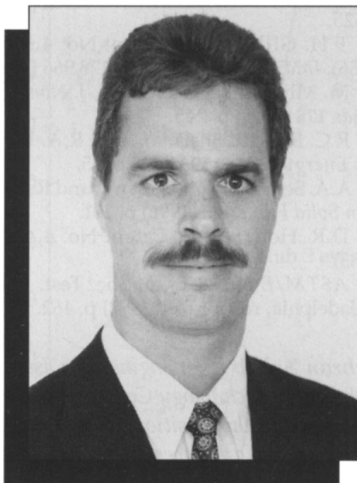


Brian Holloway Appointed MRS/OSA Congressional Fellow for 1997–98

Brian Holloway of Stanford University is the recent recipient of the 1997–1998 MRS/OSA Congressional Science and Engineering Fellowship. As a precursor to a career involving public service and technology transfer, he will work for one year in a Washington congressional office. "I hope to learn how scientific policy is formulated in order to someday focus on basic scientific-research funding," said Holloway.

The goal of the fellowship is to promote communication between Congress and the science and engineering community. Fellows serve with individual members of Congress, committees, or support agencies such as the Congressional Budget Office and the Congressional Research Service. According to MRS Public Affairs Committee Chair Julia Phillips, the program has greatly benefitted the Society. "The Fellows are extremely energetic and productive. For example Kelly Kirkpatrick, the first MRS/OSA Fellow, has influenced legislation such as the recently proposed tax on waived graduate-student tuition." At press time for this issue of *MRS Bulletin*, the bill had passed through Congress, retaining section 117d of the Internal Revenue Code. This segment of law ensures graduate-students' continued exemption from tax responsibility on the value of tuition




Brian Holloway

waivers. "Kelly has also provided MRS members with valuable insight into the legislative process through her efforts to improve the MRS Public Affairs homepage as well as her efforts on public-affairs issues," said Phillips.

Holloway will start with a two-week orientation at the American Association for the Advancement of Science, which coordinates the fellowship. "I hope to

bring my youthful enthusiasm and my wide variety of scientific interests to the position," he said. Having recently completed his PhD degree in mechanical engineering with a minor in materials science and engineering, Holloway is investigating a congressional office where he feels his services would be most helpful. He plans to make a decision in late September or early October. Kirkpatrick served Senator Joseph I. Lieberman (D-CT) during her fellowship (see *MRS Bulletin*, Vol. XX, No. 8, p. 64). The 1996–1997 Fellow, Michal Freedhoff, worked for U.S. Congressional Representative Edward J. Markey (D-MA). (For more information on Freedhoff's fellowship, see *MRS Bulletin*, Vol. 21, No. 10, p. 74; and *MRS Bulletin*, Vol. 21, No. 11, p. 74.)

"I want to thank MRS and OSA for providing me with this once-in-a-lifetime opportunity," Holloway said.

Holloway's dissertation work involved studying the chemical bonding present in carbon nitride thin films in order to determine the chemical processes occurring during film deposition. He received a BS degree in mechanical engineering from the University of Florida. During his undergraduate years, Holloway co-owned and operated a commercial fishing company. 

INTERNATIONAL UNION OF MATERIALS RESEARCH SOCIETIES

IUMRS-ICEM-98 Issues Call for Papers

The Fourth International Conference on Electronic Materials (IUMRS-ICEM-98), chaired by Soon Ja Park (Seoul National University) with Min Che Chon (Chon, International) as honorary chair, will be held August 24–27, 1998, in Cheju, Korea. The conference, organized by Materials Research Society of Korea (MRS-K) under the auspices of the International Union of Materials Research Societies (IUMRS), is a continuation in the series of meetings held in Strasbourg, France (1992); Hsinchu, Taiwan (1994); and Boston, USA (1996). Prospective authors should submit five

copies of a 1,000 word summary to Professor Shinhoo Kang, The Secretariat of IUMRS-ICEM-98, Materials Research Society of Korea, School of Materials Science and Engineering, Seoul National University, Seoul 151-742, Korea; 82-2-880-7167; fax 82-2-884-1413; e-mail icem98@plaza.snu.ac.kr. The deadline is February 28, 1998.

