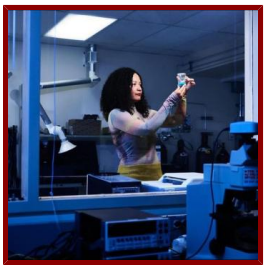
Stanford



Debbie Senesky

Associate Professor of Aeronautics and Astronautics, of Electrical Engineering and Senior Fellow at the Precourt Institute for Energy

CONTACT INFORMATION

- **Administrator**

  Corinna Haussecker - Administrative Associate

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Bio

BIO

Debbie G. Senesky is an Associate Professor at Stanford University in the Aeronautics and Astronautics Department and the Electrical Engineering Department. In addition, she is the Principal Investigator of the EXtreme Environment Microsystems Laboratory (XLab). Her research interests include the development of nanomaterials for extreme harsh environments, high-temperature electronics for Venus exploration, and microgravity synthesis of nanomaterials. In the past, she has held positions at GE Sensing (formerly known as NovaSensor), GE Global Research Center, and Hewlett Packard. She received the B.S. degree (2001) in mechanical engineering from the University of Southern California. She received the M.S. degree (2004) and Ph.D. degree (2007) in mechanical engineering from the University of California, Berkeley. Prof. Senesky is the Site Director of nano@stanford. She is currently the co-editor of two technical journals: IEEE Journal of Microelectromechanical Systems and Sensors. In recognition of her research, she received the Emerging Leader Abie Award from AnitaB.org in 2018, Early Faculty Career Award from the National Aeronautics and Space Administration (NASA) in 2012, Gabilan Faculty Fellowship Award in 2012, and Sloan Ph.D. Fellowship from the Alfred P. Sloan Foundation in 2004.

Prof. Senesky's career path and research has been featured by Scientific American, Seeker, People Behind the Science podcast, The Future of Everything radio show, Space.com, and NPR's Tell Me More program. More information about Prof. Senesky can be found at https://xlab.stanford.edu and on Instagram (@astrodebs).

ACADEMIC APPOINTMENTS

- Associate Professor, Aeronautics and Astronautics
- Associate Professor, Electrical Engineering
- Senior Fellow, Precourt Institute for Energy
- Member, Bio-X
- Affiliate, Precourt Institute for Energy

HONORS AND AWARDS

- John Blume Faculty Scholar, Stanford University (2020)
- Selected Participant, Stanford Faculty Entrepreneurial Leadership Program (2019)
- Emerging Leader Abie Award in Honor of Denice Denton, AnitaB.org (2018)

- Selected Participant, US Frontiers of Engineering Symposium, National Academy of Engineering (2016)
- Golden Reviewer, IEEE Electron Devices Letters (2015)
- Early Faculty Career Award, National Aeronautics and Space Administration (NASA) (2012)
- Frederick E. Terman Faculty Fellow, Stanford University (2012)
- Gabilan Faculty Fellow, Stanford University (2012)
- Sloan Ph.D. Fellowship, Alfred P. Sloan Foundation (2004-2006)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Orbital Reef University Advisory Council (2022 - present)
- Co-chair, Faculty Women's Forum Steering Committee (2022 - present)
- Mentor, The Brooke Owens Fellowship (2022 - present)
- Editor, IEEE Journal of Microelectromechanical Systems (2019 - present)
- Editor, Micromachines (Journal) (2017 - present)
- Editor, Sensors (Journal) (2015 - present)
- Advisory Board, Multi-User Silicon Carbide Research and Fabrication Facility (University of Arkansas) (2022 - present)
- Advisory Board, UC Berkeley, Department of Mechanical Engineering (2016 - present)
- Faculty Advisor, Stanford Chapter, National Society of Women Engineers (SWE) (2018 - present)
- Board Member, Scientific Adventures for Girls (2015 - 2022)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- B.S., University of Southern California , Mechanical Engineering (2001)
- M.S., University of California, Berkeley , Mechanical Engineering (2004)
- Ph.D., University of California, Berkeley , Mechanical Engineering (2007)

