Alexander D. Glew, Ph.D., P.E.

Employment History

From: 1997 To: Present Position:		**Glew Engineering Consulting, Inc.** Mountain View, California President & CEO Clients include semiconductor equipment, plasma generation, vacuum systems, fluid delivery systems, flow and pressure component suppliers, laser manufacturers, consumer electronics, industrial electronics, vehicles, telecommunications, etc. Consulting work includes thin film characterization, process development, project turn-around/rescue, gas flow and vacuum metrology, design of experiments, corrosive gas applications, finite element analysis, and related market analysis.
From: Aug 1987 To: Jan 1997 Titles Project Mgr. Jan 1996 to Jan 1997 CVD Supplier Quality Engineering Manager		**Applied Materials, Inc.** Santa Clara, California Engineering Manager, Core-Technologist • I sat on the corporate engineering/technology (ET) council, one of 15 council members. Responsible for corporate direction in high purity processing, gas, and chemical delivery technology for all divisions, including CVD, EPI, PVD, RTP, ETCH, PRS, Thermal Processing, CMP, Flat Panel Display, and others. Also, qualified gas and vacuum component selections. In addition, I consulted with all divisions on gas and vacuum systems, liquid source delivery systems, components, chemical and process gas, and supplier selections. • I received a patent for improved tungsten (W) CVD deposition with carbon doping. • I successfully proposed and executed a project that SEMATECH S100 funded. The goal was to develop industry methods to determine the effects of trace chemicals on semiconductor processing and equipment reliability. This work resulted in two SEMATECH Technology Transfers listed below. First, we introduced ppb levels of impurities into both a Tungsten CVD deposition process and an aluminum etching process. Subsequently, we examined the effect on particle generation, deposition rate, uniformity, selectivity, and incorporation into the film. This work resulted in a 30% increase

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Core Technologist	in deposition rate. Similarly, we introduced ppb-ppm levels of impurities into HBr gas systems and conducted accelerated lifetime tests at three sites across the country. Also, we measured gas composition in situ of Tungsten CVD and Al Etch process by quadrupole mass spectrometry.
CVD Engineering Manager	• I managed gas, vacuum, and chemical components, evaluation, testing, and supplier quality management. Also, I led an engineering group that tested and recommended gas, vacuum, and chemical component for the CVD division and developed process controls at suppliers. In addition, I supervised the laboratory and trained individuals to create specialized testing capabilities to characterize gas delivery and vacuum components. Also, I supported Etch, PVD, and other divisions with shared suppliers, including vacuum pumps, vacuum transducers, flow controllers, valves, etc.
Systems Engineer	• I managed a group of engineers and support personnel who developed gas panels and liquid source chemical delivery systems for dielectric deposition. Delivered TEOS, TMP, TMB, and many other organometallic precursors for USG, PSG, and BPSG dielectric deposition. Developed organometallic CVD systems extensively. We designed multiple liquid source delivery systems for organometallic chemical precursors, i.e. bubblers, boilers, and injectors. • I managed the CVD division design support group: CAD designers, drafters, and CAD systems for division. I brought in first 3D CAD systems and the first FEA program. • I established and managed the customer engineering special group for the CVD division, which engineered all equipment modifications to meet customer specifications. These modifications included changes across the entire system, including process chambers, vacuum systems, gas delivery, power distribution, safety, and robotics. • I worked on the development and release of a landmark product, the Precision 5000 CVD, one of which is now in the Smithsonian Institute. This was the first cluster tool for semiconductor manufacturing. • I developed dielectric layers of silicon dioxide (glass or USG), boron phosphorous silicon glass (BPSG), phosphorous silicon glass (PSG), nitride, oxy-nitride, and others. • I was responsible for flow and vacuum equipment suppliers for the company including MFC, valves, mechanical vacuum pumps, cryo-pumps, dry pumps, and others. Supported multiple divisions on these matters.

