

ALTAIR NANOTECHNOLOGIES INC
Form 424B5
May 26, 2009
PROSPECTUS SUPPLEMENT
(To Prospectus dated October 3, 2006)

11,994,469 Shares
and Warrants to Purchase 6,596,958 Shares

Common Shares

We are offering up to 11,994,469 common shares and warrants to purchase up to 6,596,958 common shares in this offering (and the common shares issuable from time to time upon exercise of these warrants). The common shares and warrants will be sold in units, with each unit consisting of one common share and one warrant to purchase 0.55 of a common share at an exercise price of \$1.00 per common share. Each unit will be sold at a negotiated price of \$1.17 per unit. Each purchaser of our common shares will receive one warrant to purchase 0.55 common shares, exercisable for seven years at an exercise price of \$1.00 per share, for each common share they purchase in this offering. Units will not be issued or certificated. The common shares and warrants are immediately separable and will be issued separately. Each common share includes an attached right arising under an Amended and Restated Shareholder Rights Plan Agreement dated October 15, 1999. Our common shares are listed on the NASDAQ Capital Market under the symbol "ALTI." On May 21, 2009, the last reported sale price of our common shares was \$1.35 per share.

Our business and an investment in the securities offered by this prospectus supplement and the accompanying prospectus involve significant risks. See "Risk Factors" beginning on page S-4 of this prospectus supplement.

These securities have not been approved or disapproved by the Securities and Exchange Commission ("SEC") or any state securities commission nor has the SEC or any state securities commission passed upon the accuracy or adequacy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

In connection with this offering, we have engaged Lazard Capital Markets, LLC as the placement agent.

	Per Unit	Maximum Offering Amount
Public offering price	\$ 1.17	\$ 14,033,529
Placement agent's fee ¹	\$ 0.08	\$ 982,347
Proceeds, before expenses, to Altair	\$ 1.09	\$ 13,051,182

We estimate the total expenses of this offering, excluding the placement agent's fee, will be approximately \$215,000. Because there is no minimum offering amount required as a condition to closing this offering, the actual public offering amount, placement agent's fee and net proceeds to us, if any, in this offering are not presently determinable and may be less than the maximum offering amounts set forth above. We are offering these common shares and warrants to purchase common shares on a best efforts basis primarily to institutional investors. We have retained Lazard Capital Markets LLC to act as the exclusive placement agent in connection with this offering. We are not required to sell any specific number or dollar amount of the common shares and warrants to purchase common shares offered in this offering, but the placement agent will use its commercially reasonable efforts to arrange for the sale of the common shares and warrants to purchase common shares offered.

¹ See "Plan of Distribution" beginning on page S-16 of this prospectus supplement.

LAZARD CAPITAL MARKETS

Prospectus Supplement dated May 22, 2009

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You should rely only on the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein or therein. We have not, and the placement agent has not, authorized any other person to provide you with different or inconsistent information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement and the accompanying prospectus is accurate only as of their respective dates, regardless of the time of delivery of this prospectus supplement and accompanying prospectus or of any sale of common shares and warrants to purchase common shares. Our business, financial condition, results of operations and prospects may have subsequently changed. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common shares and warrants to purchase common shares and the distribution of this prospectus outside the United States.

Unless the context requires otherwise, in this prospectus supplement and the accompanying prospectus, the terms "Altair," "we," "our" and "us" refer to Altair Nanotechnologies Inc., and its subsidiaries as a combined entity, except where it is made clear that the term only means the parent company or an identified subsidiary.

THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY, NOR SHALL THERE BE ANY SALE OF THESE SECURITIES, IN CANADA.

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement, which describes the specific terms of the securities we are offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into the accompanying prospectus. The second part, the accompanying prospectus, including the documents incorporated by reference, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. This prospectus supplement and the accompanying prospectus are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may offer and sell from time to time any combination of securities described in the accompanying prospectus in one or more offerings up to a maximum dollar amount described in the following paragraph. The accompanying prospectus provides you with a general description of the securities we may offer from time to time under our shelf registration statement and provides general information about us, some of which may not apply to this offering. Each time we use the accompanying prospectus to offer securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in the prospectus. The shelf registration statement includes exhibits that provide more detail on descriptions of the matters discussed in this prospectus supplement and the accompanying prospectus. The shelf registration statement was declared effective by the SEC on October 3, 2006. This prospectus supplement describes the specific details regarding this offering, including the price, the number of common shares and warrants being offered, the plan of distribution, the risks of investing in our common shares and warrants and the placement arrangements.

The shelf registration statement originally registered an aggregate of \$50,000,000 in securities. An amount of \$24,999,999.30 of the common shares offered under this shelf registration process were sold prior to the date hereof. An additional \$6,248,309.60 of common shares were issued upon the exercise of warrants offered under this shelf registration process, resulting in an aggregate prior "take down" of \$31,248,309.60. The remaining \$18,751,690.40 has been increased by \$3,750,338.08 pursuant Registration Statement of Form S-3MEF filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, resulting in a the total maximum dollar amount of \$22,502,028.48 remaining under the shelf registration for this offering and any subsequent offerings.

To the extent that any statement that we make in this prospectus supplement is inconsistent with statements in the accompanying prospectus, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus. You should carefully read this prospectus supplement, the related exhibits filed with the SEC and the accompanying prospectus together with additional information described under the headings "Incorporation of Certain Information by Reference" and "Where You Can Find More Information."

BUSINESS OVERVIEW

We are a Canadian corporation, with principal assets and operations in the United States, whose primary business is developing and commercializing nanomaterial and titanium dioxide pigment technologies. We are organized into two divisions, a Power and Energy Group, and all other operations, which consists of the remaining portions of the previous Life Sciences and Performance Materials groups. Management completed a thorough review of operations and strategies and determined that it was in the best interests of the shareholders for the Company to focus primarily on the Power and Energy Group. As a result of this assessment resources devoted to the Performance Materials Group and Life Sciences Group were significantly reduced and no new development is being done in those areas.

Our research, development, production and marketing efforts are currently directed toward one primary market, the Power and Energy Storage market, with efforts in other areas being directed at supporting existing initiatives rather than developing any new products. We are still, however, engaged in the following ongoing development and production efforts:

Power and Energy Group

- The design, development, and production of our nano-lithium Titanate battery cells, batteries, and battery packs as well as related design and test services for use in a variety of energy applications.
- The development, production and sale for testing purposes of electrode materials for use in a new class of high performance lithium ion batteries called nano-lithium Titanate batteries.

All Other Operations

- Continuing support for AlSher Titania, in evaluating strategic alternatives to develop and produce high quality titanium dioxide pigment for use in paint and coatings, and nano titanium dioxide materials for use in a variety of applications including those related to removing contaminants from air and water.
- The co-development of RenaZorb, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in human patients undergoing kidney dialysis.

We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology.

Our revenues have been, and we expect them to continue to be, generated by license fees, product sales, commercial collaborations and contracts and grants. We currently have agreements in place to (1) provide research to further develop battery electrode materials, nanosensors, and nanomaterials characterization, (2) participate in a joint venture combining the technologies of the partners in order to develop and produce titanium dioxide pigment for use in a variety of applications, (3) develop a suite of energy storage solutions for the stationary power market (4) develop battery backup power systems for Naval applications and (5) develop power and energy systems for other military applications. In addition, we have entered into a licensing agreement for RenaZorb, our pharmaceutical candidate for treatment of chronic renal failure in humans. We have made product sales consisting principally of battery packs and nano lithium titanate. Future revenues will depend on the success of our contracted projects, the results of our other research and development work, the success of the RenaZorb application licensee in obtaining regulatory approval for the drugs, or other products, and the success of our marketing efforts with respect to both product sales and technology licenses.

Our principal executive offices are located at 204 Edison Way, Reno, Nevada 89502, and our phone number is (775) 856-2500. Our website is www.altairnano.com. Information contained on our website is not a part of this or any other prospectus supplement or the accompanying prospectus.

THE OFFERING

Common shares offered by us 11,994,469 shares

Warrants to purchase common shares offered by us 6,596,958 shares

Common shares to be outstanding after this offering 105,147,740 shares

Use of proceeds
Proceeds from the offering will be added to our general corporate funds and be used for working capital and general corporate purposes. See "Use of Proceeds" on page S-13.

