

INTRODUCTION .....	XV
SUMMARY.....	XVI
<i>SUMMARY TABLE U.S. MARKETS FOR ADVANCED CERAMIC COMPONENTS,</i> <i>THROUGH 2007 (\$ MILLIONS)</i> .....	<i>XVII</i>
<i>SUMMARY FIGURE U.S. MARKETS FOR ADVANCED CERAMIC COMPONENTS,</i> <i>2002 AND 2007 (\$ MILLIONS)</i> .....	<i>XVII</i>
ABRASIVES.....	1
NORITAKE TO PRODUCE CBN IN THE U.S. ....	1
VSM ABRASIVES HAS ABRASIVE GRAINS .....	1
ADVANCED GLASSES.....	2
JOINT TEAM PATENTS DYNAGLASS .....	2
SCIENTISTS DEMO SILICA LASER .....	3
SUPERIOR MICROPOWDERS ISSUED 14TH PATENT.....	4
HOYA LAUNCHES SEMICONDUCTOR UNIT.....	5
CORNING DEBUTS OPTICAL FIBER.....	6
CORNING TO EXPAND LCD GLASS CAPACITY .....	7
BIOCERAMICS .....	8
NANOSTRUCTURED SURFACES FOR BIO-IMPLANTS.....	8
CERAMICS-TO-METAL FOR MEDICAL DEVICES .....	9
GLASS CAN REPAIR BONE .....	10
MINERALIZATION WITH HUMAN OSTEOBLASTS.....	11
APATITE COMPOSITES FOR FACIAL REPAIR .....	11
HYDROXYAPATITE DENTAL CERAMICS STUDIED.....	12
ORGANIC COMPOSITES FOR BODY PARTS .....	12
ORGANIC COMPOSITES FOR BODY PARTS (CONTINUED) .....	13
BIOMATERIALS .....	14
SELF-ASSEMBLY EXPLOITED TO MIMIC BONE STRUCTURE.....	14
SELF-ASSEMBLY EXPLOITED TO MIMIC BONE STRUCTURE (CONTINUED) .....	15
STRUCTURAL CARBON AND NANOTUBES .....	16
FOLLOW THE BOUNCING BALL .....	16
NANOTUBE PLANT PLANNED FOR JAPAN .....	16
ACTUATORS AND FORCE SENSORS PROPOSED .....	17
CARBON/CARBON IMPROVES BRAKES .....	18
CARBON/CARBON IMPROVES BRAKES (CONTINUED).....	19
CATALYSTS AND CATALYST SUPPORTS .....	20
SILICA SPHERES FOR CATALYSTS .....	20
VANADIUM CATALYST FORMS FORMALDEHYDE.....	20

VANADIUM CATALYST FORMS FORMALDEHYDE (CONTINUED).....	21
CHEMICAL AND ENVIRONMENT .....	22
SORBENT TECHNOLOGY LICENSES OFFERED.....	22
SORBENT TECHNOLOGY LICENSES OFFERED (CONTINUED).....	23
COATINGS .....	24
MARKET FOR SPUTTERING TARGETS TO REACH NEARLY \$1.8 BILLION BY 2006 .....	24
<i>TABLE 1 WORLD MARKETS FOR SPUTTERED TARGETS AND SPUTTERED     FILMS, THROUGH 2006.....</i>	25
ION IMPLANTATION AND MBE TECHNOLOGIES TO GROW AT 26% AND 33% RESPECTIVELY ON AVERAGE PER ANNUM THROUGH 2006.....	25
ION IMPLANTATION ... THROUGH 2006 (CONTINUED) .....	26
<i>TABLE 2 VALUE OF WORLDWIDE ION IMPLANTATION AND MBE INDUSTRIES -     EQUIPMENT, SERVICES AND MATERIALS, THROUGH 2006 (\$ MILLIONS).....</i>	27
<i>FIGURE 1 VALUE OF WORLDWIDE ION IMPLANTATION AND MBE INDUSTRIES -     EQUIPMENT, SERVICES AND MATERIALS, 2000, 2001 AND 2006 (\$ MILLIONS).....</i>	27
BN ADHESIVE FROM AREMCO.....	28
CBN FILM BY PLASMA-JET CVD .....	28
ORIENTED FILM FOR SOI TECHNOLOGY.....	29
