

# Publications List

## Donna Washington Stokes

**PUBLICATIONS (44 total; h-index – 13)**

<https://scholar.google.com/citations?user=hMGmFE4AAAAJ&hl=en>

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1. 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 Publishing (2019).
2. 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).
3. 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).
4. 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).
5. The influence of parents on undergraduate and graduate students’ entering the STEM disciplines and STEM careers, Cheryl J. Craig, Rakesh Verma, **Donna Stokes**, Paige Evans and Bobby Abrol, *International Journal of Science Education*, DOI:10.1080/09500693.2018.1431853 (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).
7. Propagation of THz acoustic wave packets in GaN at room temperature, Maznev, A. A., Hung, T.-C., Yao, Y.-T., Chou, T.-H., Gandhi, J. S., Lindsay, L., Shin, H. D., **Stokes, D. W.**, Forrest, R. L., Bensaoula, A., Sun, C.-K. and Nelson, K. A., *Appl. Phys. Lett.*, **112**, 061903 (2018).
8. Math Remediation Intervention for Student Success in the Algebra-Based Introductory Physics Course, Forrest, R.L., **Stokes, D.W.**, BurrIDGE, A.B. and Voight, C.D., *Physical Review Physics Education Research*, 13, 20137 (2017).
9. Developing STEM Teachers through both Informal and Formal Learning Experiences, **Stokes, D.**, Evans, P. and Craig, C., Search and Research: *Teacher Education for Contemporary Context*. Editors Juanjo Mena, Ana Garcia Valcarcel, Francisco Garcia-Penalvo and Marta Martin del Pozo, Publiusher Ediciones Universidad de Salamanca (2017).

10. Attracting, preparing and retaining teachers in high need areas: A science as inquiry model of teacher education. Chapter in M. Peters, B. Cowie and I. Mentor (Eds.) *A companion to research in teacher education.*, Craig, C., Evans, P., **Stokes, D.** and Bott, S., New York, NY: Springer Publishing. (2017).
11. Recruitment, Retention and Preparation of Secondary Physics and Chemistry Teachers. **Stokes, D.**, Evans, P., Craig, C., and Bott, S., *American Physical Society Forum on Education Newsletter* (Fall 2016).
12. Pre-testing and early Intervention in Introductory General Physics I, **Stokes, D.W.**, Forrest, R.L., and Voight, C.D., Publications from the 6<sup>th</sup> International Technology Education and Development Conference, Valencia, Spain (March 2012).
13. Effect of strain on the growth of InAs/GaSb superlattices: An x-ray diffraction study J. H. Li, **D. W. Stokes**, J. C Wickett, O. Caha, K. E. Bassler, and S. C. Moss *J. Appl. Phys.*, **107**, 123504 (2010).
14. Short Period InAs/GaSb superlattices for mid-infrared photodetectors, H.J. Haugan, F. Szmulowicz, G.J. Brown, B. Ullrich, S.R. Munshi, S. Elhamri, J.C. Wickett and **D.W. Stokes**, *Phys. Stat. Sol.*, **4**, 1702-1706 (2007).
15. Growth of Short-Period InAs/GaSb Superlattices, H.J. Haugan, K. Mahalingam, G.J. Brown, W.C. Mitchal, B. Ullrich, L. Grazulis, S. Elhamri, J.C. Wickett and **D.W. Stokes**, *J. Appl. Phys.*, **100**, 123110-1- 123110-5 (2006).
16. X-ray Diffraction Analysis of an Osmium Silicide Epilayer Grown on Si (100) by Molecular Beam Epitaxy, F.Z. Amir, R.J. Cottier, T.D. Golding, W. Donner, N. Anibou and **D.W. Stokes**, *J. Cryst. Growth*, **294**, 174-178 (2006).
17. Effects of Interfacial Strain on the Morphological Instability of Semiconductor Epitaxial Films, J.H. Li and **D.W. Stokes**, *Appl. Phys. Lett.*, **89**, 111906-1 – 111906-3 (2006).
18. X-ray diffraction Analysis of Interdiffusion in Al<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>Sb<sub>y</sub> Multilayers, R.L. Forrest, **D.W. Stokes**, J.H. Li, R. Lukic-Zrnica and T.D. Golding, *J Vac. Sci. Technol. B*, **24**, 1127-1129 (2006).
19. Effects of Interfacial Bonds on Morphological Instability of Slightly Lattice Mismatched Epitaxial Thin Films, J.H. Li, **D.W. Stokes**, O. Caha, S.L. Ammu, J. Bai, K.E. Bassler, and S.C. Moss, *Science Highlight from the National Synchrotron Light Source*, (November 2005).
20. Morphological Instability in InAs/GaSb Superlattices Due to Interfacial Bonds, J.H. Li, **D.W. Stokes**, O. Caha, S.L. Ammu, J. Bai, K.E. Bassler, and S.C. Moss, *Phys. Rev. Letters*, **95**, 96104-1 – 96104-4 (2005).
21. Molecular Beam Epitaxial Growth of  $\beta$ -Fe(Si<sub>1-x</sub>Ge<sub>x</sub>)<sub>2</sub>, R.J. Cottier, K. Hossain, F.Z. Amir, J.B. House, B.P. Gorman, J.M. Perez, O.W. Holland, T.D. Golding and **D.W. Stokes**, *Proceeding from the North American MBE Conference, J. Vac. Sci. Technol. B*, **23**, 1299 - 1303, (2005).

