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ADVANCED MATERIALS – TECH AND CLEANTECH QUARTERLY INDUSTRY UPDATE

June 22, 2009

Prices: 6/19/09

Industry:
Advanced Materials:
Tech & CleanTech

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In This Issue:

INDUSTRY UPDATE

Introducing the Advanced Materials Quarterly

Over the past few months, we have been working towards establishing coverage on a unique Advanced Materials universe at our firm. In this publication, we are presenting our broad investment thesis, highlighting key trends that we intend to focus on and, at the same time, specifying the key parameters that a company within our coverage universe needs to satisfy. In our subsequent quarterlies, we intend to highlight and address specific themes, trends and issues that impact our universe.

What Differentiates Advanced Materials from Traditional Materials?

Advanced materials help stimulate development, improve performance, prolong product life, and/or reduce costs. Throughout this report, detailed descriptions of investment ideas will indicate that companies within our coverage universe are focused on advanced materials such as silicon, beryllium, ruthenium, zinc selenide, and sapphire, as opposed to some of the more traditional materials such as aluminum, copper and steel.

Our Investment Thesis

As applications in leading edge industries, such as technology and cleantech, push performance limits, we believe conventional materials will need to be replaced with advanced materials. Our Advanced Materials universe comprises of companies that produce such enabling materials for other end users, or apply their materials know-how to come up with leading edge products and applications themselves. We see high growth for advanced materials - not only from their existing applications but, more importantly, from their increasing adoption in various new applications.

Themes That We Focus On

While the scope of advanced materials is quite universal, we narrow the scope by focusing on the following high-growth long-term themes:

- Shrinking semiconductor devices and components.
- Clean technology—battery, LED, solar and wind.
- Enabling materials and manufacturing—Beryllium, explosion clad, lasers etc.

Key Characteristics of Companies within Our Universe

We believe an advanced materials company should meet the following parameters:

- Advanced materials related intellectual property.
- Exposed to high-growth long-term themes.
- Leadership position in served markets.
- Pass through most of the commodity price.
- Good margin profile and solid balance sheet.
- Growth beyond existing markets from increasing adoption.

We believe niche advanced materials companies with a defensible technology edge and tangible end-market focus have the opportunity to be highly successful.

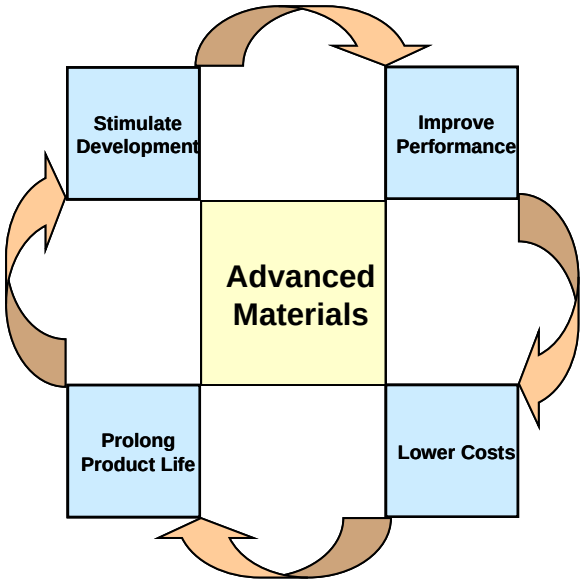
CHARACTERISTICS OF ADVANCED MATERIALS

Advanced materials stimulate development, improve performance, prolong product life, and/or lower costs.

Differentiating Advanced Materials from Traditional Materials

Advanced materials keep technology and development on the leading edge, pushing a process or product's capabilities to its limits. Such materials enable breakthroughs in performance and can make the seemingly unattainable a reality. In our definition, we tend to consider any material "advanced", if it helps stimulate development, improves performance, prolongs product life, and/or lowers costs (Exhibit 1).

Exhibit 1: Enabling and Improving Technologies with the Materials Edge



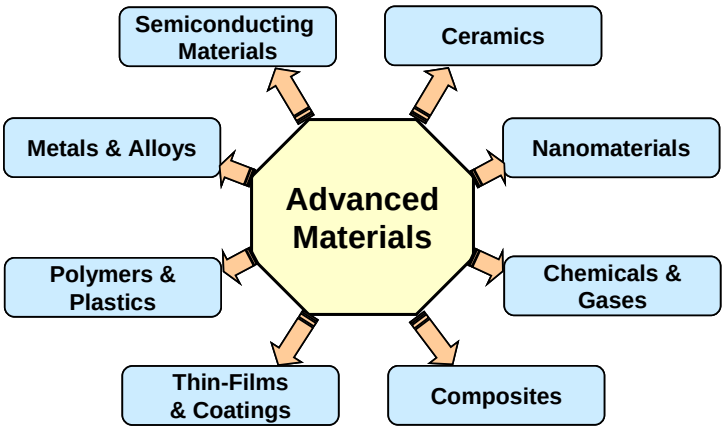
Source: D.A. Davidson & Co

Companies are not limited to specific material types.

Companies Could Address a Multitude of Materials Segments

Looking at our coverage universe from the perspective of material types, we believe advanced materials companies could be involved primarily within eight different materials categories, as shown in Exhibit 2. Clearly we do not believe that the scope of Advanced Materials is limited to any specific material type.

Exhibit 2: Materials Categories where we Expect Significant Innovation



Source: D.A. Davidson & Co.

WHAT MAKES AN ADVANCED MATERIALS COMPANY?

Leading Edge Materials Related Intellectual Property and Know-How

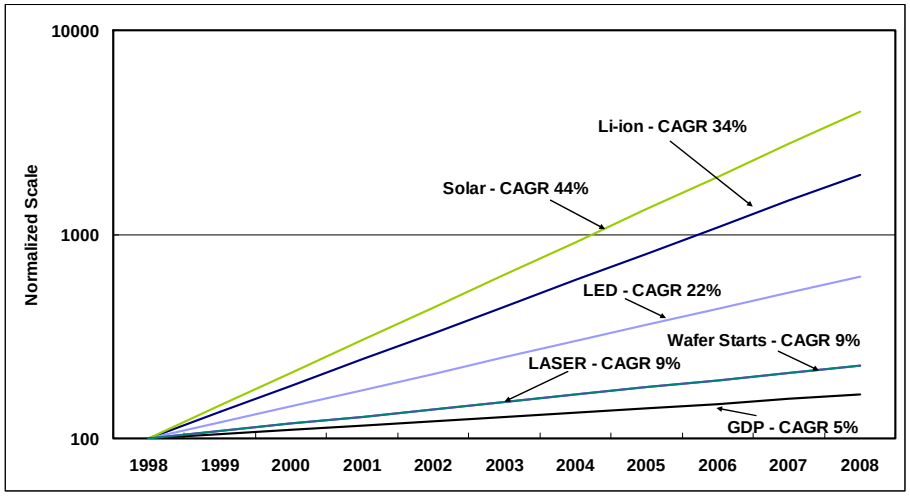
We admit the materials business has been stigmatized, as most observers believe the companies are commoditized with little pricing leverage and lower margins. There is some truth to this, as the R&D costs of developing new materials are quite high and companies find it hard to recoup that cost from their customers. We believe this is where advanced materials companies differentiate themselves from traditional materials companies. In the end, it is all about adding value to the customers. Advanced materials companies enable their customers to achieve strong product differentiation and cost advantages.

Exposed to High-Growth Long-Term Themes

We focus on themes that will lead to significantly higher growth rates than the GDP.

Materials demand in general should see a steady underlying growth as the world population continues to increase and, more importantly, the consumption level for a vast number of people in developing nations accelerates with higher economic growth, leading to significantly higher income levels. While these trends are positive for almost all materials, we try to find companies that are exposed to end markets that we believe have significantly higher long-term growth rates. The three key themes we focus on are: smaller, faster & cheaper semiconductor devices; clean technology; and enabling materials & manufacturing. New materials are becoming increasingly critical as semiconductor device size continues to shrink and various traditional materials used are now reaching their physical limit in terms of shrinkage. Clean technology is another emerging opportunity where we see significant growth in the need for mobile power (batteries), long-lasting less energy consuming lighting (LEDs), and solar power. Within our enabling materials & manufacturing theme, we focus on new materials that enable leading edge industrial applications and technologies, such as lasers and explosion clad welding that lead to better manufacturing efficiency. As shown in Exhibit 3, all these applications have seen significantly higher growth compared to GDP growth over the past few years, and we expect these trends to continue for the next several years.

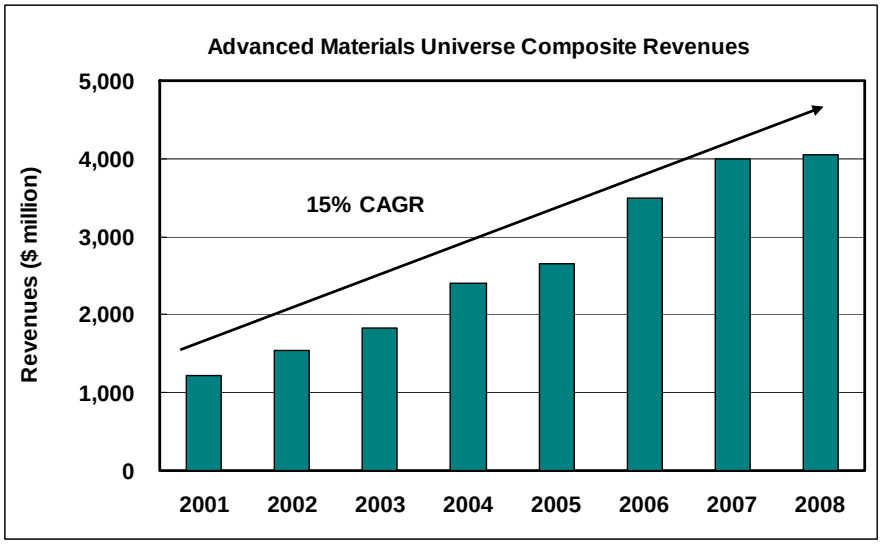
Exhibit 3: Growth Rates Have Been Well Above the GDP



Source: Unisource, Navigant Consulting, Strategies Unlimited, VLSI, Dataquest, Laserfocusworld and D.A. Davidson & Co. estimates

As all the companies within our Advanced Materials universe are exposed to these high-growth trends, combined revenues of the companies within our coverage have grown at a 15% CAGR since the beginning of this decade (Exhibit 4).

Exhibit 4: Exposure to High-Growth End Markets Reflected in Revenue Growth



Source: CapitalIQ and Company SEC Filings

Leadership Position in Their Respective End Markets

Almost every company in our universe has a leadership position in the key market they play in.

Almost every company in our universe has a leadership position in the key market that they play in. For example, Brush Engineered Materials is a leader in beryllium and beryllium alloys, II-VI Inc. is the largest supplier of infrared optics components, Dynamic Materials commands number one share of the explosion clad market, and Cabot Microelectronics is by far the number one player in slurries for the polishing of semiconductors. While most of these companies address niche markets, many are creating their own markets as they solve existing problems and enhance technologies. For example, ATMI, Inc. continues to introduce new products and materials to enhance semiconductor process and manufacturing efficiency. Their flagship product called the Safe Delivery System was a new approach enabling the safe delivery of gases in processing chambers, which also has a significant throughput advantage. Another company, IPG Photonics Corp., has been able to solve key technology and cost-related challenges in the emerging fiber laser space, which is experiencing growing adoption in various manufacturing-related applications. We believe the leadership positions of these companies provide an important support to our overall investment theme.

Business not Directly Tied to the Underlying Commodity

Companies pass-through the price of commodities to their customers.

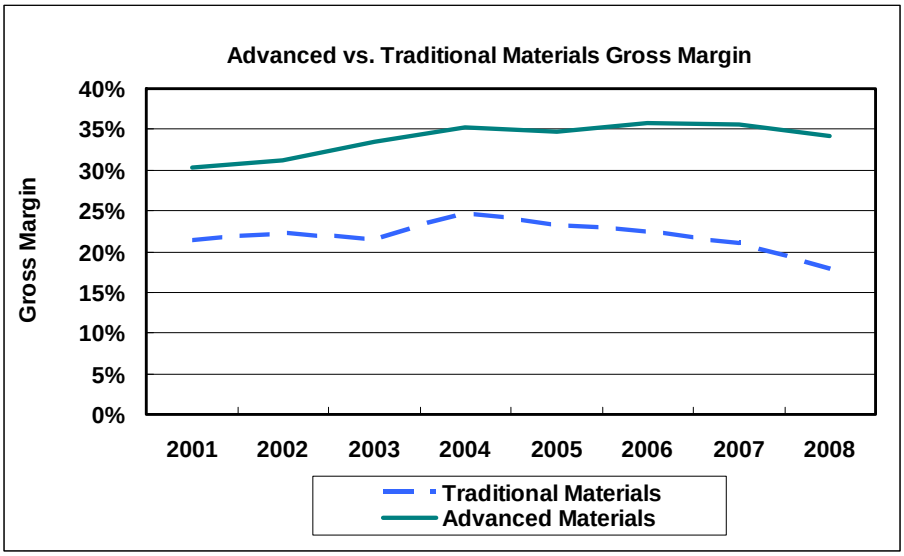
We acknowledge that every materials business has some dependence on the price of the underlying commodity, but the primary focus within our universe is not on what happens to the price but what proprietary process and technology is applied to that material in order to add value. Almost every company within our Advanced Materials universe tends to pass-through the price of the underlying commodities to its customers. Clearly, profit margins are not based on fluctuations in the price of the materials but on the proprietary process and materials know-how applied to them, which leads to better performance and/or lower cost. Once again, this is how advanced materials companies differ from the traditional materials companies.

Good Margin Profile and Solid Balance Sheet

Advanced materials command better margins than traditional materials.

One important measure of product differentiation and value add is measured by the profit margin profile of the business. We have plotted the composite gross margin of the companies within our universe versus a composite of some of the large traditional materials companies (Exhibit 5). The margin profile of companies within our coverage universe tends to be better than the traditional materials companies. Additionally, we believe a strong balance sheet should always be a key requirement for any quality long-term investment idea. Almost all of the companies in our coverage universe have very solid balance sheets with significant cash positions and minimal or no debt.

Exhibit 5: Advanced Materials Companies Command Better Margins



Source: CapitalIQ, Filings from Advanced Materials Companies within our Coverage and 3M Co., Alcoa, Arcelor Mittal, Dow Chemical, Nucor, US Steel

Growth Beyond Existing Markets from Increasing Adoption

Continued adoption in new applications leads to higher growth.

One key driver of higher growth for advanced materials is the increasing adoption in new applications. As semiconductor components shrink in size, airplanes become lighter to reduce fuel consumption, and industries reduce their carbon footprint, we believe new materials will continue to replace traditional materials. For example, beryllium and beryllium alloys have traditionally been used in defense and aerospace industries but, over time, they have found significant applications in semiconductor components as a connector material that can keep its shape even with shrinking size. Similarly, corrosion resistant explosion clad metals have seen growth from shipbuilding to oil refining and, most recently, in alternative energy.

