



MSEC Matters

TEXAS STATE UNIVERSITY
ISSUE II • FALL 2021

*Silicon Carbide imaged by the Hirox Digital Microscope
Acquired by Alan Martinez, ARSC Staff*

Letter From the Director

We are pleased to share this second edition of our Materials Science, Engineering, and Commercialization (MSEC) newsletter. We are now publishing this newsletter twice a year to keep everyone informed about major achievements, milestones, and changes in our program.



I am so honored to have been named Interim Director of the MSEC program. Our previous director, Dr. Jennifer Irvin, remains as Associate Director while taking on her new role as Co-Director of the Materials Application Research Center. As Interim Director, I hope to build upon the outstanding work of the past Director by bringing to bear my past experience directing and advising other PhD programs. I consider the best part of my new job so far has been getting better acquainted with the exceptional students and faculty who make the MSEC program so unique.

As we begin 2022 we mark an exciting milestone for the MSEC program: 10 years ago, in 2012, we admitted our first PhD student. This Spring semester we will celebrate our 10th anniversary with a special symposium featuring our founding directors, current faculty and students, and distinguished alumni of the program as we look back on the past, evaluate the present, and envision the future of the MSEC program.

This Spring, as we continue to adapt to the challenges of the evolving COVID pandemic, we remain committed to offering our students an exceptional educational, research, and business training opportunity in a healthy, safe, and inclusive community for all.

Sincerely,

A handwritten signature in black ink that reads "Sean Michael Kerwin".

Dr. Sean Kerwin
MSEC Interim Director

IN THIS ISSUE

Letter From the Director · P. 2

Student Achievements · P. 3

Faculty Achievements · P. 3

Dr. Irvin Mentor Award · P. 4

MSEC Alumni Focus · P. 5

MSEC Student Club · P. 5

New MSEC Faculty · P. 6

Advancing to Candidacy · P. 7

Graduates · P.7

TEXAS STATE
MATERIALS SCIENCE,
ENGINEERING, AND
COMMERCIALIZATION



Fall 2021 Fellowship Recipients

Maria Camila Belduque Correa

- Fall 2021 Doctoral Merit Fellowship

Chandan Howlader

- Fall 2021 Doctoral Research Support Fellowship



Faculty Spotlight

DR. XIJUN "JEFF" SHI

Dr. Xijun (Jeff) Shi, Assistant Professor in the Ingram School of Engineering, won the Texas State New Ventures Competition and was selected as a 2021 U.S. Department of Agriculture E. Kika De La Garza Fellow, both for work with cementitious materials containing recycled aggregates!



Faculty Recognitions

DENISE M. TRAUTH ENDOWED PRESIDENTIAL RESEARCH PROFESSORSHIP

Dr. Alexander Korienko, Chemistry and Biochemistry

TEXAS STATE UNIVERSITY DISTINGUISHED PROFESSOR AND REGENTS' PROFESSOR

Dr. Rodney Rhode, College of Health Professions

PRESIDENTIAL DISTINCTION AWARD FOR EXCELLENCE IN SCHOLARLY/CREATIVE ACTIVITIES

Dr. Xiaoyu Xue, Chemistry and Biochemistry

PRESIDENTIAL DISTINCTION AWARD FOR EXCELLENCE IN TEACHING

Dr. Cynthia Luxford, Chemistry and Biochemistry

PRESIDENTIAL DISTINCTION AWARD FOR EXCELLENCE IN SERVICE

Dr. Shannon Weigum, Biology

COLLEGE ACHIEVEMENT AWARD FOR EXCELLENCE IN SCHOLARLY/CREATIVE ACTIVITIES

Dr. Bahram Asiabanpour, Ingram School of Engineering

Dr. Tania Betancourt, Chemistry and Biochemistry

Dr. Zhijie "Sasha" Dong, Ingram School of Engineering

COLLEGE ACHIEVEMENT AWARD FOR EXCELLENCE IN TEACHING

Dr. Sean Kerwin, Chemistry and Biochemistry

COLLEGE ACHIEVEMENT AWARD FOR EXCELLENCE IN SERVICE

Dr. Ben Martin, Chemistry and Biochemistry

Dr. Nikoleta Theodoropoulou, Physics



Outstanding Mentor Award Recipient

The Texas State University Graduate College has selected its 2021-2022 Outstanding Mentor Awards recipient.

