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Pisa, Italy; (2) NEST, Istituto Nanoscienze-CNR and Scuola Normale Superiore, I-56126 Pisa,

Italy; (3) Department of Physics and Astronomy, University of Missouri, Columbia, MO 65211, United States

Corresponding author: Agarwal, A.

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Abstract:Quasi-two-dimensional superconductors with tunable spin-orbit coupling are very interesting systems with properties that are also potentially useful for applications. In this Letter we demonstrate that these systems exhibit undamped collective spin oscillations that can be excited by the application of a supercurrent. We propose to use these collective excitations to realize persistent spin oscillators operating in the frequency range of 10 GHz-1 THz. © 2011 American Physical Society.