

## Jennifer Fowlie

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### Bio

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#### LINKS

- Personal website: [www.jenfowlie.com](http://www.jenfowlie.com)
- Google Scholar: <https://scholar.google.com/citations?user=HcbR9B4AAAAJ&hl=en>

### Publications

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#### PUBLICATIONS

- **Layered metals as polarized transparent conductors.** *Nature communications*  
Putzke, C., Guo, C., Plisson, V., Kroner, M., Chervy, T., Simoni, M., Wevers, P., Bachmann, M. D., Cooper, J. R., Carrington, A., Kikugawa, N., Fowlie, J., Gariglio, et al  
2023; 14 (1): 3147
- **Effects of rare-earth magnetism on the superconducting upper critical field in infinite-layer nickelates.** *Science advances*  
Wang, B. Y., Wang, T. C., Hsu, Y. T., Osada, M., Lee, K., Jia, C., Duffy, C., Li, D., Fowlie, J., Beasley, M. R., Devereaux, T. P., Fisher, I. R., Hussey, et al  
2023; 9 (20): eadf6655
- **Metal-insulator transition in composition-tuned nickel oxide films.** *Journal of physics. Condensed matter : an Institute of Physics journal*  
Fowlie, J., Georgescu, A. B., Suter, A., Mundet, B., Toulouse, C., Jaouen, N., Viret, M., Dominguez, C., Gibert, M., Salman, Z., Prokscha, T., Alexander, D. T., Kreisel, et al  
2023
- **Electronic Coupling of Metal-to-Insulator Transitions in Nickelate-Based Heterostructures** *ADVANCED ELECTRONIC MATERIALS*  
Varbaro, L., Mundet, B., Dominguez, C., Fowlie, J., Georgescu, A. B., Korosec, L., Alexander, D. L., Triscone, J.  
2023
- **Intrinsic magnetism in superconducting infinite-layer nickelates** *NATURE PHYSICS*  
Fowlie, J., Hadjimichael, M., Martins, M. M., Li, D., Osada, M., Wang, B., Lee, K., Lee, Y., Salman, Z., Prokscha, T., Triscone, J., Hwang, H. Y., Suter, et al  
2022
- **Machines for Materials and Materials for Machines: Metal-Insulator Transitions and Artificial Intelligence** *FRONTIERS IN PHYSICS*  
Fowlie, J., Georgescu, A., Mundet, B., del Valle, J., Tueckmantel, P.  
2021; 9
- **Dynamics of the electrically induced insulator-to-metal transition in rare-earth nickelates** *PHYSICAL REVIEW B*  
del Valle, J., Rocco, R., Dominguez, C., Fowlie, J., Gariglio, S., Rozenberg, M. J., Triscone, J.  
2021; 104 (16)
- **Crossover between distinct symmetries in solid solutions of rare earth nickelates** *APL MATERIALS*  
Fowlie, J., Mundet, B., Toulouse, C., Schober, A., Guennou, M., Dominguez, C., Gibert, M., Alexander, D. L., Kreisel, J., Triscone, J.  
2021; 9 (8)
- **Near-Atomic-Scale Mapping of Electronic Phases in Rare Earth Nickelate Superlattices** *NANO LETTERS*  
Mundet, B., Dominguez, C., Fowlie, J., Gibert, M., Triscone, J., Alexander, D. L.  
2021; 21 (6): 2436-2443

- **Optical properties of LaNiO<sub>3</sub> films tuned from compressive to tensile strain** *PHYSICAL REVIEW B*  
Ardizzone, Zingl, M., Teyssier, J., Strand, H. R., Peil, O., Fowlie, J., Georgescu, A. B., Catalano, S., Bachar, N., Kuzmenko, A. B., Gibert, M., Triscone, J., Georges, A., et al  
2020; 102 (15)
- **Length scales of interfacial coupling between metal and insulator phases in oxides** *NATURE MATERIALS*  
Dominguez, C., Georgescu, A. B., Mundet, B., Zhang, Y., Fowlie, J., Mercy, A., Waelchli, A., Catalano, S., Alexander, D. L., Ghosez, P., Georges, A., Millis, A. J., Gibert, et al  
2020; 19 (11): 1182-+
- **Vibrational properties of LaNiO<sub>3</sub> films in the ultrathin regime** *APL MATERIALS*  
Schober, A., Fowlie, J., Guennou, M., Weber, M. C., Zhao, H., Iniguez, J., Gibert, M., Triscone, J., Kreisel, J.  
2020; 8 (6)
- **Coupling Lattice Instabilities Across the Interface in Ultrathin Oxide Heterostructures** *ACS MATERIALS LETTERS*  
van Thiel, T. C., Fowlie, J., Autieri, C., Manca, N., Siskins, M., Afanasiev, D., Gariglio, S., Caviglia, A. D.  
2020; 2 (4): 389-394
- **Thickness-Dependent Perovskite Octahedral Distortions at Heterointerfaces** *NANO LETTERS*  
Fowlie, J., Lichtensteiger, C., Gibert, M., Meley, H., Willmott, P., Triscone, J.  
2019; 19 (6): 4188-4194
- **Rare-earth nickelates RNiO<sub>3</sub>: thin films and heterostructures** *REPORTS ON PROGRESS IN PHYSICS*  
Catalano, S., Gibert, M., Fowlie, J., Iniguez, J., Triscone, J., Kreisel, J.  
2018; 81 (4): 046501
- **Conductivity and Local Structure of LaNiO<sub>3</sub> Thin Films** *ADVANCED MATERIALS*  
Fowlie, J., Gibert, M., Trier, G., Gloter, A., Iniguez, J., Filippetti, A., Catalano, S., Gariglio, S., Schober, A., Guennou, M., Kreisel, J., Stephan, O., Triscone, et al  
2017; 29 (18)
- **Interfacial Control of Magnetic Properties at LaMnO<sub>3</sub>/LaNiO<sub>3</sub> Interfaces** *NANO LETTERS*  
Gibert, M., Viret, M., Torres-Pardo, A., Piamonteze, C., Zubko, P., Jaouen, N., Tonnerre, J., Mougín, A., Fowlie, J., Catalano, S., Gloter, A., Stephan, O., Triscone, et al  
2015; 15 (11): 7355-7361