

Electrical/thermal dual-controlled quad-functional terahertz metasurface absorber: Supplementary Materials

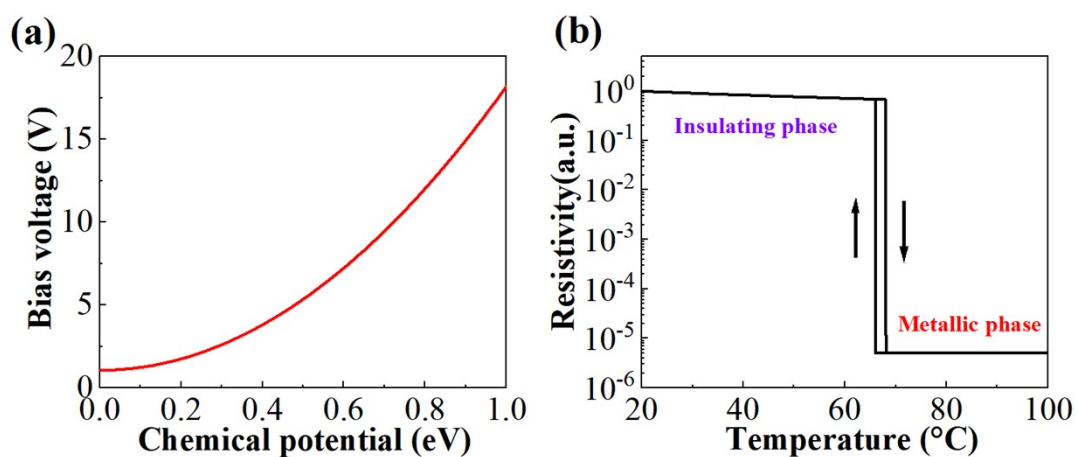


Fig. S1. (a) Chemical potential as a function of applied external voltage. (b) The resistivity of VO₂ as a function of Temperature.

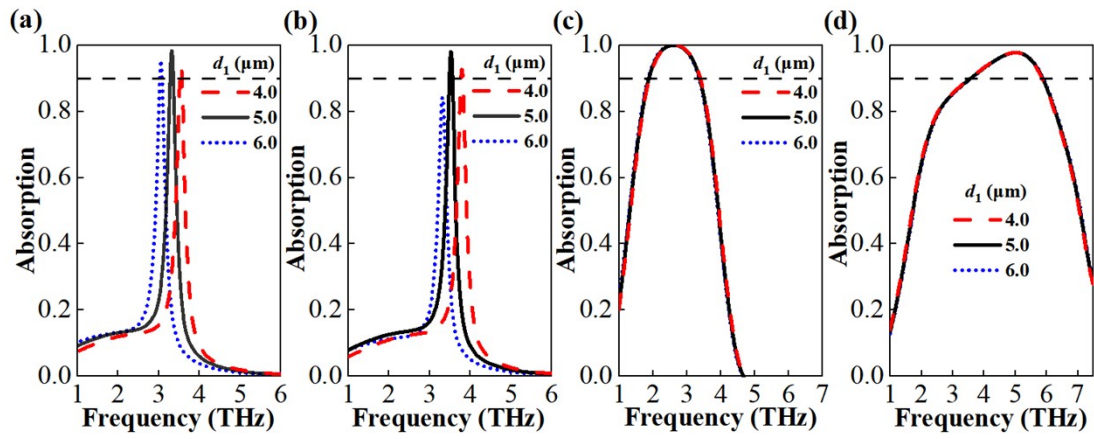


Fig. S2: Absorption spectra of QMA with different parameters d_1 for the four modes of (a) "L-NAM", (b) "H-NAM", (c) "L-BAM", and (d) "H-BAM".