22. Optical and Structural Properties of InAs/GaSb Nanostructures, **D.W. Stokes**, J.H. Li, R.L. Forrest, S.L. Ammu, J.C. Lenzi, S.C. Moss. B. Nosh, E.H. Aifer, B. Bennett and L.J. Whitman, *Materials Research Society Symposia Proceedings*, **794**, 271-276 (2004).
23. X-ray Diffraction Analysis of Lateral Composition Modulation in InAs/GaSb Superlattices Intended for Infrared Detector Applications, **D.W. Stokes**, R.L. Forrest, J.H. Li, S. C. Moss. B. Nosh, B. Bennett, L.J. Whitman and M. Goldberg, *IEE – Optoelectronics, Proceedings from the 5<sup>th</sup> International Conference on Mid-Infrared Optoelectronic Materials and Devices*, **150**, 420-423 (2003).
24. Lateral Composition Modulation in InAs/GaSb Superlattices, **D.W. Stokes**, R.L. Forrest, J.H. Li, S.C. Moss. B. Nosh, B. Bennett, L.J. Whitman and M. Goldberg, *J. Appl. Phys.*, **93**, 311-315 (2003).
25. Type II Antimonide Quantum Well for Mid-Infrared Laser, M.J. Yang, J.R. Meyer, W.W. Bewley, C.L. Felix, I. Vurgaftman, W. Barvosa-Carter, L.J. Whitman, R.E. Bartolo, **D.W. Stokes**, H. Lee and R.U. Martinelli, *Optical Materials*, **17**, (1-2), 179-183(2001)
26. Electrical and Magneto Transport in  $Al_{1-x}In_xAs_{1-y}Sb_y$ /GaSb Multilayers, R. Lukic-Zrnic, **D.W. Stokes**, C.L. Littler and T.D. Golding, *Semicond. Sci. Tech.*, **16**, 353-357 (2001).
27. Mid-infrared W quantum-well lasers for noncryogenic continuous-wave operation, C.L. Felix, W.W. Bewley, I. Vurgaftman, R.E. Bartolo, **D.W. Stokes**, J.R. Meyer, M.J. Yang, H. Lee, R. J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, M. Maiorov, A.R. Sugg, and G.H. Olsen, *Appl. Opt.*, **40**, 806-811 (2001).
28. Mid-Infrared “W” Lasers, I. Vurgaftman, C. L. Felix, W. W. Bewley, D. W. Stokes, R. E. Bartolo and J. R. Meyer, *Phil. Trans. R. Soc. Lond. A*, **359**, 489-503 (2001).
29. Optically- and electrically-pumped type-II “W” quantum-well lasers for the mid-IR, J. R. Meyer, W. W. Bewley, I. Vurgaftman, C. L. Felix, L. J. Olafsen, D. W. Stokes, M. J. Yang, H. Lee, R. J. Menna, R. U. Martinelli, D. Z. Garbuzov, J. C. Connolly, M. Maiorov, A. R. Sugg, and G. H. Olsen, in *Conference on Lasers and Electro-Optics*, S. Brueck, R. Fields, M. Fejer, and F. Leonberger, eds., OSA Technical Digest (Optical Society of America, 2000), paper CMM3, San Francisco, California (May 2000).
30. Type II mid-infrared lasers, Jerry R. Meyer, William W. Bewley, Igor Vurgaftman, Christopher L. Felix, Linda J. Olafsen, Edward H. Aifer, **Donna W. Stokes**, Ming J. Yang, Hao Lee, Raymond J. Menna, Ramon U. Martinelli, Dmitri Z. Garbuzov, John C. Connolly, Mikhail A. Maiorov, Alan R. Sugg, and Gregory H. Olsen, *Proc. SPIE*, **3947**, 100 (2000).
31. High Temperature W Diode Lasers Emitting at  $3.3 \mu m$ , L. J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, M. Maiorov, J.C. Connolly, A.R. Sugg, and G.H. Olsen, *Materials Research Society symposia proceedings*, **607**, 95 (2000).
32. Optical-Pumping Injection Cavity (OPIC) Mid-IR “W” Lasers with High Efficiency and Low Loss, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, J.R. Meyer, H. Lee, and R.U. Martinelli, *IEE Phot. Tech. Lett.* **12**, 477-479 (2000).