LINKS

- Scientific American, "What It Takes to Grow Crystals in Space": https://www.scientificamerican.com/article/what-it-takes-to-grow-crystals-in-space/
- Inside the Lab That Wants to Make Graphene Aerogel in Space: https://www.youtube.com/watch?v=nctQVS8EJ-8
- What could we make if we learned how to manufacture things in space?: https://engineering.stanford.edu/magazine/article/what-could-we-make-if-we-learned-how-manufacture-things-space
- How do we build electronic materials that can survive radiation?: https://aa.stanford.edu/news/how-do-we-build-electronic-materials-can-survive-radiation
- Debbie Senesky receives the 2018 Emerging Leader Abie Award: https://news.stanford.edu/thedish/2018/08/14/debbie-senesky-receives-the-2018-emerging-leader-abie-award/
- Interview on "Exploring Venus": https://engineering.stanford.edu/magazine/article/debbie-senesky-developing-electronics-extremes-space
- New nano devices could withstand extreme environments in space and on earth: https://news.stanford.edu/2017/03/28/new-nano-devices-withstand-extreme-environments-of-space/
- Meet our Faculty: https://news.stanford.edu/2016/12/20/meet-stanford-faculty/
- Interview on People Behind the Science: http://www.peoplebehindthescience.com/dr-debbie-senesky/
- Debbie Senesky receives a 2012 NASA Early Career Faculty Award: https://www.nasa.gov/directorates/spacetech/strg/2012_space_tech_opps_senesky.html

Teaching

COURSES

2023-24

- Advanced Micro and Nano Fabrication Laboratory: ENGR 241 (Spr)
- How to Shoot for the Moon: AA 107N, DESIGN 187N (Spr)
- Lightweight Structures: AA 151 (Aut)

2022-23

- How to Shoot for the Moon: AA 107N, DESIGN 187N (Spr)
- Lightweight Structures: AA 151 (Aut)
- Smart Structures: AA 280 (Win)

2021-22

- Analysis of Structures: AA 240 (Aut)
- Smart Structures: AA 280 (Win)

2020-21

- 3D Printed Aerospace Structures: AA 119N (Spr)
- Lightweight Structures: AA 151 (Aut)
- Smart Structures: AA 280 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Guillem Megias i Homar, Tanay Topac

Postdoctoral Faculty Sponsor

Zhou Li

Doctoral Dissertation Advisor (AC)

Sergio Cordero, Jasmine Cox, Katheryn Kornegay, Anand Lalwani

Orals Evaluator

Tanay Topac

Master's Program Advisor

Justin Kao, Sharon Njeri, Arantxa Ramos del Valle

Publications

PUBLICATIONS

- **Thermal stability study of gallium nitride based magnetic field sensor** *JOURNAL OF APPLIED PHYSICS*
  Shetty, S., Kuchuk, A., Zamani-Alavijeh, M., Hassan, A., Eisner, S. R., de Oliveira, F., Krone, A., Harris, J., Thompson, J. P., Eldose, N. M., Mazur, Y. I., Huitink, D., Senesky, et al
  2023; 134 (14)
- **Temperature and field dependencies of current leakage mechanisms in IrO_x contacts on InAlN/GaN heterostructures** *APPLIED PHYSICS LETTERS*
  Eisner, S. R., Senesky, D. G.