Need to Look at Advanced Materials Companies in a Non-Traditional Way

A new Advanced Materials universe provides the right framework for understanding the companies within our coverage.

Unlike traditional sectors such as semiconductor, industrial or defense, companies in our Advanced Materials sector address more than one end market. For example, a company like Ceradyne makes body armor using ceramics but, at the same time, uses its ceramic know-how to make crucibles for solar. Additionally, the company's ceramics go into several industrial applications. Clearly, its end market exposure ranges from defense to industrial to cleantech. We believe that looking at such companies from one end market perspective will pigeonhole investors into only thinking about the opportunities in that particular business segment. To genuinely value the business opportunity from multiple end markets, investors need to look at such companies from an end market agnostic point of view. We believe our Advanced Materials universe provides the right framework for understanding their capabilities. We strongly believe that, given their high growth potential, better profit margins, and true product differentiation, Advanced Materials companies deserve a premium valuation.

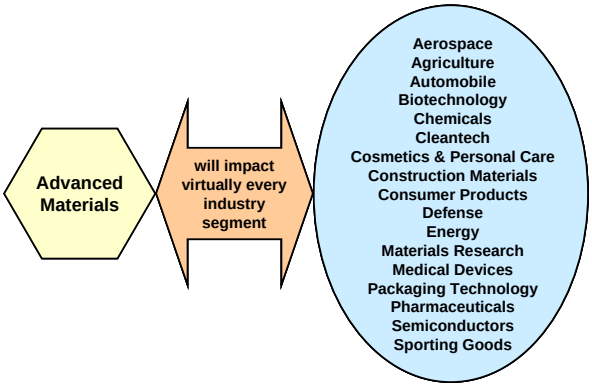
SCOPE OF OUR ADVANCED MATERIALS UNIVERSE

Almost Every End Market will be Impacted by Advanced Materials

Advanced materials will help push the limits of performance in almost every industry segment.

Advanced materials are playing a major role in transforming a variety of industries: The transition from aluminum to copper interconnects has enabled semiconductor chips to achieve faster processing speeds; Light Emitting Diodes (LEDs) are extending their application from being used as indicators to becoming a source of illumination; Thin-film Silicon, Germanium and Cadmium Telluride are increasing the efficiency of solar cells. These are just a few examples illustrating the role of advanced materials. We believe advanced materials will help push the limits of performance in every industry segment (Exhibit 6).

Exhibit 6: Almost Every Industry Segment would Gain from Advanced Materials



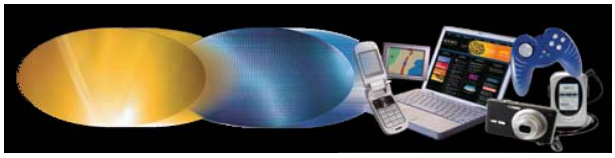
Source: D.A. Davidson & Co.

We Focus on the Technology & Cleantech Industry

We focus on technology and cleantech as these will lead the adoption of advanced materials.

While advanced materials will clearly impact most industries, given our growth emphasis, we focus on technology and cleantech-related applications. Given the leading edge nature of these industries, we believe they will be the early adopters of advanced materials. The semiconductor industry serves as a great example. At the wafer level, there have been numerous developments to increase the size of the wafer, reduce its thickness, and manufacture it with innovative materials. At the chip level, introduction of several new thin film materials, such as copper, low-k (k stands for the dielectric constant) and high-k dielectrics, have enabled chips to become faster, cheaper and smaller. Interestingly, the same wafer and thin-film related innovations are now becoming a key driver for the cleantech industry (Exhibit 7). While the scope of clean technology is very wide, it generally revolves around applications such as solar power, wind power, LEDs, electric/hybrid-electric vehicles and other energy-efficient non-polluting technologies.

Exhibit 7: Several Innovations for Technology are Now Driving Cleantech



Wafers become semiconductors...which become the electronics we use every day.

Wafers also become solar cells...which generate the clean power of today and tomorrow.

Source: MEMC Electronic Materials Inc.

LONG-TERM THEMES WE ARE FOCUSED ON

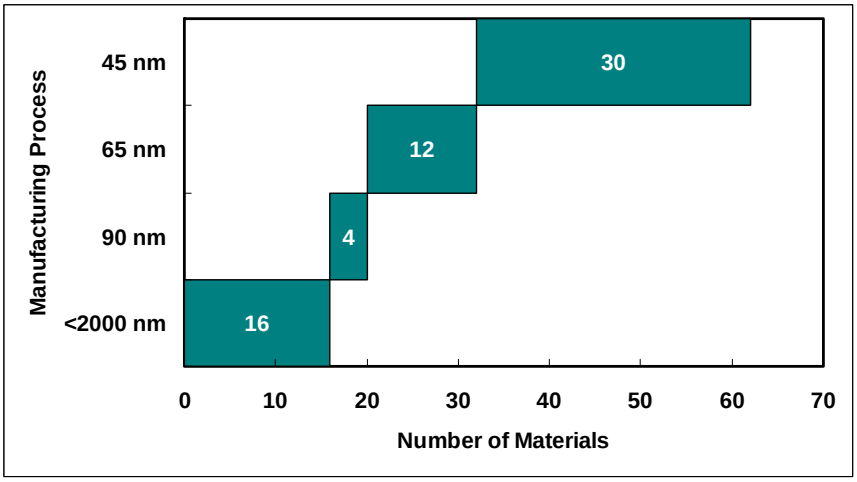
Shrinking Semiconductor Devices and Components

The semiconductor industry has been among the fastest growing industries over the past 50+ years. As far as technology is concerned, it has kept on a path of phenomenal growth by doubling the number of transistors every 18 months since 1965 (as predicted by Moore's Law). Up until this decade, most of this growth was achieved by shrinking the minimum line-width of transistors but, as geometries started to shrink below nano-dimensions (100 nanometers), scientists and engineers started to feel the need to make changes in the materials that have been traditionally used in semiconductor processing. We believe major changes in materials will be needed to drive the next leg of growth and keep it on the path of Moore's Law. Research by Solid State Technology (an independent research firm) indicates that the number of additional new materials, required for each advanced generation (90nm to 65nm to 45nm), has more than doubled (Exhibit 8). We expect this trend to continue as semiconductor geometries shrink further to 32nm, 22nm and beyond. We believe this overriding theme, on top of a 7%-9% average annual growth rate in semiconductor unit demand, will lead to much stronger growth in companies that enable advanced materials for semiconductor chip manufacturing.

Additional new materials required for each advanced generation of semiconductors has more than doubled.

Within our coverage universe, companies such as ATMI, Inc. and Cabot Microelectronics are exposed to this trend as they supply materials used in semiconductor chip manufacturing. Two other companies, Brush Engineered Materials and Rogers Corporation, are also exposed to this trend as their materials are used in electronic components such as cellular phones, DVD players, and 3G base stations.

Exhibit 8: Number of Materials Used Grows With Each New Manufacturing Process



Source: Solid State Technology and D.A. Davidson & Co. Estimates

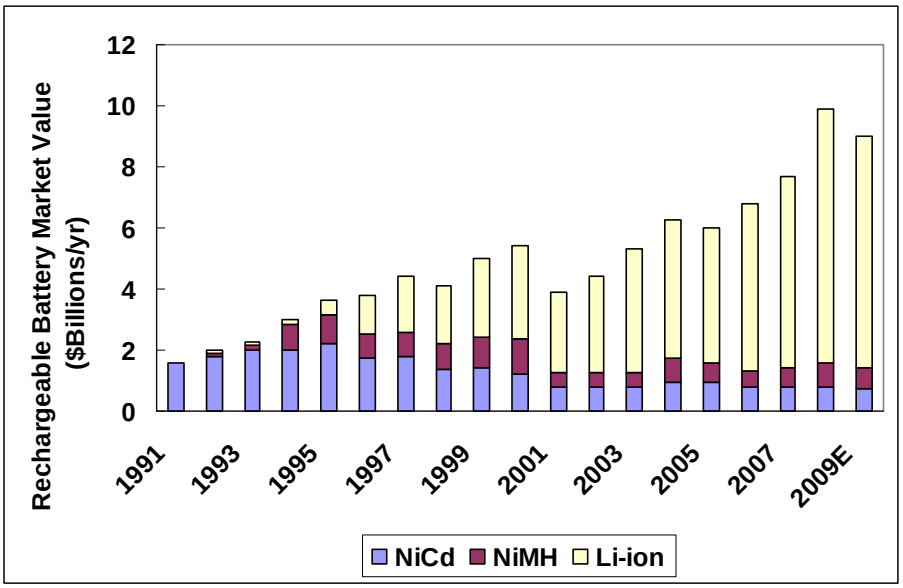
Lithium-ion Batteries

We expect the market for lithium-ion batteries to experience very strong growth over the next several years. The electronics industry has already seen the adoption of these batteries, as they are now the dominant rechargeable battery choice in mobile phones, laptops, computers and other mobile electronic devices. Additionally, due to its higher energy density and smaller form factor (size), Li-ion batteries have also been replacing Nicked Cadmium (NiCd) and Nickel Metal Hydride (NiMH) batteries in power tools applications. We believe the penetration of Li-ion batteries in the power tools market is less than 50% at this point, providing significant growth opportunity over the next few years. While these trends have already lead to differentiated growth for Li-ion in the rechargeable battery market (Exhibit 9), we believe the next leg of growth will be driven by applications such as lawn and garden tools, lawn mowers and vacuum cleaners. Ultimately, we see the adoption of Li-ion batteries in Hybrid Electric Vehicles (HEVs) and Electric Vehicles (EVs), which will end up growing this market by an order of magnitude.

Due to higher energy density and smaller size, Li-ion batteries have seen the fastest growth within the rechargeable battery market.

Polypore International Inc. is a company within our current coverage universe exposed to this trend, as it is one of the leading suppliers of separation membranes for lithium-ion batteries.

Exhibit 9: Li-ion, the Highest Growth Segment of the Rechargeable Battery Market



Source: Unisource and D.A. Davidson & Co. Estimates

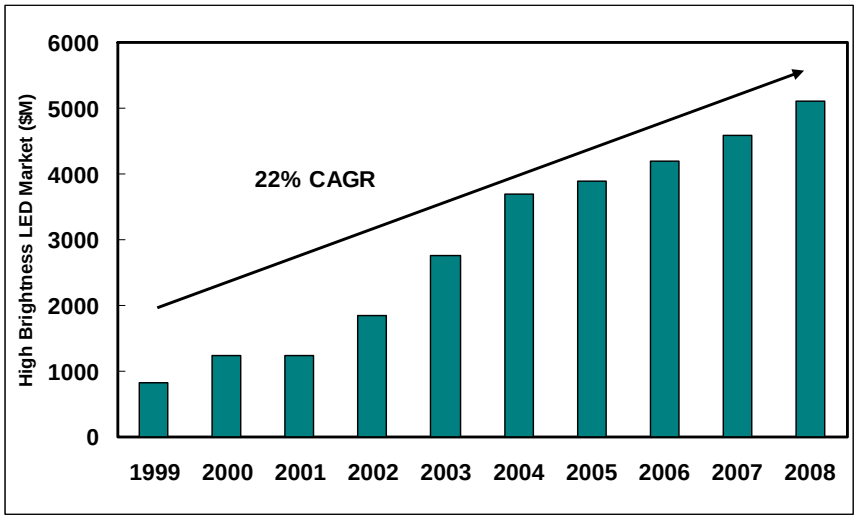
Light Emitting Diodes (LEDs)

We expect strong growth in LEDs from their increasing adoption in displays, traffic signals, automotive lighting and, eventually, in general lighting.

LEDs have seen their growing adoption in backlighting for cellular phones, notebooks and netbooks. While penetration in cellular phones may have reached a high level, notebooks and netbooks are still in the early stages of adoption. Leading manufacturers are now starting to announce television displays using LEDs, which could provide another strong leg of growth over the next few years. Other than electronics, LEDs have also seen strong adoption in traffic signals and automotive lighting. More importantly, due to their lower energy consumption, higher durability, smaller size and non-polluting nature (no mercury), LEDs are now emerging as the solid state lighting of choice over traditional incandescent and fluorescent lighting. According to published reports by industry sources (Strategies Unlimited and LEDs Magazine) and our estimates, the High Brightness (HB) LED market has grown at a 22% CAGR over the past nine years (Exhibit 10). Once past the current economic downturn, we expect the LED market to resume its strong growth, driven by increasing adoption in backlighting units for displays, mobile devices, traffic signals, automotive lighting and eventually in general lighting, which, we believe, is the holy grail for LEDs.

Almost 70% of the world's LEDs are made on sapphire wafers. As the leading supplier of sapphire wafers, Rubicon Technologies Inc. is a company within our current coverage universe that stands to benefit from the long-term growth in LEDs.

Exhibit 10: Growth in LEDs has been Very Strong



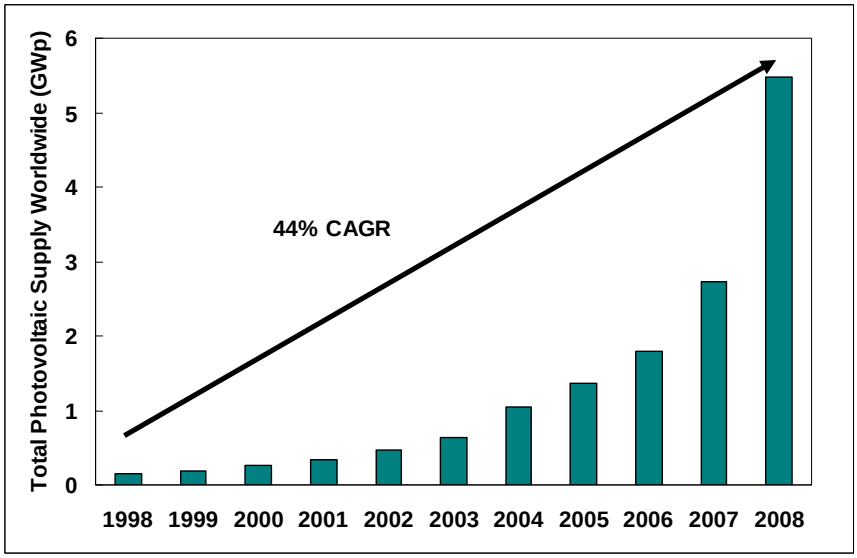
Source: Strategies Unlimited, LEDs Magazine and D.A. Davidson & Co. Estimates

Solar Energy

We expect advanced materials to play the enabling role in the adoption of solar energy.

