Electronic Supplementary Information (ESI)

for

Electro-Optic Crystals Grown in Confined Geometry with Optimal Crystal Characteristics for THz Photonic Applications†

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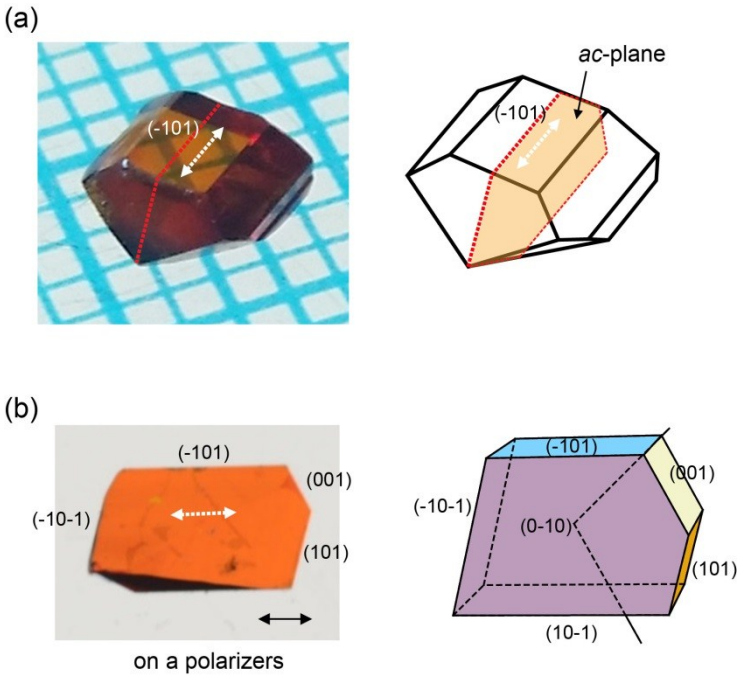

Fig. S1 (a) Photograph of HMQ-TMS crystal grown by conventional slow cooling method in methanol, which exhibit hexagonally-shaped block morphology. (b) Photograph of *ac*-plane-cut HMQ-TMS crystal prepared by cutting a bulk single crystal with its facet diagram. The dotted and the solid double arrows are parallel to the polar axis of HMQ-TMS crystals and to the light-polarization direction after the polarizer, respectively.

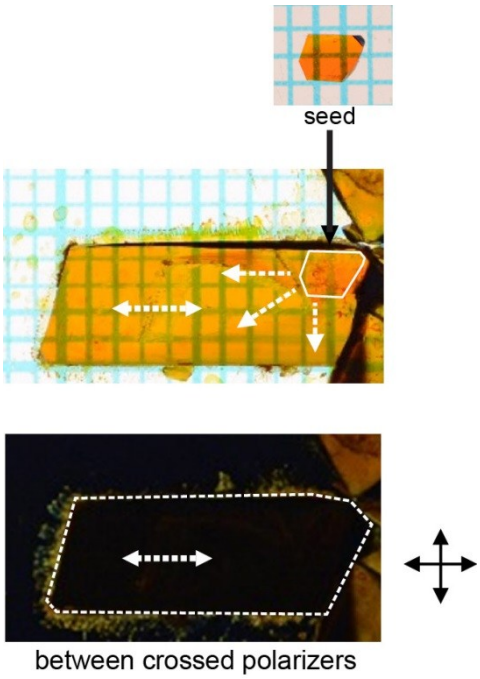

Fig. S2 Photographs of HMQ-TMS crystals grown in 0.5 mm-gap confined geometry, in which 0.39 mm-thick HMQ-TMS seed with an area of 3.0 mm^2 grows to crystal with a larger area of 57.0 mm^2. The dotted arrows present main crystals growth directions. The dotted and the solid double arrows are parallel to the polar axis of HMQ-TMS crystals and to the polarizer directions, respectively.

X-ray diffraction reflection patterns of HMQ-TMS crystals

Fig. 4b shows X-ray diffraction reflection patterns of HMQ-TMS crystals grown in confined geometry. In high diffraction angle region ($2\theta \approx 44\text{-}45^{o}$), a small broad peak appears. In this diffraction angle region ($2\theta \approx 44\text{-}45^{o}$), various diffraction peak can be appear; 2θ = 44.038 degree corresponding to (331) plane, 44.216 degree corresponding to (-226) plane, 44.572 degree corresponding to (-5-14) plane, 44.673 degree corresponding to (501) plane and 44.888 degree corresponding to (233) plane, which are calculated from single crystal structure data of HMQ-TMS crystals in Ref. 11.