Doctoral Dissertation:

From: 1996 Stanford University
To: 2002 Stanford, California
Ph.D.
Completed a dissertation in the department of Materials Science & Engineering leading to the Ph.D. degree.
Research includes:

- Plasma Deposition of Diamond-Like Carbon and Fluorinated Amorphous Carbon and the Resultant Properties and Structure.
- Characterized stress, strain and hardness of films. Related the stress energy state to the diamond like nature of the thin films.
- Investigation of deposition mechanism fluorinated amorphous carbon (FLAC) and diamond-like carbon (DLC), low k dielectric materials.
- Modeled and conducted experiments on mechanism of ion energy, momentum and flux dependence for FLAC and DLC film synthesis in radio-frequency plasma discharges, including competing mechanisms of sub-plantation, ion-peening, sputtering, and etching.
- Constructed and instrumented a multi-purpose processing chamber for PE-CVD, etch, and sputtering with measurement capability.
- Fabricated MIS capacitors to investigate the dielectric properties of fluorinated amorphous carbon (FLAC). Performed all wafer processing to construct MIS capacitors, including lithography, etch, CVD and PVD.
- Conducted thin film analysis including UV absorption spectroscopy, spectral ellipsometry, multi-incident angle ellipsometry, Fourier transform infrared spectroscopy, profilometry, nano-indentation, RBS, HFS, nano-indentation, and gravimetric measurements.
- Modeled dielectric properties and dispersion relationship of fluorinated amorphous carbon (FLAC), and compared spectral ellipsometric measurements to results of electrical CV tests and thickness measurements by profilometry using MIS structures.

Consulting History

From: 2022 JRCO
To Ongoing Professional Engineering review and FEA analysis of an electric vehicle used as float at Disneyland,"It's a Small World."

From: 2021 Global Foundries
To: 2021 Review patent portfolio.

From:	2020	Sydney Metro, Australia
To	2022	Analysis of the all of the equipment, its replacement, startup, and the cost of moving a semiconductor FAB in order to put a metro rail line through the area. Client (Syndey Metro) received a favorable ruling from the Valuer General.
From:	2019	TDA Research Institute
To:	2020	Analysis of a high-temperature battlefield hydrogen reactor.
From:	2019	LED Manufacturer
To:	2019	FEA thermal analysis of new LED designs.
From:	2019	Elwood Mill Products
To:	2019	Professional Engineering review of capital equipment. Finite element analysis.
From:	Sept. 2017	UNICO
To:	Jan 2018	Finite element analysis of new product concepts.
From:	July 2017	Elwood National Forge
To:	Dec 2017	Professional Engineering review of capital equipment. Finite element analysis.
From:	April 2017	Jon Richards Co. (for Disneyland)
To:	May 2017	Professional Engineering review of electric vehicle used as a float at Disneyland, the Marvel Avenger's Mobile™.
From:	2017	Licensed Mechanical Engineering
To:	Ongoing	Professional Engineering letters and calculations for submission to building and environmental health departments. Miscellaneous clients.
From:	2016	Carbontech
To:	2018	Obtain UL listing for thin film carbon heaters.
From	2018	Solas
To	2018	Reverse engineering of OLED displays and technology.
From:	2016	Tashjian & Padian
To:	2018	Reverse engineering of OLED displays and technology.

From:	2016	VWR
To:	2017	Review of new semiconductor technologies for etching and particle reduction in semiconductor processing chambers
From:	2016	TDA Research
To:	2017	Finite element analysis of effluent treatment system for power plant carbon reduction treatments.
From:	2016	Champion Telecom
To:	2016	Engineering support, Finite element analysis, and design of "Cell Towers on Wheels" (COWs). Multiple projects. Analysis of trucks used to support emergency telecommunications.
From:	2015	Phiston Engineering
To:	2016	Review the ability of equipment to destroy flash memory. Generate reports for clients to submit to NSA and others.
From:	2015	United States Air Force
To:	2015	Concluded
	Duties	Advanced semiconductor process equipment engineering for Air Force Laboratory. CVD equipment design, control circuitry, and related hardwar.
From:	2015	VADA
To:	2016	
	Duties	Fluid analysis of venting device to avoid building catastrophy..
From:	2013	Watlow
To:	2014	
	Duties	Development of wafer chuck heating device for silicon processing. This has led to multiple patents.
From:	2012	Solar Cell Manufacturing Factory Explosion at SolarWorld, OR.
To:	2013	
	Duties	Analysis, measurement, and report on explosion of CVD equipment in solar manufacturing factory: PECVD Silicon Nitride Process. Work performed for insurance company.