Growing environmental awareness has been a key driver for cleaner sources of energy. As worldwide demand for electricity continues to increase, there has been a strong drive to reduce the industry's historical reliance on fossil fuel by replacing it with renewable sources of energy such as solar. One of the enablers of this initiative is the crystalline silicon photovoltaic (PV) technology that was developed more than 50 years ago. The photovoltaic cell is a device that converts sunlight into electric current. Over time, several other techniques such as thin-film solar, concentrated solar power (CSP) and concentrated photovoltaics have emerged, which convert solar energy into electricity. Clearly, growth over the past ten years has been very high (44% CAGR) as capacity continues to come on line (Exhibit 11). The solar industry has so far been heavily dependent on government incentives, as it is not yet competitive with traditional sources on price, although scientists and engineers are working hard to make this technology economically viable. Advanced materials, such as amorphous silicon (a-Si), copper indium gallium diselenide (CIGS), cadmium telluride (CdTe) and gallium arsenide (GaAs), are being investigated by the solar industry and we expect these materials to play an enabling role in the adoption of solar energy.

Exhibit 11: Global Photovoltaic Supply has Experienced Phenomenal Growth



Source: European Photovoltaic Industry Association, Navigant Consulting and D.A. Davidson & Co. Estimates

Ceradyne, Inc. is a company within our current coverage universe that has a partial but very fast growing exposure to the solar market as it makes crucibles for melting of silicon. IPG Photonics and Dynamic Materials are two other companies in our coverage universe with exposure to the solar market.

Adoption of Lasers in Manufacturing

Worldwide industrial laser production units have been growing at an 8%-10% CAGR over the past several years, primarily due to their increasing adoption in materials processing applications such as metal cutting, marking and welding. While it is hard to pinpoint the exact opportunity from these applications for lasers, a broader approach may provide some insight. The size of the overall machine tool market was approximately $55 billion in 2008, with lasers for manufacturing making up only $1.5 billion of that, so lasers have penetrated less than 3% of the overall market thus far. While we realize that not every machine tool would use lasers in the future, at these levels, we believe adoption has a lot of room to grow.

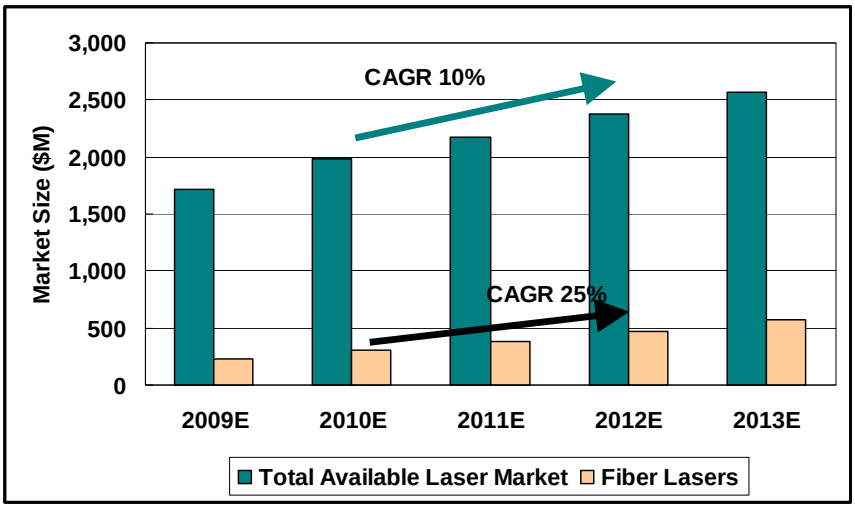
Lasers will continue to see their growing adoption in manufacturing applications, such as cutting, welding and marking.

As a leading supplier of laser optics components, II-VI Inc. stands to benefit significantly from growth in the laser market.

Within the laser space, there are certain high-growth sub-segments, such as fiber lasers that will grow at a much faster pace than the overall laser market. Recent advancements in technology have not only enabled fiber lasers to expand into new applications for lasers, such as solar, but also replace other types of lasers in their current applications. Fiber lasers present a significant performance, flexibility and cost of ownership advantage over traditional lasers. The worldwide sales of fiber lasers grew from 3% of total unit sales in 2004 to 16% in 2008. While the growth in the overall laser market is expected to be in the order of 10%, the fiber laser market is expected to grow at a 25% CAGR (Exhibit 12). It appears that most of the market share gains for fiber lasers thus far have come at the expense of solid state lasers, but this technology is now also starting to compete with CO_2 gas lasers in certain welding and cutting applications.

As a pioneer and leading supplier of fiber lasers, IPG Photonics is a company in our universe that is heavily exposed to the upcoming growth in the fiber laser market.

Exhibit 12: Projected Growth in Lasers



Source: IPGP Investor Presentation, Strategies Unlimited and D.A. Davidson & Co. Estimates

In addition to the broad trends mentioned above, several other industries, such as defense, oil & natural gas, and aerospace are also adopting various advanced materials to improve performance. For example, Ceradyne, Inc. has been extremely successful in making body armors using lightweight ceramics, which has resulted in a significant reduction in weight that soldiers need to carry while in combat. Another company, Dynamic Materials, has developed a proprietary explosion clad technology to join very dissimilar metals that are highly

corrosion resistant. These corrosion resistant materials are being used in applications such as oil refining, shipbuilding and alternative energy. Brush Engineered Materials is another advanced materials company that has developed a new alloy called ToughMet, which is being used in the landing gear of aircrafts to reduce weight and improve reliability.

In Exhibit 13, we provide a comparative valuation table of our current coverage universe.

Exhibit 13: Coverage Universe Comparative Valuation Table

Advanced Materials Valuation Table ($ in millions, except per share)

Company	Ticker	Rating	Target Price	Price 6/19/2009	Shares Out.	Market Cap ($M)	BV Per Share	P/Book Value	Sales CY:09E	Sales CY:10E	P/Sales CY:09E	P/Sales CY:10E	EPS CY:09E	EPS CY:10E	P/E CY:09E	P/E CY:10E
ATMI Inc.*	ATMI	B	$21	$15.50	31.4	$486.33	$12.37	1.3x	$227.4	$315.0	2.2x	1.6x	-$0.39	$0.75	n.m	21x
Brush Engineered Materials Inc.	BW	B	$20	$16.16	20.1	$325.35	$16.89	1.0x	$625.4	$750.0	0.5x	0.4x	-$0.32	$1.00	n.m	16x
Cabot Microelectronics Corp.*	CCMP	N	$32	$30.62	23.1	$707.54	$18.87	1.6x	$260.4	$340.0	2.7x	2.1x	$0.00	$1.15	n.m	27x
Ceradyne, Inc.*	CRDN	B	$23	$18.87	26.0	$491.24	$24.21	0.8x	$419.8	$450.0	1.2x	1.1x	$0.65	$1.50	29x	13x
Dynamics Materials Corp*	BOOM	B	$27	$19.73	12.8	$252.54	$9.27	2.1x	$178.0	$206.0	1.4x	1.3x	$0.80	$1.37	25x	14x
II-VI Inc*	IIVI	B	$29	$23.16	29.7	$687.85	$10.54	2.2x	$251.1	$311.0	2.7x	2.2x	$0.77	$1.33	30x	17x
IPG Photonics Corp.*	IPGP	B	$14	$11.30	46.2	$521.52	$5.14	2.2x	$179.4	$215.0	2.9x	2.4x	$0.35	$0.65	33x	17x
Polypore International, Inc.	PPO	B	$13	$10.60	44.4	$470.37	$9.09	1.2x	$468.9	$505.0	1.0x	1.0x	$0.43	$0.65	24x	16x
Rogers Corporation	ROG	B	$31	$19.42	15.6	$303.69	$20.64	0.9x	$290.0	$330.0	1.1x	1.0x	$0.00	$1.40	n.m	14x
Rubicon Technology, Inc.*	RBCN	B	$13	$11.75	20.3	$238.29	$5.03	2.3x	$13.6	$36.0	17.1x	6.4x	-$0.50	$0.15	n.m	78x
Average						**$448.47**	**$13.21**	**1.6x**	**$291.4**	**$345.8**	**3.3x**	**1.9x**	**$0.18**	**$1.00**	**28x**	**23x**

*D.A. Davidson makes a market in this security

Source: D.A. Davidson & Co. Estimates

A short one-page introduction of all the companies within our current coverage universe follows.

ATMI, Inc. (ATMI)

Headquarters: Danbury, CT
Website: www.atmi.com.

Rating	**BUY**
Current Price	$15.50
Price Target	$21
52 Wk Price Range	$29.92 - $8.70
Avg Daily Vol	378,570
Market Capitalization	$486 M
Shares Outstanding	31.4 M
Cash	$98.2 M
Cash/Share	$3.13
Debt/Capital	0%
Book Value	$388.2 M
Book Value/Share	$12.37
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.32	-$0.36A	$0.07
Q2	$0.30	-$0.11E	$0.14
Q3	$0.21	$0.00E	$0.27
Q4	-$0.07	$0.07E	$0.27
Year	$0.77	-$0.39E	$0.75
P/E	20.2x	n.m.	20.6x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$92.8	$37.4A	$70.0
Q2	$89.5	$55.0E	$75.0
Q3	$86.7	$65.0E	$85.0
Q4	$70.1	$70.0E	$85.0
Year	$339.1	$227.4E	$315.0
P/S	1.47x	2.16x	1.60x

Price History

Source: Thomson One

The Company

ATMI is a leading supplier of enabling materials and process technology to the semiconductor, display and life sciences industries. In its primary semiconductor market, ATMI focuses its activities specifically on the specialty materials market for front-end chip manufacturing processes. Prior to 2004, the company had a significant equipment/services business, but management made a strategic decision to exit that business, which had lower margins. The successful implementation of this plan has established ATMI as one of the few pure plays in the semiconductor materials market. The company's revenues are driven by chip unit demand and wafer starts. Over the past few years, ATMI has been focused on expanding its copper-related businesses, which are growing faster than the industry average. The company's differentiated product portfolio, continued innovation, and strong margins have generated strong and steady growth. ATMI, Inc. was founded in 1986 and is headquartered in Danbury, Connecticut.

Investment Thesis

The semiconductor industry has been among the fastest growing industries over the past 50+ years. As far as technology is concerned, the industry has kept on a path of phenomenal growth by doubling the number of transistors every 18 months since 1965 (as predicted by Moore's Law). Most of this growth has been achieved by shrinking the minimum line-width of transistors. As geometries shrink below nano-dimensions (100 nanometers), scientists and engineers must make significant changes in the materials that have been traditionally used in semiconductor processing. We believe major changes in materials will be needed to drive the next leg of growth in semiconductor technology and keep it on the path of Moore's Law. As a leading enabler of advanced materials and processing to the semiconductor industry, we believe ATMI stands to gain significantly from the growing importance and increasing adoption of newer materials.

Recent Developments

ATMI reported Q1 operating EPS of $(0.36) on revenues of $37.4 million (-47% from Q4:08 and -60% from Q1:08). Results were worse than expected primarily due to severe inventory reductions of the company's SDS (Safe Delivery System) product line at a key distributor. Management expects inventories to stabilize by the end of Q2. While Q1 wafer starts were at very low levels, we expect a significant jump in Q2 wafer starts and, as a result, expect revenues for ATMI to improve meaningfully. Visibility beyond Q2 remains low at this point but with a strong cash position, no debt, and proprietary products, we continue to believe ATMI is a good investment for long-term investors - peak earnings could be significantly higher if the cyclical recovery continues into CY11 and beyond. Historically, the stock has traded at a price-to-forward EPS multiple of 20x-30x. We would point out that, given the cyclical nature of the semiconductor industry, price-to-earnings multiples on these stocks tend to be higher at the beginning of a cyclical upturn due to lower earnings. Our $21 price target is based on a 28x multiple to our CY10 EPS estimate of $0.75.

Brush Engineered Materials Inc. (BW)

Headquarters: Mayfield Heights, OH
Website: www.beminc.com.

Rating	**BUY**
Current Price	$16.16
Price Target	$20
52 Wk Price Range	$32.79 -$6.98
Avg Daily Vol	266,740
Market Capitalization	$325 M
Shares Outstanding	20.13 M
Cash	$12.9 M
Cash/Share	$0.6
Debt/Capital	3%
Book Value	$340.0 M
Book Value/Share	$16.89
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.35	-$0.36A	$0.10
Q2	$0.53	-$0.18E	$0.20
Q3	$0.41	$0.07E	$0.35
Q4	$0.13	$0.10E	$0.35
Year	$1.43	-$0.32E	$1.00
P/E	11.3x	n.m.	16.1x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$226.3	$135.4A	$170.0
Q2	$246.6	$150.0E	$180.0
Q3	$240.5	$170.0E	$200.0
Q4	$196.3	$170.0E	$200.0
Year	$909.7	$625.4E	$750.0
P/S	0.36x	0.52x	0.45x

Price History

Source: Thomson One

The Company

Brush is the only fully integrated producer of beryllium and beryllium alloys. Due to its unique properties, beryllium has been able to address key technological challenges in the semiconductor, electronics, industrial, defense, and several other industries. Brush also manufactures and fabricates other precious and specialty metal products that are going into semiconductors, data storage, aerospace, oil & gas and several other industries. Almost 55% of the company's business is exposed to the telecommunications, computer and data storage markets, while the remaining 45% is exposed to industrial, aerospace, defense, automotive and other markets.

Investment Thesis

Beryllium has unique properties as it is stiffer than steel but lighter than aluminum. Along with excellent mechanical properties, beryllium also exhibits high electrical/ thermal conductivity and a very high resistance to corrosion. Given the unique properties of its beryllium/beryllium alloys and other advanced metals/alloys, we believe Brush will see increasing adoption of these high-performance materials in several applications ranging from electronics to aerospace and defense. We believe Brush, with its unique position as the only fully integrated producer of beryllium, its exposure to high growth markets (telecommunications, perpendicular/optical media, oil & natural gas, heavy equipment), and its expanding global business, is poised for long-term growth once past this near-term economic slowdown. Additionally, work on a brand new pure beryllium production facility primarily funded by the government is on track to be ready for production by the end of 2010.

Recent Developments

BW reported Q1 operating EPS of $(0.36) on revenues of $135.4 million (-31% from Q4:CY08).Clearly, near-term business has been heavily impacted by the ongoing economic downturn. In line with our thesis of improvements in the semiconductor food chain in Q2, management commented that the level of business bottomed in Q1 and is now improving, especially in the consumer electronics-orientated markets. On the industrial side of the business, recent manufacturing data has indicated that bookings activity is now starting to stabilize. While we do not expect a sharp pickup, we do expect business to recover from Q2 onwards. The stock has been moving up since the beginning of the year but still trades very close to its tangible book value of $15.11. Our $20 price target is predicated upon a 20x multiple to our CY10 earnings estimate of $1.00.