Dr. Jennifer Irvin, Associate Professor in the Department of Chemistry and Biochemistry and Co-Director of the Materials Application Research Center, is the recipient of The Graduate College Outstanding Mentor Award. This award recognizes a faculty member who has had extraordinary success in mentoring graduate students.



Dr. Irvin has been with MSEC since its inception and served as MSEC Director from September 2015 through August 2021.

Dr. Irvin's areas of interest include the use of electroactive polymers in applications, and dominant ion transport processes in electroactive polymers. With her research and impact on her colleagues and students, Dr. Irvin received very thoughtfully written letters which described in detail the tremendous positive impact of her mentorship.

She has also been recognized for her teaching and research by receiving the 2012 Chemistry & Biochemistry Department Teaching Award and the 2010 Cottrell College Science Award, Research Corporation for Scientific Advancement.

Congratulations Dr. Irvin!

MSEC ALUMNI FOCUS

DR. ANWAR SIDDIQUE



Dr. Anwar Siddique graduated in 2019 and is currently a Yield Analysis Engineer with the group OTF Yield Department at Intel Corporation in Ocotillo, Arizona. Dr. Siddique recently published "Improved Electrical Properties of AlGaIn/GaN High-Electron-Mobility Transistors by In Situ Tailoring the SiNx Passivation Layer" in *ACS Applied Materials and Interfaces*, which can be found [here](#).

MSEC STUDENT CLUB

The MSEC Student Club was established in 2018 to explore and promote academic and career issues related to materials science, engineering, entrepreneurship, and leadership. The club has helped those interested in these issues to get to know one another outside the classrooms, laboratories and departments by hosting events, creating special projects and connecting with experts around the world.



Officers for the 2021-2022 academic year are: Md Abdul Halim, President; Mauricio Jemal, Vice President; Tijani Mohammed, Treasurer; and Kaleb Neptune, Secretary (not pictured).

The MSEC Student Club is still accepting members with NO membership fee! If interested, email Md Abdul Halim at m_h745@txstate.edu for more information.



Dr. Ariful Haque

Regular Faculty, MSEC

Assistant Professor,
Electrical Engineering

Ph.D. in Electrical
Engineering and Materials
Science & Engineering,
North Carolina State
University



Dr. David Irvin

Adjunct Faculty, MSEC

Lecturer,
Chemistry and
Biochemistry

Ph.D. in Organic
Chemistry, University of
Florida



Dr. Eduardo Perez

Associate Faculty, MSEC

Associate Professor,
Industrial Engineering

Ph.D. in Industrial
Engineering, Texas A&M
University

Welcome New MSEC Graduate Faculty!



Dr. Lawrence Lawson

Adjunct Faculty, MSEC

Lecturer,
Electrical Engineering

Ph.D. in Surface and Solid State Physics, Washington State
University

Dr. Thomas Zirkle

Adjunct Faculty, MSEC

Chief Technology Officer,
MicroPower Global

Ph.D. in Electrical Engineering, Arizona State University



Advanced to Candidacy



Tanjina
Ahmed



Anupam
K.C.