Testimony

Client	BOE Technology Group Co
Case	In the Matter of Certain Organic Light-Emitting Diode Display Modules and Components Thereof(Inv. No. 337-TA-1378) Samsung Display Corp v BOE Technology Group Co et al.
Project	ITC matter
Dates	March 2024 ongoing
Status	Ongoing

Client	Kawasaki Jukogyo Kabushiki Kaisha (Crowell Moromg LLP) vs. Rorze Corporation and Rorze Automation, Inc.,
Case	UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION Case No. 5:22-cv-04947-EJD (SVK)
Project	Semiconductor equipment patents
Dates	2023 - ongoing
Status	Ongoing

Client	Daedulus Prime (Mintz Levin) vs. Samsung and TSMC
Case	International Trade Commission 337-TA-1336
Project	Semiconductor patents
Dates	2022
Status	Settled in September 2023

Client	IFT (Mintz Levin) vs. Samsung and TSMC
Case	IFT v. Micron
Project	Semiconductor patents
Dates	2022
Status	Settled

Client	Silanna vs. Sydney Metro West (Ashurst)
Case	Class 3 Proceedings in the Land & Environment Court Case: Silanna Semiconductor Pty Ltd v Sydney Metro (2022/00004763).
Project	Eminent domain of a semiconductor facility
Dates	2021 – 2022.
Status	Settled in mediation.

Client	Demaray (Irell and Manella) vs. Samsung Corp.
Case	Western District of Texas Waco Division, Case No. 6:20-CV-00636-ADA
Project	Semiconductor PVD processing, Pulsed DC and RF plasma power filtering.
Dates	2020 – 2024
Status	The trial was held in February 2024.

Client	Demaray (Irell and Manella) vs. Intel Corporation and Samsung Corp (6:20-cv-00636-ADA)
Case	Western District of Texas Waco Division, Case No. 6:20-CV-00636-ADA.
Project	Semiconductor PVD processing, Pulsed DC and RF plasma power filtering.
Dates	2020 – 2023
Status	Settled with Intel in September 2023. Testified on Samsung matter in Feb. 2024.

Client	Demaray (Irell and Manella) vs. Intel Corporation and Samsung Corp.
Case	International Trade Commission IPR2021-00103, IPR2021-00104
Project	Semiconductor PVD processing, Pulsed DC and RF plasma power filtering.
Dates	2020 – 2021

Client	Tokyo Ohka Kogyo Co., Ltd. (Knobbe) v. Fujifilm Electronic Materials U.S.A., Inc.
Case	Case No. PGR2022-00010
Project	Semiconductor patent dispute.
Dates	2021 – 2022
Status	Submitted report. IPR granted. Settled.

	Hanwa vs REC (Gilbert Tobin) et al .
Case	Federal Court of Australia, NSD 458 of 2019.
Project	Solar panel manufacturing patent dispute.
Dates	2021 – 2022
Status	Testified in Federal Court in Sydney, NSW, Australia.

Client	Ocean Semiconductor LLC vs Western Digital Corp (Shearman & Sterling LLP)
Case	IPR2021-00929
Project	Semiconductor processing/metrology patent dispute.

Dates 2020 – 2020
Status Concluded.