Cabot Microelectronics Corp. (CCMP)

Headquarters: Aurora, IL
Website: www.cabotcmp.com

Rating	**NEUTRAL**
Current Price	$30.62
Price Target	$32 ↑
52 Wk Price Range	$43.18 -$18.47
Avg Daily Vol	283,190
Market Capitalization	$708 M
Shares Outstanding	23.11 M
Cash	$159.0 M
Cash/Share	$6.9
Debt/Capital	0%
Book Value	$436.1 M
Book Value/Share	$18.87
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	SEP

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.51	$0.01A	$0.17
Q2	$0.34	-$0.34A	$0.17
Q3	$0.43	-$0.03E	$0.22
Q4	$0.36	$0.19E	$0.41
Year	$1.64	-$0.17E	$0.97
P/E	18.7x	n.m.	31.4x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$93.4	$63.0A	$75.0
Q2	$94.5	$45.4A	$75.0
Q3	$97.0	$65.0E	$80.0
Q4	$90.2	$75.0E	$95.0
Year	$375.1	$248.4E	$325.0
P/S	1.9x	2.9x	2.2x

Price History

Source: Thomson One

The Company

CCMP is the leading supplier of high-performance polishing slurries that are used in the manufacturing of advanced semiconductor chips, hard disk drives, and magnetic heads. The company is using its leadership position and technology know-how to attack adjacent markets such as CMP pads and surface finishing in the flat panel display, healthcare, and high precision optics industries.

Investment Thesis

Cabot Microelectronics Corp. is the leading supplier of high performance polishing slurries used as consumables in the manufacturing of advanced semiconductor chips, hard disk drives, and magnetic heads. The company has almost a 45% share of this roughly $700 million market. Over the past few years, Cabot has been working on penetrating the adjacent CMP pads business, which is close to a $500 million market dominated by Rohm & Haas. We believe Cabot is starting to experience strong traction in this market and has an opportunity to capture a meaningful share. Additionally, through acquisitions, CCMP has expanded into the Surface Finishing business in the non-semiconductor markets, which, while still relatively small, we expect to add to future growth. As performance needs of semiconductor devices grow and the drive to make smaller and faster devices continues, we believe the percentage of devices that utilize CMP in their manufacturing processes will also continue to grow. Additionally, given CCMP's initiative to get into newer markets and ongoing traction into the pads business, we expect the company to grow at a higher rate than the growth in semiconductor units or wafer starts.

Recent Developments

CCMP reported FQ2:09 operating EPS of $(0.34) on revenues of $45.4 million (-28% from FQ1:09 and -52% from FQ2:08). While business was extremely tough in the March quarter, in line with our thesis that wafer starts would bottom in this quarter, CCMP did point to a strong recovery in the months of March and April. Visibility beyond the June quarter remains low, but we expect a strong sequential uptick in the company's revenue in the June quarter. Our previous $29 price target was based on a 25x multiple to our CY10 EPS estimate of $1.15. With emerging signs of a recovery in wafer starts we are raising our price target to $32 based on a 28x multiple to our CY10 estimate. We would point out that, given the cyclical nature of the semiconductor industry, price-to-earnings multiples on these stocks tend to be higher at the beginning of a cyclical upturn due to lower earnings. While near-term upside in the stock is limited, we believe CCMP is a quality company for long-term investors and peak earnings could be significantly higher, if a cyclical recovery continues into CY11 and beyond. We would wait for a pullback before taking a position in the stock.

Ceradyne, Inc. (CRDN)

Headquarters: Costa Mesa, CA
Website: www.ceradyne.com

Rating	**BUY**
Current Price	$18.87
Price Target	$23
52 Wk Price Range	$50.51 - $14.27
Avg Daily Vol	397,960
Market Capitalization	$491 M
Shares Outstanding	26.0 M
Cash	$233.3 M
Cash/Share	$9.0
Debt/Capital	14%
Book Value	$630.2 M
Book Value/Share	$24.21
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$1.20	$0.03A	$0.22
Q2	$1.25	$0.03E	$0.34
Q3	$1.04	$0.26E	$0.47
Q4	$0.87	$0.33E	$0.47
Year	$4.38	$0.65E	$1.50
P/E	4.3x	28.9x	12.6x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$188.5	$99.8A	$100.0
Q2	$185.0	$100.0E	$110.0
Q3	$167.7	$110.0E	$120.0
Q4	$138.9	$110.0E	$120.0
Year	$680.2	$419.8E	$450.0
P/S	0.74x	1.18x	1.10x

Price History

Source: Thomson One

The Company

Ceradyne is a leading manufacturer of advanced technical ceramic products and components for defense, industrial, solar, nuclear, automotive/diesel, and commercial applications. The company experienced strong revenue growth in recent years (65% CAGR from 2002 to 2007) primarily from body and side armor sales, but revenues have been coming down since, as armor sales have declined.

Investment Thesis

We believe high-strength lightweight ceramic materials and composites will continue to replace traditional structural and commercial materials in several niche applications. As a producer of advanced ceramics, Ceradyne should be the prime beneficiary of this trend. With the striking success of its advanced ceramic materials in defense-related applications (especially body and side armor), Ceradyne has a proven technology platform ready for adaptation and deployment into diverse industrial, consumer, energy, and high-tech markets. The company has also been proactive in expanding its non-defense business through acquisitions. As a result, defense revenues in CY08 came down to 61% of total revenues versus 76% in CY06. We expect the defense contribution to decline to 50% of the overall business by the end of CY09. While we expect continued growth in non-defense businesses, such as fused silica ceramic crucibles for melting silicon for solar, nuclear waste containment and semiconductor materials, investors need to be patient, as this is always a time consuming process.

Recent Developments

We had been cautious on the stock, given our expectation that armor sales in CY09 would likely be below the company's previous expectations. In a press release recently, CRDN reduced its CY09 EPS guidance from $1.60 to $0.70 primarily due to continued weakness in the economy and weak armor sales. Revenues for CY09 are now expected to be $420-$440 million compared to the prior guidance of $465-$500 million. With the revised guidance, we believe expectations for CY09 have now been adjusted to conservative levels. We view the company's recently announced acquisition of Diaphorm positively as we believe Diaphorm has a superior materials technology for Advanced Combat Helmets (ACH), which could lead to meaningful revenues for Ceradyne in CY10. Management projects a close to $60 million opportunity from helmets in CY10. CRDN has been trading within a price-to-forward EPS range of 8x-17x over the past four years. While there may not be a near-term catalyst for the stock, with a tangible book of $19.32 and net cash per share of $4.98, we see limited downside from current levels. Our $23 price target is based on a 15x multiple to our CY10 EPS estimate of $1.50.

Dynamic Materials Corp. (BOOM)

Headquarters: Boulder, CO
Website: www.dynamicmaterials.com

Rating	**BUY**
Current Price	$19.73
Price Target	$27
52 Wk Price Range	$35.50 -$4.95
Avg Daily Vol	450,820
Market Capitalization	$253 M
Shares Outstanding	12.8 M
Cash	$16.28 M
Cash/Share	$1.3
Debt/Capital	27%
Book Value	$118.6 M
Book Value/Share	$9.27
Dividend Yield	0.81%
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.42	$0.38A	$0.28
Q2	$0.49	$0.15E	$0.31
Q3	$0.45	$0.11E	$0.37
Q4	$0.43	$0.16E	$0.41
Year	$1.79	$0.80E	$1.37
P/E	11.0x	24.6x	14.4x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$58.4	$49.8A	$48.0
Q2	$63.2	$43.0E	$50.0
Q3	$52.4	$41.0E	$53.0
Q4	$58.6	$44.2E	$55.0
Year	$232.6	$178.0E	$206.0
P/S	1.07x	1.44x	1.28x

Price History

Source: Thomson One

The Company

Dynamic Materials Corporation is the leading provider of explosion-welded clad metal plates. Due to their highly corrosion resistant nature, explosion welded metals have found wide ranging applications in a variety of high-growth industries, such as oil refining, chemical and petrochemical, hydrometallurgy, aluminum production, shipbuilding, power generation, industrial refrigeration and alternative energy.

Investment Thesis

Dynamic Materials is a leader in the explosion clad welded metals market with roughly 42%-48% of the worldwide market share. Explosion-weld cladding uses an explosive charge to bond together plates of different metals that do not bond easily with traditional welding techniques. Explosion welding is a unique process that retains the original properties of the metals that are bonded. Apart from providing an elegant solution, this process tends to save cost as a thin layer of expensive corrosion resistant metal could be welded with a structurally sound, but relatively inexpensive material. Approximately ten years ago, Dynamic Materials was heavily exposed to the petrochemical industry. While the company still has a significant exposure to the oil & gas industry (40%-45% we believe), the adoption of its explosion clad material has grown into other industries such as hydrometallurgy, aluminum production, shipbuilding, power generation, industrial refrigeration and alternative energy. Overall, we believe the explosion clad market has grown from $160 million in 2004 to close to $450 million in 2008. As a leader in the explosion clad market, we expect Dynamic Materials to benefit from the growing adoption of these materials in various industries.

Recent Developments

BOOM reported Q1 EPS of $0.38 on revenues of $49.8 million (-15% from both Q4:08 and Q1:08). Gross margins for the quarter remained strong at 31%. Backlog at the end of Q1:09 dropped to $74 million compared to $97 million at the end of Q4:08. The decline in business was not at all a surprise to us, as our recent channel checks had indicated that orders from large refinery projects were not being released. For CY09, management revised its revenue guidance from down 12%-20% to down 17%-23% year-over-year. The company's revised guidance was right in line with our estimates and, as a result, our CY09 and CY10 estimates remained unchanged. We believe the oil refining, petrochemical, alternative energy, power generation and hydrometallurgy industries will see strong long-term growth once past this near-term slowdown. While we expect business to remain tough in the near-term, as a leading supplier of enabling solutions to these industries, BOOM stands to gain significantly from this long-term trend. Our $27 price target is based on a 20x multiple to our CY10 earnings estimate of $1.37. We expect BOOM to continue to generate positive free cash flow throughout this downturn and continue to pay down its debt.

II-VI Inc. (IIVI)

Headquarters: Saxonburg, PA
Website: www.ii-vi.com

Rating	**BUY**
Current Price	$23.16
Price Target	$29
52 Wk Price Range	$48.26 - $14.05
Avg Daily Vol	178,620
Market Capitalization	$688 M
Shares Outstanding	29.70 M
Cash	$83.5 M
Cash/Share	$2.8
Debt/Capital	2%
Book Value	$313.0 M
Book Value/Share	$10.54
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	JUN

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.32	$0.45A	$0.17
Q2	$0.36	$0.28A	$0.23
Q3	$0.44	$0.23A	$0.30
Q4	$0.50	$0.14E	$0.33
Year	$1.61	$1.10E	$1.03
P/E	14.4x	21.1x	22.4x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$72.7	$87.8A	$62.0
Q2	$74.3	$74.3A	$67.0
Q3	$81.0	$64.1A	$73.0
Q4	$91.8	$58.0E	$78.0
Year	$319.7	$284.2E	$280.0
P/S	2.2x	2.4x	2.5x

Price History

Source: Thomson One

The Company

II-VI Inc. is the world's leading manufacturer of infrared laser optical elements. Over time, the company has expanded its served available market by using its crystal growth know-how to get into adjacent markets, such as near-infrared optics, military infrared optics, and others. These components (mostly consumable) go into laser systems that are used for cutting, welding, heat-treating, marking, and engraving operations in the industrial, defense, medical, and other industries.

Investment Thesis

II-VI Inc. is the world's leading manufacturer of infrared laser optical elements. The company has a roughly 35% share of this $450 million worldwide market. In our view, materials are undoubtedly at the heart of the company's differentiated technology. II-VI has accumulated strong intellectual property and technological know-how to develop, manufacture, and coat complex materials from the periodic table. The company is fully vertically integrated, as it has in-house capability to grow crystals of materials it uses, fabricate parts out of those crystals, coat them, conduct quality checks, and finally, assemble them. Additionally, the company has expanded into adjacent markets such as near-infrared optics, military infrared optics, and others, which has expanded the company's served available market to ~$1.5 billion. Today, the adoption of lasers is growing in precision manufacturing of industrial components, welding of automotive parts, marking of pharmaceutical packaging, and numerous other applications. We believe II-VI will be the primary beneficiary of the growing installed base of lasers in existing applications and their increasing adoption in newer applications. II-VI has grown its revenues at an approximate 19% CAGR over the past 20 years and has been profitable every year since 1973.

Recent Developments

II-VI reported March operating EPS of $0.23 on revenues of $64.1 million (-14% from December) which was more or less in line with expectations. March quarter bookings were down 8% to $62.3 million versus $67.3 million in December. Backlog was also down slightly to $112 million versus $114 million at the end of the December quarter. In line with our thesis, management highlighted that the company's military business (35%-40% of total currently) is continuing to do well while the non-military side of the business remains tough. We believe business for II-VI Inc. should start to see some improvement in the second half of CY09 as manufacturing activity recovers from extremely low levels in the first half. Management guided for FQ4 EPS of $0.14-$0.18 on revenues of $58-$62 million. Given the defensive nature of its business and a proven track record, IIVI has been our best pick for CY09. Our $29 price target is based on a 22x multiple to our CY10 EPS estimate of $1.33.

IPG Photonics Corp. (IPGP)

Headquarters: Oxford, MA
Website: www.ipgphotonics.com

Rating	**BUY**
Current Price	$11.30
Price Target	$14
52 Wk Price Range	$22.40 - $6.79
Avg Daily Vol	227,330
Market Capitalization	$522 M
Shares Outstanding	46.15 M
Cash	$71.6 M
Cash/Share	$1.6
Debt/Capital	7%
Book Value	$237.3 M
Book Value/Share	$5.14
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.18	$0.10A	$0.14
Q2	$0.19	$0.02E	$0.16
Q3	$0.21	$0.09E	$0.17
Q4	$0.19	$0.14E	$0.18
Year	$0.77	$0.35E	$0.65
P/E	14.7x	n.m.	17.3x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$52.9	$45.4A	$50.0
Q2	$56.0	$39.0E	$53.0
Q3	$62.0	$45.0E	$55.0
Q4	$58.2	$50.0E	$57.0
Year	$229.1	$179.4E	$215.0
P/S	2.28x	2.91x	2.43x

Price History

Source: Thomson One

The Company

IPG Photonics Corp. is the leading provider of fiber lasers for materials processing, defense, medical and communications markets. The company pioneered the development and commercialization of optical fiber-based lasers by solving some critical materials and processing issues. Fiber lasers are penetrating new applications and are starting to take market share from other laser-based solutions by delivering superior performance, reliability and usability at a lower total cost of ownership.

Investment Thesis

IPGP is the industry leader in the ~$300 million fiber laser market (in 2008) with close to a 70% market share. Fiber lasers present a significant performance, flexibility and cost of ownership advantage over traditional lasers. Fiber laser technology has emerged as a key enabler of leading edge laser applications in various industries. As a result, this is a significantly faster growing sub-segment of the overall industrial laser market. Revenues for IPGP have grown at a 48% CAGR from 2002 to 2008. According to Strategies Unlimited, the fiber laser market is expected to decline by 24% in CY09 versus a larger 32% decline in the overall laser market. Once past a tough CY09, we expect this market to grow at a 25% CAGR over the next few years versus a 10% CAGR in the overall laser market. As a pioneer and leading shareholder of this market, we expect IPG Photonics to significantly benefit from this trend.