ICEM has provided a forum focused on areas of preparation, characterization, and application of electronic materials. The meeting will consist of ten symposia, which emphasize the latest developments

in research areas of various electronic materials: Si-based Processing; Compound Semiconductors; Electro-Ceramics and Sensors; Display Materials; Magnetics; Ferroelectric Thin Films; Electronic Packaging; Surface, Interfaces, and Nanotechnology; Polymers for Electronics; and Energy Conversion Storage Materials.



News about IUMRS conferences and other activities should be sent to:

MRS Bulletin, Materials Research Society
506 Keystone Drive, Warrendale, PA 15086-7573 USA
E-mail: bulletin@mrs.org



San Francisco Marriott Hotel, Salon 8 and Salon 9, Tuesday-Thursday, April 14-16, 1998



MRS encourages attendees to visit the exhibit by:

- Programming both morning and afternoon complimentary coffee breaks in the Exhibit Hall every day.
- Offering a deli-style lunch for purchase in the Exhibit Hall every day from noon to 1:30 p.m.
- Hosting a complimentary reception in the Exhibit Hall on Tuesday evening from 5:00 p.m. to 6:30 p.m.

The MRS Exhibit, held in conjunction with the 1998 MRS Spring Meeting, will feature over **120 international exhibitors** who will display a full spectrum of equipment, instrumentation, products, software, publications and services for materials research. The exhibit will closely parallel the nature of the technical symposia and, as always, the program has been arranged to allow meeting participants ample opportunity to visit the exhibit.

Exhibit Hours (tentative)

Tuesday, April 14 11:30 a.m. – 6:30 p.m.*

Wednesday, April 15 9:30 a.m. – 6:00 p.m.

Thursday, April 16 9:30 a.m. – 1:30 p.m.

**Complimentary Reception from 5:00 p.m. - 6:30 p.m.*

List of 1997 Spring Exhibitors

Booth Space is limited...contact MRS for your application today!

A & N Corporation	FEI Company, Components Group	MDC Vacuum Products Corporation	SC Technology/Telemark SensArray Corporation
ABB Extrel	E. A. Fischione Instruments, Inc.	Melles Griot, Inc.	Shiva Technologies, Inc.
Academic Press, Inc.	Fujikin of America, Inc.	Micrion Corporation	SKION Corporation
Accurel Systems International Corporation	Gatan, Inc.	Micro Photonics, Inc.	South Bay Technology, Inc.
Aetrium, Inc.	General Vacuum, Inc.	MMR Technologies, Inc.	SPI Supplies/Structure Probe, Inc.
AIXTRON, Inc.	Heraeus Amersil, Inc.	Molecular Simulations, Inc.	STAIB Instruments, Inc.
AJA International, Inc.	High Voltage Engineering	MVSystems, Inc.	Struers/Logitech Product Group
Aldrich Chemical Company, Inc.	Huntington Mechanical Laboratories, Inc.	Nano Instruments, Inc.	SURFACE
American Institute of Physics, Inc.	Hysitron, Inc.	Nanofilm Technologie GmbH	Surface/Interface, Inc.
APD Cryogenics, Inc.	IBM Analytical and Test Services	National Electrostatics Corporation	SVT Associates, Inc.
ASTeX/Applied Science and Technology, Inc.	Implant Sciences Corporation	Neocera, Inc.	TECHNOTRADE International, Inc.
Bede Scientific Incorporated	Inel, Inc.	New Focus, Inc.	Tencor Instruments
Blake Industries, Inc.	InnoVac Corporation	Nicolet Instrument Corporation	TexSEM Laboratories (TSL), Inc.
Burleigh Instruments, Inc.	Instruments SA, Inc.	Nikko Hitech International	Thermionics Laboratory
Ceramaseal	Insulator Seal Inc.	Noranda Advanced Materials	Thomas Swan & Co., Ltd.
CHA Industries	Ion Tech, Inc.	Nor-Cal Products, Inc.	TopoMetrix Corp.
Chemat Technology, Inc.	Janis Research Company	Omicron Associates	Union Carbide Crystal Products
Commonwealth Scientific Corporation	JEOL USA, Inc.	Oxford Applied Research	Vacuum Atmospheres Co.
Creekside Technologies	k-Space Associates, Inc.	Oxford Instruments Scientific Research Division	Varian Vacuum Products
Cryomech, Inc.	Keithley Instruments, Inc.	Park Scientific Instruments	VCR Group, Inc.
DCA Instruments, Inc.	KeveX Instruments, Inc.	Parke Mathematical Laboratories	Virginia Semiconductor
Denton Vacuum, Inc.	KeveX X-Ray Inc.	Philips Electronic Instruments Company	Voltaix, Inc.
Digital Instruments, Inc.	Kluwer Academic Publishers	Physical Electronics, Inc.	Yasui Seiki Co. (USA)
Duniway Stockroom	Lake Shore Cryotronics	Plasma Sciences, Inc.	
Eagle-Picher Industries	Lambda Physik, Inc.	Plasmatron Coating Systems, Inc.	
EDAX International	Lambda Technologies	Princeton Instruments, Inc.	
Elsevier Science	Lasertec U.S.A., Inc.	Pure Tech, Inc.	
EMCORE Corporation	Lasertec U.S.A., Inc.	QualiTau, Inc.	
EMISPEC Systems, Inc.	Kurt J. Lesker Company	Renishaw Inc.	
EPI/MBE Products Group	LUXTRON Corporation	Research and PVD Materials Corporation	
Epion/PVD Products	Magnet Sales & Manufacturing	Rigaku/USA, Inc.	
ERG Materials & Aerospace Corporation	MARCH Instruments, Inc.	RMC	
ESCETE B.V.	Materials Analysis Group/Philips Semiconductors		
ESM Software	Materials Technologies International (MTI)		
Charles Evans & Associates			