Status Settled

Client Continental Circuits (Caldell, Cassidy, and Curry) vs. Intel Corporation; Ibiden
Case No. CV16-2026 PHX DGC
Project Electronics substrate (PCB) technology.
Dates 2018 – 2020
Status Submitted reports and testified at deposition. Settled.

Client RENEE PLUNKETT, AN INDIVIDUAL AND HEIR OF ESTATE OF SCOTT PLUNKETT, GLOREE PLUNKETT, A MINOR BY AND THROUGH HER GUARDIAN AD LITEM, TERRY ALLEN ROBERTSON (Michael Hirman Law) vs. LEATT CORP., A FOREIGN CORPORATION; TIFFANY NELLIS; AND DOES 2-100

Case: 19-cv-0629-H-AGS
Project FEA analysis of safety device
Status Submitted expert report. Settled.

Client Moldanado et al v. Apple Inc. (Morrison and Forrester)
Case Case No. 3:16-cv-04067-WHO
Project iPhone and iPad Class Action Law Suit
Dates 2019-
Status Submitted declaration and testified at deposition.
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Client Hanwa v REC et al (Finnegan).
Case ITC 337-TA-1151
Project Solar Panel Technology
Dates 2019-2020.
Status Submitted declaration and testified at deposition.

Client Micron vs. Northstar/WiLAN (Eckert Seamons)
Case IPR2018-01000, U.S. Patent No. 6,465,743
Project Semiconductor packaging and ball grid arrays
Dates 2019
Status Submitted declaration and testified at deposition. Settled.

Client ASM (KMOB) vs. Kokusai Electric Corporation

Case	IPRs multiple: IPR2018-01584, IPR2018-01523, IPR2018-01479, IPR2018-01151, IPR2018-01357.
Project	Semiconductor processing equipment.
Dates	2018 -2019
Status	Submitted declaration and testified at depositions. Settled.

Client	IP Bridge, (Ropes & Gray)
Case	IP Bridge vs Qualcom
Project	Patent review.
Dates	2018 -2019
Status	Settled

Client	IP Bridge, (Wolf, Greenfield & Sacks)
Case	IP Bridge vs TSMC
Project	Patent review.
Dates	2018
Status	Settled

Client	Veeco (Ropes and Gray)
Case	Veeco (Ropes and Gray) vs. SGL Carbon Group , QVl 7-2 217
Project	Semiconductor Processing Equipment for process chamber chucks.
Dates	2017
Status	Completed. Preliminary injunction granted for client and settlement reached.

Client	IP Bridge (Ropes and Gray)
Case	BROADCOM LIMITED, BROADCOM CORPORATION, AVAGO TECHNOLOGIES, LTD., AVAGO TECHNOLOGIES U.S., INC., and LSI CORPORATION, Case No. 2:16-cv-134, Eastern District of Texas, and IPR2016-1376, 1377 and 1379.
Project	Interconnect and back end of line patents.
Dates	Spring 2015 – Spring 2017
Status	Submitted expert reports and testified at deposition. Settled.

Client	Elm 3DS Innovations (Mintz, Levin, Cohn, Ferris, Glovsky and Popeo PC)
Case	Elm vs. Samsung Electronics, Hynix and Micron Inter Partes Review (IPR) at the USPTO: IPR2016-00386, IPR2016-00387, IPR2016-00388, IPR2016-00389, IPR2016-00390, IPR2016-00391, IPR2016-00392, IPR2016-00393, IPR2016-00394, IPR2016-00395, IPR2016-00687, IPR2016-00691, IPR2016-00708, IPR2016-00770, and IPR2016-00786.

Project	I performed a patent infringement analysis involving thinned and stacked wafers, low-stress dielectric materials, and other topics of IC memory.
Dates	2016 – 2017
Status	Submitted declarations in IPR and gave testimony at deposition.

Client	Semcon, (Russ, August & Kabat)
Case	Semcon v. Micron Inc. CASE NO. 12-532-RGA UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE
Project	Advanced process control and metrology in semiconductor processing patent case regard CMP.
Dates	2013
Status	Submitted expert reports and testified at deposition.