Recent Developments

IPGP reported Q1 operating EPS of $0.10 on revenues of $45.4 million (-22% from Q4:08 and -14% from Q1:08). Results were at the bottom end of Q1 guidance, which had called for EPS of $0.09-$0.14 on revenues of $45-$50 million. In spite of the challenging quarter, IPGP generated $17.5 million in cash flow from operations. The company guided to June quarter EPS of $0.01-$0.07 on revenues of $39-$45 million, which was in line with our estimates but below consensus. While near-term business remains tough, we see some signs of recovery in manufacturing activity from Q3 onwards. As a result, we expect the second half of CY09 to be better than the first half for IPGP. Given IPGP's leadership position in a high-growth end market, we believe the stock presents a great buying opportunity for patient investors at current levels. Our $14 price target is based on a 22x multiple to our CY10 EPS estimate of $0.65.

Polypore International, Inc. (PPO)

Headquarters: Charlotte, NC
Website: www.polypore.net

Rating	**BUY**
Current Price	$10.60
Price Target	$13
52 Wk Price Range	$29.26 - $2.38
Avg Daily Vol	295,990
Market Capitalization	$470 M
Shares Outstanding	44.4 M
Cash	$96.07 M
Cash/Share	$2.2
Debt/Capital	66%
Book Value	$403.3 M
Book Value/Share	$9.09
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.27	$0.09A	$0.12
Q2	$0.27	$0.08E	$0.15
Q3	$0.20	$0.12E	$0.19
Q4	$0.22	$0.14E	$0.19
Year	$0.96	$0.43E	$0.65
P/E	11.1x	24.4x	16.4x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$145.3	$108.9A	$120.0
Q2	$164.7	$115.0E	$125.0
Q3	$154.9	$120.0E	$130.0
Q4	$145.6	$125.0E	$130.0
Year	$610.5	$468.9E	$505.0
P/S	0.75x	1.01x	0.95x

Price History

Source: Thomson One

The Company

Polypore International is one of the world's leading providers of specialized polymer-based membranes (a thin and flexible sheet of material with microscopic pores), used for the separation of battery materials and removal (filtration) of various materials and ions from liquids in healthcare, industrial and other specialty applications.

Investment Thesis

Polypore is one of the leading suppliers of polymeric membranes (films) that are used as a separator in lead-acid and lithium-ion batteries. While the company's lead-acid business is the largest business segment, and a solid cash flow generator, we believe Li-ion is where the key growth opportunity lies. The lithium-ion battery market has experienced a 34% CAGR over the past 18 years, driven primarily by its adoption in the electronics industry. We expect further strong growth in power tools, lawn and garden tools and, ultimately, hybrid electric vehicles (HEVs) and electric vehicles (EVs). As the only major domestic producer of Li-ion battery separators, we believe Polypore is well positioned to gain from ongoing clean technology initiatives domestically and the growing effort towards independence from foreign oil. Polypore's recent loss of customer Johnson Controls (JCI) in the lead-acid business has been the prime reason for reduced valuations. However, we believe Polypore can protect its leadership in this business even after this loss.

Recent Developments

Polypore reported 1Q:CY09 operating EPS of $0.09 on revenues of $108.9 million. Our operating EPS estimates exclude extraordinary charges and acquisition-related litigation expenses. Including these items, GAAP EPS for the quarter came in at $0.07. Revenues were down 25.2% sequentially and down 25.1% versus 1Q:CY08. The revenue decline was clearly not a surprise, given the ongoing economic slowdown and recent revenue loss from Johnson Controls, which we believe was close to $50 million in CY08. On the positive side, Polypore completed its initiatives to realign the lead-acid separator business and, as a result, operating margins did not see a significant drop. During the quarter, Polypore generated close to $15 million in operating cash flow. We believe Polypore is one of the best ways to play the upcoming growth in Li-ion batteries due to its broad penetration in every end market, well diversified customer base, and positive cash flow business model. Our $13 price target is predicated upon a 20x multiple to our CY10 earnings estimate of $0.65.

Rogers Corporation (ROG)

Headquarters: Rogers, CT
Website: www.rogers-corp.com

Rating	**BUY**
Current Price	$19.42
Price Target	$31
52 Wk Price Range	$44.50 -$14.60
Avg Daily Vol	201,200
Market Capitalization	$304 M
Shares Outstanding	15.6 M
Cash	$45.5 M
Cash/Share	$2.91
Debt/Capital	0%
Book Value	$322.8 M
Book Value/Share	$20.64
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.48	-$0.28A	$0.25
Q2	$0.44	-$0.20E	$0.30
Q3	$0.51	$0.24E	$0.39
Q4	$0.47	$0.24E	$0.46
Year	$1.90	$0.00E	$1.40
P/E	10.2x	n.m.	13.9x

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$102.3	$65.5A	$75.0
Q2	$97.7	$71.0E	$80.0
Q3	$101.7	$77.0E	$85.0
Q4	$78.6	$76.5E	$90.0
Year	$380.3	$290.0E	$330.0
P/S	0.81x	1.06x	0.95x

Price History

Source: Thomson One

The Company

Founded in 1832, Rogers Corporation is one of the oldest publicly traded American companies in continuous operation. The company is a supplier of specialty materials (polymers and foams) and components (printed circuit boards and other) that are used in cellular phones, communications infrastructure, computer, office equipment, aerospace, defense, ground transportation, and consumer products. These specialty materials are grouped into four reportable segments: printed circuit materials, custom electrical components, high performance foams, and other polymer products.

Investment Thesis

Growing demand for electronic components (such as cellular phones, base stations, satellite television receivers, and automotive electronics) and their increasing performance requirements have lead to a higher adoption of advanced materials produced by Rogers Corporation. The company commands a 50% or greater market share in almost all of the leading-edge applications within each of its broad business segments, for which competition is quite fragmented. Although the company serves a global customer base, given the increasing shift of manufacturing to Asia, Rogers has been diligently focusing on growing its business in Asia. Almost 50% of its business is exposed to the electronics food chain, such as portable communication devices, communication infrastructure, and consumer electronics. The other half is exposed to end markets, such as ground transportation, aerospace, defense and consumer-related non-electronic items. New product development has been at the core of the company's growth strategy. To continue its leading innovation, ROG plans to spend roughly 6% of its annual sales on research and development, focusing on improving existing technologies, finding new applications for existing products, and most importantly, developing a pipeline of value-added materials for high-growth end markets. We believe the company currently has close to 30 new products in its pipeline, which bodes well for its future revenue growth.

Recent Developments

ROG reported Q1:CY09 operating EPS of $(0.28) on revenues of $65.5 million (-17% from Q4:CY08). Results were better than our estimates and guidance. Almost 50% of Rogers' sales come from the semiconductor food chain, which is beginning to improve. Data points from Taiwanese foundries indicate strong growth in wafer starts in the June quarter. Given Rogers supplies materials for the components, not the chips, we expect revenues to start to improve from Q3 onwards. Additionally, its cost cutting efforts will start to show their impact in the 3Q, which should lead to profitability. The company has no debt and a good cash position on the balance sheet. Trading at close to tangible book value of $20, we believe ROG presents a good buying opportunity at current levels. Our $31 price target is predicated upon a 22x multiple to our CY10 earnings estimate of $1.40.

Rubicon Technology, Inc. (RBCN)

Headquarters: Franklin Park, IL
Website: www.rubicon-es2.com

Rating	**BUY**
Current Price	$11.75
Price Target	$13
52 Wk Price Range	$23.71 - $2.50
Avg Daily Vol	80,640
Market Capitalization	$238 M
Shares Outstanding	20.28 M
Cash	$39.4 M
Cash/Share	$1.9
Debt/Capital	0%
Book Value	$102.1 M
Book Value/Share	$5.03
Dividend Yield	NA
3 Yr EPS Growth	NA
FY End	DEC

Earnings Per Share

	2008A	2009E	2010E
Q1	$0.10	-$0.19A	-$0.01
Q2	$0.12	-$0.20E	$0.02
Q3	$0.07	-$0.08E	$0.05
Q4	-$0.09	-$0.03E	$0.09
Year	$0.21	-$0.50E	$0.15
P/E	56.5x	n.m.	n.m.

Note: Numbers may not add because of rounding.

Revenue ($mil)

	2008A	2009E	2010E
Q1	$10.5	$2.3A	$6.0
Q2	$11.5	$2.3E	$8.0
Q3	$10.4	$4.0E	$10.0
Q4	$4.0	$5.0E	$12.0
Year	$36.5	$13.6E	$36.0
P/S	7.06x	17.09x	6.41x

Price History

Source: Thomson One

The Company

Rubicon Technology Inc. is the leading supplier of sapphire substrates (wafers) for the Light Emitting Diodes (LEDs), Radio Frequency Integrated Circuits (RFICs), and other optical markets. Rubicon is a fully vertically integrated manufacturer of sapphire wafers in 2", 3", 4", and 6" diameters, and is currently working to expand its product portfolio to offer wafers in 8" and greater diameters for future generation applications. The company uses its proprietary "evolving science, evolving solutions" technology known as ES2^{TM} to grow high purity, low-stress, and low-defect density sapphire crystals. The ability to grow larger size wafers with the least amount of defects is the key technology edge that the company has over its competitors.

Investment Thesis

Given the high growth and increasing adoption of LEDs in backlighting, displays, mobile devices, signals, automotive and general lighting, we expect the market for sapphire wafers to grow at a +20% CAGR once past the near-term slowdown. Rubicon's proprietary crystal growth technology enables significantly lower defect density, and its ability to produce large diameter wafers in high volume enables lower cost of production for its customers. Given these key advantages and its leadership position, we believe Rubicon is well positioned to gain from the upcoming growth in the adoption of LEDs.

Recent Developments

RBCN reported Q1 EPS of $(0.19) on revenues of $2.3 million and guided for a flat Q2 versus Q1. Revenues have come down to dismal levels and the company is currently operating at a close to 20% factory utilization rate. However, recent data points indicate growing utilization rates at some of its Asian customers. Our channel checks indicate that, while most of the current improvement in utilization is at the smaller wafer size (2-inch diameter wafers), where margins are not very strong, improvements in larger wafer diameter substrates are expected to follow. Given the increasing adoption of LEDs in notebooks, netbooks, televisions and many other applications, we expect the market for sapphire wafers to grow at a 20% CAGR once past the near-term slowdown. With over $39 million in cash and short-term investments and no debt, Rubicon's balance sheet remains solid. Due to drastic pricing pressure and underutilization, we expect a modest earnings recovery in CY10 but expect earnings to grow meaningfully from those levels over the next few years. While a bit speculative, we believe RBCN is a great way to play the growing adoption of LEDs. Our $13 price target is based upon a 2.5x multiple to the tangible book value of $5.03 per share.

Non-Covered Public Advanced Materials Companies To Watch

COMPANY	DESCRIPTION
Accelrys (ACCL: $5.45) *San Diego, CA*	Accelrys engages in the design, development, marketing, and support of software and related services that facilitate the discovery and development of new and improved products and processes in the pharmaceutical, biotechnology, chemical, petrochemical, and material industries.
Advanced Battery Technologies Inc. (ABAT: $3.75) *New York, NY*	Advanced Battery Technologies, Inc. engages in the design, manufacture, and marketing of rechargeable polymer lithium-ion (PLI) batteries in the People's Republic of China, the United States, and Europe. Its products include rechargeable PLI batteries for use in consumer products, such as portable computers, personal digital assistants, and cellular telephones. The company also, through a 49% equity interest in Beyond E-Tech, Inc., distributes cellular telephones in the United States.
Allegheny Technologies (ATI: $38.20) *Pittsburgh, PA*	Allegheny Technologies Incorporated, through its subsidiaries, engages in the production and sale of specialty metals worldwide. It operates in three segments: High Performance Metals, Flat-Rolled Products, and Engineered Products.
Altair Nanotechnologies, Inc. (ALTI: $0.97) *Reno, NV*	Altair Nanotechnologies, Inc. engages in developing and commercializing nanomaterial and titanium dioxide pigment technologies in the United States and Canada. The company operates in three divisions: Power and Energy Group, Performance Materials, and Life Sciences.
American Superconductor (AMSC: $26.47) *Devens, MA*	American Superconductor Corporation engages in the development, manufacture, and sale of products using two core technologies: high temperature superconductor (HTS) wires and power electronic converters for electric power applications. The company also assembles superconductor wires and power electronic converters into integrated products, such as HTS ship propulsion motors and dynamic reactive compensation systems.
Anaren Inc. (ANEN: $16.88) *East Syracuse, NY*	Anaren, Inc. engages in the design, development, and manufacture of microwave and radio frequency components, assemblies, and subsystems that receive, process, and transmit radar, wireless communications, and other wireless signals and microwave transmissions. Its product line includes surface mount microwave components, which provide passive microwave signal distribution functions; ferrite components that are used in various wireless base station applications; and resistive products, including resistors, power terminations, and attenuators for use in high power wireless, industrial, and medical applications.
AXT, Inc. (AXTI: $1.42) *Fremont, CA*	AXT, Inc. designs, develops, manufactures, and distributes compound and single element semiconductor substrates for wireless communications, lighting display applications, and fiber optic communications applications. The company offers semi-insulating substrates made from gallium arsenide, which are used in power amplifiers and radio frequency integrated circuits of wireless handsets; direct broadcast televisions; high-performance transistors; and satellite communications applications.
CARBO Ceramics Inc. (CRR: $34.31) *Irving, TX*	CARBO Ceramics Inc. engages in the manufacture and supply of ceramic proppant primarily used in the hydraulic fracturing of natural gas and oil wells in the United States and internationally. The company primarily manufactures five ceramic proppants, including CARBOHSP and CARBOPROP designed for use in deep gas wells; CARBOLITE and CARBOECONOPROP for use in natural gas wells of moderate depth and oil wells; and CARBOHYDROPROP used to enhance performance in slickwater fracture treatments.
Carpenter Technology Corp. (CRS: $21.06) *Reading, PA*	Carpenter Technology Corp. engages in the manufacture, fabrication, and distribution of specialty metals and engineered products. The company offers specialty metals, including stainless steels, titanium products, high temperature alloys, electronic alloys, tool steels, and other alloys in various forms. Carpenter also provides engineered products, such as structural ceramic, ceramic cores, and custom-shaped bars.
Cree, Inc. (CREE: $30.41) *Durham, NC*	Cree, Inc. develops and manufactures semiconductor materials and devices primarily based on silicon carbide (SiC), gallium nitride (GaN), and related compounds. It offers light emitting diode (LED), SiC and GaN material, and power and radio frequency (RF) products. The company's LED products include LED chips, LED components, and LED lighting solutions. Cree provides SiC and GaN wafer and epitaxy material products to corporate, government, and university customers to manufacture products for optoelectronic, microwave, and power switching applications; and SiC crystal materials for gemstone applications.
Dionex (DNEX: $61.87) *Sunnyvale, CA*	Dionex Corporation designs, manufactures, markets, and services analytical instrumentation and related accessories, and chemicals. It offers a range of liquid chromatography systems, sample preparation devices, and related products that are used by chemists to separate and quantify the individual components of chemical mixtures in industrial, research, and laboratory markets.