Risk Factors
See "Risk Factors" beginning on page S-4 for a discussion of factors you should consider carefully when making an investment decision.

Warrant terms
The warrants will be exercisable beginning at closing through May 28, 2016 and will be exercisable at a price of \$1.00 per common share. See "Description of Warrants" on page S-15.

NASDAQ Capital Market symbol ALTI

The number of common shares to be outstanding after the closing of this offering is based on 93,153,271 shares outstanding as of May 22, 2009 and excludes:

- 4,973,135 common shares issuable upon exercise of options outstanding under our equity incentive plans as of May 22, 2009, at a weighted-average exercise price of \$2.4913 per share;
- 431,482 common shares issuable upon exercise of warrants outstanding as of May 22, 2009, at a weighted-average exercise price of \$3.4978 per share;
- 4,160,916 common shares reserved for future grants under our equity incentive plans as of May 22, 2009; and
- 6,596,958 common shares issuable upon the exercise of the warrants offered in this offering.

Unless otherwise indicated, all information in this prospectus supplement assumes:

- no exercise or forfeiture of options or warrants since May 22, 2009; and
- no issuance of additional options to purchase common shares under our existing equity incentive plans since May 22, 2009.

RISK FACTORS

An investment in our common shares and warrants involves significant risks. You should carefully consider the risks described in this prospectus supplement and the accompanying prospectus, in addition to the other information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus before making an investment decision. Any of these risks could materially and adversely affect our business, financial condition or results of operations. In such case, you may lose all or part of your investment. Some factors in this section are forward-looking statements.

Investors in this offering will pay a much higher price than the book value of our stock.

If you purchase common shares and warrants to purchase common shares in this offering, you will incur an immediate and substantial dilution in net tangible book value of \$0.69 per share, after giving effect to the sale by us of 11,994,469 units in this offering at the public offering price of \$1.17 per unit. In the past, we have issued options to acquire common shares at prices significantly below this offering price. To the extent these outstanding options are ultimately exercised, you will incur additional dilution.

Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of the net proceeds from any offering by us and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity as part of your investment decision to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for our company.

We may continue to experience significant losses from operations.

We have experienced a net loss in every fiscal year since our inception. Our losses from operations were \$30.1 million in 2008, and \$6.4 million for the three months ended March 31, 2009. Even if we do generate operating income in one or more quarters in the future, subsequent developments in the economy, our industry, customer base, business or cost structure, or an event such as significant litigation or a significant transaction, may cause us to again experience operating losses. We may never become profitable.

Our quarterly operating results have fluctuated significantly in the past and will continue to fluctuate in the future, which could cause our stock price to decline.

Our quarterly operating results have fluctuated significantly in the past, and we believe that they will continue to fluctuate in the future, due to a number of factors, many of which are beyond our control. If in future periods our operating results do not meet the expectations of investors or analysts who choose to follow our company, our stock price may fall. Factors that may affect our quarterly operating results include the following:

- fluctuations in the size and timing of customer orders from one quarter to the next;
- timing of delivery of our services and products;
- additions of new customers or losses of existing customers;
- positive or negative business or financial developments announced by our key customers;
- our ability to commercialize and obtain orders for products we are developing;
- costs associated with developing our manufacturing capabilities;
- new product announcements or introductions by our competitors or potential competitors;
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the effect of variations in the market price of our common shares on our equity-based compensation expenses;

- technology and intellectual property issues associated with our products; and
- general political, social, geopolitical and economic trends and events.

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A majority of our revenue has historically been generated from low-margin contract research and development services; if we cannot expand revenues from other products and services, our business will fail.

Historically, a majority of our revenue has come from contract research and development services for businesses and government agencies. During the years ended December 31, 2008, 2007 and 2006, contract service revenues comprised 87%, 55% and 67% respectively, of our operating revenues. Contract services revenue is low margin, or has negative margins, and is unlikely to grow at a rapid pace. Our business plan anticipates revenues from product sales and licensing, both of which have potential for higher margins than contract services and have potential for rapid growth, increasing in coming years. If we are not successful in significantly expanding our revenues, or if we are forced to accept low or negative margins in order to achieve revenue growth, we may fail to reach profitability in the future.

We may not be able to raise sufficient capital to meet future obligations.

As of March 31, 2009, we had approximately \$21.9 million in cash and cash equivalents. As we take additional steps to enhance our commercialization and marketing efforts, or respond to acquisition and joint venture opportunities or potential adverse events, our use of working capital may increase. In any such event, absent a comparatively significant increase in revenue, we will need to raise additional capital in order to sustain our ongoing operations, continue unfinished testing and additional development work and, if certain of our products are commercialized, construct and operate facilities for the production of those products.

We may not be able to obtain the amount of additional capital needed or may be forced to pay an extremely high price for capital. Factors affecting the availability and price of capital may include the following:

- market factors affecting the availability and cost of capital generally, including recent increases or decreases in major stock market indexes, the stability of the banking and investment banking systems and general economic stability or instability;
- the price, volatility and trading volume of our common shares;
- our financial results, particularly the amount of revenue we are generating from operations;
- the amount of our capital needs;
- the market's perception of companies in one or more of our lines of business;
- the economics of projects being pursued; and
- the market's perception of our ability to execute our business plan and any specific projects identified as uses of proceeds;

If we are unable to obtain sufficient capital or are forced to pay a high price for capital, we may be unable to meet future obligations or adequately exploit existing or future opportunities. If we are unable to obtain sufficient capital in the long run, we may be forced to curtail or discontinue operations.

Adverse economic conditions and government initiatives could reduce or delay the demand for our products.

The current financial markets and general economic environment are substantially weaker at present than they have been in past years. Our products are targeted primarily at large power producers, the U.S. and British military, military contractors and, to a lesser extent, automobile manufacturers. Due to declining revenues and concerns about

liquidity, companies and branches of the military in our target market have reduced, delayed or eliminated many research and development initiatives, including those related to energy storage. This reduction or delay in development spending is harming our development and productions efforts and will continue to harm such efforts until development spending increases to prior levels.

In addition, certain of our customers or potential customers who have the liquidity to fund development projects have deferred orders in anticipation of qualifying for funds dispensed in accordance with the American Recovery and Reinvestment Act of 2009. We are likely to experienced reduced product demand until companies seeking funding under these energy initiatives within the American Recovery and Reinvestment Act of 2009 receive funding and/or learn that they will not receive funding.

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We depend upon several sole-source third-party suppliers.

We rely on certain suppliers as the sole-source of certain services, raw materials and other components of our products. We do not have long-term supply or service agreements with any such suppliers. As a result, the providers of such services and components could terminate or alter the terms of service or supply with little or no advance notice. If our arrangements with any sole-source supplier were terminated or such a supplier failed to provide essential services or deliver essential components on a timely basis or introduced unacceptable price increases, our production schedule would be delayed, possibly by as long as six months. Any such delay in our production schedule would result in delayed product delivery and may also result in additional production costs, customer losses and litigation.

Our patents and other protective measures may not adequately protect our proprietary intellectual property, and we may be infringing on the rights of others.

We regard our intellectual property, particularly our proprietary rights in our nanomaterials technology, as critical to our success. We have received various patents, and filed other patent applications, for various applications and aspects of our nanomaterials technology and other intellectual property. In addition, we generally enter into confidentiality and invention agreements with our employees and consultants. Such patents and agreements and various other measures we take to protect our intellectual property from use by others may not be effective for various reasons, including the following:

- Our pending patent applications may not be granted for various reasons, including the existence of conflicting patents or defects in our applications;
- The patents we have been granted may be challenged, invalidated or circumvented because of the pre-existence of similar patented or unpatented intellectual property rights or for other reasons;
- Parties to the confidentiality and invention agreements may have such agreements declared unenforceable or, even if the agreements are enforceable, may breach such agreements;
- The costs associated with enforcing patents, confidentiality and invention agreements or other intellectual property rights may make aggressive enforcement cost prohibitive;
- Even if we enforce our rights aggressively, injunctions, fines and other penalties may be insufficient to deter violations of our intellectual property rights; and
- Other persons may independently develop proprietary information and techniques that, although functionally equivalent or superior to our intellectual proprietary information and techniques, do not breach our patented or unpatented proprietary rights.

