



vacuum TECHNOLOGY **& coating**




2019 **MEDIA KIT**



Media Kit 2019

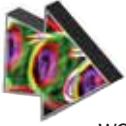
The Leading Monthly Publication Exploring Thin Film Vacuum Deposition & Coating



Of VT&C's 30,400 total print circulation, 15,500+ subscribers are from the manufacturing side which we have broken down into the following 37 key markets:

- Aerospace, Military & Defense, Marine
- Automotive Industry or Suppliers Exclusively to the Industry
- Bearings
- Building & Construction Including Materials
- Electrical, Passive Electronic, or Other Types of Industrial Components
- Consumer Electronic Products or Systems
- Crystals
- Compound Semiconductors
- Computers & Peripherals
- Data Storage Systems, Devices or Components, Print Heads, Recording Heads
- Decorative Coatings, Shower Heads, Faucets, Sinks, Tubs
- Food Industry for Human or Animal Consumption, Beverages, Candy, Chewing Gum
- Fiber Optic Component, Systems or Materials
- Flat Panels, Displays, Monitors, Touch Screens
- Glass: Architectural, Commercial, Consumer, Laboratory, Optical
- Holography
- Heating & Cooling: Refrigeration, Heating, Air Conditioning
- Imaging Systems
- Instrumentation
- Industrial Controls for All Industries
- Lasers, Systems, and Components, Laser Optics
- Lighting for All Industries
- Medical
- Motion Control & Robotics
- Multi-Industry Groups, Multiple Non-related Product Groups
- Optics and Ophthalmic: Lenses, Mirrors, Prisms, Materials
- Optoelectronics
- Packaging for All Industries
- Plastics
- Power Industry, Including Power Systems, Batteries, Fuel Cells
- Safety & Security
- Sensors
- Semiconductors & Other Solid State Devices
- Tool Coatings, Tools: Industrials, Consumer including Razors & Blades, Lighters, Pens
- Telecommunications
- Thin Film Coating Services, Thin Films or Thin Film Materials, Other Related Services
- X-Ray Tubes, Cathode Ray Tubes

VT&C Readership Information



VT&C's print issue reaches 9,500+ key R&D scientists and engineers at the U.S. national labs, government labs, and universities. These are well-funded people who comprise many hundreds of individual research project teams, each with its own vacuum needs and applications. At NIST alone **VT&C** reaches 470+, with 140+ more at Brookhaven, 300+ at Argonne, 170+ at Livermore, and 160+ at Sandia.

VT&C also reaches 4,000+ industry professionals at the companies who make capital equipment and materials. This list includes Applied Materials, AJA International, Kurt J. Lesker Company, MDC Vacuum Products, Busch USA, Lam Research, KDF, Telemark, Semicore, Nor-Cal Products, Leybold USA, Pfeiffer Vacuum Inc., Accu-Glass Products Inc., Fil-Tech Inc., Materials Science Inc., ULVAC Technologies, MKS Instruments, Sumitomo (SHI) Cryogenics of America, Nano-Master Inc., R.D. Mathis Co., InstruTech Inc., Intlvac, Sierra Applied Sciences Inc., XEI Scientific, just to name a few. We reach virtually all of the major vacuum process system producers in the country. That list also includes materials suppliers, test & inspection equipment suppliers,

manufacturers' reps and marketing professionals. Many names on this list are potential buyers for your product line.

VT&C's print magazine averages 30,400+ subscribers plus additional distribution at vacuum-centric conferences and trade shows. **VT&C** Digital and Weblog Announcements additionally reach 5,000+ subscribers. In addition, tens of thousands visit the online **VT&C** digital edition and website every month. If you need any additional information, please give us a call at 1-336-432-9627.