ENGLEHARD BUYS COATING BUSINESS .....	30
PREDICTING STRESSES IN BARRIER COATINGS .....	30
PREDICTING STRESSES IN BARRIER COATINGS (CONTINUED).....	31
LASER-ASSISTED MOLECULAR DEPOSITION .....	32
NANOSTRUCTURED WC-CO BY THERMAL SPRAY .....	32
LOW-CONDUCTIVITY THERMAL BARRIERS .....	33
CERAMIC PROTECTS HIGH-TEMP MAGNETS.....	34
GARTNER THERMAL WINS ORDERS .....	34
BEAMALLOY OPENS SERVICE CENTER.....	35
BEAMALLOY OPENS SERVICE CENTER (CONTINUED) .....	36
DIAMOND PRODUCTS.....	37
DIAMOND, DIAMOND-LIKE CARBON/CBN FILMS AND COATED PRODUCTS: TECHNOLOGY ANALYSIS.....	37
<i>TABLE 3 SHARE OF U.S. PATENTS IN DIAMOND, DIAMOND-LIKE, AND CBN     MATERIAL FILMS/COATINGS ISSUED TO U.S., JAPAN AND OTHERS, 1992,     1996 AND 2001 (%).....</i>	38
GLOBAL MARKET FOR DIAMOND, DIAMOND-LIKE, AND CBN FILMS AND COATED PRODUCTS TO REACH \$725 MILLION BY 2006.....	38
GLOBAL MARKET ... BY 2006 (CONTINUED).....	39

*TABLE 4 NORTH AMERICAN AND GLOBAL MARKET FOR DIAMOND AND DIAMOND-LIKE FILMS AND COATED PRODUCTS, THROUGH 2006 (\$ MILLIONS)*..... 40

THIN FILM DLC DIELECTRICS.....	40
AIN AND LINBO ON DIAMOND .....	41
SUMITOMO REVEALS R&D STATUS.....	42
CVD DIAMOND FOR HT ELECTRONICS.....	43
DIAMOND SYNTHESIZED ON GLASSY SUBSTRATES.....	44
GE INTRODUCES NEW DIAMOND SERIES.....	44
POLY FILMS FOR HIGH-TEMP ELECTRONICS.....	45
DIAMOND MEMBRANE ELECTRON MULTIPLIER.....	46
VANDERBILT RESEARCHERS FABRICATE DMEMS .....	46
MICROMACHINING OF CVD DIAMOND .....	47
MAC INTRODUCES DLC COATING .....	48
FLUORINATED DIAMOND-LIKE CARBON COATINGS .....	49
TURNER TOOLS OFFERS GRINDING WHEELS .....	49
NORTON TO EXHIBIT GRINDING WHEELS .....	50
MICROPATTERNS BY ECR OXYGEN PLASMA .....	50
SYSTEM FOR DIAMOND COATING DEPOSITION .....	51
DIAMOND GROWTH ON IRON AND STEEL.....	52
DIAMOND SYNTHESIZED WITH HIGH-PRESSURE CVD .....	53
DIAMOND FIELD EMITTER TRIODE .....	54
ORIENTED FILMS ON SI SUBSTRATE.....	54
THIN FILM DLC DIELECTRICS.....	55
COATED FIELD EMISSION SI TIPS .....	56
LOW-K DIELECTRICS FOR INTERCONNECTS.....	56
LOW-K DIELECTRICS FOR INTERCONNECTS	
(CONTINUED).....	57
COATINGS FOR SEVERE WEAR.....	58
ARGONNE DEVELOPS LOW FRICTION FILMS .....	58
ARGONNE DEVELOPS LOW FRICTION FILMS	
(CONTINUED).....	59
ELECTRONIC CERAMICS .....	60
CREE ACHIEVES RECORD POWER.....	60
PIEZOELECTRIC FANS TO COOL ELECTRONICS .....	61
PIEZOELECTRIC FANS TO COOL ELECTRONICS	
(CONTINUED).....	62
RAMTRON INTRODUCES 1T/1C ARCHITECTURE.....	63
RAMTRON INTRODUCES 1T/1C ARCHITECTURE (CONTINUED) .....	64
CTS INTRODUCES PECL OSCILLATOR.....	65
PACKAGE THAT DOES A FLIP .....	66