For your 1998 MRS Spring Exhibit Application, contact:

**Mary E. Kaufold, Manager Advertising & Exhibits
Materials Research Society
Telephone: (412) 779-8312
Fax: (412) 779-4397
E-mail: kaufold@mrs.org**

SPRING MEETING

98

APRIL 13-17

SAN FRANCISCO
CALIFORNIA



Exhibit:
April 14-16

1998 Spring Meeting Chairs

John A. Emerson
Organic Materials
Department 1472 MS0958
Sandia National Labs
Albuquerque, NM 87185-0958
Phone: 505-845-9747
Fax: 505-844-2894
jaemers@sandia.gov

Ronald Gibala
Department of Materials
Science and Engineering
2026 H.H. Dow Building
Univ. of Michigan
2300 Hayward Street
Ann Arbor, MI 48109-2136
Phone: 313-936-0178
Fax: 313-763-4788
rgibala@umich.edu

Caroline A. Ross
Department of Materials
Science and Engineering
Room 13-4005
Massachusetts Inst. of
Technology
77 Massachusetts Avenue
Cambridge, MA 02139
Phone: 617-258-0223
Fax: 617-252-1020
caross@mit.edu

Leo J. Schowalter
Physics Department and
Center for Integrated
Electronics
Rensselaer Polytechnic Inst.
110 - 8th Street
Troy, NY 12180-3590
Phone: 518-276-6435
Fax: 518-276-6680
schowalt@unix.cie.rpi.edu

CALL FOR PAPERS

Abstract Deadlines

November 1, 1997: for abstracts sent via e-mail, fax or mail

November 3, 1997: for abstracts sent via the MRS website

In fairness to all potential authors, late abstracts will not be accepted.

Symposia and Symposium Organizers

A: Amorphous and Microcrystalline Silicon Technology - 1998

Ruud E.I. Schropp, Utrecht Univ., The Netherlands, Phone 31-30-2533170, Fax 31-30-2543165, schropp@fys.ruu.nl;
Howard M. Branz, National Renewable Energy Lab, Phone 303-384-6694, Fax 303-384-6531, hbranz@nrel.gov; **Michael Hack**, dpiX, a Xerox Co., Phone 415-812-4535, Fax 415-493-6349, hack@dpiX.com; **Isamu Shimizu**, Tokyo Inst. of Technology, Japan, Phone 81-45-924-5424, Fax 81-45-921-1089, shimizu@chem.titech.ac.jp; **Sigurd Wagner**, Princeton Univ., Phone 609-258-4631, Fax 609-258-6279, wagner@princeton.edu; Administrative contact: **Mary Ann Woolf**, Univ. of Utah, Phone 801-581-4246, Fax (same as phone) or -4801; woolf@plab.physics.utah.edu