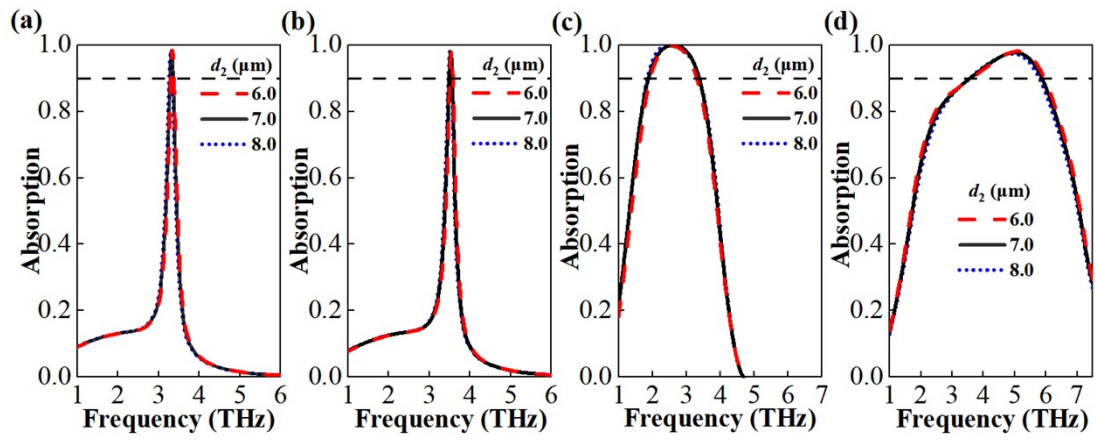


Fig. S3: Absorption spectra of QMA with different parameters d_2 for the four modes of (a) "L-NAM", (b) "H-NAM", (c) "L-BAM", and (d) "H-BAM".

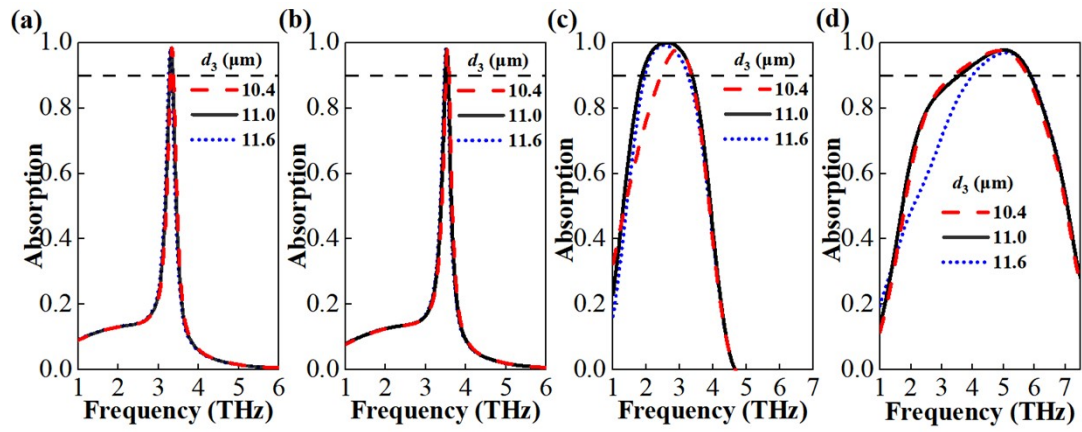


Fig. S4: Absorption spectra of QMA with different parameters d_3 for the four modes of (a) “L-NAM”, (b) “H-NAM”, (c) “L-BAM”, and (d) “H-BAM”.