EDO RECEIVES JSF CONTRACT.....	66
MARKET FOR MAGNETIC MATERIALS IN CHINA TO CROSS \$5.2	
BILLION IN 2007.....	67

<i>TABLE 5 MAGNETIC MATERIALS IN CHINA: CURRENT SALES AND FORECAST, THROUGH 2007 (\$ MILLIONS)</i> .....	68
<i>FIGURE 2 MAGNETIC MATERIALS IN CHINA: CURRENT SALES AND FORECAST, 2002 AND 2007 (\$ MILLIONS)</i> .....	69
ERIEZ'S GRATE MAGNETS DOUBLE IN STRENGTH .....	69
VISHAY INTRODUCES NEW PRODUCTS .....	69
CREED INTRODUCES POWER CHIP .....	70
RAMTRON FRAM TARGETS AUTO APPLICATIONS .....	71
CTS SENSORS FOR ASIA.....	72
EDO'S SONAR FOR ULTRA ELECTRONICS.....	73
MAC OFFERS HEAT SINKS.....	73
SOLAR CELLS COMBINE NANOTECH, PLASTICS .....	74
SOLAR CELLS COMBINE NANOTECH, PLASTICS (CONTINUED).....	75
VISHAY INTRODUCES MORE NEW PRODUCTS .....	76
THICK PZT FILMS VIA SOL-GEL.....	77
DARPA SUPPORTS CREE'S UV LED .....	78
KEMET ENHANCES HIGH-FREQUENCY LINE.....	79
HERAEUS INTRODUCES ZERO-SHRINK LTCCs.....	80
STACKABLE ACTUATORS FOR VIBRATION GENERATION .....	81
CAPACITORS WITH BATIO DIELECTRIC .....	82
RAMTRON EXHIBITS 72 MB ESRAM PRODUCTS .....	83
DOW CORNING'S CVD PRODUCTS.....	84
NANOWIRES GET THEIR STRIPES .....	85
NANOWIRES GET THEIR STRIPES (CONTINUED).....	86
FRAM MEMORY FOR CHINA'S METERS .....	87
RICHARDSON TO CARRY AVX'S RF PRODUCTS.....	88
CREE AWARDED GOVERNMENT CONTRACTS .....	89
VISHAY INTERTECHNOLOGY RELEASES PRODUCTS .....	90
NIST TEAM SEEKS MICROCHIP MATERIALS.....	91
ENHANCED MEMORY PRODUCT AVAILABLE .....	92
VISHAY RELEASES FILM CAPACITOR.....	93
CREE AWARDED DEFENSE CONTRACTS.....	94
NIST EVALUATES THIN-FILM MODELS .....	95
HOYA UNIT TO MAKE SIC WAFERS .....	96
SILICON-BASED SURFACE MOUNT RF CAPACITOR.....	96
ADVANCED CERAMETRICS GETS PHASE I SBIR AWARD .....	97
SMART CERAMICS FROM CONTINUUM PHOTONICS .....	98
PIEZO TECHNOLOGIES WINS SURGICAL GRANT.....	99
LOW-POWER, HIGH-SPEED FRAM.....	100
IBM MAKES SMALLEST SILICON TRANSISTOR .....	101
RAMTRON IN LICENSING AGREEMENT .....	102
RAMTRON IN LICENSING AGREEMENT (CONTINUED).....	103
FIBERS AND COMPOSITES .....	104

ZIRCAR'S REFRACTORY SHEET BOARD .....	104
ZIRCAR INTRODUCES ALUMINA COMPOSITE .....	104
MORE IMPROVED FIBER CEMENTS .....	105
MULLITE TOUGHENED BY MICROWAVE SINTERING .....	106
HITCO WINS DEFENSE, AEROSPACE CONTRACTS .....	106
SIBORAMIC FIBERS FOR COMPOSITES .....	107
ROBOTIC SYSTEM MAKES COMPOSITE .....	108
ROBOTIC SYSTEM MAKES COMPOSITE (CONTINUED) .....	109
ROBOTIC SYSTEM MAKES COMPOSITE (CONTINUED) .....	110
ZIRCAR INTRODUCES LAMINATES .....	111
THERMAL CERAMICS INSULATING BLANKET .....	111
