

INTERPLAY BETWEEN COMPLEX ORDERS IN FUNCTIONAL MATERIALS

LIST OF PUBLICATIONS

LOUIS PONET

- **Louis Ponet**, S. Artyukhin
First-principles theory of giant Rashba-like spin splitting in bulk GeTe
[Phys. Rev. B. **98**, 174102 \(2018\)](#)
- P. Chen, **Louis Ponet**, K. Lai, R. Cingolani, S. Artyukhin
Domain wall-localized phonons in BiFeO₃: spectrum and selection rules
[npj Comput. Mater. **6**, 48 \(2020\)](#)
- Y. Huang, L. Zheng, P. Chen, X. Cheng, S. Hsu, T. Yang, X. Wu, **Louis Ponet**, R. Ramesh, L. Chen, S. Artyukhin, Y. Chu, K. Lai
Unexpected giant microwave conductivity in a nominally silent BiFeO₃ domain wall
[Adv. Mater. **32**, 1905132 \(2020\)](#)
- C. Stefani, **Louis Ponet**, K. Shapovalov, P. Chen, E. Langenberg, D. G. Schlom, S. Artyukhin, M. Stengel, N. Domingo, G. Catalan
Mechanical softness of ferroelectric 180° domain walls
[Phys. Rev. X **10**, 041001 \(2020\)](#)
- O. Yu. Gorobtsov, **Louis Ponet**, S. K. K. Patel, N. Hua, A. G. Shabalin, S. Hrkac, J. Wingert, D. Cela, J. M. Glownia, D. Zhu, R. Medapalli, M. Chollet, E. E. Fullerton, S. Artyukhin, O. G. Shpyrko, A. Singer
Femtosecond control of phonon dynamics near a magnetic order critical point
Nature communications *under review*
- F. Fan, Z. Gao, **Louis Ponet**, J. Wang, H. Huang, S. Artyukhin, J. Hong, S. Cheong, X. Wang
Visualization of large-scale charged domain wall in hexagonal manganites
Applied Physics Letters *accepted*
- **Louis Ponet**, S. Artyukhin, Th. Kain, Anna Pimenov, A. Shuvaev, X. Wang, S. Cheong, M. Mostovoy, Andrei Pimenov
Magnetoelectric Crankshaft
Nature *under review*
- B. Dhanabalan, G. Biffi, A. Moliterni, V. Olieric, C. Giannini, G. Saleh, **Louis Ponet**, M. Prato, M. Imran, L. Manna, R. Krahne, S. Artyukhin, M. P. Arciniegas
Engineering the optical emission and robustness of metal-halide layered perovskites through ligand accommodation
Advanced Materials *accepted*