Client	Department of Justice, Anti-Trust Division, USA
Case	Applied Materials Tokyo Electron Merger
Project	Provide industry expert analysis to the Anti-Trust Division of the DOJ in the merger for competitive equipment across all of the product lines, as well as other analyses.
Dates	2013 – 2014
Status	Parties abandoned the merger, action completed.

Client	Caterpillar Inc., (Baker & Hostetler)
Case	Miller UK Limited v. Caterpillar Inc. CASE NO. 10-cv-3770, UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF ILLINOIS EASTERN DIVISION
Project	Trade secret case related to CAD drawings.
Dates	2013
Status	Submitted expert reports and testified at deposition and at trial. Completed.

Client	Carr & Farrell (LAM Research)
Case	LAM RESEARCH CORPORATION v. XYCARB CERAMICS CASE NO. 3:03-cv-1335 CRB UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION
Project	Review product for patent infringement related to process chamber components..
Dates	2013
Status	Submitted reports and was deposed.Settled

Client	Schwegman, Lundberg & Woessner, P.A. (Amkor)
Case	Tessera v. Amkor. Petition for *inter partes* review of U.S. patent at USPTO
Project	Semiconductor manufacturing technology relating to packaging.
Dates	2013 – present
Status	Submitted declarations in IPR and gave testimony at deposition.

Client	Fish & Richardson (3M)
Case	TransWeb v. 3M, District Court of NJ, 2:10-cv-04413 (FSH/PS)
Project	Litigation for plasma fluorinated electrets. Trade secret litigation for plasma fluorination of electrets and filter media, woven polymer fabric forming HEPA filters.
Dates	2011
Status	Expert report, deposed, trial.

Client	Allegaert Berger & Vogel LLP (Taiwan Glass)
Case	CVD Equipment v. Taiwan Glass, 10 Civ. 0573 (RH-I) (RLE), Eastern District of NY
Project	Litigation for breach of contract in CVD conveyor coating equipment used in the manufacture of coated low emissivity (low E) window glass, coated display glass (ITO), and coated solar glass.
Dates	2010
Status	Expert report, deposed, judgement.

Description Analyzed viability of unfinished manufacturing equipment and processes.

Client	Knobbe, Martens, Olson & Bear (ATS)
Case	ATS v. AMI SACV07-1384 JVS (JWJx)
Project	Litigation for correction of inventor-ship of patents, and breach of contract, for heat exchangers used in semiconductor processing equipment.
Dates	2009
Status	Expert report, deposed, Trial. Submitted and testified.

Client	Lee and Li (American Insurance Underwriters.)
Case	AIU v. Applied Materials, Centrotherm, M&W and others.
Project	Insurance claims re destruction of Semiconductor Fab. Reviewed plans, standards, equipment, processes and related.
Dates	2009
Status	Report, Tried in High Court of Taiwan. Testified.

Client	Robbins, Kaplan, Miller, & Ciresi (AMD)
Case	AMD v. Samsung

Project	Patent litigation for AMD Semiconductor TiN patent relating to DRAM and FLASH memory products.
Dates	2007-2010
Status	Expert report, deposed, settled.

Client	King & Spalding, Redwood Shores, CA (Qimonda)
Case	Qimonda v. LSI and others at the International Trade Commission, *Certain Semiconductor Integrated Circuits And Products Containing Same*, Inv. No. 337-TA-665
Project	Semiconductor processing patent relating to crack stop patents in silicon oxide glass layers.
Dates	2009
Status	Expert report, deposed, trial, testified at the International Trade Commission.

Client	Wilmer Hale, Palo Alto, CA (IDT)
Case	LSI v. IDT at the International Trade Commission, *Certain Semiconductor Integrated Circuits Using Tungsten Metallization And Products Containing Same*, Inv. No. 337-TA-648
Project	Semiconductor processing patent relating to TiN patents.
Dates	2008
Status	Expert report, deposed, trial, testified at ITC.