NANOFIBER COMPOSITES FOR AEROSPACE USES .....	112
TENSION BEHAVIOR OF NEXTEL/BLACKGLAS .....	113
COMPOSITE BEARING DEVELOPED .....	114
UC DAVIS DEVELOPS FG GRADED COMPOSITES .....	114
STRAFIRE SYSTEMS WINS ATP GRANT .....	115
ACR SCORES R&D 100 AWARD .....	116
STARFIRE RECEIVES NASA AWARD .....	117
ZIRCAR INTRODUCES REFRACTORY SHEET .....	117
ZIRCAR INTRODUCES REFRACTORY SHEET (CONTINUED) .....	118
FILTERS AND MEMBRANES .....	119
CO <sub>2</sub> AFFINITY ECONOMICAL, FLEXIBLE .....	119
NANOSCALE CERAMICS FLEXIBLE, YET STRONG .....	120
NANOSCALE CERAMICS FLEXIBLE, YET STRONG (CONTINUED) .....	121
LANL SEEKS TO LEAPFROG PEM .....	122
MIECs REDUCE HYDROGEN COST .....	123
COMPANIES FORM FILTER SUBSIDIARY .....	124
FUEL CELLS .....	125
STABILIZED ZIRCONIA FOR SOFC APPLICATIONS .....	125
LOW-COST ROUTE TO FC MATERIALS .....	125
POWDERED PARTS MAY CUT PLANAR COSTS .....	126
NEXTECH DEVELOPS SOFC PROCESSES .....	127
SOLID ELECTROLYTE FILMS FOR THIN LI-ION CELLS .....	127
SOLID ELECTROLYTE FILMS FOR THIN LI-ION CELLS (CONTINUED) .....	128
FUEL CELL POWERS ELECTRIC MOTOR .....	129
SMP ANNOUNCES TWO NIST ATP AWARDS .....	130
ALTAIR'S CELL POWERS ELECTRIC MOTOR .....	131
HC STARCK MOVES ON InDEC BUY .....	131
COMMERCIAL SOFC IS ALMOST HERE .....	131
COMMERCIAL SOFC IS ALMOST HERE (CONTINUED) .....	132
COMMERCIAL SOFC IS ALMOST HERE (CONTINUED) .....	133

MICRO SOFC FOR HANDHELD ELECTRONICS.....	134
FULL SPECTRUM SOLAR NEARER REALITY .....	135
FULL SPECTRUM SOLAR NEARER REALITY (CONTINUED) ....	136
FULL SPECTRUM SOLAR NEARER REALITY (CONTINUED) ....	137
FULL SPECTRUM SOLAR NEARER REALITY (CONTINUED) ....	138
INDUSTRY ANALYSIS .....	139
PIC MARKET TO REACH \$11 BILLION IN 2006 .....	139
<i>TABLE 6 GROWTH OF PHOTONIC INTEGRATED CIRCUIT, THROUGH 2006 (\$</i>	
<i>MILLIONS)</i> .....	140
CHIP SALES SHOW POSITIVE GROWTH.....	140
HIGHLIGHTS FROM THE REPORT .....	141
<i>TABLE 7 WORLDWIDE SEMICONDUCTOR SALES, THROUGH 2006 (\$ BILLIONS)</i> .....	141
MANUFACTURERS REPORT ABRASIVES PRODUCTION.....	142
FUSED ALUMINUM OXIDE .....	142
SILICON CARBIDE .....	143
<i>TABLE 8 U.S. MARKET FOR IRON-BASED AND IRON OXIDE POWDERS,</i>	
<i>THROUGH 2006 (\$ MILLIONS)</i> .....	143
JAPAN REPORTS CERAMICS GROWTH .....	144
<i>TABLE 9 PRODUCTION OF FINE CERAMIC RAW MATERIALS, 1992, 1996 AND 2001</i>	
<i>(UNIT: X 100 MILLION YEN)</i> .....	144
DIAMOND, DLC FILMS MARKET TAKES OFF .....	144
DIAMOND, DLC FILMS MARKET TAKES OFF	
(CONTINUED).....	145
<i>TABLE 10 MARKET FOR DIAMOND AND DIAMOND-LIKE FILMS AND COATED</i>	