Because the value of our company and common shares is rooted primarily in our proprietary intellectual property rights, our inability to protect our proprietary intellectual property rights or gain a competitive advantage from such rights could harm our ability to generate revenues and, as a result, our business and operations.

In addition, we may inadvertently be infringing on the proprietary rights of other persons and may be required to obtain licenses to certain intellectual property or other proprietary rights from third parties. Such licenses or proprietary rights may not be made available under acceptable terms, if at all. If we do not obtain required licenses or proprietary rights, we could encounter delays in product development or find that the development or sale of products requiring such licenses is foreclosed.

The commercialization of many of our technologies is dependent upon the efforts of commercial partners and other third parties over which we have no or little control.

We do not have the expertise or resources to commercialize all potential applications of our nanomaterials and titanium dioxide pigment technology. For example, we do not have the resources necessary to complete the testing of, and obtain FDA approval for, RenaZorb and other potential life sciences products or to construct a commercial facility to use our titanium dioxide pigment production technology. Other potential applications of our technology, such as those related to our nano-structure LTO electrode materials, are likely to be developed in collaboration with third parties, if at all. With respect to these and substantially all other applications of our technology, the commercialization of a potential application of our technology is dependent, in part, upon the expertise, resources and efforts of our commercial partners. This presents certain risks, including the following:

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- we may not be able to enter into development, licensing, supply and other agreements with commercial partners with appropriate resources, technology and expertise on reasonable terms or at all;
- our commercial partners may not place the same priority on a project as we do, may fail to honor contractual commitments, may not have the level of resources, expertise, market strength or other characteristics necessary for the success of the project, may dedicate only limited resources to, and/or may abandon, a development project for reasons, including reasons such as a shift in corporate focus, unrelated to its merits;
- our commercial partners may be in the early stages of development and may not have sufficient liquidity to invest in joint development projects, expand their businesses and purchase our products as expected or honor contractual commitments;
- our commercial partners may terminate joint testing, development or marketing projects on the merits of the projects for various reasons, including determinations that a project is not feasible, cost-effective or likely to lead to a marketable end product;
- at various stages in the testing, development, marketing or production process, we may have disputes with our commercial partners, which may inhibit development, lead to an abandonment of the project or have other negative consequences; and
- even if the commercialization and marketing of jointly developed products is successful, our revenue share may be limited and may not exceed our associated development and operating costs.

As a result of the actions or omissions of our commercial partners, or our inability to identify and enter into suitable arrangements with qualified commercial partners, we may be unable to commercialize apparently viable products on a timely and cost-effective basis, or at all.

Interest in our nano-structured LTO battery materials and batteries is affected by energy supply and pricing, political events, popular consciousness and other factors over which we have no control.

Currently, our marketing and development efforts for our batteries and battery materials are focused primarily on transportation, military and stationary power applications. In the transportation and military markets, batteries containing our nano-structured LTO materials are designed to replace or supplement gasoline and diesel engines. In the stationary power applications, our batteries are designed to conserve and regulate the stable supply of electricity, including from renewable sources. The interest of our potential customers and business partners in our products and services is affected by a number of factors beyond our control, including:

- economic conditions and capital financing and liquidity constraints;
- short-term and long-term trends in the supply and price of gasoline, diesel, coal and other fuels;
- the anticipated or actual granting or elimination by governments of tax and other financial incentives favoring electric or hybrid electric vehicles and renewable energy production;
- the anticipated or actual funding, or elimination of funding, for programs that support renewable energy programs, electric grid improvements, certain military electric vehicle

initiatives and related programs;

- changes in public and investor interest, for financial and/or environmental reasons, in supporting or adopting alternatives to gasoline and diesel for transportation and other purposes;
- the overall economic environment and the availability of credit to assist customers in purchasing our large battery systems;
- the expansion or contraction of private and public research and development budgets as a result of global and U.S. economic trends; and

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- the speed of incorporation of renewable energy generating sources into the electric grid.

Our nano-structured LTO battery materials and battery business is currently dependent upon a few customers and potential customers, which presents various risks.

Our nano-structure LTO battery materials and battery business has historically been dependent upon a few customers, including the U.S. government, affiliates of AES Corporation and smaller companies developing electric or hybrid electric cars and buses. In addition, most of these customers are development partners, who are subsidizing the research and development of products for which they may be the sole, or one of a few, potential purchasers. As a result of the small number of potential customers and partners, our existing customers and partners may have significant leverage on pricing terms, exclusivity terms and other economic and noneconomic terms. This may harm our attempts to sell products at prices that reflect desired gross margins. In addition, the decision by a single customer to abandon use or development of a product, or budget cutbacks and other events harming the ability of a single customer to continue to purchase products or continue development, may significantly harm both our financial results and the development track of one or more products.

If we acquire or invest in other companies, assets or technologies and we are not able to integrate them with our business, or we do not realize the anticipated financial and strategic goals for any of these transactions, our financial performance may be impaired.

As part of our growth strategy, we routinely consider acquiring or making investments in companies, assets or technologies that we believe are strategic to our business. We do not have extensive experience in conducting diligence on, evaluating, purchasing or integrating new businesses or technologies, and if we do succeed in acquiring or investing in a company or technology, we will be exposed to a number of risks, including:

- we may find that the acquired company or technology does not further our business strategy, that we overpaid for the company or technology or that the economic conditions underlying our acquisition decision have changed;
- we may have difficulty integrating the assets, technologies, operations or personnel of an acquired company, or retaining the key personnel of the acquired company;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises;
- we may encounter difficulty entering and competing in new product or geographic markets or increased competition, including price competition or intellectual property litigation; and
- we may experience significant problems or liabilities associated with product quality, technology and legal contingencies relating to the acquired business or technology, such as intellectual property or employment matters.

In addition, from time to time we may enter into negotiations for acquisitions or investments that are not ultimately consummated. These negotiations could result in significant diversion of management time, as well as substantial out-of-pocket costs. If we were to proceed with one or more significant acquisitions or investments in which the consideration included cash, we could be required to use a substantial portion of our available cash. To the extent we issue shares of capital stock or other rights to purchase capital stock, including options and warrants, existing shareholders would be diluted. In addition, acquisitions and investments may result in the incurrence of debt, large one-time write-offs, such as acquired in-process research and development costs, and restructuring charges.

We intend to expand our operations and increase our expenditures in an effort to grow our business. If we are unable to achieve or manage significant growth and expansion, or if our business does not grow as we expect, our operating results may suffer.

During the past several years, we have increased our research and development expenditures in an attempt to accelerate the commercialization of certain products, particularly our nano-structured LTO electrode materials and battery systems. Our business plan anticipates continued expenditure on development, manufacturing and other growth initiatives. We may fail to achieve significant growth despite such expenditures. If achieved, significant growth would place increased demands on our management, accounting systems, network infrastructure and systems of financial and internal controls. We may be unable to expand associated resources and refine associated systems fast enough to keep pace with expansion, especially as we expand into multiple facilities at distant locations. If we fail to ensure that our management, control and other systems keep pace with growth, we may experience a decline in the effectiveness and focus of our management team, problems with timely or accurate reporting, issues with costs and quality controls and other problems associated with a failure to manage rapid growth, all of which would harm our results of operations.

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Our competitors have more resources than we do, and may be supported by more prominent partners, which may give them a competitive advantage.

We have limited financial, personnel and other resources and, because of our early stage of development, have limited access to capital. We compete or may compete against entities that are much larger than we are, have more extensive resources than we do and have an established reputation and operating history. In addition, certain of our early stage competitors may be partnered with, associated with or supported by larger business or financial partners. This may increase their ability to raise capital, attract media attention, develop products and attract customers despite their short operating history and small size. Because of their size, resources, reputation and history (or that of their business and financial partners) certain of our competitors may be able to exploit acquisition, development and joint venture opportunities more rapidly, easily or thoroughly than we can. In addition, potential customers may choose to do business with our more established competitors, without regard to the comparative quality of our products, because of their perception that our competitors are more stable, are more likely to complete various projects, are more likely to continue as a going concern and lend greater credibility to any joint venture.

