c111 s0.00 r18 k8 a1.5 i700 t9 Full matter current density Full excitation energy per unit cell 0.05 1.5 J [fs-1.A-2] 1.0 E 0.5 0.00 0.5 -0.050.0 -12.5 15.0 2.5 5.0 7.5 12.5 15.0 2.5 5.0 7.5 10.0 17.5 0.0 10.0 17.5 0.0 Time [fs] Time [fs] c111 s0.00 r18 k12 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 1.5 J [fs-1.Å-2] 1.0 H 0.5 0.00 0.5 -0.050.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 5.0 7.5 2.5 0.0 10.0 12.5 15.0 0.0 17.5 Time [fs] Time [fs] c111 s0.00 r18 k16 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 1.5  $J[fs^{-1} \cdot A^{-2}]$ 1.0 E 0.5 0.00 0.5 -0.050.0 -2.5 7.5 10.0 12.5 15.0 17.5 0.0 2.5 7.5 10.0 12.5 15.0 5.0 5.0 17.5 0.0 Time [fs] Time [fs] c111 s0.00 r18 k20 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 1.5 -1.4-2] 1.0 0.00 . ∑ \_\_0.05 0.5 0.0 -12.5 2.5 2.5 5.0 10.0 15.0 5.0 7.5 10.0 12.5 15.0 7.5 17.5 0.0 17.5 0.0 Time [fs] Time [fs] c111 s0.22 r18 k8 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 E [eV] 0.00 -0.050 12.5 2.5 2.5 5.0 15.0 17.5 5.0 7.5 10.0 12.5 15.0 0.0 7.5 10.0 0.0 17.5 Time [fs] Time [fs] c111 s0.22 r18 k12 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 4 0.0 E [eV] -0.17.5 17.5 2.5 5.0 5.0 10.0 12.5 15.0 0.0 7.5 12.5 15.0 17.5 2.5 10.0 0.0 Time [fs] Time [fs] c111 s0.22 r18 k16 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 E [eV] 0.00 -0.0510.0 12.5 5.0 7.5 15.0 17.5 0.0 2.5 5.0 7.5 12.5 17.5 2.5 10.0 15.0 0.0 Time [fs] Time [fs] c111 s0.22 r18 k20 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 E [eV] 0.00 -0.050 5.0 12.5 2.5 7.5 2.5 7.5 10.0 15.0 0.0 5.0 10.0 12.5 17.5 15.0 0.0 17.5 Time [fs] Time [fs] c112 s0.00 r18 k8 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 3 J [fs-1.A-2] E [eV] 0.00 -0.050 5.0 12.5 15.0 2.5 5.0 7.5 10.0 12.5 15.0 7.5 17.5 2.5 10.0 0.0 17.5 0.0 Time [fs] Time [fs] c112 s0.00 r18 k12 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 3  $J[fs^{-1} \cdot A^{-2}]$ E [eV] 0.00 -0.050 7.5 2.5 12.5 17.5 2.5 5.0 10.0 12.5 5.0 7.5 10.0 0.0 15.0 17.5 0.0 15.0 Time [fs] Time [fs] c112 s0.00 r18 k16 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 3 . E [eV] 0.00 1 -0.050 -0.0 10.0 15.0 0.0 5.0 12.5 15.0 5.0 12.5 10.0 Time [fs] Time [fs] c112 s0.22 r18 k8 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 0.05 10 E [eV] 0.00 5 -0.050 2.5 5.0 7.5 12.5 15.0 17.5 10.0 12.5 17.5 5.0 7.5 10.0 0.0 15.0 2.5 0.0 Time [fs] Time [fs] c112 s0.22 r18 k12 a1.5 i700 t9 Full matter current density Full excitation energy per unit cell 15 0.05 E [eV] 5 0.00 5 -0.050 -0.107.5 12.5 2.5 5.0 12.5 0.0 2.5 5.0 7.5 10.0 15.0 17.5 0.0 10.0 15.0 17.5 Time [fs] Time [fs] c112 s0.22 r18 k16 a1.5 i700 t9 Full excitation energy per unit cell Full matter current density 15 0.05 E [eV] 5 0.00 5 -0.050 -0.107.5 12.5 2.5 7.5 2.5 5.0 10.0 15.0 0.0 5.0 10.0 12.5 15.0 0.0 17.5 17.5 Time [fs] Time [fs] c114 s0.00 r18 k8 a1.5 i500 t9 Full excitation energy per unit cell Full matter current density 0.05 6 -E [eV] 0.00 -0.050 2.5 5.0 7.5 12.5 2.5 5.0 7.5 10.0 15.0 0.0 10.0 12.5 15.0 0.0 17.5 17.5 Time [fs] Time [fs] c114 s0.22 r18 k8 a1.5 i500 t9 Full excitation energy per unit cell Full matter current density 30

J [fs-1.Å-2] E [eV] 20 0.0 10 0 -0.17.5 12.5 2.5 5.0 10.0 15.0 17.5 0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 0.0 Time [fs] Time [fs]