Qiu *et al.* Reply. We offer a reply to the preceding Comment [1] on our Letter concerning photoinduced chirality in $1T$-$TiSe_2$ [2]. The Comment contrasts the results of ultrafast electron diffraction (UED) to our time-resolved resonant elastic x-ray scattering (trREXS) measurements. We argue that there is no contradiction between the UED and trREXS observations.

The disparity arises from the fundamentally different sensitivities of the two probes. UED probes the total charge density and in principle can detect both atomic displacements and variations in the valence charge density. However, charge density wave (CDW) modulations dominated by electronic (valence) charge redistribution, in the absence of appreciable lattice distortion, have not yet been resolved in UED experiments. In contrast, our trREXS measurements are performed under resonant conditions at the Ti K edge, where the scattering amplitude includes resonant terms (f' and f'') that are directly sensitive to electronic order, even without involvement from the lattice. These resonant contributions break Friedel's law [$I(\mathbf{Q}) \neq I(-\mathbf{Q})$] [3], which underlies the sensitivity to electronic symmetry breaking that we make use of in our Letter.

In $1T$-$TiSe_2$, the CDW is widely recognized as a cooperative state involving both periodic lattice distortions and electronic (excitonic) order [4–7]. Importantly, chirality has been proposed to originate from gyrotropic electronic order—where electrons spontaneously organize into a chiral configuration with very little response from the otherwise achiral lattice [8]. Therefore, the absence of circular dichroism in UED measurements appropriately reflects the lack of pronounced chirality in the lattice distortions, but it does not constrain the symmetry of the electronic sector. This separation of sensitivities is well established in other correlated systems. For example, in cuprate superconductors electronic CDWs are routinely detected by resonant x-ray scattering [9–11] but remain invisible to electron diffraction.

The validity of our conclusions is further underpinned by rigorous analysis and control experiments addressing the grazing-incidence geometry. As detailed in our original Letter, the transmitted elliptical pump field decomposes into components whose symmetries are fully accounted for. The differential (relative circular dichroism Δ_{CD}) measurement we report isolates the response from the circular component, as the symmetric linear contribution cancels out. Control measurements on a bismuth reference sample exhibited no detectable circular dichroism (CD) signal, confirming that the observed dichroism is intrinsic to $1T$-$TiSe_2$. Furthermore, the observation of opposite CD signs in distinct momentum-space regions, together with the disappearance of CD at around 500 ps, is incompatible with the purely geometric polarization effects proposed in the Comment.

The UED and trREXS techniques probe complementary aspects—lattice displacements and electronic order, respectively—of the CDW in $1T$-$TiSe_2$. Their results are not contradictory but rather highlight the multifaceted nature of this ordered state. The null CD result in UED is consistent with a lattice-based picture but does not challenge the electronic chirality observed via trREXS, a conclusion supported by the resonant nature of our probe and comprehensive experimental validation.

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