2023; 123 (15)

- **Investigation of mechanical properties and structural integrity of graphene aerogels via molecular dynamics simulations.** *Physical chemistry chemical physics : PCCP*
  Zheng, B., Liu, C., Li, Z., Carraro, C., Maboudian, R., Senesky, D. G., Gu, G. X.
  2023
- **Enhancement-Mode GaN Transistor Technology for Harsh Environment Operation** *IEEE ELECTRON DEVICE LETTERS*
  Yuan, M., Niroula, J., Xie, Q., Rajput, N. S., Fu, K., Luo, S., Das, S., Bin Iqbal, A., Sikder, B., Isamotu, M., Oh, M., Eisner, S. R., Senesky, et al
  2023; 44 (7): 1068-1071
- **Synthesis and characterization of UiO-66-NH2 incorporated graphene aerogel composites and their utilization for absorption of organic liquids** *CARBON*
  Li, Z., Liu, C., Frick, J., Davey, A. K., Dods, M. N., Carraro, C., Senesky, D. G., Maboudian, R.
  2023; 201: 561-567
- **Hall-Effect Sensor Design With Physics-Informed Gaussian Process Modeling** *IEEE SENSORS JOURNAL*
  Xu, Y., Lalwani, A., Arora, K., Zheng, Z., Renteria, A., Senesky, D. G., Wang, P.
  2022; 22 (23): 22519-22528
- **Biological growth as an alternative approach to on and off-Earth construction** *FRONTIERS IN BUILT ENVIRONMENT*
  Lipinska, M., Maurer, C., Cadogan, D., Head, J., Dade-Robertson, M., Paulino-Lima, I., Liu, C., Morrow, R., Senesky, D. G., Theodoridou, M., Rheinstadter, M. C., Zhang, M., Rothschild, et al
  2022; 8
- **Effects of Part Orientation, Printer Selection, and Infill Density on Mechanical Properties and Production Cost of 3D Printed Flexural** *MANUFACTURING LETTERS*
  Chen, R., Baich, L., Lauer, J., Senesky, D. G., Manogharan, G.
  2022; 33: 549-560
- **Nanoindentation characterization of thin film stack structures by finite element analysis and experiments using acoustic emission testing** *MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING*
  Liu, C., Nagler, O., Tremmel, F., Unterreitmeier, M., Frick, J. J., Gu, X., Senesky, D. G.
  2022; 147
- **On-Orbit Implementation of Discrete Isolation Schemes for Improved Reliability of Serial Communication Buses** *IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS*
  Holliday, M., Manchester, Z., Senesky, D. G.
  2022; 58 (4): 2973-2982
- **Effects of Part Orientation, Printer Selection, and Infill Density on Mechanical Properties and Production Cost of 3D Printed Flexural Specimens** *MANUFACTURING LETTERS*
  Chen, R., Baich, L., Lauer, J., Senesky, D. G., Manogharan, G.
  2022; 33: 549-560
- **Dynamic Biasing for Improved On-Orbit Total-Dose Lifetimes of Commercial Electronic Devices** *IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS*
  Holliday, M., Heuser, T., Manchester, Z., Senesky, D.
  2022; 58 (4): 3326-3336
- **High Temperature Degradation Modes Observed in Gallium Nitride-Based Hall-Effect Sensors Magnetic field sensors** *JOURNAL OF ELECTRONIC PACKAGING*
  Krone, A., Kasitz, J., Huitink, D., Alpert, H., Senesky, D. G., Shetty, S., Salamo, G.
  2022; 144 (2)
- **Effect of proton irradiation temperature on persistent photoconductivity in zinc oxide metal-semiconductor-metal ultraviolet photodetectors** *JOURNAL OF APPLIED PHYSICS*
  Heuser, T. A., Chapin, C. A., Holliday, M. A., Wang, Y., Senesky, D. G.
  2022; 131 (15)
- **Cluster-based acoustic emission signal processing and loading rate effects study of nanoindentation on thin film stack structures** *MECHANICAL SYSTEMS AND SIGNAL PROCESSING*
  Liu, C., Nagler, O., Tremmel, F., Unterreitmeier, M., Frick, J. J., Patil, R. P., Gu, X., Senesky, D. G.