We will not generate substantial revenues from our life science products unless proposed products receive FDA approval and achieve substantial market penetration.

We have entered into development and license agreements with respect to RenaZorb, a potential drug candidate for humans with kidney disease, and may enter into similar agreements with respect to the other products. Most of the potential life sciences applications of our technologies are subject to regulation by the FDA and similar regulatory bodies. In general, license agreements in the life sciences area call for milestone payments as certain milestones related to the development of the products and the obtaining of regulatory approval are met; however, the receipt by the licensor of substantial recurring revenues is generally tied to the receipt of marketing approval from the FDA and the amount of revenue generated from the sale of end products. There are substantial risks associated with licensing arrangements, including the following:

- Further testing of potential life science products using our technology may indicate that such products are less effective than existing products, unsafe, have significant side effects or are otherwise not viable;
- The licensees may be unable to obtain FDA or other regulatory approval for technical, political or other reasons or, even if it obtains such approval, may not obtain such approval on a timely basis; in this regard, we note that Spectrum Pharmaceuticals, Inc., the licensee of RenaZorb, has been significantly delayed in testing on RenaZorb; and
- End products for which FDA approval is obtained, if any, may fail to obtain significant market share for various reasons, including questions about efficacy, need, safety and side effects or because of poor marketing by the licensee.

If any of the foregoing risks, or other risks associated with our life science products were to occur, we would not receive substantial, recurring revenue from our life science efforts, which would adversely affect our overall business, operations and financial condition.

We and Sherwin-Williams may be unable to find a new investor to participate in AlSher, and consequently terminate the joint venture disposing of its remaining assets.

We are currently working with Sherwin-Williams to identify an interested third party to invest in AlSher and undertake the next phase in the proposed development of our titanium dioxide pigment manufacturing process, which is the construction of an approximately 5,000 ton per year demonstration plant. Neither Sherwin-Williams nor Altair

has indicated a willingness to fund this next phase of development. Should the parties be unable to find an acceptable third party investor, the AlSher joint venture will in all likelihood be terminated and its remaining assets sold. If this joint venture is terminated, it is unlikely that we will realize any material revenue from its titanium dioxide pigment production process.

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If manufacturing becomes a larger part of our operations, we will become exposed to accompanying risks and liabilities.

We have not produced any products using our nanomaterials and titanium dioxide pigment technology and equipment on a sustained commercial basis. In-house or outsourced manufacturing is expected to become an increasingly significant part of our business over the next few years. As a result, we expect to become increasingly subject to various risks associated with the manufacturing and supply of products, including the following:

- If we fail to supply products in accordance with contractual terms, including terms related to time of delivery and performance specifications, we may be required to repair or replace defective products and may become liable for direct, special, consequential and other damages, even if manufacturing or delivery was outsourced;
- Raw materials used in the manufacturing process, labor and other key inputs may become scarce and expensive, causing our costs to exceed cost projections and associated revenues;
- Manufacturing processes typically involve large machinery, fuels and chemicals, any or all of which may lead to accidents involving bodily harm, destruction of facilities and environmental contamination and associated liabilities; and
- As our manufacturing operations expand, we expect that a significant portion of our manufacturing will be done overseas, either by third-party contractors or in a plant owned by the company. Any manufacturing done overseas presents risks associated with quality control, currency exchange rates, foreign laws and customs, timing and loss risks associated with overseas transportation and potential adverse changes in the political, legal and social environment in the host country; and
- We may have made, and may be required to make, representations as to our right to supply and/or license intellectual property and to our compliance with laws. Such representations are usually supported by indemnification provisions requiring us to defend our customers and otherwise make them whole if we license or supply products that infringe on third-party technologies or violate government regulations.

Any failure to adequately manage risks associated with the manufacture and supply of materials and products could lead to losses (or small gross profits) from that segment of our business and/or significant liabilities, which would harm our business, operations and financial condition.

Our past and future operations may lead to substantial environmental liability.

Virtually any prior or future use of our nanomaterials and titanium dioxide pigment technology is subject to federal, state and local environmental laws. In addition, we are in the process of reclaiming mineral property that we leased in Tennessee. Under applicable environmental laws, we may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation and/or removal of any hazardous substances discovered at any property we use. In addition, courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal or transportation of hazardous substances. If we incur any significant environmental liabilities, our ability to execute our business plan and our financial condition would be harmed.

Certain of our experts and directors reside in Canada or Dubai and may be able to avoid civil liability.

We are a Canadian corporation, and three of our directors and our Canadian legal counsel are residents of Canada. A fourth director is a resident of Dubai. As a result, investors may be unable to effect service of process upon such persons within the United States and may be unable to enforce court judgments against such persons predicated upon civil liability provisions of the U.S. securities laws. It is uncertain whether Canadian or Dubai courts would enforce judgments of U.S. courts obtained against us or such directors, officers or experts predicated upon the civil liability provisions of U.S. securities laws or impose liability in original actions against us or our directors, officers or experts predicated upon U.S. securities laws.

We are dependent on key personnel.

Our continued success will depend, to a significant extent, on the services of our executive management team and certain key scientists and engineers. We do not have key man insurance on any of these individuals. Nor do we have agreements requiring any of our key personnel to remain with our company. The loss or unavailability of any or all of these individuals could harm our ability to execute our business plan, maintain important business relationships and complete certain product development initiatives, which would harm our business.

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We may issue substantial amounts of additional shares without stockholder approval.

Our articles of incorporation authorize the issuance of an unlimited number of common shares that may be issued without any action or approval by our shareholders. In addition, we have various stock option plans that have potential for diluting the ownership interests of our shareholders. The issuance of any additional common shares would further dilute the percentage ownership of our company held by existing shareholders.

The market price of our common shares is highly volatile and may increase or decrease dramatically at any time.

The market price of our common shares is highly volatile. Our stock price may change dramatically as the result of announcements of product developments, new products or innovations by us or our competitors, uncertainty regarding the viability of our technology or any of our product initiatives, significant customer contracts, significant litigation or other factors or events that would be expected to affect our business, financial condition, results of operations and future prospects.

The market price for our common shares may be affected by various factors not directly related to our business or future prospects, including the following:

- intentional manipulation of our stock price by existing or future shareholders or a reaction by investors to trends in our stock rather than the fundamentals of our business;
- a single acquisition or disposition, or several related acquisitions or dispositions, of a large number of our shares, including by short sellers covering their position;
- the interest of the market in our business sector, without regard to our financial condition, results of operations or business prospects;
- positive or negative statements or projections about our company or our industry, by analysts, stock gurus and other persons;
- the adoption of governmental regulations or government grant programs and similar developments in the United States or abroad that may enhance or detract from our ability to offer our products and services or affect our cost structure; and
- economic and other external market factors, such as a general decline in market prices due to poor economic conditions, investor distrust or a financial crisis.

We may be delisted from the NASDAQ Capital Market if the price of our common shares does not remain above \$1.00 per share.

Under NASDAQ rules, a stock listed on NASDAQ Capital Market must maintain a minimum bid price of at least \$1.00 per share. During late 2008 and early 2009, the minimum bid price for our common shares has fallen below \$1.00 on several occasions. As a matter of practice, NASDAQ generally gives a company a notice of delisting if its common shares trades below \$1.00 for 30 consecutive trading days. After receiving the notice, the company will generally be delisted if the trading price for its common shares has not exceeded \$1.00 for 10 consecutive days within 90 days of the date of the notice. NASDAQ has temporarily suspended its minimum bid price requirements until July 2009 in light of recent declines in the value of equity securities overall. NASDAQ is not, however, required to extend this rule suspension or give a company any grace period and may delist a company's stock immediately after violation of an applicable rule. Accordingly, if the price of our common shares trades below \$1.00 for a sustained period of time, or if NASDAQ decides to delist our common shares based upon a one-time violation of the bid-price rule or any

other rule, we may be delisted from the NASDAQ Capital Market.

