height *H* of the corresponding moiré is obtained (Eq. (1))