

Dr. Laurene Tetard

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Professional Preparation

- B.S. June 2004, University of Burgundy, France, Dept. of Physics and Chemistry.
- M.S. June 2006, University of Burgundy, France, Dept. of Physics.
- Ph.D. December 2010, University of Tennessee, Knoxville, Dept. of Physics.

Appointments

Associate Professor: NanoScience Technology Center and Dept. of Physics, University of Central Florida (08/2019 – present)

Assistant Professor: NanoScience Technology Center and Dept. of Physics, University of Central Florida (08/2013 – 8/2019)

Eugene P. Wigner Fellow and Research Staff: Oak Ridge National Laboratory (2011 – 2013)

Research Assistant: Nanoscale Science and Devices Group, Oak Ridge National Laboratory (01/2006 – 12/2010)

Products

Most current related to the field

- L. Tetard, Scanning Probe Microscopy, ACS In Focus, in press, 2023
- F. E. Torres-Davila*, M. Molinari, R. Blair, N. Rochdi, and L. Tetard, Enhancing Infrared Light-Matter Interaction for Deterministic and Tunable Nanomachining of Hexagonal Boron Nitride, NanoLetters, 22 (20), 8196-8202, 2022
- H.J. Sharahi, M. Janmaleki, L. Tetard, S. Kim, H. Sadeghian, G.J. Verbiest, Acoustic subsurface-atomic force microscopy: Three-dimensional imaging at the nanoscale, Journal of Applied Physics, 129 (3), 030901, 2021 - Selected for cover page and Features Article
- M. Soliman, B. Lee, A. Ozcan, T. B. Rawal, M. Young, H. C Mendis, P. Rajasekaran, T. Washington II, S. V. Pingali, H. O'Neill, A. Gesquiere, L. De La Fuente, L. Petridis, E. Johnson, J. Graham, S. Santra, L. Tetard, Engineered zinc oxide-based nanotherapeutics boost systemic antibacterial efficacy against phloem-restricted diseases, Environmental Science: Nano, 9(8), 2869-2886, 2022 - Selected for Recent HOT Articles
- R. Coste, M. Soliman, N. B. Bercu, S. Potiron, K. Lasri, V. Aguié-Béghin, L. Tetard, B. Chabbert, M. Molinari, Unveiling the impact of embedding resins on the physicochemical traits of wood cell walls with subcellular functional probing, Composites Science and Technology, 201, 108485, 2020

Other significant products

- A. S. Patri, B. Mostofian, Y. Pu, N. Ciaffone, M. Soliman, M. D. Smith, R. Kumar, X. Cheng, C. E. Wyman, L. Tetard, A. J. Ragauskas, J. C. Smith, L. Petridis, C. M. Cai, A multifunctional co-solvent pair reveals molecular principles of biomass

deconstruction, Journal of the American Chemical Society, 141, 32, 12545-12557, 2019L.

- Tetard, A. Passian, R. H. Farahi, T. Thundat, B. H. Davison, Opto-nanomechanical spectroscopic material characterization, Nature Nanotechnology, 10, 870–877, 2015
- Z. Yu, L. Tetard, L. Zhai, J. Thomas, Supercapacitor Electrode Materials: nanostructures from 0 to 3 dimensions, Energy & Environmental Science, 8, 702-730, 2015. Selected for Cover Page
- L. Tetard, A. Passian, T. Thundat, New modes for subsurface atomic force microscopy through nanomechanical coupling, Nature Nanotechnology, 5, 105-109, 2010
- L. Tetard, A. Passian, K. T. Venmar, R. M. Lynch, B. H. Voy, G. Shekhawat, V. P. Dravid, T. Thundat, Imaging nanoparticles in cells by nanomechanical holography, Nature Nanotechnology, 3, 501-505, 2008

Graduate teaching experience

- IDS 6250 Introduction to Nanotechnology and Nanoscience, IDS6191 Nanotechnology for sustainable agriculture, IDS6254 Nanofabrication and characterization

Graduate students mentored

- Chair of thesis/dissertation committees:
 - Guntis Rutins, MS Nano, graduated Summer 22
 - Fernand Torres-Davila, PhD Physics, graduated Fall 22
 - Negar Otrooshi, PhD Physics, graduated Spring 19
 - Mikhael Soliman, PhD MSE, graduated Fall 18
 - Yi Ding, PhD MSE, graduated Spring 18
- Member of thesis/dissertation committees:
 - Keanna Jardine, PhD Planetary, expected graduation Summer 23
 - Molla Manjul Islam, graduated Spring 23
 - Corbin Feit, PhD MSE, graduated Summer 22
 - Jaynlynn Sosa, MS Nano, graduated Summer 22
 - Raphael Coste, France, graduated Fall 2021
- To date, supervised 9 PhD students (5 already graduated), 10 MS students (6 already graduated) and more than 20 UG students

Other synergistic activities related to graduate education

- Associate Site Leader of the UCF Physics MS to PhD Bridge Program funded by the American Physical Society (APS), 2015-2021 (over 40 students recruited).
- Co-chair of Center of Excellence in Material Innovation for Sustainable Agriculture (MISA) 2016, 2017, 2018, 2019 (60-120 participants/ year) symposia, in Orlando FL.
- Organizer of the Euro-Mediterranean Conference on Materials and Renewable Energies, Marrakech, Morocco, 2017, 2019, 2021.
- Lead and organizer of several workshops in Nanotechnologies, Morocco and Ben Guerir, 2019-2021.
- Organizer of outreach events at the Orlando Public Library (NanoCamps July 2017; June, July 2016, 60 participants and NanoFest January 2017, January 2016, February 2015: 60-100 participants).