33. Continuous-Wave Operation of  $\lambda = 3.25\mu\text{m}$  Broadened Waveguide “W” Quantum-Well Diode Lasers up to  $T=195\text{ K}$ , W.W. Bewley, H. Lee, I. Vurgaftman, R.J. Menna, C.L. Felix, R.U. Martinelli, **D.W. Stokes**, D.Z. Garbuzov, J.R. Meyer, M. Maiorov, J.C. Conolly, A.R. Sugg, and G.H. Olsen, *Appl. Phys. Lett.*, **76**, 256-258 (2000).
34. Mid-IR broadened-waveguide and angled-grating distributed feedback( $\alpha$ -DFB) “W” quantum well lasers, C.L. Felix, I. Vurgaftman, R.E. Bartolo, D.W. Stokes, M.J. Jurkovic, J.R. Lindle, J.R. Meyer, M.-J. Yang, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, M. Maiorov, A.R. Sugg and G.H. Olsen, IEEE 17th International Semiconductor Laser Conference (2000).
35. High Temperature Diode and Optically-Pumped Mid-IR Lasers with Type-II “W” Quantum Wells, W.W. Bewley, L.J. Olafsen, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, M.J. Yang, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Conolly, M. Maiorov, A.R. Sugg, and G.H. Olsen, *Optics and Photonics News*, **10**, 18-19 (1999).
36. Type-II Quantum-Well “W” Lasers Emitting at  $\lambda = 5.4 - 7.3\mu\text{m}$ , **D.W. Stokes**, L.J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, J.R. Meyer, and M.J. Yang, *J. Appl. Phys.*, **86**,4729-4733 (1999).
37. Thermal Characterization of Diamond-Pressure-Bond Heat Sinking for Optically Pumped Mid-Infrared Lasers, W.W. Bewley, CL. Felix, E.H. Aifer, **D.W. Stokes**, I. Vurgaftman, L.J. Olafsen, J.R. Meyer, M.J. Yang, and H. Lee, *IEEE J. Quant. Electron.*, **35**, 1597-1601 (1999).
38. High-Efficiency Midinfrared “W” Laser with Optical Pumping Injection Cavity, C.L.Felix, W.W. Bewley, I. Vurgaftman, L.J. Olafsen, **D.W. Stokes**, J.R. Meyer, and M.J. Yang, *Appl. Phys. Lett.*, **75**, 2876-2878 (1999).
39. High-Temperature Continuous-Wave Operation of Optically-Pumped Type-II “W” Lasers from 3-6.3 microns, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, L.J. Olafsen, E.H. Aifer, J.R. Meyer, M.J. Yang, B.V. Shanabrook, H. Lee, R.U. Martinelli, J.C. Connolly, and A.R. Sugg, *Technical Digest, Summaries of papers presented at the Conference on Lasers and Electro-Optics, Optical Society of America*, **578**, 366 (1999).
40. High Temperature Continuous-Wave 3-6.1  $\mu\text{m}$  “W” Lasers with Diamond-Pressure-Bond Heat Sinking, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, E.H. Aifer, L.J. Olafsen, J.R. Meyer, M.J. Yang, B.V. Shanabrook, H. Lee, R.U. Martinelli, and A.R. Sugg, *Appl. Phys. Lett.*, **74**, 1075-1077 (1999).
41. Continuous-Wave Type-II “W” Lasers Emitting at  $\lambda = 5.4 - 7.1\ \mu\text{m}$ , C.L. Felix, W.W. Bewley, L.J. Olafsen, **D.W. Stokes**, E.H. Aifer, I. Vurgaftman, J.R. Meyer, and M.J. Yang, *IEE Phot. Tech. Lett.*, **11**, 964-966 (1999).
42. Optically Pumped Mid-infrared Type-II Lasers: Advances in High Temperature Performance, C.L. Felix, W.W. Bewley, L.J. Olafsen, **D.W. Stokes**, E.H. Aifer, I. Vurgaftman, J.R. Meyer, M.J. Yang, H. Lee, R.U. Martinelli, J.C. Connolly, A.R. Sugg and G.H. Olsen, *Proceedings of the SPIE-The International Society for Engineering*, **3628**, 130-139 (1999).

43.  $\text{Al}_{1-x}\text{In}_x\text{As}_{1-y}\text{Sb}_y/\text{GaSb}$  Effective Mass Superlattices Grown by Molecular Beam Epitaxy. **D. Washington-Stokes**, T.P. Hogan, P. Chow, T.D. Golding, U. Kirschbaum, C.L. Littler and R. Lukic, *J. Cryst. Growth*, **201-202**, 854-857 (1999).
44.  $\text{Al}_{1-x}\text{In}_x\text{As}_{1-y}\text{Sb}_y/\text{GaSb}$  Heterojunctions and Multilayers Grown by Molecular Beam Epitaxy for Effective Mass Superlattices. **D. Washington**, T. Hogan, P. Chow, T. Golding, C. Littler and U. Kirschbaum, *J. Vac. Sci. Tech. B*, **16**, 1385-1388 (1998).