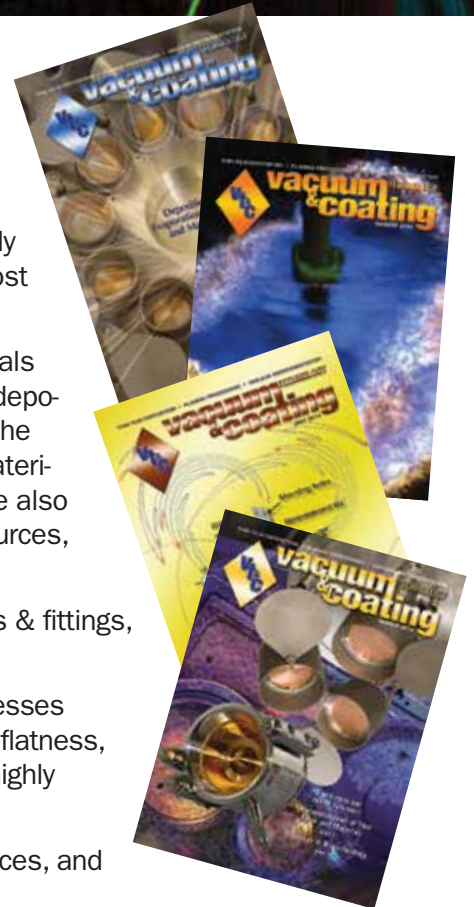
One popular cornerstones of **VT&C** is the monthly Product Showcase which features targeted product listing groupings. Each month, **VT&C** publishes one Product Showcase, which appears both digitally and in print. Topics include Thin Film Deposition, Coating, Cleaning & Etching Equipment; Thin Film Metrology, Measurement, Characterization and Analysis Equipment; Gas Analytical Systems Instrumentation & Metrology; Vacuum Pumps; Power Supplies; Deposition/Coating Targets, Sources & Accessories; Materials - Oils, Fluids, Lubricants, Chemicals & Gases; and many more.

ADVERTISING IN VACUUM TECHNOLOGY & COATING



VT&C has a high editorial content with only 25-35 percent of the total folio content being advertisements, thus resulting in a high ratio of editorial content. The policies of the publisher are extremely user-friendly to companies that advertise and thus, support the magazine financially. Most advertisers fall into the following major groups:

1. Companies that manufacture vacuum processing equipment and the materials used in the process. The processes most often covered are physical vapor deposition, plasma processing, chemical vapor deposition, crystal growing, etc. The materials most commonly advertised in **VT&C** are sputtering targets and materials, evaporation sources, substrates, and chemicals. Process controllers are also advertised heavily, as are e-beam sources, ion beam sources, sputtering sources, and rf power supplies
2. Companies that supply vacuum components such as pumps, valves, flanges & fittings, seals and feedthroughs, bellows, chambers, traps, chillers and heaters.
3. Manufacturers of instruments used in the deposition or other vacuum processes such as metrology systems, spectrometers, vacuum gauges, leak detectors, flatness, thickness and hardness testers. Gases and gas-handling systems are also highly appropriate
4. Providers (or Suppliers) of Thin Film Coating services, plasma cleaning services, and other vacuum processing services are also found frequently.



VACUUM TECHNOLOGY & COATING'S EDITORIAL STAFF



Peter M. Martin, Ph.D., Executive Editor
& Senior Technologist

Columns & Blog: **Thin Film Technology, Surface Engineering & Back-to-Basics**

Dr. Martin has been the Executive Editor for Vacuum Technology and Coating magazine since 2005, and the Thin Film Editor since 2000. He is currently an Emeritus Fellow at Pacific Northwest National Laboratory, and retired from PNNL in 2008 as a Laboratory Fellow. He worked for PNNL for over twenty nine years where he specialized in developing thin film coatings for energy, biomedical, space and defense applications. He is a SVC Mentor, Past President and Program

Chair. He holds over forty five patents in the field of thin films and has won numerous national awards in thin film technology and microfabrication. He edited the totally revised Third Edition of Handbook of Deposition Technologies for Films and Coatings (Elsevier) and recently authored Introduction to Surface Engineering and Functionally Engineered Materials (Wiley/Scrivener). Peter has written over 500 technical publications and given over 200 presentations, has won three R&D 100 Awards for his work in microfabrication and barrier coatings for flat panel displays, has two Federal Laboratory Consortium (FLC) awards, was selected Battelle Technology of the Year (2003) for his work with the photolytic artificial lung, voted Distinguished Inventor, and Battelle 2005 Inventor of the Year. He also teaches short courses on Photovoltaics, Smart Materials and Energy Materials and Applications. Peter's Blogs cover the basic science and technology of vacuum deposition processes.