2022; 165

- **Hall-Effect Sensor Technique for No Induced Voltage in AC Magnetic Field Measurements Without Current Spinning** *IEEE SENSORS JOURNAL*
  Lalwani, A., Yalamarthy, A., Alpert, H. S., Holliday, M., Eisner, S. R., Chapin, C. A., Senesky, D. G.
  2022; 22 (2): 1245-1251

- **Selective aqueous ammonia sensors using electrochemical stripping and capacitive detection** *AIChE Journal*
  Lalwani, A., Dong, H., Mu, L., Woo, K., Johnson, H. A., Holliday, M. A., Guo, J., Senesky, D. G., Tarpeh, W. A.
  2021

- **Extended Exposure of Gallium Nitride Heterostructure Devices to a Simulated Venus Environment**
  Eisner, S. R., Alpert, H. S., Chapin, C. A., Yalamarthy, A., Satterthwaite, P. F., Nasiri, A., Port, S., Ang, S., Senesky, D. G., IEEE
  IEEE.2021

- **Closed-form orthotropic constitutive model for aligned square array mesostructure** *ADDITIVE MANUFACTURING*
  Chen, R., Kaplan, A. F., Senesky, D. G.
  2020; 36

- **Nanoarchitectonics for Wide Bandgap Semiconductor Nanowires: Toward the Next Generation of Nanoelectromechanical Systems for Environmental Monitoring.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
  Pham, T. A., Qamar, A., Dinh, T., Masud, M. K., Rais-Zadeh, M., Senesky, D. G., Yamauchi, Y., Nguyen, N. T., Phan, H. P.
  2020; 7 (21): 2001294

- **Low Offset and Noise in High Biased GaN 2DEG Hall-Effect Plates Investigated With Infrared Microscopy** *JOURNAL OF MICROELECTROMECHANICAL SYSTEMS*
  Dowling, K. M., Liu, T., Alpert, H. S., Chapin, C. A., Eisner, S. R., Yalamarthy, A., Satterthwaite, P. F., Kock, H., Ausserlechner, U., Asheghi, M., Goodson, K. E., Senesky, D. G.
  2020; 29 (5): 669–76

- **Self-powered monolithic accelerometer using a photonic gate** *NANO ENERGY*
  Nguyen, T., Dinh, T., Phan, H., Dau, V., Nguyen, T., Joy, A., Bahreyni, B., Qamar, A., Rais-Zadeh, M., Senesky, D. G., Nguyen, N., Dao, D.
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- **Ultra-High-Q Gallium Nitride SAW Resonators for Applications With Extreme Temperature Swings** *JOURNAL OF MICROELECTROMECHANICAL SYSTEMS*
  Qamar, A., Eisner, S. R., Senesky, D. G., Rais-Zadeh, M.
  2020; 29 (5): 900–905

- **Nanoarchitectonics for Wide Bandgap Semiconductor Nanowires: Toward the Next Generation of Nanoelectromechanical Systems for Environmental Monitoring** *ADVANCED SCIENCE*
  Pham, T., Qamar, A., Dinh, T., Masud, M., Rais-Zadeh, M., Senesky, D. G., Yamauchi, Y., Nguyen, N., Phan, H.
  2020

- **Analysis of mobility-limiting mechanisms of the two-dimensional hole gas on hydrogen-terminated diamond** *PHYSICAL REVIEW B*
  Peterson, R., Malakoutian, M., Xu, X., Chapin, C., Chowdhury, S., Senesky, D. G.
  2020; 102 (7)

- **Effective In-Plane Moduli of Fused Filament Fabrication Material with Aligned Mesostructure** *JOM*
  Chen, R., Senesky, D.
  2020; 72 (3): 1314–23

- **Lithography and Etching-Free Microfabrication of Silicon Carbide on Insulator Using Direct UV Laser Ablation** *ADVANCED ENGINEERING MATERIALS*
  Tuan-Khoa Nguyen, Hoang-Phuong Phan, Dowling, K. M., Yalamarthy, A., Toan Dinh, Balakrishnan, V., Liu, T., Chapin, C. A., Quoc-Dung Truong, Van Thanh Dau, Goodson, K. E., Senesky, D. G., Dzung Viet Dao, Nam-Trung Nguyen
  2020