<i>PRODUCTS, THROUGH 2006 (\$ MILLIONS)</i> .....	146
INDUSTRY NEWS .....	147
CORNING TO OPEN NEW FACILITY .....	147
ENERGY AWARD TO AMSC .....	147
MORGAN ADVANCED IN REORGANIZATION .....	148
CERADYNE ADDS NEW CAPACITY .....	148
TEXTRON SELLS COMPOSITE BUSINESS.....	149
CERAMTEC CLOSES MANSFIELD FACILITY .....	149
COOPERATIVE MATERIALS RESEARCH PROJECTS.....	150
COORSTEK UPDATES EARNINGS EXPECTATIONS .....	150
NANOPHASE REVENUES COMING UP .....	151
KEMET POSTS QUARTERLY LOSS.....	151
INTERMAGNETICS INCOME GAINS.....	152
CTS POSTS FOURTH-QUARTER LOSS.....	152
CORNING'S LOSSES WIDEN QUARTER .....	153
SEM CORP. SELLS SILICON PRODUCTS .....	153
THERMAL CERAMICS FORMS NEW TEAM .....	154
CERADYNE EXPECTS STRONG GROWTH .....	154
RUTGERS CERAMIC CENTENNIAL REUNION .....	155
AMSC REPORTS QUARTERLY LOSS .....	155

SALES DOWN FOR AMERICAN TECHNICAL.....	156
CONDUCTUS EXPECTS STRONG GROWTH .....	156
EDO CORP. EARNINGS INCREASE .....	157
RECORD SALES FOR FERRO .....	158
EDO AWARDED NAVY CONTRACT.....	158
CERADYNE INSERTS UNDERGO RETESTING.....	159
ISCO EXPANDS PATENT SUIT .....	160
CONDUCTUS COMPLETES PRIVATE PLACEMENT.....	161
NANOPHASE 4Q REVENUE STABLE .....	161
CPS REPORTS NET LOSS .....	162
MRI MAGNETS BUOY INTERMAGNETICS EARNINGS.....	162
ISCO'S YEARLY LOSSES MOUNT .....	163
STARFIRE SYSTEMS IS THE WINNER .....	163
ALTAIR NANOTECHNOLOGIES COMPLETES FUNDING .....	164
COMPANIES REPORT QUARTER RESULTS .....	164
CERADYNE SALES UP .....	164
AMK SALES DOWN 49%.....	164
ATMI SALES DOWN.....	164
PECHINEY EARNINGS STABLE.....	165
CTS RESULTS BETTER THAN EXPECTED.....	165
SUPERIOR MICROPOWDERS SIGNS MOU.....	165
CONDUCTUS GAINS IN FIRST QUARTER.....	166
ISCO REPORTS REVENUE GAIN .....	167
NSF TO SUPPORT EURO COLLABORATION .....	167
COORSTEK WINS ASSEMBLY CONTRACTS .....	168
U.S. COMMITTED TO SMALL THINGS.....	169
GE SPECIALTY MATERIALS ACQUIRES ACC .....	170
CREE REVENUE GROWS 13%.....	170
VISHAY SALES GAIN IN QUARTER.....	171
CONDUCTUS REVENUES REMAIN STABLE .....	172
EDO'S 2ND-QUARTER EARNINGS DECLINE.....	172
SUPERCON COMPONENTS REPORTS SMALL LOSS .....	173
MORGAN LAUNCHES FELLOWSHIP AWARD .....	173
ALTIS SEMICONDUCTOR INSTALLS AMSC REGULATION SYSTEM.....	174
WESGO CELEBRATES 75TH ANNIVERSARY.....	175
TOP 10 IN INTERCONNECT TECHNOLOGY CITED .....	176
TOP 10 IN INTERCONNECT TECHNOLOGY CITED (CONTINUED).....	177
TOP 10 IN INTERCONNECT TECHNOLOGY CITED (CONTINUED).....	178
EDO AWARDED SIKORSKY CONTRACT.....	179
ALCOA EARNS ASM AWARD .....	180
NANOPHASE REPORTS REVENUE GAIN .....	181

SATEE DOWN FOR ATC.....	181