Terrence Thompson, Technical Editor

Column & Blog: **Product Showcase and Observations & Opportunities Blog**

Terrence (Terry) Thompson is a technical editor for **Vacuum Technology & Coating** magazine. He is a microelectronics manufacturing industry veteran with more than three decades of experience in technology publishing. He served as executive editor of *Wafer & Device Packaging and Interconnect* magazine, and was the editor of *Chip Scale Review* and *HDI—High Density Interconnect* magazines that all addressed semiconductor chip and wafer-level test, assembly and packaging. He has also held the top editorial post with *Solid State Technology* and *MicroLithography World* magazines. He was the editorial director for *Microelectronic Manufacturing & Testing* (later *Microelectronic Manufacturing Technology*) and *Hybrid Circuit Technology* magazines. He also was the founder, editor and

publisher of the *Display Technology Report* newsletter on advanced displays and related technologies. Earlier, Thompson was the editor of *Assembly* magazine.

Thompson conceived, organized and ran three major industry technical conferences: the Assembly Technology Expo (later the Assembly & Automation Expo, now the Automation Technology Expo), the HDI Expo and Conference, and the International Wafer Level Packaging Conference (IWLPC).

He has made technical presentations on microelectronics manufacturing at major conferences and seminars in the USA, Japan and Malaysia. Mr. Thompson's manufacturing career began as a manufacturing engineer at AT&T. He later worked at Motorola Inc. followed by General Instrument Corp. He is a Certified Manufacturing Engineer in automation with the Society of Manufacturing Engineers and also contributed chapters to the Society of Manufacturing Engineers' books on automation. Terry's Blog, Observations & Opportunities, addresses global technology and market high-growth areas for vacuum-centric processes and materials going forward.



Steve Hansen, Contributing Editor

Column: **Guides to Vacuum Technology**

Steve Hansen is a consultant specializing in vacuum technology related product development and education. He retired from MKS Instruments in 2009, the company he joined in 1995. In his years with MKS he was responsible for developing vacuum, instrumentation and plasma training courses as well as MKS' line of vacuum and plasma training equipment. He was also responsible for the calibration product line and the US service operations for several of the company's product lines. Steve's background also includes many years in the semiconductor industry where he was involved in process development.

With a nearly lifelong interest in vacuum technology, Steve founded the educational journal "the Bell Jar" in 1992. A web presence was established in 1994. With a target audience of amateur scientists and educators, the American Vacuum Society has considered "the Bell Jar" to be of sufficient significance to warrant a place on the society's "Vacuum Science & Technology Timeline: 1500-2007."

Steve continues to be active with monthly columns in Vacuum Technology & Coating. He is also involved with educational product development.

Steve received his BSEE degree from Northeastern University in 1972 and is the holder of two patents in the field of semiconductor manufacturing. He and his wife now reside in Owl's Head, Maine.



Matthew R. Linford, Ph.D., Contributing Editor

Column: **Characterization of Thin Films and Materials**

Matthew R. Linford received his B.S. in chemistry from BYU. He then obtained an M.S. in Materials Science and a Ph.D. in Chemistry from Stanford. His post-doc was at the Max Planck Institute of Colloids and Interfaces in Germany. He is now a professor in the Department of Chemistry and

Biochemistry at Brigham Young University. Linford has nearly 250 publications. He is an editor of Applied Surface Science, an Elsevier journal with an impact factor of 2.7. He is a fellow of the American Vacuum Society. From Google Scholar, his h-index is 30 and his i10-index is 69. Linford's research focuses on the development and characterization of new materials for separation science and for data storage, and on mathematical methods for data analysis.

Robert (Bob) A. Langley, Ph.D., Associate Editor

Retired from Oak Ridge National Laboratory in 1994 and Sandia National Laboratories in 1999. He has performed research in the fields of atomic and molecular physics, solid state physics, material science, vacuum science and technology, upper atmospheric phenomena, fusion power, and high-energy accelerators and published over 130 scientific papers. He is associate editor

of **Vacuum Technology and Coating** magazine, teaches vacuum related courses for American Vacuum Society and Society of Vacuum Coaters, served on the Board of Directors of the AVS, served as Chairman of the AVS and the IUVSTA Plasma Science Divisions, and consults on vacuum science and technology, and microwave material processing.