- **Extreme Temperature Modeling of AlGaN/GaN HEMTs** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
  Albahrani, S., Mahajan, D., Kargarrazi, S., Schwantuschke, D., Gneiting, T., Senesky, D. G., Khandelwal, S.
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- **Monolithic mtesla-level magnetic induction by self-rolled-up membrane technology.** *Science advances*
  Huang, W., Yang, Z., Kraman, M. D., Wang, Q., Ou, Z., Rojo, M. M., Yalamarthy, A. S., Chen, V., Lian, F., Ni, J. H., Liu, S., Yu, H., Sang, et al
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- **Deployment of InAlN/GaN Hall-effect Sensors for Bucket Transformer Monitoring and Forecasting**
  Janowitz, J., Holliday, M., Dowling, K., Yeung, B., Kumar, S., Peterson, R., Alpert, H., Chapin, C., Lopez, J., Senesky, D. G., IEEE
  IEEE.2020
- **Deployment of InAlN/GaN Hall-effect Sensors for Bucket Transformer Monitoring and Forecasting** *2020 IEEE SENSORS*
  Janowitz, J., Holliday, M., Dowling, K., Yeung, B., Kumar, S., Peterson, R., Alpert, H., Chapin, C., Lopez, J., Senesky, D. G.
  2020: 4
- **A Laterally Vibrating Lithium Niobate MEMS Resonator Array Operating at 500 °C in Air.** *Sensors (Basel, Switzerland)*
  Eisner, S. R., Chapin, C. A., Lu, R. n., Yang, Y. n., Gong, S. n., Senesky, D. G.
  2020; 21 (1)
- **Significant Phonon Drag Enables High Power Factor in the AlGaN/GaN Two-Dimensional Electron Gas.** *Nano letters*
  Yalamarthy, A. S., Munoz Rojo, M., Bruefach, A., Boone, D., Dowling, K. M., Satterthwaite, P. F., Goldhaber-Gordon, D., Pop, E., Senesky, D. G.
  2019
- **Effect of Geometry on Sensitivity and Offset of AlGaN/GaN and InAlN/GaN Hall-Effect Sensors** *IEEE SENSORS JOURNAL*
  Alpert, H. S., Dowling, K. M., Chapin, C. A., Yalamarthy, A., Benbrook, S. R., Koeck, H., Ausserlechner, U., Senesky, D. G.
  2019; 19 (10): 3640–46
- **Modeling of radiation-induced defect recovery in 3C-SiC under high field bias conditions** *COMPUTATIONAL MATERIALS SCIENCE*
  Peterson, R., Senesky, D.
  2019; 161: 10–15
- **500 degrees C SiC PWM Integrated Circuit** *IEEE TRANSACTIONS ON POWER ELECTRONICS*
  Kargarrazi, S., Elahipanah, H., Saggini, S., Senesky, D., Zetterling, C.
  2019; 34 (3): 1997–2001
- **Stable Operation of AlGaN/GaN HEMTs for 25 h at 400C in air** *IEEE JOURNAL OF THE ELECTRON DEVICES SOCIETY*
  Kargarrazi, S., Yalamarthy, A., Satterthwaite, P. F., Blankenberg, S., Chapin, C., Senesky, D. G.
  2019; 7 (1): 931–35
- **Gallium Nitride Photodetector Measurements of UV Emission from a Gaseous CH4/O-2 Hybrid Rocket Igniter Plume**
  Alpert, H. S., Yalamarthy, A., Satterthwaite, P. F., Jens, E., Rabinovitch, J., Scandrette, N., Newaz, A. M., Karp, A. C., Senesky, D. G., IEEE
  IEEE.2019
- **Process-induced anomalous current transport in graphene/InAlN/GaN heterostructured diodes**
  Satterthwaite, P. F., Yalamarthy, A., Vaziri, S., Rojo, M., Pop, E., Senesky, D. G., IEEE
  IEEE.2019
- **Strain Effect in Highly-Doped n-Type 3C-SiC-on-Glass Substrate for Mechanical Sensors and Mobility Enhancement** *PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE*
  Hoang-Phuong Phan, Tuan-Khoa Nguyen, Toan Dinh, Cheng, H., Mu, F., Iacopi, A., Hold, L., Dzung Viet Dao, Suga, T., Senesky, D. G., Nam-Trung Nguyen
  2018; 215 (24)
- **High Responsivity, Low Dark Current Ultraviolet Photodetectors Based on Two-Dimensional Electron Gas Interdigitated Transducers** *ACS PHOTONICS*
  Satterthwaite, P. F., Yalamarthy, A., Scandrette, N. A., Newaz, A. M., Senesky, D. G.
  2018; 5 (11): 4277–82
- **Highly sensitive pressure sensors employing 3C-SiC nanowires fabricated on a free standing structure** *MATERIALS & DESIGN*
  Hoang-Phuong Phan, Dowling, K. M., Tuan Khoa Nguyen, Toan Dinh, Senesky, D. G., Namazu, T., Dzung Viet Dao, Nam-Trung Nguyen
  2018; 156: 16–21
- **Highly sensitive 4H-SiC pressure sensor at cryogenic and elevated temperatures** *MATERIALS & DESIGN*
  Tuan-Khoa Nguyen, Hoang-Phuong Phan, Toan Dinh, Dowling, K. M., Foisal, A., Senesky, D. G., Nam-Trung Nguyen, Dzung Viet Dao
  2018; 156: 441–45