Ener1, Inc. (HEV: $5.63) *New York, NY*	Ener1, Inc. engages in developing and manufacturing rechargeable lithium-ion batteries and battery systems in the United States and South Korea. It operates in three segments: Battery, Fuel Cell, and Nanotechnology. The Battery segment offers lithium-ion batteries for hybrid, plug-in hybrid, and electric vehicles, as well as for buses, trucks, and other alternative transportation vehicles. The Fuel Cell segment develops and markets fuel cells and fuel cell systems. The Nanotechnology segment engages in developing nanotechnology related manufacturing processes and materials. The company offers its products to customers in the transportation, stationary power, military applications, and small cell markets.
Entegris, Inc. (ENTG: $2.78) *Chaska, MN*	Entegris, Inc. engages in the development, manufacture, and supply of materials integrity management solutions to the semiconductor and data storage markets. It serves integrated circuit device manufacturers, original equipment manufacturers that provide equipment to integrated circuit device manufacturers, gas and chemical manufacturing companies, and manufacturers of high-precision electronics.
First Solar (FSLR: $173.46) *Tempe, AZ*	First Solar, Inc. and its subsidiaries engage in the design, manufacture, and sale of solar electric power modules. The solar module is a polycrystalline thin film structure that employs cadmium telluride semiconductor material to convert sunlight into electricity. The company sells its products to solar project developers and system integrators.
Flexible Solutions International (FSI: $1.25) *Victoria, BC Canada*	Flexible Solutions International engages in the development, manufacture, and marketing of patented water technologies worldwide. The company's proprietary environmental technologies simultaneously reduce water evaporation and energy consumption. This technology can be applied to swimming pools, open fresh water surfaces of all kinds, and agricultural land.
Force Protection Inc. (FRPT: $7.89) *Ladson, SC*	Force Protection, Inc. engages in the design, manufacture, testing, and delivery of blast and ballistic protected vehicles that support armed forces and security personnel. It offers Armor Kit/ForceArmor, an external ballistic protection module that protects from explosively formed projectiles. Force Protection, Inc. offers its products under the Buffalo, Cougar, and Cheetah platforms. It principally serves the U.S. Army, the U.S. Marine Corps, and the U.S. Department of Defense.
GrafTech International (GTI: $11.31) *Parma, OH*	GrafTech International, Ltd. develops and manufactures graphite and carbon material science-based solutions. It operates through three segments: Graphite Electrode, Advanced Graphite Materials, and Other Business.
Haynes International (HAYN: $23.74) *Kokomo, IN*	Haynes International, Inc. develops, manufactures, markets, and distributes alloys, which are used primarily in the aerospace, land-based gas turbine, and chemical processing industries. It provides high temperature-resistant alloys (HTA products) and corrosion-resistant alloys (CRA products).
Hexcel (HXL: $10.41) *Stamford, CT*	Hexcel Corporation, together with its subsidiaries, engages in the development, manufacture, and marketing of advanced structural materials in the United States, Europe, and internationally. It operates in three segments: Composites, Reinforcements, and Structures.
Horsehead Holding Corp. (ZINC: $7.98) *Pittsburgh, PA*	Horsehead Holding Corp. produces zinc and zinc-based products in North America. Its products include PW zinc metal, which is used to provide a protective coating to various fabricated products, including pipe and guard rails, heat exchangers, and telecommunications towers, as well as for the production of brass; and SSHG zinc metal that is used as feed for the manufacture of high-purity zinc powder and zinc alloys. Horsehead Holding's customers primarily include steel and brass producers, and galvanizers.
LDK Solar Co., Ltd. (LDK: $11.01) *Xinyu City, China*	LDK Solar Co., Ltd. engages in the manufacture and sale of multicrystalline solar wafers to the manufacturers of solar cells and solar modules in the People's Republic of China and internationally. The company offers multicrystalline solar wafers between 180 and 220 microns in thickness. It also provides wafer processing services to monocrystalline and multicrystalline solar cell and module manufacturers. In addition, the company manufactures polysilicon materials, which include ingots and polysilicon scraps.
MEMC Electronic Materials Inc. (WFR: $19.14) *St. Peters, MO*	MEMC Electronic Materials, Inc. designs, manufactures, and sells silicon wafers for the semiconductor industry worldwide. The company's products are used in the manufacture of various semiconductor devices, including microprocessor, memory, logic, and power devices, as well as the starting material for solar cells. Its customers comprise semiconductor device manufacturers, including the memory, microprocessor, and applications-specific integrated circuit manufacturers, foundries, and solar cell and module manufacturers.
MTS Systems Corp. (MTSC: $20.95) *Eden Prairie, MN*	MTS Systems Corporation supplies mechanical testing systems and industrial position sensors in North America, Europe, and Asia.

ReneSola Ltd. (SOL: $6.09) *Jiashan, China*	ReneSola, Ltd. engages in the development, manufacture, and sale of solar wafers and related products in the People's Republic of China. It offers silicon ingots and solar wafers, which are processed from silicon raw materials, including reclaimable silicon raw materials, in the form of partially-processed and broken wafers, broken solar cells, pot scrap, silicon powder, ingot tops and tails, and other off-cuts. The company sells solar wafers which are used in the production of solar cells.
RTI International Metals (RTI: $19.30) *Niles, OH*	RTI International Metals engages in the manufacture and sale of titanium mill products and fabricated metal components worldwide. Its products are used in the aerospace, oil and gas exploration and production, geo-thermal energy production, chemical processing, and other industries.
Symyx Technologies, Inc. (SMMX: $6.10) *Sunnyvale, CA*	Symyx Technologies, Inc. operates as a scientific research and development integration partner for various companies in the life sciences, chemical, energy, consumer products, and electronics industries in the United States, Europe, Asia, and rest of North America.
Titanium Metals (TIE: $9.90) *Dallas, TX*	Titanium Metals Corporation produces titanium melted and mill products. It offers titanium sponge, melted products, mill products, and industrial fabrications.
USEC Inc. (USU: $5.23) *Bethesda, MD*	USEC Inc. supplies low enriched uranium (LEU) for commercial nuclear power plants worldwide. It sells separative work units (SWU) component of LEU, the SWU and uranium components of LEU, and uranium. In addition, USEC Inc. provides nuclear energy solutions and services, including the design, fabrication, and implementation of spent nuclear fuel technologies; nuclear materials transportation; and nuclear fuel cycle consulting services.
Zoltek Companies, Inc. (ZOLT: $10.02) *St. Louis, MO*	Zoltek Companies, through its wholly owned subsidiaries, engages in the manufacture, marketing, and development of carbon fibers for various applications. The company manufactures and sells carbon fibers, which are used as the primary building material in commercial products; filament winding and pultrusion equipment for the production of composite parts; and technical fibers for aircraft brake and other friction applications.

Source: CapitalIQ

Comprehensive Universe of Covered and Non-Covered Advanced Materials Companies

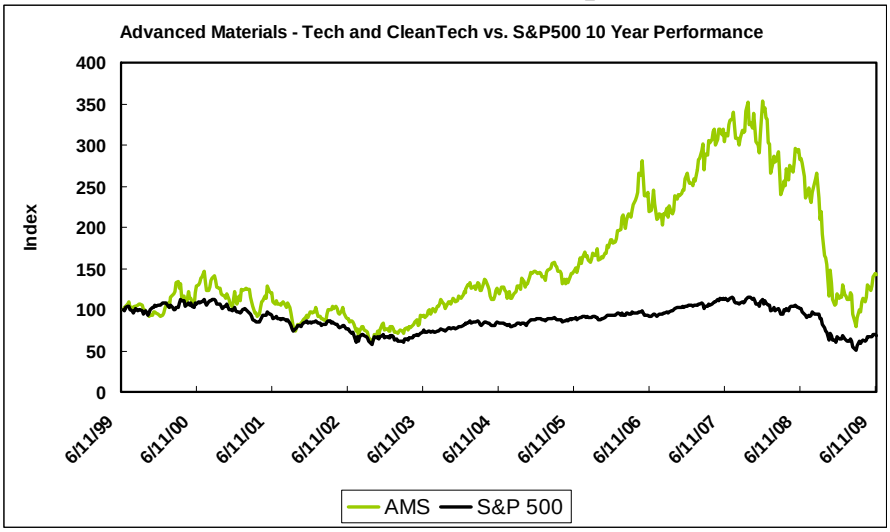
Advanced Materials Comparable Valuation Table ($ in millions, except per share)

Company		Rating	Price 6/19/2009	Shares Out.	Market Cap	BV Per Share	P/Book Value	Sales CY:08	Sales CY:09E	P/Sales CY:08	P/Sales CY:09E	EPS CY:08	EPS CY:09E	P/E CY:08	P/E CY:09E
Semiconductor & Component Materials															
Anaren Inc.	ANEN	NR	$16.88	14.5	$245.2	$10.7	1.6x	$142.5	$173.9	1.7x	1.4x	$0.73	1.07	23.00x	15.73x
ATMI Inc.*	ATMI	B	$15.50	31.4	$486.3	$12.4	1.3x	$339.1	$227	1.5x	2.2x	$0.77	-0.39	20.22x	n.m.
AXT Inc.*	AXTI	NR	$1.42	30.5	$43.3	$2.8	0.5x	$72.9	n.m.	0.6x	n.m.	$0.04	-0.23	35.50x	n.m.
Brush Engineered Materials Inc.	BW	B	$16.16	20.1	$325.3	$16.9	1.0x	$909.7	$625	0.4x	0.5x	$1.43	-0.32	11.31x	n.m.
Cabot Microelectronics Corp.*	CCMP	N	$30.62	23.1	$707.5	$18.9	1.6x	$344.7	$260	2.1x	2.7x	$1.13	0.00	27.03x	n.m.
Entegris, Inc.	ENTG	NR	$2.78	113.5	$315.5	$2.5	1.1x	$555.4	$338	0.6x	0.9x	$0.30	-0.61	9.39x	n.m.
MEMC Electronic Materials Inc.	WFR	NR	$19.14	223.5	$4,277.6	$9.2	2.1x	$1,987.5	$1,106	2.2x	3.9x	$3.24	0.48	5.92x	39.55x
Rogers Corporation	ROG	B	$19.42	15.6	$303.7	$20.6	0.9x	$380.3	$290	0.8x	1.1x	$1.90	0.00	10.20x	n.m.
Rubicon Technology, Inc.*	RBCN	B	$11.75	20.3	$238.3	$5.0	2.3x	$36.5	$14	7.1x	17.1x	$0.21	-0.50	56.48x	n.m.
Average					**$771.4**	**$11.0**	**1.4x**	**$529.8**	**$379.4**	**1.9x**	**3.7x**	**$1.1**	**-$0.1**	**22.1x**	**27.6x**
Advanced Ceramics															
Anaren Inc.	ANEN	NR	$16.88	14.5	$245.2	$10.7	1.6x	$142.5	$174	1.7x	1.4x	$0.73	$1.07	23.00x	15.73x
Carbo Ceramics Inc.	CRR	NR	$34.31	23.3	$798.2	$18.6	1.8x	$403.8	$309	2.0x	2.6x	$2.36	$1.90	14.54x	18.09x
Ceradyne Inc.*	CRDN	B	$18.87	26.0	$491.2	$24.2	0.8x	$680.2	$420	0.7x	1.2x	$4.38	$0.65	4.31x	28.86x
Force Protection Inc.	FRPT	NR	$7.89	69.9	$551.9	$4.1	1.9x	$852.4	$706	0.6x	0.8x	$0.63	$0.56	12.62x	14.22x
Hexcel Corp.	HXL	NR	$10.41	96.5	$1,005.0	$5.4	1.9x	$1,340.5	$1,240	0.7x	0.8x	$0.78	$0.83	13.33x	12.59x
Average					**$618.3**	**$12.6**	**1.6x**	**$683.9**	**$569.8**	**1.2x**	**1.4x**	**$1.8**	**$1.0**	**13.6x**	**17.9x**
Materials Research and Characterization															
Accelrys Inc.	ACCL	NR	$5.45	27.3	$148.6	$3.0	1.8x	$81.3	$82	1.8x	1.8x	$0.22	$0.00	24.77x	n.m.
Dionex Corp.	DNEX	NR	$61.87	17.7	$1,094.0	$11.7	5.3x	$390.1	$390	2.8x	2.8x	$2.95	$3.30	20.99x	18.73x
MTS Systems Corp.	MTSC	NR	$20.95	16.8	$351.0	$12.1	1.7x	$462.3	$375	0.8x	0.9x	$2.55	$1.51	8.22x	13.91x
Symyx Technologies Inc.	SMMX	NR	$6.10	34.1	$207.9	$4.4	1.4x	$159.2	$144	1.3x	1.4x	-$0.35	-$0.21	n.m.	n.m.
Average					**$450.4**	**$7.8**	**2.6x**	**$273.2**	**$247.9**	**1.7x**	**1.7x**	**$1.3**	**$1.2**	**18.0x**	**16.3x**
Solar, Wind & Power															
American Superconductor Corporation	AMSC	NR	$26.47	43.4	$1,149.1	$5.1	5.2x	$156.5	$233	7.3x	4.9x	-$0.47	$0.02	n.m.	n.m.
First Solar, Inc.*	FSLR	NR	$173.46	84.5	$14,651.5	$20.8	8.3x	$1,221.3	$1,941	12.0x	7.5x	$3.92	$7.23	44.23x	n.m.
LDK Solar Co.Ltd.	LDK	NR	$11.01	113.1	$1,245.4	$6.8	1.6x	$1,639.0	$1,142	0.8x	1.1x	$1.23	-$0.02	8.92x	n.m
MEMC Electronic Materials Inc.	WFR	NR	$19.14	223.5	$4,277.6	$9.2	2.1x	$1,987.5	$1,106	2.2x	3.9x	$3.24	$0.48	5.92x	39.55x
ReneSola Ltd.	SOL	NR	$6.09	137.6	$838.1	$2.6	2.4x	$665.0	$492	1.3x	1.7x	-$0.73	-$0.33	n.m.	n.m
USEC Inc.	USU	NR	$5.23	112.4	$587.6	$10.4	0.5x	$1,622.8	$2,192	0.4x	0.3x	$0.41	$0.30	12.76x	17.61x
Average					**$3,791.5**	**$9.1**	**3.3x**	**$1,215.4**	**$1,184.3**	**4.0x**	**3.2x**	**$1.3**	**$1.3**	**18.0x**	**28.6x**
Advanced Metals															
Allegheny Technologies Inc.	ATI	NR	$38.20	98.0	$3,744.3	$19.9	1.9x	$5,309.9	$3,513	0.7x	1.1x	$5.28	$0.85	7.23x	45.15x
Brush Engineered Materials Inc.	BW	B	$16.16	20.1	$325.3	$16.9	1.0x	$909.7	$625	0.4x	0.5x	$1.43	-$0.32	11.31x	n.m.
Carpenter Technology Corp.	CRS	NR	$21.06	44.1	$927.7	$17.8	1.2x	$1,869.2	$1,227	0.5x	0.8x	$3.46	$0.33	6.09x	64.80x
Dynamics Materials Corp*	BOOM	B	$19.73	12.8	$252.5	$9.3	2.1x	$232.6	$178	1.1x	1.4x	$1.79	$0.80	11.01x	24.57x
Haynes International Inc.	HAYN	NR	$23.74	12.0	$285.8	$28.0	0.8x	$621.9	$471	0.5x	0.6x	$4.64	$0.75	5.12x	31.65x
Horsehead Holding Corp.	ZINC	NR	$7.98	35.3	$281.3	$7.7	1.0x	$443.7	$202	0.6x	1.4x	$1.14	-$0.77	7.01x	n.m.
RTI International Metals Inc.	RTI	NR	$19.30	23.1	$446.2	$26.0	0.7x	$591.2	$452	0.8x	1.0x	$2.41	$0.04	8.00x	n.m.
Titanium Metals Corp.	TIE	NR	$9.90	181.1	$1,793.0	$6.0	1.6x	$1,164.8	$993	1.5x	1.8x	$0.88	$0.36	11.24x	27.20x
Average					**$1,007.0**	**$16.5**	**1.3x**	**$1,392.9**	**$957.8**	**0.8x**	**1.1x**	**$2.6**	**$0.3**	**8.4x**	**38.7x**
Lasers & LEDs															
Cree Inc.	CREE	NR	$30.41	88.9	$2,704.6	$13.5	2.3x	$534.2	$579	1.9x	1.7x	$0.56	$0.62	54.11x	49.05x
II-VI Inc*	IIVI	B	$23.16	29.7	$687.9	$10.5	2.2x	$334.8	$251	2.1x	2.7x	$1.67	$0.77	13.84x	30.11x
IPG Photonics Corporation*	IPGP	B	$11.30	46.2	$521.5	$5.1	2.2x	$229.1	$179	2.3x	2.9x	$0.77	$0.35	14.73x	32.72x
Rubicon Technology, Inc.*	RBCN	B	$11.75	20.3	$238.3	$5.0	2.3x	$36.5	$14	7.1x	17.1x	$0.21	-$0.50	56.48x	n.m.
Average					**$1,038.1**	**$8.5**	**2.2x**	**$283.7**	**$255.7**	**3.3x**	**6.1x**	**$0.8**	**$0.3**	**34.8x**	**37.3x**
Water Filtration & Separation															
Dionex Corp.	DNEX	NR	$61.87	17.7	$1,094.0	$11.7	5.3x	$390.1	$390	2.8x	2.8x	$2.95	$3.30	20.99x	18.73x
Flexible Solutions International Inc.	FSI	NR	$1.25	14.1	$17.6	$0.8	1.6x	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.
Polypore International, Inc.	PPO	B	$10.60	44.4	$470.4	$9.1	1.2x	$610.5	$468.9	0.7x	1.0x	$0.96	$0.43	11.07x	24.45x
Average					**$527.3**	**$7.2**	**2.7x**	**$500.3**	**$429.7**	**1.8x**	**1.9x**	**$2.0**	**$1.9**	**16.0x**	**21.6x**
Battery															
Advanced Battery Technologies Inc.	ABAT	NR	$3.75	57.8	$216.8	$1.5	2.6x	$46.4	$69	4.7x	3.1x	$0.33	$0.40	11.26x	9.45x
Altair Nanotechnologies, Inc.	ALTI	NR	$0.97	93.2	$90.4	$0.4	2.5x	$9.2	$7	9.8x	13.7x	-$0.31	-$0.26	n.m.	n.m.
Ener1, Inc.	HEV	NR	$5.63	113.5	$639.0	$0.7	7.6x	$1.5	$43	n.m.	15.0x	-$0.39	-$0.35	n.m.	n.m.
Polypore International, Inc.	PPO	B	$10.60	44.4	$470.4	$9.1	1.2x	$610.5	$469	0.7x	1.0x	$0.96	$0.43	11.07x	24.45x
Average					**$354.1**	**$2.9**	**3.5x**	**$166.9**	**$146.8**	**5.1x**	**8.2x**	**$0.1**	**$0.1**	**11.2x**	**16.9x**
Composites, Carbon & Graphite															
GrafTech International Ltd.	GTI	NR	$11.31	120.3	$1,360.1	$4.2	2.7x	$1,194.4	$692	1.1x	0.0x	$1.95	$0.34	5.79x	33.36x
Hexcel Corp.	HXL	NR	$10.41	96.5	$1,005.0	$5.4	1.9x	$1,340.5	$1,240	0.7x	0.8x	$0.78	$0.83	13.33x	12.59x
Zoltek Companies Inc.	ZOLT	NR	$10.02	34.4	$344.7	$8.4	1.2x	$195.9	$160	1.8x	2.2x	$0.58	$0.28	17.22x	35.91x
Average					**$903.3**	**$6.0**	**1.9x**	**$910.3**	**$697.3**	**1.2x**	**1.0x**	**$1.1**	**$0.5**	**12.1x**	**27.3x**
Comprehensive Coverage Universe Average					**$1,149.9**	**$10.2**	**2.1x**	**$732.4**	**$599.6**	**2.1x**	**2.9x**	**$1.4**	**$0.5**	**16.6x**	**28.0x**