B: Flat-Panel-Display Materials and Large-Area Processes

Ted S. Fahlen, Candescend Technologies Corp., Phone 408-360-2650, Fax 408-229-0850, tfahlen@candescend.com; **Shinji Morozumi**, Hosiden and Philips Display Corp., Japan, Phone 81-78-9915791, Fax 81-78-9978652, morozumi@hosiden.co.jp; **Gregory Parsons**, North Carolina State Univ., Phone 919-515-7553, Fax 919-515-3465, parsons@ncsu.edu; **Carl Seager**, Sandia National Labs, Phone 505-844-9168, Fax 505-844-1197, cseage@sandia.gov; **Chuang-Chuang Tsai**, Applied Komatsu Technology, Phone 408-235-6847, Fax 408-563-0685, cc_tsai@amat.com

C: Materials Issues in Vacuum Microelectronics

Wei Zhu, Lucent Technologies/Bell Labs, Phone 908-582-7659, Fax 908-582-4868, wzhu@bell-labs.com; **Lawrence S. Pan**, Candescend Technologies Corp., Phone 408-360-2667, Fax 408-229-8008, lpan@candescend.com; **Thomas E. Felter**, Lawrence Livermore National Lab, Phone 510-422-8012, Fax 510-424-4737, felter1@llnl.gov; **Christopher Holland**, SRI International, Phone 415-859-6382, Fax 415-859-3090, cholland@unix.sri.com

D: Defect and Impurity Engineered Semiconductors and Devices II

S. Ashok, The Pennsylvania State Univ., Phone 814-863-4588, Fax 814-863-7967, sxa4@psu.edu; **K. Sumino**, Nippon Steel Corp., Japan, Phone 81-439-802260, Fax 81-439 802769, sumino@kikaku.re.nsc.co.jp; **J. Chevallier**, CNRS, France, Phone 33-1-45075340, Fax 33-1-45075841, chevalier@cnrs-bellevue.fr; **B.L. Sopori**, National Renewable Energy Lab, Phone 303-384-6683, Fax 303-384-6684, soporib@tcplink.nrel.gov; **W. Goetz**, Hewlett Packard Co., Phone 408-435-6007, Fax 408-435-6335, werner_goetz@hp.com

E: Low-Dielectric Constant Materials and Applications in Microelectronics II

Chien Chiang, Intel Corp., Phone 408-765-2721, Fax 408-765-2061, chien_chiang@ccm.sc.intel.com; **Toh-Ming Lu**, Rensselaer Polytechnic Inst., Phone 518-276-8379, Fax 518-276-6680, tmlu@unix.cie.rpi.edu; **Jeffrey T. Wetzel**, Motorola Inc., Phone 512-933-5039, Fax 512-933-5497, rxmn70@aprdlgr.sps.mot.com; **Paul S. Ho**, Univ. of Texas, Austin; Phone 512-471-8961, Fax 512-471-9674, paulho@mail.utexas.edu

F: Wide-Bandgap Semiconductors for High Power, High Frequency and High Temperature

Steve Denbaars, Univ. of California, Santa Barbara, Phone 805-893-8511, Fax 805-893-8983, denbaars@engrhub.ucsb.edu; **John Palmour**, Cree Research, Inc., Phone 919-361-4770, Fax 919-361-2266, john_palmour@cree.com; **Michael S. Shur**, Rensselaer Polytechnic Inst., Phone 518-276-2201 or -6019, Fax 518-276-6261, shur@ecse.rpi.edu, http://nina.ecse.rpi.edu/shur/; **Michael Spencer**, Howard Univ., Phone 202-806-6618, Fax 202-806-6597, spencer@msrce.howard.edu

G: Science and Technology of Organic Electroluminescent Devices

Homer Antoniadis, Hewlett-Packard Labs, Phone 415-857-2386, Fax 415-857-2379, homer@hpl.hp.com; **Donal Bradley**, The Univ. of Sheffield, United Kingdom, Phone 44-114-2224575, Fax 44-114-2728079, d.bradley@sheffield.ac.uk; **Ian H. Campbell**, Los Alamos National Lab, Phone 505-667-5757, Fax 505-665-4292, campbell@lanl.gov; **Junji Kido**, Yamagata Univ., Japan, Phone 81-238-263052, Fax 81-238-263412, kid@dipfr.dip.yz.yamagata-u.ac.jp