- **A Single Input Multiple Output (SIMO) Variation-Tolerant Nanosensor.** *ACS sensors*
  Moon, D., Kim, B., Peterson, R., Badokas, K., Seol, M., Senesky, D. G., Han, J., Meyyappan, M.
  2018
- **Characterization of the piezoresistance in highly doped p-type 3C-SiC at cryogenic temperatures.** *RSC advances*
  Phan, H. P., Dowling, K. M., Nguyen, T. K., Chapin, C. A., Dinh, T., Miller, R. A., Han, J., Iacopi, A., Senesky, D. G., Dao, D. V., Nguyen, N. T.
  2018; 8 (52): 29976-29979
- **Tuning Electrical and Thermal Transport in AlGaN/GaN Heterostructures via Buffer Layer Engineering** *ADVANCED FUNCTIONAL MATERIALS*
  Yalamarthy, A., So, H., Rojo, M., Suria, A. J., Xu, X., Pop, E., Senesky, D. G.
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  Miller, R. A., So, H., Chiamori, H. C., Dowling, K. M., Wang, Y., Senesky, D. G.
  2017; 111 (24)
- **In situ ultraviolet shock radiance measurements using GaN-on-sapphire photodetectors** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Miller, R. A., Cruden, B. A., Martinez, R., Senesky, D. G.
  2017; 88 (11): 115004
- **Highly antireflective AlGaN/GaN ultraviolet photodetectors using ZnO nanorod arrays on inverted pyramidal surfaces** *APPLIED SURFACE SCIENCE*
  So, H., Lim, J., Suria, A. J., Senesky, D. G.
  2017; 409: 91-96
- **Lithography-free microfabrication of AlGaN/GaN 2DEG strain sensors using laser ablation and direct wire bonding** *MICROELECTRONIC ENGINEERING*
  Dowling, K. M., So, H., Toor, A., Chapin, C. A., Senesky, D. G.
  2017; 173: 54-57
- **Profile Evolution of High Aspect Ratio Silicon Carbide Trenches by Inductive Coupled Plasma Etching** *JOURNAL OF MICROELECTROMECHANICAL SYSTEMS*
  Dowling, K. M., Ransom, E. H., Senesky, D. G.
  2017; 26 (1): 135-142
- **Suppression of Persistent Photoconductivity in AlGaN/GaN Ultraviolet Photodetectors Using In Situ Heating** *IEEE ELECTRON DEVICE LETTERS*
  Hou, M., So, H., Suria, A. J., Yalamarthy, A. S., Senesky, D. G.
  2017; 38 (1): 56-59
- **LOW-TEMPERATURE AND PRESSURE RESPONSE OF InAlN/GaN RING-SHAPED HIGH ELECTRON MOBILITY TRANSISTORS**
  Chapin, C. A., Miller, R. A., Chen, R., Dowling, K. M., Senesky, D. G., IEEE
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- **ZnO nanorod arrays and direct wire bonding on GaN surfaces for rapid fabrication of antireflective, high-temperature ultraviolet sensors** *APPLIED SURFACE SCIENCE*
  So, H., Senesky, D. G.
  2016; 387: 280-284
- **Wafer-level MOCVD growth of AlGaN/GaN-on-Si HEMT structures with ultra-high room temperature 2DEG mobility** *AIP ADVANCES*
  Xu, X., Zhong, J., So, H., Norvilas, A., Sommerhalter, C., Senesky, D. G., Tang, M.
  2016; 6 (11)
- **DC characteristics of ALD-grown Al2O3/AlGaN/GaN MIS-HEMTs and HEMTs at 600 degrees C in air** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
  Suria, A. J., Yalamarthy, A. S., So, H., Senesky, D. G.
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- **A microfabricated sun sensor using GaN-on-sapphire ultraviolet photodetector arrays** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Miller, R. A., So, H., Chiamori, H. C., Suria, A. J., Chapin, C. A., Senesky, D. G.
  2016; 87 (9)

