



Our group investigates materials, processing technologies and devices for THz technologies. The driving force of this research has been the need for ultra-low-noise heterodyne receivers at the millimeter and submillimeter wavelengths. Of particular interest is the investigation and development, with the National Radio Astronomy Observatory, of complex integrated superconducting SIS mixers for the new International Atacama Large Millimeter/submillimeter Array. Additional ultra low noise detectors include superconducting nano-sized hot electron bolometers at THz frequencies for both machined waveguide and quasi-optic receiver architectures. Our group is also a leader in the development of heterodyne array detectors including the 64 pixel Supercam Array in collaboration with University of Arizona and Arizona State University.

# Lichtenberger Research Group

**Arthur Lichtenberger**

Research Professor

Director of the University of Virginia

Microfabrication Laboratories

Arthurw@virginia.edu

[www.ece.virginia.edu/faculty/lichtenberger.html](http://www.ece.virginia.edu/faculty/lichtenberger.html)

Dept. of Electrical & Computer Engineering

University of Virginia

Charlottesville, VA

434.924.6085

*"Developing new devices and systems for the emerging field of terahertz spectroscopy, imaging and metrology."*



**NANOSTAR**  
UNIVERSITY of VIRGINIA