CERADYNE RESULTS SHOW SOLID GROWTH.....	182
GE SPECIALTY MATERIALS COMPLETES ACQUISITION.....	183
COORSTEX , C.L. SMITH COMBINE STRENGTHS .....	184
STI, CONDUCTUS TO MERGE .....	184
ZIRCAR IN ALLIANCE WITH NAOI KIZAI .....	185
CREE REPORTS REVENUE GAIN .....	185
CTS REPORTS IMPROVED RESULTS.....	186
KEMET SEES SALES DROP .....	187
NANOPHASE TECHNOLOGIES REVENUES UP.....	187
ATP ANNOUNCES 40 NEW AWARDS .....	188
CERADYNE RECEIVES ARMOR ORDER.....	189
CORNING TEAM IN INVENTORS HALL OF FAME .....	189
MEETINGS.....	190
CERAMICS AND ELECTRONICS FOR THE NEW HORIZON.....	190
METROLOGY AND ANALYSIS.....	191
NIST CREATES NEW REFERENCE.....	191
ERIEZ OFFERS TESTING OF DRY OR LIQUID SAMPLES .....	191
ONLINE, MULTI-CHAMBER POROMETER AVAILABLE.....	192
AGFA NDT OFFERS NDT SOLUTIONS.....	192
SHIMIDZU INTRODUCES PARTICLE SIZE ANALYZER .....	193
SINGLE-POINT SURFACE AREA MEASUREMENTS .....	193
ASTM HAS ANNOUNCED REVISIONS TO CERAMIC TEST METHODS.....	193
FIRST STAGE OF NEUTRON SOURCE COMPLETED .....	194
CERAMIC TECHNOLOGY STREAMLINES INSPECTION .....	194
BROOKHAVEN LAUNCHES PHOTODIODE OPTION.....	195
PHOSPHORUS DOPANT REFERENCE MATERIALS.....	195
NIST TO OPERATE CALIBRATION SERVICE.....	196
NIST DEVELOPS UV METROLOGY .....	197
EDAX LAUNCHES X-RAY DETECTORS .....	198
PAAR PHYSICA STRENGTHENS SERVICES .....	198
QUALITY CONTROL CAPABILITIES EXPANDED .....	199
DRYER PRODUCES UNIFORM PARTICLES.....	199
POWDERS AND NANO CERAMICS.....	200
U.S. MARKET FOR IRON-BASED AND IRON OXIDE POWDERS TO CROSS \$865.8 MILLION BY 2006.....	200
<i>TABLE 11 U.S. MARKET FOR IRON-BASED AND IRON OXIDE POWDERS,         THROUGH 2006 (\$ MILLIONS)</i> .....	201
<i>FIGURE 3 U.S. MARKET FOR IRON-BASED AND IRON OXIDE POWDERS, 1999,         2000, 2001 AND 2006 (\$ MILLIONS)</i> .....	201
AQUEOUS ROUTE TO CERAMIC POWDERS.....	202
CHEMICAL PROCESSING OF POROUS MATERIALS .....	202



NANOPHASE EXPANDS ZINC OXIDE LINE.....	202
COMB DISCOVERY FOR NEW MATERIALS .....	203
PECHINEY DEVELOPS ALUMINA BUSINESS.....	204
NANO INSTITUTE IN CANADA .....	205
PNNL OFFERS POWDER LICENSE.....	205
JOINT VENTURE IN NANOTECHNOLOGY .....	206
NANOPHASE APPLIES FOR CORE PATENT .....	206
ALTAIR EXPANDS BATTERY TECHNOLOGIES .....	207
ALTAIR ENTERS JAPAN DISTRIBUTION DEAL .....	208
BATTERY DEVELOPERS USING ALTAIR'S SPINEL .....	209
CONTINUOUS COMBUSTION SYNTHESIS OF POWDERS.....	210
SASOL DEVELOPS NANO BOEHMITE ALUMINA.....	210
SASOL DEVELOPS NANO BOEHMITE ALUMINA (CONTINUED).....	211
PATENT AWARDED FOR TIO <sub>2</sub> PIGMENT PROCESS .....	212