Following any such delisting, our common shares would likely be eligible for quotation on the OTC Bulletin Board or other quotation service. Nonetheless, even if our common shares are quoted on an alternative quotation service, the fact of being delisted from the NASDAQ Capital Market will likely harm the price and trading volume for our common shares. Once delisted, our common shares would not be eligible for relisting until, among other things, our common shares traded at or above \$4.00 per share.

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We have never declared a cash dividend and do not intend to declare a cash dividend in the foreseeable future.

We have never declared or paid cash dividends on our common shares. We currently intend to retain any future earnings, if any, for use in our business and, therefore, do not anticipate paying dividends on our common shares in the foreseeable future.

We are subject to various regulatory regimes, and may be adversely affected by inquiries, investigations and allegations that we have not complied with governing rules and laws.

In light of our status as a public company and our lines of business, we are subject to a variety of laws and regulatory regimes in addition to those applicable to all businesses generally. For example, we are subject to the reporting requirements applicable to Canadian and United States reporting issuers, such as the Sarbanes-Oxley Act of 2002, the rules of the NASDAQ Capital Market and certain state and provincial securities laws. We are also subject to state and federal environmental, health and safety laws, and rules governing department of defense contracts. Such laws and rules change frequently and are often complex. In connection with such laws, we are subject to periodic audits, inquiries and investigations. Any such audits, inquiries and investigations may divert considerable financial and human resources and adversely affect the execution of our business plan.

Through such audits, inquiries and investigations, we or a regulator may determine that we are out of compliance with one or more governing rules or laws. Remedying such non-compliance diverts additional financial and human resources. In addition, in the future, we may be subject to a formal charge or determination that we have materially violated a governing law, rule or regulation. We may also be subject to lawsuits as a result of alleged violation of the securities laws or governing corporate laws. Any charge or allegation, and particularly any determination, that we had materially violated a governing law would harm our ability to enter into business relationships, recruit qualified officers and employees and raise capital.

A large shareholder has certain registration, board appointment and other rights that may permit the shareholder to exercise significant influence on management or obtain certain benefits.

Al Yousuf, LLC, which is controlled by Eqbal Al Yousuf, a member of our board of directors, owns approximately 20% of our issued and outstanding common shares. In addition, Al Yousuf, LLC has the contractual right to appoint two directors to our board of directors, the contractual right to cause one such director to serve on our Compensation, Nomination and Corporate Governance Committee and a right of first offer permitting it to purchase a percentage of the common shares offered in certain future offerings equal to its percentage ownership of our common shares. (Such right of first offer has been waived with respect to this offering). In addition, we have executed a registration rights agreement with Al Yousuf, LLC pursuant to which we are required to cause a registration statement registering the re-sale of its shares to be effective by December 2009 and pursuant to which it has the right to demand a one-time underwritten registration of its shares at any time during a six-year period beginning in December 2009. As a result of these agreements, Al Yousuf, LLC and Mr. Al Yousuf may have a disproportionate influence on management, which influence may be used in a manner that benefits Al Yousuf, LLC more than the shareholders as a whole, and may be able to extract certain benefits or rights from the company.

FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain and incorporate by reference certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, regarding our anticipated financial condition, results of operations and businesses in the future, including management's beliefs, projections and assumptions concerning future results and events. These forward-looking statements generally are in the future tense and may, but do not necessarily, include words such as "believes," "expects," "anticipates," "intends," "plans," "estimates," "may," "will," "should," "could," "predicts," "potential," "continue" or similar expressions. Forward-looking statements are not guarantees. They involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Our future results may differ materially from those expressed in these forward-looking statements. Some of the factors that may cause actual results to differ materially from those contemplated by such forward-looking statements include, but are not limited to, those identified under "Risk Factors" above and in the annual and quarterly reports we file with the SEC.

Given these risks and uncertainties, you are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of the document in which they are contained. We do not undertake any obligation to update any forward-looking statement or to publicly announce any revision of any forward-looking statement to reflect the occurrence of any future developments or events, unless required by law.

USE OF PROCEEDS

The estimated net proceeds we will receive from this offering will be approximately \$12.84 million after deducting the placement agent's fee and the estimated offering expenses assuming the maximum number of shares and warrants are sold in the offering. We will not receive any proceeds from the sale of common shares issuable upon exercise of the warrants unless and until such warrants are exercised. If the warrants were fully exercised for cash, we would receive additional proceeds of up to approximately \$6.60 million. The net proceeds from this offering will be added to our general corporate funds to be used for working capital and general corporate purposes. Pending these uses, the net proceeds will be invested in short-term marketable securities in accordance with our investment policy.

The amounts and timing of the expenditure of the net proceeds from this offering may vary significantly, based on the expenses of our operations and depending on numerous factors, including the success of our commercialization activities with third parties and the scope and amount of our research and development activities, among other things. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering. We reserve the right to change the use of these proceeds as a result of certain contingencies such as the results of our research and development and third-party commercialization activities, competitive developments, opportunities to acquire technologies or businesses and other factors.

DILUTION

If you invest in our common shares and warrants in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per unit and the net tangible book value per share of our common shares as adjusted to give effect to our sale of the units offered hereby. Our historical net tangible book value as of March 31, 2009 was \$37.14 million, or \$0.40 per common share. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of outstanding common shares.

Dilution in net tangible book value per share represents the difference between the amount per unit paid by purchasers of our common shares and warrants to purchase common shares in this offering and the as adjusted net tangible book value per common share immediately after completion of this offering. After giving effect to our sale of 11,994,469 common shares and warrants to purchase 6,596,958 common shares in this offering at the public offering price of \$1.17 per unit, and after deducting the placement agent's fee and estimated offering expenses payable by us, our as adjusted net tangible book value at March 31, 2009 would have been \$49.98 million, or \$0.48 per common share. This amount represents an immediate increase in net tangible book value of \$.08 per share to our existing shareholders and an immediate dilution in net tangible book value of \$0.69 per share to purchasers of shares and warrants in this offering. Our net tangible book value calculation assumes no exercise of the warrants offered hereby.

The following table illustrates this dilution on a per share basis:

Public offering price per unit	\$	1.17
Net tangible book value per share as of March 31, 2009	\$	0.40
Increase in net tangible book value per share attributable to this offering	\$	0.08
As adjusted net tangible book value per share after this offering	\$	0.48
Dilution per share to new investors	\$	0.69

The above discussion and table are based on 93,153,271 common shares issued and outstanding as of May 22, 2009 and exclude:

- 4,973,185 common shares issuable upon exercise of options outstanding under our equity incentive plans as of May 22, 2009, at a weighted-average exercise price of \$2.4913 per share
- 431,482 common shares issuable upon exercise of warrants outstanding as of May 22, 2009 at a weighted-average exercise price of \$3.4978 per share;
- up to 6,596,958 warrants to be issued in this offering at an exercise price of \$1.00 per share; and
- 4,160,916 common shares reserved as of May 22, 2009 for future grants under our equity incentive plans.

To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our

shareholders.

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DESCRIPTION OF UNITS

In this offering, we are offering a maximum of 11,994,469 units, consisting of 11,994,469 common shares and warrants to purchase up to 6,596,958 common shares. Each unit consists of one common share and warrants to purchase 0.55 common shares at an initial exercise price of \$1.00 per share. This prospectus also relates to the offering of our common shares upon exercise, if any, of the warrants. Units will not be issued or certificated. The common shares and warrants are immediately separable and will be issued separately.

The units offered in this offering will be issued pursuant to a subscription agreement between each of the purchasers and us. You should review a copy of the form of subscription agreement and the form of warrant, each of which have been filed by us as an exhibit to a Current Report on Form 8-K filed with the Securities and Exchange Commission in connection with this offering, for a complete description of the terms and conditions applicable to the units. This description of the units in this prospectus supplement is qualified in its entirety by reference to the warrants and subscription agreement.

Common Shares

The material terms and provisions of our common shares and each other class of our securities which qualifies or limits our common shares are described under the caption “The Securities We May Offer” starting on page 13 of the accompanying prospectus.

