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Abstract for an Invited Paper
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Quantum frameness for charge-parity-time inversion symmetry¹

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Physical laws are invariant under simultaneous charge-parity-time (CPT) inversion, which is due to relativistic Lorentz covariance and the linearity of quantum mechanics. We show that CPT-superselection can be circumvented by employing a system that possesses CPT frameness, and we construct such resources in two cases: for massive spin-zero particles and for Dirac-spinors. In the case of spin-zero particles, we explicitly construct and quantify all resourceful pure states. Our approach is to treat CPT inversion unitarily by considering the aggregate action of the CPT transformation, rather than sequentially composing a unitary and two anti-unitary transformations, thereby overcoming a major drawback of circumventing time-inversion symmetry alone using an anti-unitary transformation [G. Gour, P. S. Turner and B. C. Sanders, *J. Math. Phys.* 50, 102105 (2009)]. We discuss an explicit example using pionic communication to overcome CPT superselection.

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