H: Hydrogen in Semiconductors and Metals

Norbert H. Nickel, Hahn-Meitner-Institut Berlin, Germany, Phone 49-30-67053301, Fax 49-30-67053333, nickel@hmi.de; **Warren B. Jackson**, Xerox Palo Alto Research Lab, Phone 415-812-4196, Fax 415-812-4105, wjackson@parc.xerox.com; **Robert C. Bowman**, Jet Propulsion Lab, Phone 818-354-7941, Fax 818-393-4206, robert.c.bowman-jr@jpl.nasa.gov; **Robert G. Leisure**, Colorado State Univ., Phone 970-491-5370, Fax 970-491-7947, leisure@lamar.colostate.edu

I: Advanced Interconnects and Contact Materials and Processes for Future Ics

Shyam P. Murarka, Rensselaer Polytechnic Inst., Phone 518-276-2978, Fax 518-276-2990, smurarka@unix.cie.rpi.edu; **Moshe Eizenberg**, Technion-Israel Inst. of Technology, Israel, Phone/Fax 972-4-8294585, eizen@tx.technion.ac.il; **David B. Fraser**, Intel Corp., Phone 408-765-2926, Fax 408-653-5157, david_b_fraser@ccm.hf.intel.com; **Roland Madar**, Institut National Polytechnique de Grenoble/ENSFG, France, Phone 33-476-826330, Fax 33-476-829394, roland.madar@admingp.fr; **Raymond Tung**, Lucent Technologies/Bell Labs, Phone 908-582-6895, Fax 908-582-2300, rtt@clockwise.lucnet.com

J: Electronic Packaging Materials Science X

Daniel J. Belton, Intel Corp., Phone 602-554-8963, Fax 602-554-7813, daniel_j_belton@ccm.hf.intel.com; **Michael Gaynes**, IBM Corp., Phone 607-755-9244, Fax 607-755-9192, mgaynes@vnet.ibm.com; **Raymond Pearson**, Lehigh Univ., Phone 610-758 3857, Fax 610-758-4244, rpo2@lehigh.edu; **Elizabeth G. Jacobs**, Texas Instruments, Phone 972-995-4703, Fax 972-995-2658, zzil@ti.com

K: Materials Reliability in Microelectronics VIII

Thomas Marieb, Intel Corp., Phone 408-765-5255, Fax 408-765-2949, thomas_mariieb@ccm.sc.intel.com; **John Bravman**, Stanford Univ., Phone 415-723-3698, Fax 415-725-4034, john.bravman@forsythe.stanford.edu; **James R. Lloyd**, Lloyd Technology Associates Inc., Phone 508-461-0753, Fax 508-461-0352, jlloyd@ma.ultranet.com; **Matt A. Korhonen**, Cornell Univ., Phone 607-255-5190, Fax 607-255-6575, matt@msc.cornell.edu

MRS Materials Research Society



For additional meeting information, contact: MRS Member Services
506 Keystone Drive, Warrendale, PA 15086
Phone: 412-779-3003, Fax: 412-779-4398
http://www.mrs.org/, E-mail: info@mrs.org

EFFECTIVE AUGUST 25, 1997



Old Address:
9800 McKnight Road, Pittsburgh, PA 15237

Please contact MRS at its new location:



**Materials
Research
Society**

506 Keystone Drive
Warrendale, PA 15086-7573 USA

Phone (operator): 412-779-3003

Phone (automated attendant): 412-779-3004

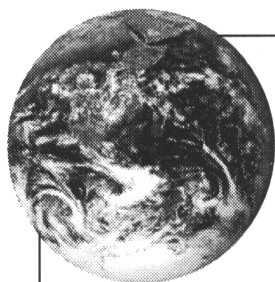
Advertising & Exhibits: 412-779-8312

Fax: 412-779-8313

E-mail addresses and our MRS Website remain unchanged.

Information about the Materials Research Society and its full range of products and services can be found on the internet: <http://www.mrs.org/>

MRS is excited about its new headquarters facility and the opportunity it provides to advance the MRS commitment to its members and the materials research community.



