

Ying Jia

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ACADEMIC/PROFESSIONAL APPOINTMENTS

Research Associate	Northwestern University Micro/nano Fabrication Center (NUFAB)	2015-Present
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PROFESSIONAL PREPARATION

Northwestern University	Evanston, IL	Postdoctoral Fellow	2013-2015
Argonne National Laboratory	Lemont, IL	Postdoctoral Fellow	2009-2013
Inst. of Physics, Chinese Acad. of Science	Beijing, China	Cond. Matter Physics	Ph.D., 2009

EXPERTISE

Semiconductor:

Nano Device Fabrication	Semiconductor Metrology	Electrical/Magnetic Characterization
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Artificial Intelligence:

Data Engineering	Computer Vision	Internet of Things
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FIVE PRODUCTS MOST CLOSELY RELATED TO PROPOSAL

- Smart cameras for replacing in-person equipment checkup 2022 – present
Utilized a medium-performance camera and a microprocessor to read and record equipment real-time displays. The system is powered by a high accuracy, lightweight, and fast-speed computer vision model with high input image quality tolerance.
- Fabrication of flexible semiconductor devices for bioelectronics 2022
“High-speed, Scanned Laser Structuring of Multi-layered Eco/bioresorbable Materials for Advanced Electronic Systems,” *Nature Communications* 13:6518 (2022).
- Real-time monitoring system of essential equipment 2021
Utilized low-cost inline sensors, microprocessors, and central data servers to read, process and display streaming data from essential equipment. An anomaly detection algorithm was used to monitor the equipment and alarm facility managers.
- Equipment and facility predictive maintenance system 2020 - 2021
Integrated secure equipment network, batch data processing pipeline, central data storage, customized data analysis, machine learning algorithms, and a dashboard to monitor the status of capital equipment and predict future maintenance.
- Discovery of a new electronic state in 2D semiconductor junctions 2017
“Enhanced Conductivity Along Lateral Homojunction Interfaces of Atomically Thin Semiconductors” *2D materials*. 4, 021012 (2017). DOI:10/1088/2053-1583/4/2/02101.