Warrants

Exercisability. The warrants are exercisable beginning on the date of original issuance and at any time up to the date that is seven years after such date. The warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of common shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). Unless otherwise specified in the warrant, except upon at least 61 days’ prior notice from the holder to us, the holder will not have the right to exercise any portion of the warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% or 9.99%, as applicable, of the number of common shares outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants.

Cashless Exercise. In the event that a registration statement covering common shares underlying the warrants, or an exemption from registration, is not available for the issuance or resale of such common shares underlying the warrants, the holder may, in its sole discretion, exercise the warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, elect instead to receive upon such exercise the net number of common shares determined according to the formula set forth in the warrant.

Exercise Price. The exercise price per common share purchasable upon exercise of the warrants is \$1.00 per common share being purchased. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common shares and also upon any distributions of assets, including cash, stock or other property to our shareholders. The exercise price per share will also be subject to adjustment on a weighted average basis for certain dilutive issuances of equity securities.

Fractional Shares. No fractional common shares will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price of the warrant.

Transferability. Subject to applicable laws, the warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing. We do not plan on making an application to list the warrants on the Nasdaq Capital Market, any other national securities exchange or other nationally recognized trading system.

Fundamental Transactions. We will not enter into or be party to a fundamental transaction, which is a merger or other change of control transaction, as described in the warrants, unless the successor entity, as described in the warrants, assumes the warrants and delivers new warrants that are substantially similar. If we enter into, or are a party to, a fundamental transaction pursuant to which our shareholders are entitled or required to receive securities issued by another company or cash or other assets in exchange for common shares, which we refer to as a fundamental transaction, a holder of a warrant will have the right to receive, upon an exercise of the warrant, consideration as if the holder had exercised its warrant immediately prior to such fundamental transaction. In the event of a fundamental transaction, at the request of a holder of a warrant delivered before the 15th day after such fundamental transaction, we (or the successor entity) will purchase the warrant by paying to the holder, cash in an amount equal to the Black-Scholes value, as described in the warrant, of the remaining unexercised portion of the warrant on the date of consummation of such fundamental transaction.

Restrictions on Market-Based Convertible Securities and Rights. In the subscription agreement, we agree that, for so long as any warrants remain outstanding, we will not issue or sell any rights, warrants or options to subscribe for or purchase common shares, or directly or indirectly convertible into or exchangeable for common shares at a price which resets as a function of market price of the common shares, unless the conversion, exchange or exercise price of any such security cannot be less than the then exercise price of the warrants (other than as a result in the ordinary course of business of the issuance of common stocks under our stock plans or employee stock purchase plans).

Rights as a Stockholder. Except as otherwise provided in the warrants or by virtue of such holder's ownership of common shares, the holder of a warrant does not have the rights or privileges of a holder of our common shares, including any voting rights, until the holder exercises the warrant.

Waivers and Amendments. Subject to the 61-day prior notice requirement with respect to certain ownership limitations, any term of the warrants may be amended or waived with our written consent and the written consent of the holders of warrants.

PLAN OF DISTRIBUTION

We are offering units through a placement agent, with each unit consisting of one common share and warrants to purchase 0.55 of a common share. Each common share includes an attached right arising under an Amended and Restated Shareholder Rights Plan Agreement dated October 15, 1999. Subject to the terms and conditions contained in the placement agent agreement, dated May 22, 2009, Lazard Capital Markets LLC has agreed to act as the placement agent for the sale of up to an aggregate of 11,994,469 units. The placement agent is not purchasing or selling any units by this prospectus supplement or the accompanying prospectus, nor is it required to arrange for the purchase or sale of any specific number or dollar amount of units, but has agreed to use reasonable efforts to arrange for the sale of all of the units.

The placement agent agreement provides that the obligations of the placement agent and the investors are subject to certain conditions precedent, including the absence of any material adverse change in our business and the receipt of customary legal opinions, letters and certificates.

Confirmations and definitive prospectuses will be distributed to all investors who agree to purchase the units, informing investors of the closing date as to such units. We currently anticipate that closing of the sale of the units will take place on or about May 28, 2009. Investors will also be informed of the date and manner in which they must transmit the purchase price for their units. On the scheduled closing date, the following will occur:

- we will receive funds in the amount of the aggregate purchase price; and
- Lazard Capital Markets LLC will receive the placement agent's fee in accordance with the terms of the placement agent agreement.

We will pay the placement agent a commission equal to 7.0% of the gross proceeds in the offering. We may also reimburse the placement agent for certain legal expenses incurred by it in connection with this offering not to exceed 1% of the gross offering proceeds. In no event will the total amount of compensation paid to the placement agent and other securities brokers and dealers upon completion of this offering exceed 8.0% of the gross proceeds of this offering. In addition, the maximum commission or discount to be received by a FINRA member of independent broker/dealer will not be greater than 8.0% for the sale of any securities being registered pursuant to SEC Rule 415 and sold under this shelf registration statement. The placement agent will not receive any commission with respect to the common shares issuable upon exercise of the warrants. The estimated offering expenses payable by us, in addition to the placement agent's fee of \$982,347, are approximately \$215,000, which includes legal, accounting and printing costs and various other fees associated with registering and listing the common shares. After deducting certain fees due to the placement agent and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$12,836,181. If all of the warrants offered hereby are exercised for cash, we would receive additional proceeds of up to a maximum of approximately \$6,596,958.

Lazard Frères & Co. LLC referred this transaction to Lazard Capital Markets LLC and will receive a referral fee from Lazard Capital Markets LLC in connection therewith.

We have agreed to indemnify the placement agent and Lazard Frères & Co. LLC against certain liabilities, including liabilities under the Securities Act of 1933, as amended, and liabilities arising from breaches of representations and warranties contained in the placement agent agreement. We have also agreed to contribute to payments the placement agent and Lazard Frères & Co. LLC may be required to make in respect of such liabilities. The placement agent agreement is included as an exhibit to our Current Report on Form 8-K that will be filed with the SEC in connection with the consummation of this offering.

We, along with our executive officers and directors have agreed to certain lock-up provisions with regard to future sales of our common shares and other securities convertible into or exercisable or exchangeable for common shares for a period of ninety (90) days after the offering as set forth in the placement agent agreement.

The transfer agent for our common shares is Equity Transfer Services, Inc., located in Ontario, Canada. Our common shares are listed on the NASDAQ Capital Market under the symbol "ALTI."

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INVESTOR SUITABILITY STANDARDS

In order to permit us to avoid registration of this offering in Canada, each investor will be required to represent and warrant that:

- it is not domiciled in Canada;
- it is not purchasing the securities for the account or benefit of any resident of any province or territory of Canada;
- it is not purchasing the securities with a view to resell into Canada;
- the securities were not offered to the investor in Canada; and
- the subscription agreement was not received or executed in Canada.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

As permitted by SEC rules, this prospectus supplement and the accompanying prospectus do not contain all of the information that prospective investors can find in the registration statement of which it is a part or the exhibits to the registration statement. The SEC permits us to incorporate by reference, into this prospectus supplement and the accompanying prospectus, information filed separately with the SEC.

This prospectus supplement incorporates by reference the documents set forth below that we previously have filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended (File no. 001-12497). These documents contain important information about us and our financial condition.

- Our Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on March 16, 2009.
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009, filed with the SEC on May 8, 2009.
- Our Current Reports on Form 8-K filed with the SEC on March 4, 2009, April 1, 2009, and April 24, 2009.
- The description of our common shares contained in our Registration Statement on Form 10-SB, SEC File No. 1-12497 filed with the SEC pursuant to the Securities Exchange Act, including any amendment or report filed under the Securities Exchange Act for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act after the date of this registration statement, and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement or the accompanying prospectus.

Upon written or oral request, we will provide without charge to each person to whom a copy of this prospectus supplement or the accompanying prospectus is delivered, including any beneficial owner, a copy of the information that has been or may be incorporated by reference in this prospectus supplement or the accompanying prospectus. Direct any request for copies to John Fallini, Chief Financial Officer, at our corporate headquarters, located at 204 Edison Way, Reno, Nevada 89502, telephone number (775) 858-3750.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, information statements and other information with the SEC. You may read and copy any reports, statements or other information that we file at the SEC's public reference rooms at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of this information by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Washington, DC 20549 at prescribed rates. Please call the SEC at 1 (800) SEC-0330 for further information on the public reference rooms. The SEC also maintains a web site at <http://www.sec.gov>, at which reports, proxy and information statements and other information regarding our company are available.