PROCESS PRODUCES METAL-OXIDES .....	213
AP MATERIALS WINS SBIR CONTRACT.....	213
CLEARING ARSENIC FROM DRINKING WATER .....	214
NANOPHASE AWARDED DISPERSION PATENT .....	214
MOTOROLA, DA NANOMATERIALS MARKET SLURRY FORMULATION .....	215
SUPERIOR MICROPOWDERS IS EXPANDING.....	216
FRANCE PROMOTES NANOTECHNOLOGY.....	216
BISMUTH TITANATE FORMED HYDROTHERMALLY .....	217
PHOSPHOR POWDER SYNTHESIZED AT 90°C .....	218
SMP WINS NIST ATP AWARD .....	218
SMP WINS NIST ATP AWARD (CONTINUED).....	219
ALTAIR SIGNS AGREEMENTS WITH PIGMENT GROUPS .....	220
TRANSITION METAL NITRIDES PREPARED.....	221
COLLOIDAL PROCESSING OF SILICON NITRIDE.....	221
ZYP COMPLETES BN FACILITY.....	221
ALTAIR AWARDED NANO TIO <sub>2</sub> PATENT.....	222
ALTAIR NANOTECH IN PIGMENT AGREEMENT .....	223
SMP,GE IN METALS DEAL.....	223
SI DIAMOND UNVEILS NANOTUBE COMPOSITES.....	224
COMMERCIALIZING ORNL'S NANOTECH INVENTIONS.....	225
COMMERCIALIZING ORNL'S NANOTECH INVENTIONS (CONTINUED).....	226
COMMERCIALIZING ORNL'S NANOTECH INVENTIONS (CONTINUED).....	227
PROCESSING AND TECHNOLOGIES.....	228
CERAMIC NEAR NET SHAPE PROCESSING MARKET TO CROSS \$3 BILLION BY 2006 .....	228

<i>TABLE 12 U.S. MARKET VALUE OF CERAMIC PRODUCTS FABRICATED BY NEAR NET SHAPE PROCESSES, THROUGH 2006 (\$ MILLIONS)</i> .....	229
<i>FIGURE 4 U.S. MARKET VALUE OF CERAMICS FABRICATED BY NEAR NET SHAPE PROCESSES, 2001 AND 2006 (\$ MILLIONS)</i> .....	230
MAC PRESENTS SIC HEATERS.....	230
IMPROVED POROUS ALUMINA CERAMICS .....	231
CERAMIC ARMOR TO PROTECT U.S. ARMY .....	231
FUNDING FOR MILITARY LASERS .....	232
FUNDING FOR MILITARY LASERS (CONTINUED).....	233
BUSH BUDGET BOOSTS NANOTECH FUNDING.....	234
CERADYNE CONTRACTS BODY ARMOR.....	234
INNOVATIVE CERAMIC METAL BONDING .....	235
MICROWAVES HEAT CERAMIC FURNACE .....	235
ZIRCAR INTRODUCES ALUMINA CASTABLE .....	236
TRANSPARENT ALUMINA CERAMIC DEVELOPED .....	236
TRANSPARENT ALUMINA CERAMIC DEVELOPED (CONTINUED).....	237
ENGINEERED PRESSURE CELEBRATES ITS 10TH .....	238
CUTTING PERFORMANCE OF PCBN EVALUATED .....	238
LIGHTWEIGHT CORDIERITE FROM DYSON.....	239
MAC EXPANDS TO NEW FACILITY .....	240
PNNL RECOGNIZED FOR TECH TRANSFER .....	240
PNNL RECOGNIZED FOR TECH TRANSFER (CONTINUED).....	241
PNNL RECOGNIZED FOR TECH TRANSFER (CONTINUED).....	242
CERAMICS DATA ON THE WEB.....	243
CERAMICS MADE FROM WOOD .....	243
CATALYTIC MATERIALS IN HEATING APPLIANCES.....	244
TACTILE SURFACE SENSOR UNVEILED .....	245
EPSI OFFERS CIP PRODUCTION UNITS .....	246
ZIRCAR INTRODUCES REFRACTORY SHEET .....	246
NEW PRECISION LAPPING MACHINE .....	247
