






# Erica M.K. Davis, Ph.D.

## Technology Specialist, Patent Agent

-  Atlanta, GA
-  404-724-2773
-  edavis@fr.com

## Overview

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### About Erica

Erica M.K. Davis, Ph.D., is a technology specialist and patent agent in the Atlanta office of Fish & Richardson P.C. Her practice consists of patent prosecution and litigation in the areas of nanotechnology, electrical and computer technology, cleantech, manufacturing, internet technologies, and software.

Prior to joining the firm, Dr. Davis worked as a process engineer at an additive manufacturing startup, where she participated in both R&D efforts as well as process development and optimization. Dr. Davis completed her doctoral dissertation at the University of Texas at Austin in electrical engineering, and has authored/co-authored over 10 academic journal publications in the field of semiconductor optoelectronics.

### Focus Areas

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### Services

- Patent

### Industries

- Cleantech
- Electrical and Computer Technology
- Internet

- Manufacturing
- Nanotechnology
- Software

## Education

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Ph.D., Electrical Engineering, University of Texas at Austin (2013) Dissertation entitled "Rare-earth monopnictide alloys for tunable, epitaxial metals"

M.S., Electrical Engineering, University of Texas at Austin (2010)

B.S., Physics, with minor in Hispanic Studies, Carnegie Mellon University (2007)

## Insights

### Selected Publications

E.M. Krivoy, S. Rahimi, H.P. Nair, R. Salas, S.J. Maddox, D.J. Ironside, Y. Jiang, G. Kelp, G. Shvets, D. Akinwande, and S.R. Bank, "Growth and characterization of single crystal rocksalt LaAs using LuAs barrier layers," *Appl. Phys. Lett.*, vol. 101, no. 22, pp. 221908, Nov. 2012.

E.M. Krivoy, H.P. Nair, A.M. Crook, S. Rahimi, S.J. Maddox, R. Salas, D.A. Ferrer, V.D. Dasika, D. Akinwande, and S.R. Bank, "Growth and characterization of LuAs films and nanostructures," *Appl. Phys. Lett.*, vol. 101, no. 14, pp. 141910, Oct. 2012.

E.M. Krivoy, A. Vasudev, S. Rahimi, R. Synowicki, H.P. Nair, D.J. Ironside, G. Kelp, G. Shvets, D. Akinwande, M.L. Lee, M. Brongersma and S.R. Bank, "Rare-earth monopnictide alloys for tunable, epitaxial semimetallic films," in preparation for *Nano Lett*, July 2015.

V.D. Dasika, E.M. Krivoy, H.P. Nair, K.W. Park, E.T. Yu, and S.R. Bank, "InAs quantum dot size and density control using Bi as a surfactant," *Appl. Phys. Lett.*, vol. 105, no. 25, pp. 253104, Dec. 2014.

K.W. Park, E.M. Krivoy, H.P. Nair, S.R. Bank, and E.T. Yu, "Cross-sectional scanning thermal microscopy of ErAs/GaAs superlattices grown by molecular beam epitaxy," *Nanotechnology*, vol. 26, no. 26, pp. 265701, July 2015.

S. Rahimi, E.M. Krivoy, J. Lee, M.E. Michael, S.R. Bank and D. Akinwande, "Temperature and thickness

dependence of electrical resistivity of  $\text{La}(x)\text{Lu}(1-x)\text{As}$ ,” AIP Advances, vol. 3, 082102, Aug. 2013.

R. Salas, E. M. Krivoy, A. M. Crook, H. P. Nair and S. R. Bank. Proceedings of SPIE. 8106, 81060P (2011).

B. Wang, E. Hinds, and E. Krivoy. Proceedings of SPIE. 7461, 746110 (2009).

## Languages

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- English
- Spanish