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Tailoring Chirp in Spin-Lasers JEONGSU LEE, SUNY at Buffalo, GUILHEM BOERIS, Ecole Polytechnique, KAREL VYBORNY, Institute of Physics ASCR, IGOR ZUTIC, SUNY at Buffalo — The interplay of spin injection in lasers and their nonlinear response leads to novel spintronic devices [1]. Such spin-lasers can enable desirable properties including threshold reduction, bandwidth enhancement, and low chirp [1-3]. These lasers can also be viewed as spin-amplifiers, since high circular polarization in the output can be achieved even with nearly spin-unpolarized injection [2,3]. In the present work, we study chirp in spin-lasers and suggest new modulation schemes to improve their performance. Supported by NSF-ECCS, U.S. ONR, AFOSR-DCT, and NSF-NEB 2020.

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