

Dr. Donna Stokes

Professor and Associate Dean for
Undergraduate Affairs and
Student Success

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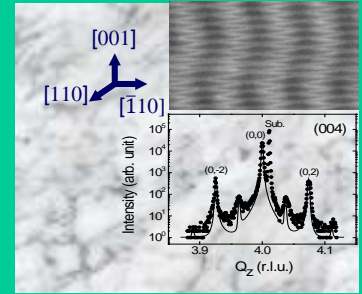


Educational Research:

Dr. Stokes is involved in educational research which focusses on preparation of Science and Math teachers for secondary education and on physics education research focusing improving student success in physics courses. Her approach utilizes inquiry based teaching and learning strategies for promotion of success in learning communities. She is currently an APS PhysTEC Fellow.

Scientific Research:

Dr. Stokes' scientific research focuses on understanding the structural and optical properties of semiconductor materials for the development of novel detectors and lasers for infrared applications. She utilizes research tools such as FTIR spectroscopy and X-Ray diffraction to understand the relationship of the nanostructure of materials to its optical response.



Sample Publications:

1. Learning and Leading as Collaborative Physics Education/Physics Partners: Building a Physics Teacher Education Program, **Donna W Stokes** and Paige K Evans, Chapter in Craig, Cheryl J., Turchi, Laura, McDonald, Denise M (Eds), *Cross-Disciplinary, Cross-Institutional Collaboration in Teacher Education*, Palgrave Macmillan, Cham, p 271-284 (2020).
2. Teaching through Culture: Employing Culturally Responsive Pedagogy to Transform Postsecondary STEM Instruction, McAlister-Shields, L., Hutchison, L., and **Stokes, D.** Chapter in J. Conyers, C. Edwards, & K. Thompson (Eds.), *African Americans in Higher Education: A Critical Study of Social and Philosophical Foundations of Africana Culture*. Gorham, ME: Myers Education Publishing (2020).
3. Long mean free paths of room-temperature THz acoustic phonons in a high thermal conductivity material, Ting-Han Chou, Lucas Lindsay, Alexei A. Maznev, Jateen S. Gandhi, **Donna W. Stokes**, Rebecca L. Forrest, Abdelhak Bensaoula, Keith A. Nelson, and Chi-Kuang Sun, *Phys. Rev. B*, **100**, 094302 (2019).
4. The Gordian Knot of Teacher Induction: When Context Trumps Teacher Preparation and the Desire to Teach, Cheryl J. Craig, Paige Evans, Jing Li and **Donna Stokes**, A chapter in Denise McDonald (Ed.), *Facing Challenges and Complexities in Retention of Novice Teachers*, Information Publishing, Charlotte, North Carolina (2018).
5. A tribute to 'unsung teachers': teachers' influences on students enrolling in STEM programs with the intent of entering STEM careers, Cheryl J Craig, Paige Evans, Rakesh Verma, **Donna Stokes**, and Jing Li, *European Journal of Teacher Education*, DOI:10.1080/02619768.2018.1523390 (2018).
6. The embodied nature of narrative knowledge: A cross-study analysis of embodied knowledge in teaching, learning, and life knowledge in teaching, learning, and life, Cheryl J. Craig, JeongAe You., Yali Zou, Rakesh Verma, **Donna Stokes**, Paige Evans, Gayle Curtis, *Teaching and Teacher Education*, 71, 329 (2018).

Recent Funding:

1. National Science Foundation DUE Award # 1950036, Co-PI, "Preparing Effective STEM Teachers by Advancing the Cultural and Computational Engagement of STEM Scholars," \$1,199,872, (6/01/2020 – 5/3/2025)
2. National Science Foundation DUE Award #1832534, PI, "Building Capacity: Integrated Interventions to Improve Undergraduate Student Success in STEM," \$1,499,879 (1/1/2019 – 12/31/2023)
3. National Science Foundation, PI, "STEM Scholarship Program with Promotion and Retention of STEM Education through a Networking Team (PARENT) Support," \$1,000,000 (1/1/17 – 12/31/21).
4. National Science Foundation, co-PI, "University of Houston: Learning through Informal and Formal Experiences," \$1,450,000 (09/01/16-08/31/21)