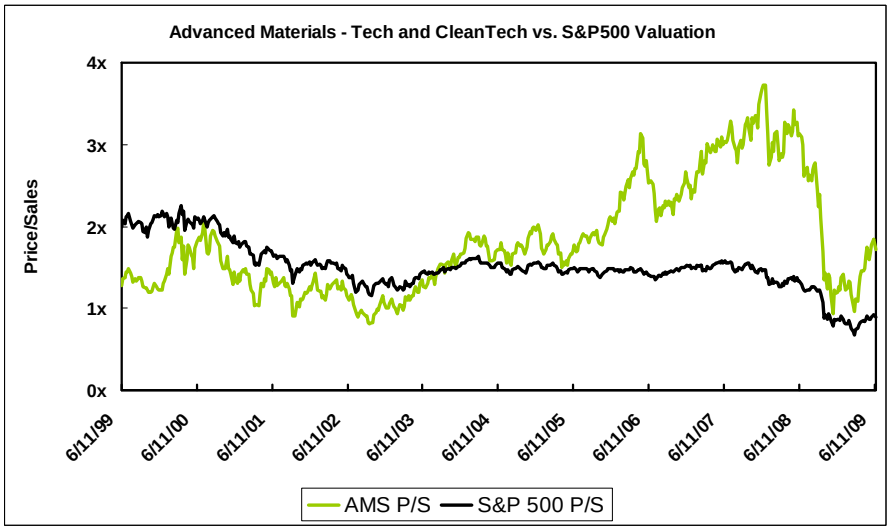
*D.A. Davidson & Co. makes a market in this security

Source: CapitalIQ and D.A. Davidson & Co. Estimates

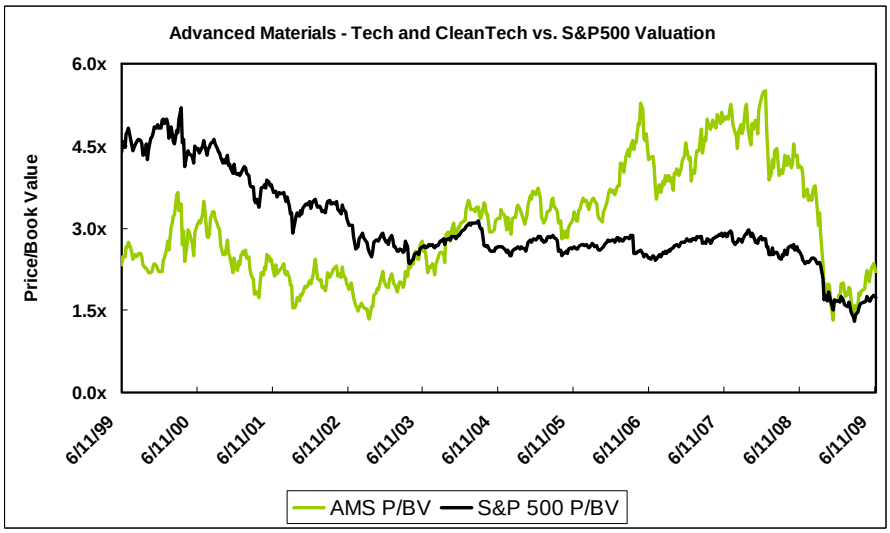
Performance & Valuation of the Comprehensive Universe



Source: CapitalIQ



Source: StockVal



Source: StockVa

Note: The AMS universe used in these charts consists of all the companies mentioned in the table on page 25.

Private Advanced Materials Companies To Watch

COMPANY	DESCRIPTION
A123Systems www.a123systems.com *Watertown, MA*	A123Systems develops next generation Lithium-Ion batteries that revolutionizes the way manufacturers design high power products.
Advanced Diamond Technologies www.thindiamond.com *Romeoville, IL*	Advanced Diamond Technologies, Inc. (ADT) develops and applies diamond films for industrial, electronic and mechanical applications. ADT formed to commercialize the ultrananocrystalline diamond technology developed at Argonne National Laboratory, and is the exclusive licensee to Argonne's portfolio of patents for synthesizing and using UNCD.
AmberWave Systems www.amberwave.com *Salem, NH*	AmberWave Systems Corporation provides technology research and development services to the semiconductor industry. The company offers strained silicon solutions and device integration methodologies to enhance semiconductor-based products.
Aspen Aerogels www.aerogel.com *Northborough, MA*	Aspen Aerogels' patented nanotechnology process delivers a revolutionary change in thermal management and energy conservation. The company's technology is at work in oil pipelines, military ships, building and construction, boots and jackets, and several other applications/industries, wherever superior thermal, fire and acoustic barriers are needed but weight and space requirements are stringent.
Cambrios Technologies www.cambrios.com *Mountain View, CA*	Cambrios is an electronic materials company that develops proprietary, competitive products. Cambrios implements its novel technology to simplify electronics manufacturing processes, improve end-product performance, and identify ways to satisfy unmet industry needs. The company is also developing solution phase chemistries that will replace more complicated and expensive manufacturing processes.
Cnano Technology www.cnanotechnology.com *Menlo Park, CA*	Cnano Technology develops and manufactures carbon nanotubes for industry applications based on their unique electrical, thermal, and mechanical properties. The company's low manufacturing costs, based on the patented technologies and scalable manufacturing process, allow it to offer high quality carbon nanotubes at reasonable prices to customers.
Elmet Technologies www.elmettechnologies.com *Lewiston, ME*	Elmet manufactures molybdenum and tungsten products used in the lighting, electronics, semiconductor, automotive, fiberglass, aircraft, and medical industries. The company's product line includes wires, rods, sheets, and pressed and sintered parts. In addition, the company also manufactures custom precision machined and fabricated parts to exacting customer specifications.
Entek International www.entek-international.com *Lebanon OR*	With over one billion square meters of battery separator material shipped, Entek is one of the leading manufacturers of battery separators. Its market share is estimated to be 40%+ of the global Starting, Lighting and Ignition, PE Separators market.
EoPlex Technologies www.eoplex.com *Redwood City, CA*	EoPlex Technologies produces components in layers using custom printing equipment and proprietary "inks" that carry ceramic, metallic, or polymer materials to millions of locations. This allows the manufacture of components with integrated chambers, channels, sensors, circuits, reactors, energy scavengers, and other features.
Five Star Technologies www.fivestartech.com *Cleveland, OH*	Five Star has built a broad portfolio of patented processes and advanced materials experience. In 2002, the company obtained venture capital funding to support the development of new materials-based product platforms. Focusing on the electronics products arena, Five Star has various products and initiatives, ranging from advanced powder processing to chip packaging materials.
Hycrete www.hycrete.com *Jersey City, NJ*	Hycrete provides corrosion control services for concrete structures. Its products include Hycrete Admixture, Hycrete TT, and Hycrete CMU. The company's products help in the protection of bridge decks and highways, seawalls and docks, wastewater treatment facilities, garages, swimming pools, tunnels, pavements, and walkways.
Hydration Technologies www.htiwater.com *Albany, OR*	Hydration Technology Innovations is the leading provider of next-generation forward osmosis water filtration technology based on a proprietary membrane that converts almost any polluted water into safe, potable drink.

Imara Corp. www.imaracorp.com *Menlo Park, CA*	Imara is a lithium-ion battery company that develops and manufactures the next generation of advanced batteries. Its cells stand apart from other li-ion batteries because of its unique, materials-agnostic electrode technology. It exclusively licenses a patented technology developed by the Stanford Research Institute (SRI), and has extended the technology through its own proprietary innovations. Imara's research and development team continues to expand the commercial boundaries of high-power, high-energy, li-ion chemistries.
Intermolecular www.intermolecular.com *San Jose, CA*	Intermolecular delivers High Productivity Combinatorial™ (HPC) technology products and services that enable customers to maximize semiconductor R&D ROI. The company's Tempus™ HPC Platform offers chipmakers, materials suppliers, and equipment manufacturers integrated processing, characterization and informatics systems that exponentially accelerate learning in materials discovery, process development and IC device integration.
Isola Group www.isola-group.com *Chandler, AZ*	Isola Group is a technology-driven, global designer, developer and manufacturer of high performance base materials used in the manufacture of advanced multilayer printed circuit boards worldwide.
Konarka Technologies www.konarka.com *Lowell, MA*	Konarka builds products that convert light to energy—anywhere. As the leading developer of polymer photovoltaic technology that provides a source of renewable power in a variety of form factors for commercial, industrial, government and consumer applications, Konarka has a broad portfolio of patents, technology licenses, and an accomplished technical team.
Kovio www.kovio.com *Sunnyvale, CA*	Kovio develops a new category of semiconductor products using printed silicon electronics and thin-film technology. This new manufacturing technology combines the low cost of graphics printing with the power and functionality of silicon-based semiconductors.
Micro Power www.micro-power.com/ *Beaverton, OR*	Micro Power develops battery systems, from those using Ni-MH and Ni-Cd batteries to the most advanced Lithium-ion systems and smart battery packs.
Molecular Imprints www.molecularimprints.com *Austin, TX*	Molecular Imprints has developed enabling imprint lithography systems for applications in nano devices, microstructures, advanced packaging, bio devices, optical components and semiconductor devices. The company's lithography tools enable niche, very high resolution applications at a significantly lower cost.
Nanofilm www.nanofilmtechnology.com *Valley View, OH*	Nanofilm's initial expertise enabled the manipulation of coatings at the molecular level to enhance the durability, clarity, and performance of polymeric eyeglass lenses. Today, Nanofilm's surface care products are distributed around the world for the care of electronic displays, such as computers, cell phones, and MP3 players, as well as cameras, scopes, eyeglasses, and sunglasses.
NanoGram www.nanogram.com *Milpitas, CA*	NanoGram develops and licenses technology that enables the manufacture of nanoscale compositions for applications in optical nanocomposites, battery materials, phosphors, solar, and core shell. The company's licensing package includes materials production process, surface modification, dispersion technologies, process transfer expertise, and ongoing support.
Nanosolar www.nanosolar.com *San Jose, CA*	Nanosolar is a global leader in solar power innovation. With its proprietary nanoparticle ink and roll-printing technology, Nanosolar owns the processes and designs to produce the world's most cost-efficient solar cells and make them available in many versatile product forms.
The NanoSteel Company www.nanosteelco.com *Providence, RI*	The NanoSteel Company, Inc. develops and markets a range of patented Super Hard Steel nano-structured materials that effectively solve or alleviate many problems that have a destructive or costly impact on industry today, including wear, corrosion, erosion and high temperature oxidation.
Nanostellar www.nanostellar.com *Redwood City, CA*	Nanostellar, Inc. provides diesel automotive and stationary power industries with nano-engineered catalyst materials that reduce exhaust emissions and increase the effectiveness of precious metals in catalysts. Focusing on the fields of quantum computational nanoscience, chemistry, materials science, and chemical engineering, Nanostellar utilizes Rational Catalyst Design, which combines computational approaches with targeted experiments, to accelerate the development of materials.
Nanosys www.nanosysinc.com *Palo Alto, CA*	Nanosys is developing products based on a highly patented (approximately 430 patents) technology platform incorporating high performance inorganic nanostructures that are being applied to address opportunities in multiple industries. Some current application areas include flexible electronics, lightweight and conformal solar cells, semiconductor memory, and novel nanostructured surface coatings.