VACUUM TECHNOLOGY & COATING'S EDITORIAL STAFF



Abhijit Biswas, Ph.D., Contributing Editor

Column: Nanotechnology

Abhijit is an entrepreneur and a scientist. He has published 100+ papers in international journals and three text books in electrical engineering and holds several patents. He was Associate Professor in Electrical Engineering in the Center for Nano Science and Technology at the University of Notre Dame, Indiana. He has several years of experience in scientific research initiatives and leading research projects in nanocomposite, materials for sustainable energy and materials for biomedical applications and nanotechnology in various academic settings. He is a member of the editorial board of Particulate Science and Technology Journal and Journal of Advanced

Mechanical Engineering. Abhijit has been on the US National Science Foundation's proposal review panel in engineering and an invited reviewer for research proposals in science and engineering for the Romanian Research Council in Romania and the Technology Foundations in the Netherlands. He has presented numerous invited and keynote talks at national and international meetings in the areas of nanoscience and nanotechnology, and has directed several nanomaterials R&D programs with budgets totaling over \$10 million that have been funded by the Department of Defense and other Federal Agencies in collaborations with university, industry and government lab partners. In addition, Abhijit has been a reviewer and adjudicator of more than 30 international journals in nanotechnology, medicine, biology, physics, chemistry, materials science and engineering. Abhijit co-founded two companies. He can be reached at abbtft@yahoo.com



Ilker Bayer, Ph.D., Contributing Editor

Column: Nanotechnology

Dr Ilker S. Bayer is a Researcher at the Smart Materials Group at the Italian Institute of Technology in Genova and a visiting Professor at the University of Virginia, Department of Mechanical and Aerospace Engineering. He obtained his PhD degree on Mechanical and Industrial Engineering from the University of Illinois. Later on he worked as a post-doctoral researcher at the University of Alaska-Fairbanks on polymer nanocomposites and applications and returned to the Aerospace Engineering

Department at the University of Illinois. Between 2008-2010 he worked at the University of Illinois at Urbana-Champaign as a research assistant professor in the Department of Mechanical and Aerospace Engineering before joining IIT in 2010. Dr Bayer's current research interests include fabrication and characterization of functional polymer nanocomposites, preparation and characterization of biomaterial nanocomposites for antimicrobial applications and drug delivery, processing of novel cellulosic materials, new generation polymer blends and surface modification and functionalization. Dr Bayer advises a number of graduate students and post doctoral colleagues. He has published over 80 research papers and holds several patents.



Narendra Parmar, Ph.D., Contributing Editor

Column: Nanotechnology

Narendra Parmar received his Ph.D. degree in Physics from the Department of Physics and Astronomy, Washington State University (WSU), Pullman in 2012 specializing in ZnO semiconductor crystal. In his Ph.D. thesis work carried out under the supervision of Prof. Kelvin Lynn, he worked on defect engineering and p-type doping of ZnO bulk single crystals grown by melt, hydrothermally as well as chemical vapor transport methods. He gained considerable expertise on post growth thermal processing and doping methods in order to manipulate the electrical behavior and achieve p-type doping of ZnO crystals. He has several years of experience in the design, development and utilization of hardware and software for scanning probe techniques, UHV systems and many complementary spectroscopic characterization techniques. Dr. Parmar continued his work on ZnO as a post-doctoral fellow in the same group at WSU and his recent results could potentially lead to breakthroughs in p-type conduction in ZnO.

Dr. Parmar has also been working on CdTe semiconductor, characterization defects for photovoltaic applications. Dr. Parmar has considerable familiarity with different UHV thin films growth techniques and standard processes involved in crystal growth facility and clean room microfabrication processes. Dr. Parmar has taught several graduate and under graduate level courses in Physics and Material Science and Engineering at WSU. He is also skilled with the practical knowledge of scientific patent drafting. Dr. Parmar's collaborative research has benefited a number of his colleagues with whom he has worked and his research has resulted in numerous publications in world's prestigious peer reviewed scientific journals. He has also given presentations at national and international scientific conferences. In addition to research, he is serving as an editorial board member for a scientific journal and has been an invited reviewer for a number of international journals. He has been a contributing editor for the Nanotechnology column in *Vacuum Technology and Coating* magazine for the past couple of years.



Abhijit Biswas, Ph.D., Contributing Editor

Column: Photonics and Microelectronics

One goal of VT&C is to keep readers informed on new and advancing technologies. Nanotech and Biotech Columns were introduced several years ago with great success and we also include papers by guest authors on advanced coating. Building on this, we introduce a new Column by Dr. Biswas, Photonics and Microelectronics, which further broadens the scope of VT&C. These fast growing technologies form the basis for integrating photonic and microelectronic devices. Microelectronics uses vacuum technology for the microfabrication techniques and processes instrumental in creating bioMEMS devices. BioMEMS offers potential for expanding the horizons

and scope in the fast growing microelectronics-photonics integration sector that will impact a vast array of industries. These novel techniques allow researchers to create a more physiologically relevant environment, promoting new devices for life saving or enhancing applications. Proof-of-concept bioMEMS devices must be tested for the operational reliability for these technologically significant devices. Addressed is the need for simplifying and standardizing BioMEMS tools. The BioMEMS field is growing rapidly, and we anticipate practical applications of BioMEMS devices soon. This keeps VT&C readers aware of new developments in these technologies. We hope you find this new Column informative and stimulating.

