

# BARTLET DEPROSPO

Atlanta, GA • (845) 820-3310 • bdeprospo@gatech.edu

## EDUCATION

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**GEORGIA INSTITUTE OF TECHNOLOGY, Scheller College of Business** **Atlanta, GA**  
**Georgia Institute of Technology, Packaging Research Center**  
**Doctor of Philosophy in Materials Science and Engineering** *November 2020*

- Concentration: Electronics Packaging
- Dissertation: Design and Demonstration of 1 $\mu$ m Packaging Redistribution Layers for High Performance Computing Applications
- Honors and Awards: 3<sup>rd</sup> Place – Best Student Paper at IEEE Future Car 2017

**Master of Business Administration (MBA)** *December 2020*

- Honors: Merit Based Scholarship in Scheller College of Business

**State University of New York at Albany, Colleges of Nanoscale Science and Engineering** **Albany, NY**  
**Bachelor of Science, Magna Cum Laude**, in Honors Nanoscale Engineering *May 2016*

**Bachelor of Arts, Magna Cum Laude**, in Mathematics

- Concentration: Nanoscale Electronics
- Senior Project: Fundamental Interdiffusion Analysis of CVD Ru and Co Films
- Honors and Awards: Outstanding Academic Achievement for Mathematics, SUNY Presidential Scholar, Dean's List

## EXPERIENCE

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**Tokyo Ohka Kogyo Co., LTD** **Kanagawa, Japan**  
**Material Development Engineer** *July 2018-August 2018*

*TOK pioneers and develops next generation functional photoresists that are essential for the formation of semiconductor circuits. Their material systems are deployed in the fields of IC's, MEMS, 3D Packaging, LCD, and Solar-cell-related industries.*

- Identified fundamental difference between liquid and dry-film based photoresists to enable next generation electronics packaging
- Established a process-of-record for advancement of SAP for High Performance Computing
- Collaborated with TOK engineers to understand impact of surface roughness and reflectivity for extending SAP beyond 1 $\mu$ m RDL as a superior alternative to silicon BEOL processing

**IBM (International Business Machines)** **Albany, NY**  
**Process Integration Engineer** *May 2014-July 2016*

- Collaborated with engineers on 19 patents to enhance next generation server technology deployed to customers
- Invented novel method for inline process control for 7nm and beyond using OCD/XRF/XPS setting industry standard for process control for features below 50nm
- Led development of novel methodology for evaluating ultra-thin nanometer thick films for diffusion models for higher performance interconnections

## ADDITIONAL INFORMATION

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**Skills:** FIB/SEM, Photolithography Materials, Tools and Process', Seed Layer Metalization Techniques (PVD, CVD, ALD, Electroless Plating), Copper Electrolytic Plating, TGA, AutoCAD, BEOL and RDL Formation

**Publications:** IBM – 19 Patents; GTRC – 4 Patents; Conference Proceedings 1<sup>st</sup> Author – 2 Papers, 2<sup>nd</sup> Author – 6; Journal Publications 2<sup>nd</sup> Author – 3; Undergraduate Textbook Co-Author – ISBN: 1259861554

**Awards:** Best GRA 2018 Fall

**Volunteer:** MSE Welcome Weekend and Accepted Students Ambassador, Tour Guide and Mentor, Georgia Tech Graduate Student Welcome Ambassador