LEGAL MATTERS

The validity of the securities offered by us has been passed upon for us by Cassels Brock & Blackwell, LLP, of Toronto, Ontario, Canada. Additional legal matters are being passed upon for us by Parr Brown Gee & Loveless, PC, of Salt Lake City, Utah. Proskauer Rose LLP, of New York, New York, is acting as counsel to the placement agent in connection with this offering.

EXPERTS

The consolidated financial statements as of December 31, 2008 and 2007 and for the years ended December 31, 2008, 2007 and 2006 incorporated in this prospectus supplement by reference from our Annual Report on Form 10-K for the year ended December 31, 2008 have been audited by Perry-Smith LLP, independent registered public accounting firm, as set forth in its report thereon, included therein, and incorporated herein by reference. Perry-Smith LLP also issued an attestation report on management's assessment of internal control over financial reporting contained in our Annual Report on Form 10-K for the year ended December 31, 2008. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers or persons controlling the registrant, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933, and is, therefore, unenforceable.

PROSPECTUS

ALTAIR NANOTECHNOLOGIES, INC.

COMMON SHARES WARRANTS

We may from time to time offer in one or more series, together or separately:

- common shares
- warrants to purchase common shares and
- units of warrants and common shares.

We will set forth the amounts, prices and terms of these securities in supplements to this prospectus. Each common share includes an attached right arising under an Amended and Restated Shareholder Rights Plan Agreement dated October 15, 1999.

This prospectus describes the general terms that may apply to these securities. The specific terms of any such securities to be offered and the plan of distribution for that offering will be described in supplements to this prospectus. The prospectus supplements also may add, update or change information in this prospectus. You should read this prospectus and any applicable prospectus supplement before you make your investment decision.

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

We may offer and sell these securities through one or more underwriters, dealers and agents, securities through underwriting syndicates managed or co-managed by one or more underwriters, or directly to purchasers, on a continuous basis or a delayed basis. If any underwriters, dealers or agents are involved, their names and information about any commissions and discounts will be set forth in a prospectus supplement.

Our common shares are listed on the Nasdaq Capital Market under the symbol "ALTI." On September 21, 2006, the last reported sale price of our common shares was \$3.50 per share.

Investing in the securities offered by this prospectus and the accompanying prospectus supplement involves risks. See "Risk Factors" beginning on page 5.

These securities have not been approved or disapproved by the Securities and Exchange Commission or any state securities commission nor has the Securities and Exchange Commission or any state securities commission passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is October 3, 2006

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OVERVIEW

We are a Canadian company, with principal assets and operations in the United States, whose primary business is developing and commercializing nanomaterial and titanium dioxide pigment technologies. We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology. Our research, development, production, marketing and sales efforts are currently directed toward six market applications that utilize our proprietary technologies:

- Advanced Materials
 - o The marketing and licensing of titanium dioxide pigment production technology.
 - o The marketing and production of nano-structured ceramic powders for thermal spray applications.
 - o The development of nano-structured ceramic powders for nano-sensor applications.
 - o The development of titanium dioxide electrode structures in connection with research programs aimed at developing a lower-cost process for producing titanium metals and related alloys. Development of this product is largely inactive as we seek a business partner.
- Air and Water Treatment
 - o The development, production and sale of photocatalytic materials for air and water cleansing.
 - o The marketing of Nanocheck products for phosphate binding to prevent or reduce algae growth in recreational and industrial water.
- Alternative Energy
 - o The development, production and sale of nano-structured lithium titanate spinel, lithium cobaltate and lithium manganate spinel materials for high performance lithium ion batteries.
 - o The design and development of power lithium ion battery cells, batteries and battery packs as well as related design and test services.
 - o The development of materials for photovoltaics and transparent electrodes for hydrogen generation and fuel cells.
- Lanthanum based Pharmaceutical Products
 - o The co-development of RenaZorb, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in patients undergoing kidney dialysis.
 - o Renalan, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in companion animals suffering from chronic renal disease.
- Chemical Delivery Products
 - o The development of TiNano Spheres, which are rigid, hollow, porous, high surface area ceramic micro structures that are derived from Altair's proprietary process technology for the delivery of chemicals, drugs and biocides.
- Biocompatible Materials

- o The development of nanomaterials for use in various products for dental implants, dental fillings and dental products, as well as biocompatible coatings on implants.

We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology. In the near term, as we continue to develop and market our products and technology, contract services will continue to be a substantial component of our operating revenues. During the years ended December 31, 2005, 2004 and 2003, contract services revenues comprised 70%, 99% and 88%, respectively, of our operating revenues.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a “shelf” registration, or continuous offering process.

Each time that we sell any securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering and certain other offering-specific information. The prospectus supplement also may add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement.

The registration statement we filed with the SEC includes exhibits that provide more detail on descriptions of the matters discussed in this prospectus. You should carefully read this prospectus, the related exhibits filed with the SEC and the applicable prospectus supplement together with the additional information described under the heading “Where You Can Find More Information” on page 18 of this prospectus. You should not assume that the information in this prospectus, the prospectus supplements or any documents incorporated by reference is accurate as of any date other than the date of the applicable document.

You should rely only on the information incorporated by reference or provided in this prospectus and any prospectus supplement. We have authorized no one to provide you with different information.

Unless we indicate otherwise, the terms “Altair,” “we,” “our” and “us” as used in this prospectus refers to Altair Nanotechnologies Inc. and its subsidiaries as a combined entity, except where it is made clear that the term only means the parent company or an identified subsidiary. Our principal executive offices are located at 204 Edison Way, Reno, NV, and our phone number is (775) 856-2500. Our website is www.altairnano.com. Information contained on our website is not a part of this prospectus or any prospectus supplement.

RISK FACTORS

You should carefully consider the risks described in this prospectus and the accompanying prospectus supplement, in addition to the other information contained or incorporated by reference in this prospectus and the accompanying prospectus supplement before making an investment decision. Any of these risks could materially and adversely affect our business, financial condition or results of operations. In such case, you may lose all or part of your investment. Some risk factors in this section are forward-looking statements.

We may continue to experience significant losses from operations.

We have experienced a net loss in every fiscal year since our inception. Our losses from operations were \$10,481,853 in 2005 and \$8,654,102 in the six month ended June 30, 2006. Even if we do generate net income in one or more quarters in the future, subsequent developments in our industry, customer base, business or cost structure or expenses associated with our operations, or due to an event such as significant litigation or a significant transaction may cause us to again experience net losses. We may never become profitable for the long-term, or even for any quarter.

Our quarterly operating results have fluctuated significantly in the past and will continue to fluctuate in the future, which could cause our stock price to decline.

Our quarterly operating results have fluctuated significantly in the past, and we believe that they will continue to fluctuate in the future, due to a number of factors, many of which are beyond our control. If in future periods our operating results do not meet the expectations of investors or analysts who choose to follow our company, our stock price may fall. Factors that may affect our quarterly operating results include the following:

- fluctuations in the size and timing of customer service orders from one quarter to the next;
- timing of delivery of our services and products;
- addition of new customers or loss of existing customers;
- our ability to commercialize and obtain orders for products we are developing;
- costs associated with developing our manufacturing capabilities;
- new product announcements or introductions by our competitors or potential competitors;
- the effect of variations in the market price of our common shares on our equity-based compensation expenses;
- acquisitions of businesses or customers;
- technology and intellectual property issues associated with our products; and
- general economic trends, including changes energy prices or geopolitical events such as war or incidents of terrorism.

Our revenues have historically been generated from low-margin contract research services; if we cannot expand revenues from other products and services, our business will fail.