VACUUM TECHNOLOGY & COATING'S EDITORIAL STAFF



Megha Agrawal, Ph.D., Contributing Editor

Column: Vacuum Advances in Biotechnology

Dr. Megha Agrawal received her Ph.D. in Biotechnology from the Indian Institute of Technology at Roorkee, which is one of the premier institutions in India with an outstanding reputation across the globe. She won a highly competitive research award given by the Council of Scientific and Industrial Research in India to carry out her PhD work.

Dr. Agrawal's research on resveratrol has provided novel pathways to develop new therapeutics to combat neurodegenerative disorders. During an active research career of more than a decade, Dr. Agrawal has made significant contributions to develop a rapid, cost effective and more sensitive mechanism based in-vitro model of ischemic stroke as first tier of screening of neuroprotective drugs for their anti-stroke potential. Her research has impacted significantly to initiate new areas in neurodegeneration, neuroprotection and novel approaches to treat cerebral stroke related injuries and prevention. Currently, she is a Research Assistant Professor of Biology at the University

of Arkansas at Little Rock (UALR) in the United States. Based on her international reputation, she was awarded a corporate grant to support her research in neuroscience at UALR. Prior to joining UALR, she worked as a scientist in the School of Medicine at the University of Florida at Gainesville and later at the Children's National Medical Center in Washington DC, where she worked on how placental derived hormones affect neurodevelopment. Dr. Agrawal's research has been well cited. She has published in internationally prestigious scientific journals in the field of biotechnology, neuroscience, stroke and molecular biology and biochemistry. She has also been invited to give several talks at national and international meetings. Besides research, she has considerable experience in writing research grant proposals and has been an invited reviewer for a number of international journals in medicine, neuroscience and biology. Dr. Agrawal also serves as an Editorial Board Member for 'Frontiers in Molecular Bioscience', a Nature-Frontier publishing group.



Shyamasri Biswas, Ph.D., Contributing Editor

Column: Vacuum Advances in Biotechnology

Dr. Shyamasri Biswas received her Ph.D. in Biotechnology jointly from Banaras Hindu University, India and the University of Potsdam in Germany in 2003. She was awarded the prestigious German Academic Exchange Service (DAAD) sandwich model international scholarship and carried out her Ph.D. thesis work in the Department

of Physical Biochemistry at the University of Potsdam, Germany. She also received the Council for Scientific and Industrial Research fellowship in India. Dr. Biswas has held research positions in protein biochemistry, structural biology, biotechnology and molecular biology at top-tier US institutions. Her most recent affiliation has been

with the University of Florida where she has worked as a postdoctoral scientist in the Department of Biochemistry and Molecular Biology. Dr. Biswas has published over twenty peer-reviewed research papers in prestigious international journals in the field of biotechnology that include Nature Structural Biology, Journal of Biological Chemistry, Structure and Biochemistry. She has also given several talks at national and international meetings and has been an invited reviewer for a number of international journals. Dr Biswas has used high vacuum and ultra-high vacuum synchrotron facilities for her protein crystallography work. High resolution protein structures were solved using synchrotron light source which facilitated drug design against clinically relevant proteins. In addition she has also utilized low vacuum equipment like mass spectrometer, FPLC and CD for characterization of proteins.