CERADYNE'S INSERTS RECEIVE APPROVAL.....	247
HARDENER FOR ZIRCAR SHEET PRODUCTS.....	248
CORNING, FOSECO IN SUPPLY CONTRACT .....	248
PRESSURE TECHNOLOGY PLANS HIP FACILITY.....	249
EDO RECEIVES BIG TASK ORDER .....	250
KENNAMETAL INTRODUCES CARBIDE LINE.....	251
UTRC WINS R&D100 AWARD.....	251
UTRC WINS R&D100 AWARD (CONTINUED) .....	252
KYOCERA MAKES SiC AT U.S. PLANT.....	253
KENNAMETAL EXPANDS SOLID CARBIDE LINE .....	253
THERMO ELECTRON INTRODUCES SERVICE PROGRAM .....	254
ZIRCAR INTRODUCES NEW INSULATION .....	254
NEW LIFE FOR AN OLD HIP.....	255

SALES AND EARNINGS.....	256
CPS REDUCES QUARTERLY LOSSES .....	256
AMSC REVENUES UP, LOSSES MOUNTING .....	256
COORSTEK REVENUE GAINS 21% .....	257
CERADYNE SALES GAIN IN QUARTER.....	258
STI REVENUES GAIN BY 31%.....	258
KEMET SEES EARNINGS PLUNGE .....	259
AVX CORPORATION DECLARES DIVIDEND .....	259
 SUPERCONDUCTORS.....	 260
AMSC, KISWIRE IN DISTRIBUTION DEAL .....	260
ORDER FOR 1,000 SUPERFILTER SYSTEMS .....	260
STI INTRODUCES 3G FILTER .....	261
STI INTRODUCES 3G FILTER (CONTINUED) .....	262
APPLIED THIN FILMS IN LICENSE DEAL.....	263
AMSC ISSUES MOTOR RESULTS.....	264
JAPANESE COMPANIES PLACE 3G ORDERS.....	265
FIRST HTS SHIP PROPULSION MOTOR .....	266
FIRST HTS SHIP PROPULSION MOTOR (CONTINUED).....	267
STI EXPANDS SUPERPLEX SOLUTIONS FAMILY .....	268
CONDUCTUS COMPLETES URBAN FIELD TRIALS .....	269
ASC WINS POWER ELECTRONICS CONTRACT .....	270
INVESTIGATING CUO <sub>2</sub> SUPERCONDUCTORS .....	270
AMSC BEGINS TEST RUN .....	271
SECRETARY ABRAHAM RELEASES NTGS REPORT .....	271
AMSC ACHIEVES NEW RECORD .....	272
AMSC ACHIEVES NEW RECORD (CONTINUED).....	273
SCI ENGINEERED MATERIALS ESTABLISHED .....	274
AMSC, GE RECEIVE WIN VOLTAGE REGULATION ORDER.....	275
STI GROWS FASTEST IN LOS ANGELES AREA .....	276
IGC SUPERPOWER REPORTS PROGRESS .....	277
MGB <sub>2</sub> SUPERCONDUCTS AT A BALMY 39 KELVIN.....	278
MGB <sub>2</sub> SUPERCONDUCTS AT A BALMY 39 KELVIN (CONTINUED).....	279
MGB <sub>2</sub> SUPERCONDUCTS AT A BALMY 39 KELVIN (CONTINUED).....	280
AMSC IN DISTRIBUTION DEAL WITH BRIDEX .....	281
STI INTRODUCES SUPERLINK RX 850.....	282
STI INTRODUCES SUPERLINK RX 850 (CONTINUED) .....	283
SUPERPOWER, ORNL DEVELOP WIRE TECHNOLOGY .....	284
AMSC AWARDED ATP AWARD .....	285
SUPERCONDUCTIVITY INDUSTRY ASSOCIATION FORMED .....	286
SUPERCONDUCTIVITY ... FORMED (CONTINUED).....	287
CONDUCTUS RECEIVES NRL AWARD .....	288
RECORD FOR AMSC WIRE.....	289

GE HOSTS DOE VISIT .....	290
GE HOSTS DOE VISIT (CONTINUED).....	291