Isha
Desai



Tuhin
Dey



Md Abdul
Ahad Talukder

congratulations



summer and fall 2021 graduates



Dr. Rony Saha

advised by Dr. Edwin Piner and
Dr. Ravi Droopad



Dr. Damilola Runsewe

advised by Dr. Jennifer Irvin and
Dr. Tania Betancourt

&

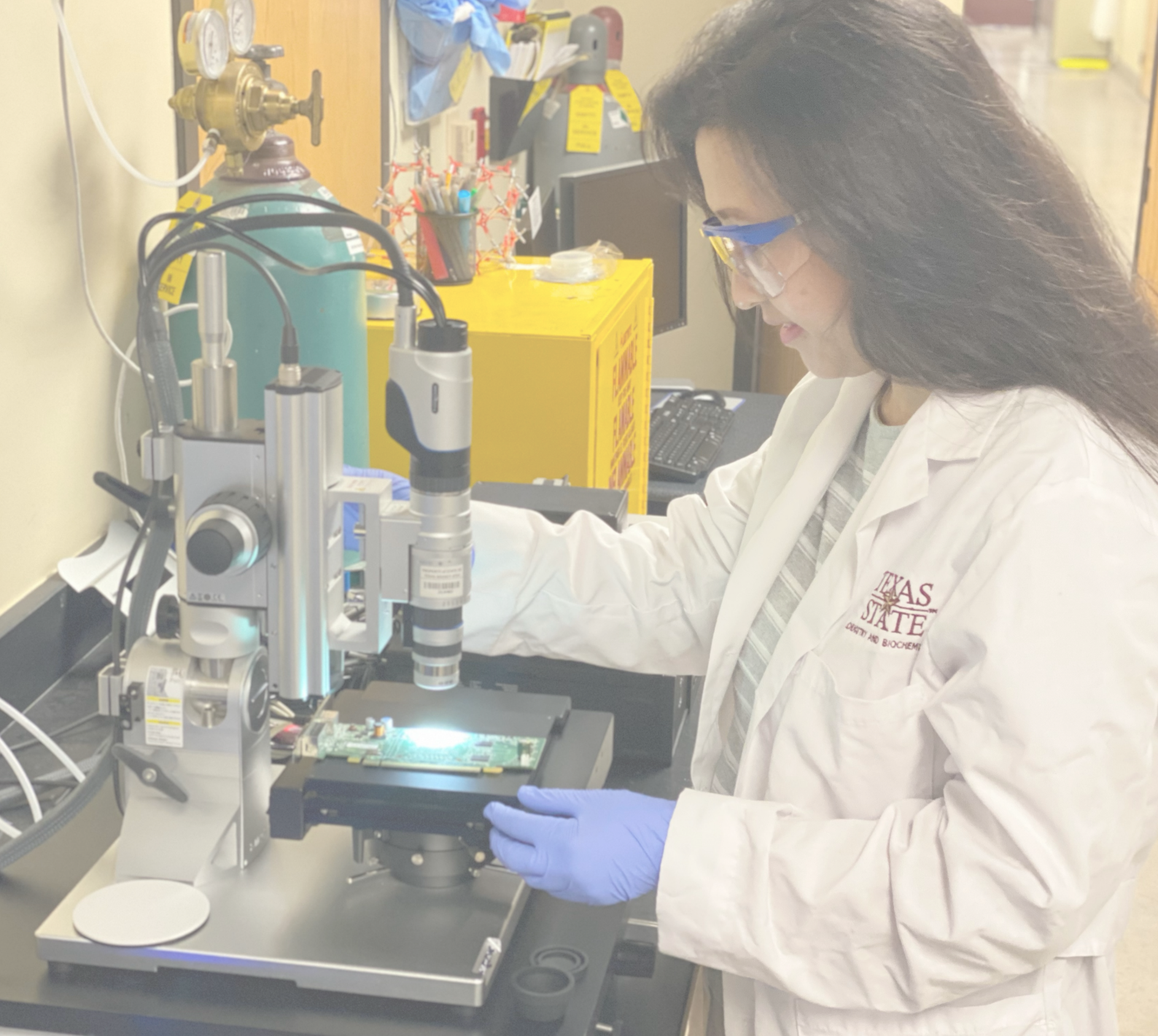
Dr. Adeniji Adetayo

advised by Dr. Gary Beall



Dr. Shubha Malla

advised by Dr. Kevin Lewis



Connect with MSEC



<https://www.msec.txstate.edu/>



<https://www.linkedin.com/groups/6713617/>



(512) 245 - 1839



Roy F. Mitte 3205
601 University Drive
San Marcos, TX 78666



msec@txstate.edu

TEXAS STATE
MATERIALS SCIENCE,
ENGINEERING, AND
COMMERCIALIZATION