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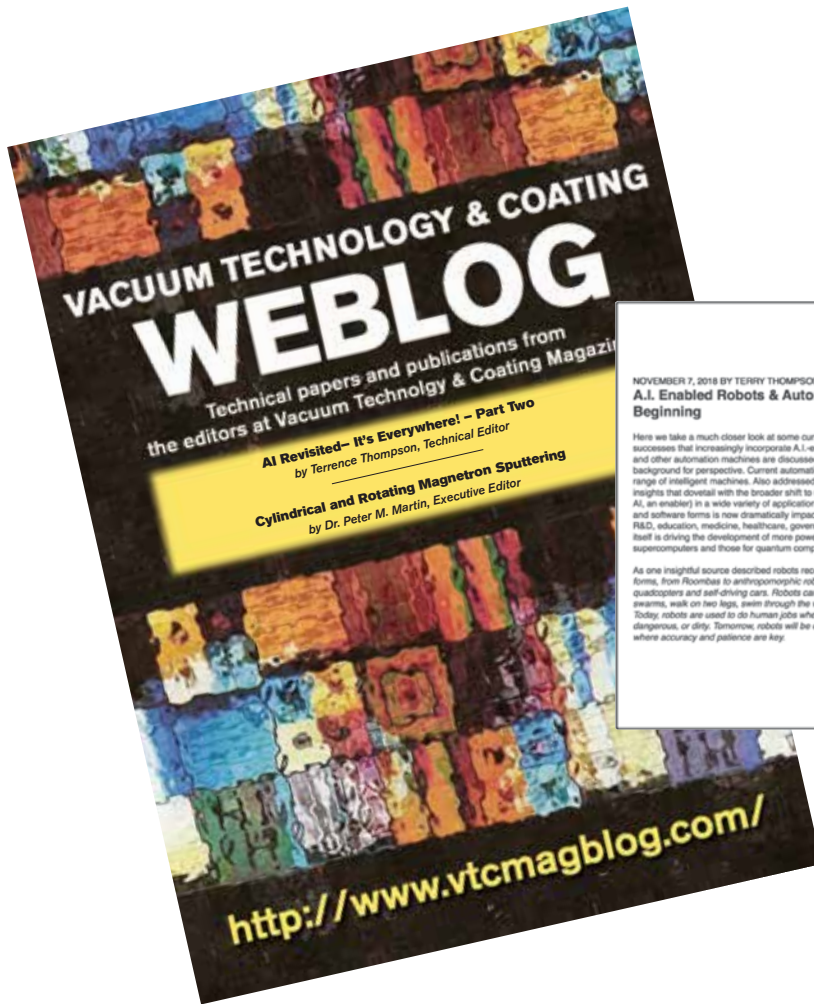
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VACUUM TECHNOLOGY & COATING'S WEBLOGS



NOVEMBER 7, 2018 BY TERRY THOMPSON
A.I. Enabled Robots & Automation - Beginning

Here we take a much closer look at some current successes that increasingly incorporate A.I.-enabled and other automation machines are discussed along background for perspective. Current automation comes in a wide variety of applications. Autom. and software forms is now dramatically impacting business, education, medicine, healthcare, government and itself is driving the development of more powerful conversational supercomputers and those for quantum computing experts.

As one insightful source described robots recently, "They do forms, from Roombas to anthropomorphic robots that look like quadcopters and self-driving cars. Robots can operate autonomously, walk on two legs, swim through the water, and even fly. Today, robots are used to do human jobs where the work is not dangerous, or dirty. Tomorrow, robots will be commanding those where accuracy and patience are key."

NOVEMBER 08, 2018 BY PETER MARTIN
High Power Pulsed Magnetron Sputtering (HPPMS) - Part 2

This is the second Blog on High Power Pulsed Magnetron Sputtering (HPPMS) process and coating. Recall from the last Blog that high-power pulsed magnetron sputtering (HPPMS) is a PVD method power impulse magnetron sputtering (PIMS) utilizes extremely high power densities of the order of kilowatt (kW) or more (based on high power densities at low duty cycle (on:off time ratio) of ~ 10% of less of microseconds). Distinguishing features of HPPMS are a high degree of ionization of sputtered metal and a high rate of molecular gas dissociation which result in high density of deposited films. The ionization and dissociation degrees increase according to the peak cathode power and the peak power and the duty cycle are selected so as to maintain an average cathode power similar to conventional sputtering (1-10 Watts).

RECENT POSTS
High Power Pulsed Magnetron Sputtering (HPPMS) - Part 2
A.I. Enabled Robots & Automation: The Beginning
Observations & Opportunities: AI Revisited - It's Everywhere, Part 3: The Singularity Evolution
Observations & Opportunities: AI Revisited - It's Everywhere, Part Four: The Singularity Dilemma
High Power Pulsed Magnetron Sputtering (HPPMS)

Visits to the VT&C website prominently display the ongoing and growing collection of VT&C weblogs.

In the Blog written by Peter M. Martin, Ph.D., Executive Editor & Senior Technologist, he expands upon his Thin Film Technology, Surface Engineering & Back-to-Basics columns with additional targeted Basic Science **and Technology Discussions of Vacuum Deposition Processes**. These basic foundational processes are described in easy-to-digest blogs for the busy technology reader. These are great for those new to vacuum science, engineering technology and those who may need refreshers.