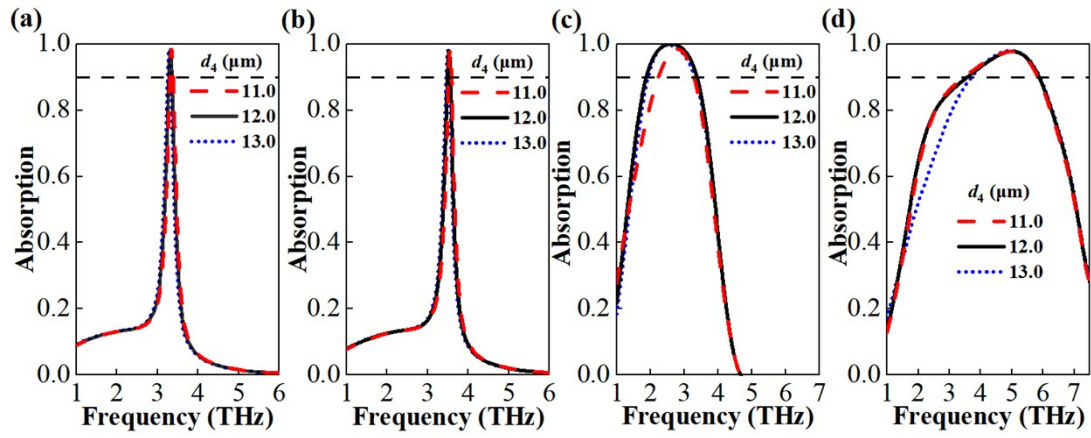


Fig. S5: Absorption spectra of QMA with different parameters d_4 for the four modes of (a) "L-NAM", (b) "H-NAM", (c) "L-BAM", and (d) "H-BAM".

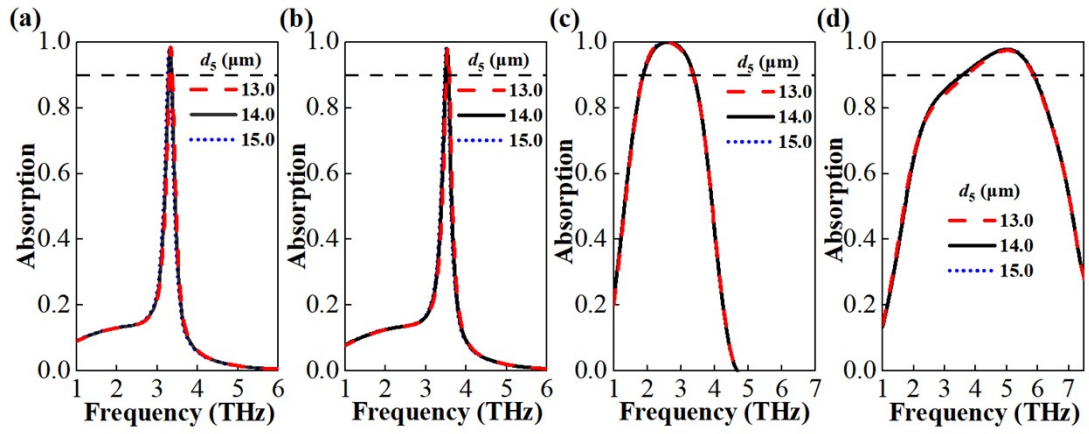


Fig. S6: Absorption spectra of QMA with different parameters d_5 for the four modes of (a) "L-NAM", (b) "H-NAM", (c) "L-BAM", and (d) "H-BAM".

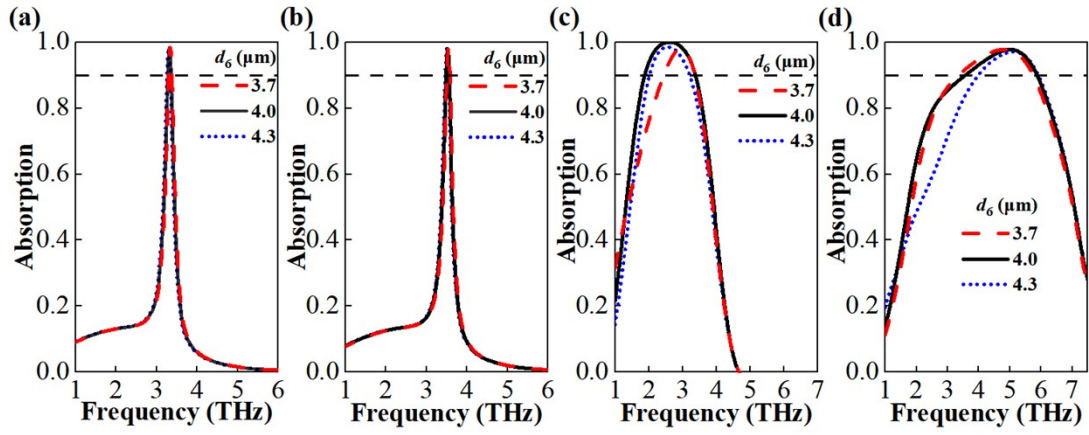


Fig. S7: Absorption spectra of QMA with different parameters d_6 for the four modes of (a) "L-NAM", (b) "H-NAM", (c) "L-BAM", and (d) "H-BAM".