



Exponent®
Engineering & Scientific Consulting

Ethan Kennon, Ph.D.

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Professional Profile

Dr. Kennon specializes in electronic processing, assembly, failure, and materials analysis. He has worked across a range from fundamental material properties and processing, up to system level design and troubleshooting.

Dr. Kennon has experience with a wide range of sample prep and materials analysis techniques that are useful for diagnosing issues with consumer electronic devices and their components. Dr. Kennon's interests are in the interactions between electronic properties and their relationship to material structure and processing.

Prior to joining Exponent, Dr. Kennon assured the quality and reliability of high frequency integrated circuits and their packages for a III-V semiconductor fab. For this work, he diagnosed wafer test issues and correlated large data sets of IC performance to fab process control monitor (PCM) data, extracted product lifetimes from HTOL reliability data and evaluated failure statistics from infant reliability tests, and performed FA and retrospective data analysis on customer failures. He organized and led risk assessments when quality issues arose then implemented corrective actions where processes could be improved.

Academic Credentials & Professional Honors

M.S., Management, University of Florida, 2017

Ph.D., Materials Science and Engineering, University of Florida, 2017

M.S., Materials Science and Engineering, University of Florida, 2015

B.S., Electronic Materials Engineering, University of California, Davis, 2013

Herbert Wertheim College of Engineering Graduate Student Fellowship Award 2013-2017

Prior Experience

IC Product Engineer, Keysight Technologies, 2017-2022

Publications

Barrett CSC, Atassi A, Kennon EL, Weinrich Z, Haynes K, Bao X-Y, Martin P, Jones KS. Dissolution of antiphase domain boundaries in GaAs on Si(001) via post-growth annealing. *Journal of Materials Science* 2019; 54(9):7028–7034

Kennon EL, Orzali T, Yin X, Vert A, Lind AG, Jones KS. Deactivation of electrically supersaturated Te doped InGaAs grown by MOCVD. Journal of Materials Science 2017; 52(18):10879–10885

Barrett CSC, Martin TP, Bao X-Y, Kennon EL, Gutierrez L, Martin P, Sanchez E, Jones KS. Effect of bulk growth temperature on antiphase domain boundary annihilation rate in MOCVD-grown GaAs on Si(001). Journal of Crystal Growth 2016; 15:39-44

Lind AG, Martin TP, Sorg VC, Kennon EL, Truong VQ, Aldridge Jr HL, Hatem C, Thompson MO, Jones KS. Activation of Si implants into InAs characterized by Raman scattering. Journal of Applied Physics 2016; 119:095705

Borland JO, Sugitani M, Oesterlin P, Johndon W, Buyuklimanli T, Hengstebeck R, Kennon EL, Jones KS, Joshi A. Liquid Phase Epitaxy (LPE) formation of localized high quality and mobility Ge & SiGe by high dose Ge-implantation with laser melt annealing for 10nm and 7nm node CMOS technology. ECS Transactions 2014; 64:127-145

Presentations

Kennon EL, Orzali T, Xin Y, Aldridge Jr HL, Vollmer K, Truong VQ, Lind AG, Barrett CSC, Jones KS. Thermal deactivation of Tellurium doping in In.₅₃Ga.₄₇As grown by MOCVD. Poster presentation, Materials Research Society Spring Meeting, Phoenix, AZ, 2016.