Nantero www.nantero.com *Woburn, MA*	Nantero is using carbon nanotubes for the development of next-generation semiconductor devices (memory, logic, and others). In the field of memory, Nantero is developing NRAM, a high density nonvolatile Random Access Memory. The company's objective is to deliver a product that will replace all existing forms of memory, such as DRAM, SRAM and flash, with NRAM serving as universal memory.
Nextreme Thermal Solutions www.nextremethermal.com *Research Triangle Park, NC*	Develops next-generation thermoelectrics based on its unique, thin-film superlattice technology for applications that require extreme thermal management solutions.
nLight Photonics Corp. www.nlight.net *Vancouver, WA*	nLIGHT is driving new application utilization of high-power semiconductor lasers and fibers through technology innovation and best practice manufacturing. Optimizing components and sub-systems for OEM integration generates differentiated advantages for its customers in industrial, medical, defense and consumer applications.
Pozzetta Products www.pozzetta.com *Englewood, CO*	Pozzetta, Inc. was founded in 1994 to meet the growing need to safely store and transport critical devices around the world. Pozzetta offers a comprehensive range of critical device handling solutions, and research and development capabilities to meet the increasingly sophisticated product-and-service requirements of the global semiconductor and electronics industry.
QuantumSphere www.qsinano.com *Santa Ana, CA*	QuantumSphere (QSI) is a leading manufacturer of advanced materials for a wide array of clean energy, defense, electronics, and other high value applications. Backed by a strong intellectual property portfolio, the company has demonstrated breakthrough results with high performance nano catalysts for use in emerging multibillion-dollar markets, such as batteries, ultracapacitors, fuel cells, and hydrogen generation.
SemEquip www.semequip.com *North Billerica, MA*	SemEquip has developed advanced ion source materials and cluster ion implantation sub-systems for the manufacture of semiconductor chips. The company's technologies enable the utilization of cluster beam ion implantation for manufacturing the world's most advanced integrated circuits at the lowest cost and highest throughput.
Starfire Systems www.starfiresystems.com *Malta, NY*	Starfire combines its expertise in polymer chemistry and materials science to create innovative materials solutions, supplying cost-effective engineered ceramic systems, components, and finished products. Starfire's easy-to-handle polymers reduce processing costs while facilitating freedom of design that enables users to form virtually any near-net shape nanostructured silicon carbide (SiC) ceramic.
Unidym www.unidym.com *Menlo Park, CA*	Unidym is a leader in the manufacture and application of carbon nanotubes (CNTs), a novel material with extraordinary electrical, thermal and mechanical properties. Unidym provides bulk materials, CNT-enabled products, and intellectual property to a wide range of customers and business partners. As a result of its recent merger with CNI, Unidym possesses a foundational patent portfolio that covers nearly every aspect of CNT manufacturing and processing, as well as multiple product applications.
Velocys www.velocys.com *Plain City, OH*	Velocys designs, develops, and tests microchannel-based chemical manufacturing systems. The Velocys technology process hardware enables substantial capital cost savings, improved product yields, and greater energy efficiencies. The company is addressing multiple end markets, including oil and gas, refining and fuels, commodity chemicals, specialty chemicals, and military.
Zyvex Performance Materials www.zyvex.com *Richardson, TX*	Zyvex Performance Materials was spun out of Zyvex Corporation in January 2007. Zyvex Performance Materials (ZPM) is the first company to provide carbon nanotube (CNT)-powered products to the marketplace. We have seen that nanomaterials, such as CNTs, hold great promise as components in advanced polymer composites that enable lower weight, higher mechanical strength, and improved electrical and thermal performance.

Recent Advanced Materials Universe News

June 12, 2009: IPG Photonics Corporation, announced a successful test of its new ten kilowatt single-mode fiber laser, a world record in a production laser. The unique laser produces 9.6 kilowatts of single-mode power through a single fiber at total efficiency exceeding 23%. IPG's new kilowatt laser has multiple applications including remote cutting and welding as well as directed energy.

June 12, 2009: II-VI Incorporated announced the sale of its x-ray and gamma-ray radiation sensor business, doing business as eV PRODUCTS, Inc., to Endicott Interconnect Technologies, Inc. of Endicott, NY. Financial terms of the transaction were not disclosed.

June 9, 2009: Ceramics products manufacturer Ceradyne Inc. agreed to buy almost all of the business and assets and some technology and intellectual property of Diaphorm Technologies LLC for $9.5 million in cash. Based in Salem, NH, Diaphorm develops makes and markets ballistic helmets.

June 1, 2009: ATMI, Inc. announced plans to double its global production capacity of ultraclean, disposable bioprocess vessels for life sciences applications through upgrades and modifications to its North American manufacturing facility in Bloomington, MN. The site, which supplies products for the integrated circuit (IC) and flat panel display (FPD) markets, adds a Grade B clean room for fabricating complex three-dimensional storage, mixing and bioreactor vessels for life sciences customers. In addition to maintaining its current IC and FPD operations, the plant upgrade will entail creation of an on-site quality testing laboratory.

May 26, 2009: LDK Solar Co. announced that it has entered into an agreement with ESPE Srl, a leading system integrator within the PV sector, to develop PV plants in the Apulia region of Italy. Construction has commenced on the first of five plants totaling 5 MW. LDK Solar will supply wafers for the PV project and ESPE will provide engineering, procurement, and construction services and system integration.

May 21, 2009: Celgard, LLC, a wholly owned subsidiary of Polypore International, Inc. submitted an application for grant funding under the U.S. Department of Energy (DOE) Electric Drive Vehicle (EDV) Battery and Component Manufacturing Initiative (DE-FOA-0000026). Celgard is seeking federal funds through this grant initiative to increase its lithium-ion battery separator production capacity in the United States. The proposed capacity expansion would be implemented at its existing Charlotte, NC facility and at an additional manufacturing facility that would be built at a second U.S. location in the Southeast. This expansion would result in the creation of hundreds of new U.S. jobs for both Celgard and its suppliers and contractors.

May 20, 2009: ISOLA GROUP, SARL, a leading designer, developer and manufacturer of high performance base materials for the printed circuit board industry, announced it entered into a non-exclusive license agreement with Sanmina - SCI Corp. that grants Sanmina the right to practice under US Patent Nos. 5,350,621 and 5,464,658 for the terms of the patents.

May 19, 2009: Konarka Technologies, Inc. announced the National Energy Renewable Laboratory (NREL) has certified that Konarka's organic based photovoltaic (OPV) solar cells have demonstrated 6.4% efficiency. This is the highest performance recorded by NREL for an organic photovoltaic solar cell, suggesting that Konarka continues to advance the technology at a significant pace. In December, Dr. Alan Heeger of the University of California, Santa Barbara, and chief scientist at Konarka, received verification from NREL for a 6% organic PV cell. NREL is a world leader in solar energy design and testing, offering very reliable, accurate and precise methods of measuring efficiency performance.

May 13, 2009: Unidym announced that it has entered into a one-year agreement with LG Display (LGD). As part of the Agreement, Unidym will develop and supply CNT films and CNT inks that are optimized for LGD's purpose.

May 12, 2009: Cambrios Technologies Corporation announced that it signed a product development and purchase agreement with Nissha Printing Company, Ltd., of Japan, the world's leading manufacturer of Touch Panels.

April 29, 2009: Nextreme Thermal Solutions and Nucletron Technologies GmbH have entered into a distribution agreement, under which Nucletron will distribute Nextreme's thin-film thermoelectric products in Europe. The agreement opens up Nextreme's first sales and marketing channel in Europe.

April 23, 2009: Zoltek Companies, Inc. reported that it has appointed Andrew W. Whipple as its Chief Financial Officer. Mr. Whipple has served as Zoltek's Chief Accounting Officer since May 2008.

April 20, 2009: Talley Metals, a subsidiary of Carpenter Technology Corporation announced that it would increase base prices approximately 5% on all stainless bar products to help offset rising manufacturing costs. The increase went into effect on all shipments beginning May 1, 2009.

April 13, 2009: Rubicon Technology, Inc. announced it has successfully grown what the company believes is the world's largest sapphire crystal. The super boule weighs in at 200 kg (441 lbs.) and will enable Rubicon to offer high quality large-size optical windows and next generation wafer products with dimensions over 12 inches.

April 6, 2009: Chrysler LLC signed an agreement with A123Systems for advanced Nanophosphate™ Lithium ion prismatic battery cells, and joint development of battery modules and battery packs for Chrysler's Range-extended Electric Vehicle and battery only Electric Vehicle production programs.

April 2, 2009: nLIGHT delivered initial units of the highest brightness ever achieved from a fiber-coupled diode laser to development partners. The high-power Pearl module is compact (< 100 cm^2) and is optimized to meet performance, cost, and reliability demands for the growing fiber laser pump and direct materials processing markets. A general release of this new and enabling performance level is planned for later this year

March 17, 2009: Novellus Systems, ATMI, Inc., and Enthone Inc. introduced ViaForm(R) Extreme Pura(TM), a new copper deposition process and chemistry for manufacturing advanced copper interconnects at 32nm and beyond. This new technology provides a high degree of process control, enables a more robust interconnect fill capability, and ensures greater device reliability.

March 5, 2009: Aspen Aerogels completed delivery of Spaceloft advanced thermal insulation to Technip for a 21-kilometer subsea natural gas pipeline off the coast of Brazil.

March 3, 2009: Intermolecular, Inc. announced that Craig Hunter joined the company as vice president and general manager, solar business. Hunter joined from Sequoia Capital, a leading venture capital firm, where he was an entrepreneur in residence focused on the photovoltaic (PV) industry.

February 27, 2009: Cabot Microelectronics Corporation, the world's leading supplier of chemical mechanical planarization (CMP) polishing slurries and growing CMP pad supplier to the semiconductor industry, announced that it completed its acquisition of Epoch Material Co., Ltd. for a total purchase price of approximately US$66 million. Epoch was a consolidated subsidiary of Eternal Chemical Co., Ltd. (TAI:1717), and specializes in the development, manufacture and sale of copper CMP slurries and CMP cleaning solutions to the semiconductor industry, as well as color filter slurries to the liquid crystal display (LCD) industry. As planned, Cabot Microelectronics initially obtained 90 percent of Epoch's stock, with the remaining 10 percent to be transferred to the company from Eternal in 18 months.

January 29, 2009: Advanced Diamond Technologies, Inc. (ADT) announced that it was awarded the first phase of a 3-year, $4.8 million contract from the Defense Threat Reduction Agency (DTRA) to develop diamond-based sensors for the real-time detection of water-based chemical and biological agents. The project's goal is to develop miniature devices to protect first responders during a terrorist event by detecting water-borne pathogens, bacterial agents, and toxins such as E. coli, Listeria, and Salmonella. Project collaborators include the University of Wisconsin-Madison (UW) and theUniversity of Illinois at Urbana-Champaign (UIUC).

January 23, 2009: IPG Photonics announced that it developed two new families of fiber lasers in the green spectrum range that will allow it to enter new markets and applications. At output wavelengths of 532nm, the new pulsed 10W green fiber laser and continuous wave (CW) 15W green fiber laser provide the high single-mode beam quality, ease of use and high reliability.

Required Disclosures

D.A. Davidson & Co. expects to receive, or intends to seek, compensation for investment banking services from the companies mentioned in this report in the next three months.

D.A. Davidson & Co. is a full service investment firm that provides both brokerage and investment banking services. Avinash Kant, Ph.D., the research analyst principally responsible for the preparation of this report, will receive compensation that is based upon (among other factors) D.A. Davidson & Co.'s investment banking revenue. However, D.A. Davidson & Co.'s analysts are not directly compensated for involvement in specific investment banking transactions.

I, Avinash Kant, Ph.D., attest that (i) all the views expressed in this research report accurately reflect my personal views about the common stock of the subject company, and (ii) no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Ratings Information

D.A. Davidson & Co. Ratings	**Buy**	**Neutral**	**Underperform**
Risk adjusted return potential	Over 15% total return expected on a risk adjusted basis over next 12-18 months	>0-15% return potential on a risk adjusted basis over next 12-18 months	Likely to remain flat or lose value on a risk adjusted basis over next 12-18 months

Distribution of Ratings (as of 3/31/09)	**Buy**	**Hold**	**Sell**
Corresponding Institutional Research Ratings and Distribution	Buy 47%	Neutral 47%	**Underperform** 6%
Corresponding Private Client Research Ratings and Distribution	Outperform 86%	Market Perform 9%	Underperform 5%
Distribution of Combined Ratings	51%	44%	6%

Distribution of companies from whom D.A. Davidson & Co. has received compensation for investment banking services in last 12 mos.			
Institutional Coverage	2%	3%	9%
Private Client Coverage	0%	0%	0%
Distribution of Combined Investment Banking	2%	3%	8%

Target prices are our Institutional Research Department's evaluation of price potential over the next 12-18 months and 5 years, based upon our assessment of future earnings and cash flow, comparable company valuations, growth prospects and other financial criteria. Certain risks may impede achievement of these price targets including, but not limited to, broader market and macroeconomic fluctuations and unforeseen changes in the subject company's fundamentals or business trends.

For a copy of the most recent reports containing all required disclosure information for covered companies referenced in this report, please contact your D.A. Davidson & Co. representative or call 1-800-755-7848.

Other Disclosures

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