Client	Morrison and Forrester (Advance Micro-Fabrication Equipment)
Case	Applied Materials v. Advanced Micro-Fabrication Equipment C07 05248 JW (PVT)
Project	Semiconductor equipment manufacturer trade secret case. Reviewed numerous CAD documents related to equipment design.
Dates	2008
Status	Expert report, deposed, settled.

Client	Ropes and Gray (Entegris)
Case	Pall v. Entegris, 05-CV-5894 (BMC)(WDW), United States District Court, Eastern District of New York
Project	Patent dispute, filter patents.
Dates	2006 to present
Status	Settled.

Client	Thelen Reid and Priest, San Jose, CA (Celerity) Keith Slenkovich (attorney)
Case	Celerity vs. Ultra-Clean Technologies CASE NO. 05-CV-04374 MMC, United States District Court, Northern District of California
Project	Patent disputes, semiconductor processing equipment, ultra high purity gas delivery systems.

Dates	2005-2007
Status	Tried. Testified.

Client	Foran Glennon Palandech and Ponzi, Chicago, IL (American Insurance Underwriters) James Glennon (attorney)
Case	International Arbitration, Tokyo
Project	Analysis of complete destruction of an entire FAB due to facility design, equipment design, installation, process monitoring and control, etc.
Dates	2004-2007
Status	Arbitrated. Testified in International Arbitration.

Client	Morgan & Finnegan LLP, NY, NY (ATMI) Kramer, Levin, Naftalis & Frankel LLP Ted Mlynar (attorney)
Case	ATMI vs. Praxair, Case No. 03 CV 5161, US District Court, Delaware
Project	Patent dispute, high purity hazardous chemical cylinder patents.
Dates	2004-2006
Status	Tried. Testified.

Client	Cooley Goddard LLP, Broomfield, CO (Advanced Energy) Jim Brogan (attorney)
Case	MKS Instruments Inc. vs. Advanced Energy C.A. No. 03-469 (JJF), US District Court, Delaware
Project	Patent dispute regarding remote plasma technology.
Dates	2004-2005
Status	Tried. Testified

Client	Kerr & Wagstaffe LLP, Attorneys (HT Components)
Case	General Components, Inc. V. HT. Components, U.S.A., Inc. Case No. C 01-20925 JF
Project	Review of breach of contract for semiconductor equipment components. Reviewed CAD drawings for high purity fittings.
Dates	Approximately 2002
Status	Settled

Client	Keker & Van Nest, San Francisco, CA, (ASM) ASM America, Inc. et al v. Genus, Inc. Stuart Gassner (attorney)
Case	Civil Action No. C 01-02190 EDL
Project	Atomic Layer Deposition (Secquential CVD) patent infringement. Patents: 6,015,590 Method for growing thin films. 5,916,365 Sequential Chemical Vapor Depositions.

Dates	2001-2002
Status	Settled

Client	Orrick Herrington & Sutcliffe, LLP (Applied Materials) Gary Weiss (attorney)
Case	Applied Materials, Inc. v. LTD Ceramics et al U.S.D.C. Case No. C01-20478 JF PVT ADR
Project	Misappropriation of trade secrets. Reviewed numerous CAD documents related to semiconductor equipment design.
Dates	2001-2003
Status	Settled

Client	Knobbe Martens, Olsen Bear, Newport Beach, CA, (Air Products)
Case	Advanced Delivery & Chemical Systems v. Air Products and Chemical, Inc. Case A 99-CA-406 SS
Project	Patents for chemical delivery.
Dates	2000-2001
Status	Settled

Client	Mitsubishi Silicon America vs. Semitool, Inc. Harrang Long Gary Rudnick (Salem, OR)
Case	CV 98-826-AA
Project	Semiconductor equipment breach of contract.
Dates	1999-2000
Status	Settled

Client	Applied Materials, Inc. v. McDowell & Company, et al Orrick Herrington & Sutcliffe LLP (Menlo Park, CA)
Case	3-98CV-907-R
Project	Misappropriation of trade secrets. I reviewed numerous CAD documents related to semiconductor equipment design.
Dates	1999
Status	Settled civil case.

