

Bennet Clark

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US Citizen - NACI/Public Trust Clearance

Process/ Manufacturing Engineer

Education	Carnegie Mellon University B.S. in Material Science and Engineering: GPA 3.57/4.00 Computer Science concentration	May 2017 Pittsburgh, PA
Work Experience	GLOBALFOUNDRIES/ Onsemi <i>Principal Process Engineer- Thin Films</i> <ul style="list-style-type: none">Process engineer owner of 80 300mm CVD,PVD, and ALD deposition chambers LAM and AMATLead cross functional teams to solve manufacturing and quality problemsDeveloped and implement multiple new films, NPIs, and chamber types into manufacturingCompleted installation and process troubleshooting and installation on 20+ PVD chambersLead process improvements to achieve best in class CVD TiN manufacturing performanceUse statistical methods to identify issues and opportunities for improvementsUse programming skills to find unique ways to analyze and present data Air Force Research Laboratory <i>Pathways Intern – Wright Patterson Air Force Base</i> <ul style="list-style-type: none">Completed testing, data collection, and data analysis in a research lab environment3D printed polymer composites and performed SEM and mechanical testing on samplesDeveloped lithography additive manufacturing process for polymer/ceramic composite	2018-present Fishkill, NY Summers 2015-2017 Dayton, OH
Projects	Process Development/ R&D for Novel Film <i>Process Owner</i> <ul style="list-style-type: none">Directed maintenance team in installation of 9 process chambers for novel deposition processPerformed full process characterization of first of its kind film with demanding specificationsCollaborated with metrology team to develop measurements for processWorked with process integration to improve final device parameters using process learningDefined specifications for contractors and communicated issues throughout installation CVD TiN Process Optimization and Chamber Installations <i>Process Owner</i> <ul style="list-style-type: none">Lead 2 million+ dollar projects installing, tuning, and qualifying 4 new process chambersReduced tool error rates by 70% using 6-sigma approach to improve controlsDeveloped a process to automate post PM conditioning increasing fleet uptime 5%Designed metal stack and optimized manufacturing for novel 3-D capacitor technologyOptimized controls to achieve world leading consumable life without any quality degrade Altus CVD Tungsten Process Characterization and Improvement <i>Project Owner</i> <ul style="list-style-type: none">Identified hardware root cause of process issue with extensive hardware and process testingDirected and analyzed multiple failure analysis sites to identify process effectsPerformed process window research, analyzed data and presented to company wide audienceImplemented root cause fix and added controls to detect similar issue in the future AIChE Chem-E Car Zinc Air Battery <i>Car Power Team Lead</i> <ul style="list-style-type: none">Built functioning zinc-air battery and integrated battery into 5th place competition carCharacterized battery performance to predict car performance and enable learningOptimized battery construction/packaging/electrolyte for performance and consistency	2020 Fishkill, NY 2022 Fishkill, NY 2019 Fishkill, NY 2015-2017 Pittsburgh,PA
Volunteer	Habitat for Humanity <ul style="list-style-type: none">Worked with other community members to refurbish housing for community	2018-present Newburgh, NY
Honors	Excellence in failure root cause analysis execution, Globalfoundries CEO Award, Eagle Scout	
Courses	Engineering Phase Relations and Diagrams Thermodynamics of Materials Microstructure and Properties	Computer Science Rapid Prototyping Technologies Advanced Programming in Python 15-213 Introduction to Programming in C
Skills	Laboratory: Spectrometry, Microscopy, SEM, X ray diffraction, 3D printing, laser cutting, mechanical testing Programming: Python, R, C, Solidworks, MATLAB, Mathematica,COMSOL, LAAMPS MD, MS Office/Google Docs Semiconductor: multivariate analysis, trace analysis, SEM/TEM/EDx FA analysis, Rs, XRF, ellipsometry, FMEA, fishbone, six sigma/lean, experimental design, factory automation	