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  So, H., Senesky, D. G.
  2016; 49 (28)
- **Continuous V-Grooved AlGaN/GaN Surfaces for High-Temperature Ultraviolet Photodetectors** *IEEE SENSORS JOURNAL*
  So, H., Lim, J., Senesky, D. G.
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  So, H., Hou, M., Jain, S. R., Lim, J., Senesky, D. G.
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- **Strain- and temperature-induced effects in AlGaN/GaN high electron mobility transistors** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
  Yalamarthy, A. S., Senesky, D. G.
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- **Low-resistance gateless high electron mobility transistors using three-dimensional inverted pyramidal AlGaN/GaN surfaces** *APPLIED PHYSICS LETTERS*
  So, H., Senesky, D. G.
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- **4H-SiC N-Channel JFET for Operation in High-Temperature Environments** *IEEE JOURNAL OF THE ELECTRON DEVICES SOCIETY*
  Lien, W., Damrongplasit, N., Paredes, J. H., Senesky, D. G., Liu, T. K., Pisano, A. P.
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- **Operation of ohmic Ti/Al/Pt/Au multilayer contacts to GaN at 600 degrees C in air** *APPLIED PHYSICS LETTERS*
  Hou, M., Senesky, D. G.
  2014; 105 (8)
- **Temperature sensor based on 4H-silicon carbide pn diode operational from 20 degrees C to 600 degrees C** *APPLIED PHYSICS LETTERS*
  Zhang, N., Lin, C., Senesky, D. G., Pisano, A. P.
  2014; 104 (7)
- **Characterization of gallium nitride microsystems within radiation and high-temperature environments** *Conference on Reliability, Packaging, Testing, and Characterization of MOEMS/MEMS, Nanodevices, and Nanomaterials XIII*
  Chiamori, H. C., Hou, M., Chapin, C. A., Shankar, A., Senesky, D. G.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Emerging GaN-based HEMTs for mechanical sensing within harsh environments** *Conference on Sensors for Extreme Harsh Environments*
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