Client	Applied Materials, Inc. v. David Biehl, et al Orrick Herrington & Sutcliffe LLP (Menlo Park, CA)
Case	CR95-20082 RMT PVT
Project	Misappropriation of trade secrets. I reviewed numerous CAD documents related to semiconductor equipment design.
Dates	1999
Status	Settled civil case. Criminal Conviction.

Education

2003	Stanford University	Ph.D., Materials Science and Engineering
1995	Stanford University	M.S., Materials Science and Engineering
1987	University of California, Berkeley	M.S., Mechanical Engineering
1985	University of California, Berkeley	B.S., Mechanical Engineering

Patents

Patent Number	Date Issued	Title
10,658,206	May 19, 2020	Method of forming a composite substrate for layered heaters
10,395,953	Aug. 27, 2019	Composite substrate for layered heaters
9,224,626	Dec. 29, 2015	Composite substrate for layered heaters
7,118,090	Jan 20, 2007	Control Valves
6,679,476	Jan. 20, 2004	Control Valves
6,204,174	Mar. 20, 2001	Method and Apparatus Rate Deposition of Tungsten.

Publications and Conference Presentations (selected).

A.D. Glew, M.A. Cappelli, "Characterization and dielectric properties of fluorinated amorphous carbon measured by capacitance-voltage versus spectral ellipsometry", *Materials Research Society Symposium Proceedings,* **593***,* Boston, MA, 1999, pp. 341-346.

A.D. Glew, M.A. Cappelli, "In situ plasma analysis, fluorine incorporation, thermostability, stress, and hardness comparison of fluorinated amorphous carbon and hydrogenated amorphous carbon thin films deposited on Si by plasma enhanced chemical vapor deposition", *Material Research Society Symposium Proc*., **565**, San Francisco, CA 1999, pp 285-290.

A.D. Glew, R. Saha, M.A. Cappelli and J.S. Kim, "Ion Energy and Flux Dependence of Diamond Like Carbon Film Synthesis in Radio-Frequency Discharges", *International Conference on Metal Coatings and Thin Films,* Surface and Coatings Technology 114 (1999) 224-229.

A. Glew, R. Saha, M. Cappelli and J. Kim, "Ion Energy and Flux Dependence of Diamond Like Carbon Film Synthesis in Radio-Frequency Discharges", *International Conference on Metal Coatings and Thin Films*, San Diego, CA, April 1998

A. Glew, J, Ammenheuser, M. Crockett, A. Johnson, W. Dax, R. Binder, J. Riddle, "SEMASPEC 97043272A Accelerated Life Tests of Gas System Performance and Reliability," *http://www.sematech.org/public/docubase/abstract/3272atr.htm*.

A. Glew, J. Ammenheuser, J. Riddle, A. Johnson, "SEMASPEC 96083175A-XFR Determining the Effects of Impurities on Semiconductor Thin Film Processing," *http://www.sematech.org/public/docubase/abstract/3175axfr.htm.*

A Glew, "Selecting Gas Purity and Materials of Construction in High Purity Gas Systems," *Semicon West Symposium on Corrosion*, July 1997

Glew, J. Kim, K. Lee, M. Cappelli, "On the Characteristics of Diamond Like Carbon",
A. *International Conference on Metal Coatings and Thin Films*, San Diego, CA, April 1997

A. Glew, D. Porter, "Gas System Reliability Testing in Chlorine", *Semiconductor Fabtech*, May 1996.

Professional Associations

American Society of Mechanical Engineers (ASME)
International Microelectronics and Packaging Society (IMAPS)
Materials Research Society (MRS)
IEEE

Civic Role

Los Altos Rotary Club

Professional License

Licensed Mechanical Engineer, State of California, M26690