

Dr. Matthew H. Kane

Marine Engineering and Technology; Materials Science and Engineering
Texas A&M University
Galveston, TX 77553

Tel: 409-740-4878 E-mail: kanem@tamug.edu

(a) Professional Preparation

Rice University	Materials Science and Engineering	B.S., 1996
Northwestern University	Materials Science and Engineering	M.S., 1997
Georgia Institute of Technology	Materials Science and Engineering	Ph.D., 2007

(b) Appointments

Texas A&M University at Galveston	Marine Engineering	Associate Professor, 2013
Massachusetts Maritime Academy	Engineering	Associate Professor, 2011
University of Oklahoma	Electrical and Computer Engineering	Assistant Professor, 2007

(c) Products

(i) Related to the proposed project

1. "Atomic Layer Deposition of Al₂O₃ on Biological Pili Substrate" Ye Zhu, Binrui Cao, Robert Nicholas, Chuanbin Mao, and **Matthew Kane**. ECS Transactions, vol. 33, pp. 43, 2010.
2. "Magnetic and optical properties of Ga_{1-x}Mn_xN grown by metalorganic chemical vapour deposition," **M. H. Kane**, A. Asghar, C. R. Vestal, M. Strassburg, J. Senawiratne, Z. J. Zhang, N. Dietz, C. J. Summers, and I. T. Ferguson. Semiconductor Science and Technology, vol. 20, pp. L5, 2005.
3. "MOCVD growth of GaN-based materials on ZnO substrates". S.-J. Wang, N. Li, E.-H. Park, Z. C. Feng, A. Valencia, J. Nause, **M.H. Kane**, C. Summers, I. Ferguson. Physica Status Solidi C, vol. 5. pp1736-1739, 2008.
4. "The Growth and Characterization of Ferromagnetic Wide Bandgap Materials for Spintronic Applications," M. H. Kane, M. Strassburg, W. E. Fenwick, A. Asghar, and I. T. Ferguson, International Journal of High Speed Electronics, 16(2) 2006, pp. 515-543.
5. "Structural investigations of Ga_{1-x}Mn_xN grown by metalorganic chemical vapor deposition," **M. H. Kane**, M. Strassburg, W. E. Fenwick, A. Asghar, A. M. Payne, S. Gupta, Q. Song, Z. J. Zhang, C. J. Summers, N. Dietz, and I. T. Ferguson., Journal of Crystal Growth, vol. 287, pp. 591, 2006.

(ii) Other significant products

1. Magnetic Properties of Bulk Zn_{1-x}Mn_xO and Zn_{1-x}Co_xO Single Crystals," M.H. Kane, K. Shalini, C.J. Summers, R. Varatharajan, J. Nause, C.R. Vestal, Z.J. Zhang, and I.T. Ferguson, Journal of Applied Physics, Vol. 97, pp. 023906-1-4, 2005.
2. "Comparison of GaMnN epilayers prepared by ion implantation and metalorganic chemical vapor deposition," **M. H. Kane**, A. Asghar, A. M. Payne, C. R. Vestal, Z. J. Zhang, M. Strassburg, J. Senawirante, N. Dietz, C. J. Summers, and I. T. Ferguson, Physica Status Solidi C, vol. 2, pp. 2441 - 2447, 2005.
3. "A nucleation study of group III-nitride multifunctional nanostructures," S. Gupta, H. Kang, M. Strassburg, A. Asghar, **M. H. Kane**, W.E. Fenwick, N. Dietz, and I. T Ferguson. Journal of Crystal Growth, vol. 287, p. 596, 2006.

4. “Growth of GaN on Silicon Substrates for LEDs”. **Matthew Kane** and Nazmul Arefin. Book Chapter in: Nitride Semiconductor LEDs: Materials, Performance, and Application. Woodhead Publishing, 2014; Huang, Kuo, Shen, eds.
5. Low temperature buffer growth for the development of vertical light emitting diodes”, R. W. Nicholas, R. W. Loshier, F. H. Zhao, S. P. Glenn, and **M. H. Kane**. Proceedings of SPIE, vol. 7422, p. 74220M, 2009.

(d) Synergetic Activities

- 1) Conference Chair for SPIE International Conference on Solid State Lighting (2010-2015)
- 2) Organizing Committee for International Conference on White LEDs and Solid State Lighting (WLED5)
- 3) Member of the Institute of Electrical and Electronic Engineers (IEEE), the Materials Research Society (MRS), SPIE, and the American Society for Engineering Education (ASEE).
- 4) Reviewer for publications in Journal of Applied Physics, Physica Status Solidi, Materials Science and Engineering B, Applied surface science, and Journal of Crystal Growth
- 5) Panel reviewer for National Science Foundation, American Society for Engineering Education Graduate Fellowship programs, and U.S. Department of Energy SBIR/STTR panels

(e) Collaborators & Other Affiliations

- **Collaborators and Co-editors:**
A. Hoffmann – Technical University Berlin; N. Dietz – Georgia State University; W. Gehlhoff – Technical University Berlin; C. Mao – Univ. of Oklahoma; G. Newman – Univ. of Oklahoma; P. McCann – Univ. of Oklahoma; Y. Qiu – Jet Propulsion Laboratory; Lu Na – University of North Carolina Charlotte, Q. Hao – University of Arizona, J-J Huang – National Taiwan University; Christian Wetzel – Rensselaer Polytechnic Institute
- **Graduate Advisors and Postdoctoral Sponsors:**
Ph.D. advisor: Ian Ferguson (Missouri Science and Technology); Christopher Summers (Georgia Institute of Technology)
M.S. advisor: Thomas O. Mason (Northwestern University)
- **Advisees**
Ph.D. students: Robert Nicholas (Raytheon); Nazmul Arefin (University of Oklahoma)
Masters students: Ye Zhu, Juan Herrera
Undergraduate students: Ross Loshier, Reston Dooley, Stephen Glenn, Matthew Stall, Samuel Crenshaw (current), Dillon Cole (current)
Postdoc: none