The Blog authored by Terrence Thompson, CMgE, Technical Editor, "**Observations & Opportunities**", addresses fast-growing global science, engineering and technology trends in high-growth businesses and industries. It follows technology breakthroughs that will enable the new Industry 4.0 Artificial Intelligence (AI) driven design and manufacturing efforts for the many new products and services that are making the digital age even more promising, encompassing and challenging for individuals, businesses and governments.

www.vtcmag.com

Want to sponsor the VT&C Blog?

Contact Andrew Cowan

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**VACUUM TECHNOLOGY & COATING'S 2019
PRODUCT SHOWCASE & EDITORIAL CALENDAR**

January 2019, subject to change

| ISSUE DATE | PRODUCT SHOWCASE/EDITORIAL FEATURE |
|--|--|
| January 2019 | Heaters, Furnaces, Ovens, Chillers, Coolers, Accessories and Services for Vacuum Processing Showcase describes furnaces, heaters, ovens, chillers, coolers, cryotrap, cryopumps and related products including cold boxes, cold cabinets, cold traps, connectors, cryocoolers, cryogenerators, cryostats, dewars, fittings, heater modules, heat exchangers, liquefiers, etc. for a wide variety of vacuum-centric process applications. |
| February 2019 | Gas Analytical Systems, Instrumentation, Metrology & Control Addresses gas analytical instrumentation that is applicable in production, R&D and numerous other vacuum applications. Systems often require sophisticated gas analytical systems and subsystems/accessories/components including MFCs, RGAs, vacuum gauges, leak detectors, mass spectrometers and gas chromatography systems, and accessories and services to verify process or test integrity. |
| March 2019 <i>SVC TechCon</i> | Deposition, Coating, Cleaning & Etching Processing Equipment Includes sputtering, evaporation and coating plus plasma cleaning and etching systems. |
| April 2019 | Vacuum Hardware: Valves, Chambers, Feedthroughs, Seals, Flanges, Fittings & Related Component Includes valves, chambers, feedthroughs, seals, flanges, fittings, handling-manipulation equipment, collars, adaptors, bellows, viewports, traps, piping and other related hardware. |
| May 2019 | Power Supplies, RF Generators & Accessories for Vacuum Thin-Film Deposition and Coating Includes power supplies used in a wide variety of vacuum-based production deposition and coating applications. |
| June 2019 <i>Semicon West</i> | Materials: Oils, Fluids, Gases, Chemicals & Lubricants Includes vacuum fluids, oils, lubricants, metals, ceramics, chemicals, gases and other materials used in vacuum processing equipment operation, installation and maintenance. Note: Deposition & Evaporation Sources & Materials will be covered in September 2019 |
| July 2019 | Thin-Film Deposition Rate Monitors & Controllers Describes thin-film deposition rate and thickness monitors, optical monitors, etch monitors, deposition controllers, quartz crystals sensors, and related products. |
| August 2019 | Gases Handling, Storage & Distribution Includes cabinets, piping, manifolds, safety, storing, transporting, purification, distribution, storage and mixing equipment for high-purity gases as well as exhaust conditioning and gas scrubbers typically used in vacuum production, semiconductor fabrication and R&D processes. |
| September 2019 <i>AVS Symposium</i> | Deposition & Evaporation Sources and Materials Includes sputtering targets, evaporation sources, ion sources, cathodes, coatings and other materials used for various deposition and coating applications. |
| October 2019 <i>MRS Fall Meeting</i> | Deposition, Coating, Cleaning & Etching Vacuum Processing Equipment Includes sputtering, evaporation and coating plus plasma cleaning and etching systems. |
| November 2019 | Thin & Thick Film Metrology, Measurement, Characterization & Surface Analysis Equipment Includes thickness, flatness and hardness testers, surface science analysis, ellipsometers, spectrometers, thin film characterization/uniformity testers, surface profilers, film stress analysis and related instrumentation/metrology products. |
| December 2019 | Vacuum Pumps Covers the wide variety of roughing pumps, high-vacuum pumps, very-high-vacuum pumps, cryopumps including vacuum pumps used in all manufacturing processes and R&D applications. |

Product Showcase Listing fee waived for Advertisers, \$295 for non-Advertisers. Contact Andrew Cowan for further information.