PRODUCTS

Germane
Digermane
Diborane
Phosphine
Silane
Disilane
Trimethylboron
Trisilane
Trifluorosilane
Difluorosilane
Boron Trifluoride
Silicon Tetrafluoride
Methylsilane
Germanium Tetrafluoride
Boron Trifluoride
Deuterated Diborane
Deuterated Methane
Deuterated Silane
Deuterated Trimethylboron

VOLTAIX - Worldwide Supplier of:

Gases for Research and Manufacturing of Silicon-based Semiconductors

▪ **ISOTOPICALLY ENRICHED**

$^{11}\text{BF}_3$ ▪ $^{10}\text{BF}_3$ ▪ $^{29}\text{SiF}_4$ ▪ $^{11}\text{B}(\text{CH}_3)_3$ ▪ $^{11}\text{B}_2\text{H}_6$ ▪ Deuterated variants

▪ **MID-DEEP UV PHOTORESIST PRECURSOR**

Methylsilane

▪ **NEXT GENERATION SILICON PRECURSORS**

Disilane (a liquified gas) ▪ Trisilane (a liquid source)

Trifluorosilane (for faster dielectrics)

Difluorosilane (for silicon deposition at lower temperature)

▪ **SILICON ALLOY PRECURSORS**

Germane / Digermane

Methylsilane

▪ **ADVANCED DOPANTS**

Trimethylboron

For more information about Voltaix products and services contact us.

Voltaix, Inc.

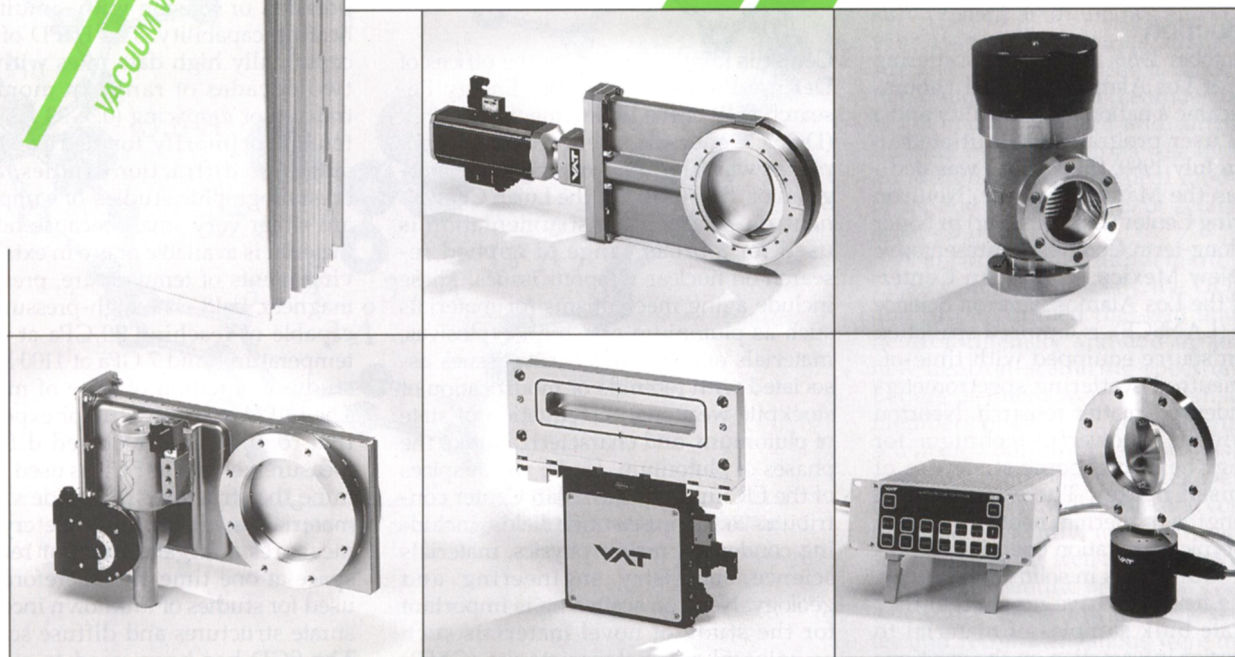
PO Box 5357, North Branch, NJ 08876, USA
Tel: 908 231-9060 • Fax: 908 231-9063
Toll-Free: 1-800-VOLTAIX in USA & CANADA

EXPLORE THE VOLTAIX WEB SITE www.voltaix.com

Circle No. 12 on Reader Service Card



New Catalog Vacuum Valves 2000



Largest Selection
Ultimate Quality
Worldwide Leader

Request your new catalog today



VAT, Inc., 500 West Cummings Park, Woburn, MA 01801

617-935-1446 Fax 617-935-3940

e mail: usa@vatvalve.com <http://www.vatvalve.com>

Circle No. 10 on Reader Service Card.