Product Submissions & Information for VT&C Product Showcases

Terrence Thompson, *Technical Editor*

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www.vtcmag.com

VACUUM TECHNOLOGY & COATING AD RATES

PRINT AD RATES (EFFECTIVE JANUARY 1, 2019)

| | | 1 TIME | 3 TIMES | 6 TIMES |
|-------------------|----------------|----------------|-----------------|-----------------|
| FULL PAGE | 4 color | \$6,200 Gross | \$6,000 Gross | \$5550 Gross |
| 1/2 ISLAND | 4 color | \$4,900 Gross | \$4,700 Gross | \$4,500 Gross |
| 1/2 PAGE | 4 color | \$3,900 Gross | \$3,800 Gross | \$3,665 Gross |
| 1/3 PAGE | 4 color | \$2,990 Gross | \$2,950 Gross | \$2,800 Gross |
| 1/4 PAGE | 4 color | \$2,200 Gross | \$2,080 Gross | \$2,020 Gross |
| | | 9 TIMES | 12 TIMES | 24 TIMES |
| FULL PAGE | 4 color | \$5,520 Gross | \$5,400 Gross | \$5,350 Gross |
| 1/2 ISLAND | 4 color | \$4,400 Gross | \$4,200 Gross | \$3,900 Gross |
| 1/2 PAGE | 4 color | \$3,500 Gross | \$3,450 Gross | \$3,400 Gross |
| 1/3 PAGE | 4 color | \$2,750 Gross | \$2,650 Gross | \$2,550 Gross |
| 1/4 PAGE | 4 color | \$2,000 Gross | \$1,970 Gross | \$1,950 Gross |

WEBSITE BANNER RATES (EFFECTIVE JANUARY 1, 2019)

| | |
|------------------------------------|-------------------|
| Top Page Banner Position | \$1,200 per month |
| Middle Page Banner Position | \$750 per month |

PRODUCT SHOWCASE LISTING RATES

(EFFECTIVE JANUARY 1, 2019)

| | |
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| Product Showcase Listings | \$295 per listing – Non-Advertiser* |
|----------------------------------|-------------------------------------|

** Product showcase Listing fee waived for Advertisers*

PRINT AD SPECIFICATIONS

| STANDARD AD SIZE | WIDTH* | × | DEPTH* |
|--|--------------------------------------|---|---|
| FULL PAGE (BLEED): Bleed Size: Trim Size: | 8 1/8 7 7/8 | | 11 1/8 10 7/8 |
| | † Safety: 3/8 from trim on all sides | | |
| FULL PAGE (NON-BLEED): | 7 | | 10 |
| ‡ 2/3 PAGE (NON-BLEED): | 4 1/2 | | 10 |
| ‡ 2/3 PAGE (BLEED): | 5 1/8 | | 11 1/8 |
| ‡ 1/2 PG ISLAND: | 4 1/2 | | 7 3/8 |
| 1/2 PAGE VERTICAL: 1/2 PAGE HORIZONTAL: (NON-BLEED) | 3 3/8 7 | | 10 4 7/8 |
| 1/2 PAGE HORIZONTAL: (BLEED) | 7 7/8 | | 5 7/16 (Trim plus 1/8 all around for bleed) † Safety = 7 × 4 7/8 centered within 7 7/8 × 5 7/16 |
| 1/3 PAGE VERTICAL: | 2 3/16 | | 10 |
| 1/3 PAGE HORIZONTAL: | 4 5/8 | | 4 7/8 |
| 1/4 PAGE: | 3 1/2 | | 4 7/8 |

*Standard ad sizes in inches. †Live matter: For safety, keep at least .375" from trim.

‡Please contact Andrew Cowan for further information

MATERIAL HANDLING:

E-mail preferred, for ad material over 5MBs, please contact Production for FTP instructions.

For all production related questions please e-mail or call our production department:

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ONLINE BANNER SPECIFICATIONS

Top Banner728 pixels wide x 90 pixels high (includes URL link)

Medium Banner 400 pixels x 90 pixels (includes URL link)

- Please supply animated banners as GIFs
- Static banners may be supplied as GIFs, PNGs or JPEGs

All banner files, static or animated, should be kept to 75k or below, for larger sizes, please contact Andrew Cowan @ 1-336-432-9627

PRODUCT SHOWCASE LISTING SPECIFICATIONS

- 100 words per listing • (1) high resolution image per listing

For more information on non-advertiser Product Showcase Listings contact Andrew Cowan

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