Historically, a significant portion of our revenues has come from contract research services for businesses and government agencies. During the years ended December 31, 2005, 2004 and 2003, contract services revenues comprised 70%, 99% and 88%, respectively, of our operating revenues. During the first six months of 2006, contract revenues comprised 77% of our revenues. Contract services revenue is low margin and unlikely to grow at a rapid pace. Our business plan anticipates revenues from product sales and licensing, both of which are higher margin than contract services and have potential for rapid growth, increasing in coming years. If we are not successful in significantly expanding our revenues from higher margin products and services, our revenue growth will be slow, it is unlikely that we will achieve profitability and our business will fail.

Our patents and other protective measures may not adequately protect our proprietary intellectual property, and we may be infringing on the rights of others.

We regard our intellectual property, particularly our proprietary rights in our nanomaterials and titanium dioxide pigment technology, as critical to our success. We have received various patents, and filed other patent applications, for various applications and aspects of our nanomaterials and titanium dioxide pigment technology and other intellectual property. In addition, we generally enter into confidentiality and invention assignment agreements with our employees and consultants. Such patents and agreements and various other measures we take to protect our intellectual property from use by others may not be effective for various reasons, including the following:

- Our pending patent applications may not be granted for various reasons, including the existence of conflicting patents or defects in our applications;
- The patents we have been granted may be challenged, invalidated or circumvented because of the pre-existence of similar patented or unpatented intellectual property rights or for other reasons;
- Parties to the confidentiality and invention assignment agreements may have such agreements declared unenforceable or, even if the agreements are enforceable, may breach such agreements;
- The costs associated with enforcing patents, confidentiality and invention agreements or other intellectual property rights may make aggressive enforcement cost prohibitive;
- Even if we enforce our rights aggressively, injunctions, fines and other penalties may be insufficient to deter violations of our intellectual property rights; and
- Other persons may independently develop proprietary information and techniques that, although functionally equivalent or superior to our intellectual proprietary information and techniques, do not breach our patented or unpatented proprietary rights.

Because the value of our company and common shares is rooted primarily in our proprietary intellectual property rights, our inability to protect our proprietary intellectual property rights or gain a competitive advantage from such rights could harm our ability to generate revenues and, as a result, our business and operations.

In addition, we may inadvertently be infringing on the proprietary rights of other persons and may be required to obtain licenses to certain intellectual property or other proprietary rights from third parties. Such licenses or proprietary rights may not be made available under acceptable terms, if at all. If we do not obtain required licenses or proprietary rights, we could encounter delays in product development or find that the development or sale of products requiring such licenses is foreclosed.

Because our products are generally components of end products, the viability of many of our products is tied to the success of third parties' existing and potential end products.

None of the existing or potential products being developed with our nanomaterials and titanium dioxide pigment technology is designed for direct use by the ultimate end user. Phrased differently, all of our products are components of other products. For example, our lithium titanate spinel battery materials and batteries are designed for use in end-user products such as electric vehicles, hybrid electric vehicles and other potential products. Other potential products and processes we and our partners are developing using our technology, such as titanium dioxide pigments, life science materials, air and water treatment products, and coatings, are similarly expected to be components of

third-party products. As a result, the market for our products is dependent upon third parties creating or expanding markets for their end-user products that utilize our products. If such end-user products are not developed, or the market for such end-user products contracts or collapses, the market for our component products would be expected to similarly contract or collapse. This would limit our ability to generate revenues and harm our business and operations.

The commercialization of many of our technologies is dependent upon the efforts of commercial partners and other third parties over which we have no or little control.

We do not have the expertise or resources to commercialize all potential applications of our nanomaterials and titanium dioxide pigment technology. For example, we do not have the resources necessary to complete the testing of, and obtain FDA approval for, Renazorb and other potential life sciences products or to construct a commercial facility to use our titanium dioxide pigment production technology. Other potential applications of our technology, such as those related to our lithium titanate spinel battery materials, coating materials and dental materials, are likely to be developed in collaboration with third parties, if at all. With respect to these and substantially all other applications of our technology, the commercialization of a potential application of our technology is dependent, in part, upon the expertise, resources and efforts of our commercial partners. This presents certain risks, including the following:

- we may not be able to enter into development, licensing, supply and other agreements with commercial partners with appropriate resources, technology and expertise on reasonable terms or at all;
- our commercial partners may not place the same priority on a project as we do, may fail to honor contractual commitments, may not have the level of resources, expertise, market strength or other characteristic necessary for the success of the project, may dedicate only limited resources and/or may abandon a development project for reasons (such as a shift in corporate focus) unrelated to its merits;
- our commercial partners may terminate joint testing, development or marketing projects on the merits of the projects for various reasons, including determinations that a project is not feasible, cost-effective or likely to lead to a marketable end product;
- at various stages in the testing, development, marketing or production process, we may have disputes with our commercial partners, which may inhibit development, lead to an abandonment of the project or have other negative consequences; and
- even if the commercialization and marketing of jointly developed products is successful, our revenue share may be limited and may not exceed our associated development and operating costs.

As a result of the actions or omissions of our commercial partners, or our inability to identify and enter into suitable arrangements with qualified commercial partners, we may be unable to commercialize apparently viable products on a timely and cost-effective basis, or at all. Our business is not dependent upon a single application of our technology; however, a failure to commercialize several of our potential products would harm our business, operations and financial condition.

If we acquire or invest in other companies, assets or technologies and we are not able to integrate them with our business, or we do not realize the anticipated financial and strategic goals for any of these transactions, our financial performance may be impaired.

As part of our growth strategy, we routinely consider acquiring or making investments in companies, assets or technologies that we believe are strategic to our business. We do not have extensive experience in integrating new businesses or technologies, and if we do succeed in acquiring or investing in a company or technology, we will be exposed to a number of risks, including:

- we may find that the acquired company or technology does not further our business strategy, that we overpaid for the company or technology or that the economic conditions underlying our acquisition decision have changed;
- we may have difficulty integrating the assets, technologies, operations or personnel of an acquired company, or retaining the key personnel of the acquired company;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises;
- we may encounter difficulty entering and competing in new product or geographic markets or increased competition, including price competition or intellectual property

litigation; and

- we may experience significant problems or liabilities associated with product quality, technology and legal contingencies relating to the acquired business or technology, such as intellectual property or employment matters.

In addition, from time to time we may enter into negotiations for acquisitions or investments that are not ultimately consummated. These negotiations could result in significant diversion of management time, as well as substantial out-of-pocket costs. If we were to proceed with one or more significant acquisitions or investments in which the consideration included cash, we could be required to use a substantial portion of our available cash, including any proceeds from this offering. To the extent we issue shares of capital stock or other rights to purchase capital stock, including options and warrants, existing stockholders might be diluted and earnings per share might decrease. In addition, acquisitions and investments may result in the incurrence of debt, large one-time write-offs, such as acquired in-process research and development costs, and restructuring charges.

We intend to expand our operations and increase our expenditures in an effort to grow our business. If we are unable to achieve or manage significant growth and expansion, or if our business does not grow as we expect, our operating results may suffer.

During the past year, we have significantly increased our research and development expenditures in an attempt to accelerate the commercialization of certain products, particularly our lithium titanate spinel battery materials and battery systems. Our business plan anticipates continued additional expenditure on development, manufacturing and other growth initiatives. We may not achieve significant growth. If achieved, significant growth would place increased demands on our management, accounting systems, network infrastructure and systems of financial and internal controls. We may be unable to expand associated resources and refine associated systems fast enough to keep pace with expansion, especially as we expand into multiple facilities at distant locations. If we fail to ensure that our management, control and other systems keep pace with growth, we may experience a decline in the effectiveness and focus of our management team, problems with timely or accurate reporting, issues with costs and quality controls and other problems associated with a failure to manage rapid growth, all of which would harm our results of operations.

Our competitors have more resources than we do, which may give them a competitive advantage.

We have limited financial, personnel and other resources and, because of our early stage of development, we have limited access to capital. We compete or may compete against entities that are much larger than we are, have more extensive resources than we do and have an established reputation and operating history. Because of their size, resources, reputation, history and other factors, certain of our competitors may be able to exploit acquisition, development and joint venture opportunities more rapidly, easily or thoroughly than we can. In addition, potential customers may choose to do business with our more established competitors, without regard to the comparative quality of our products, because of their perception that our competitors are more stable, are more likely to complete various projects, are more likely to continue as a going concern and lend greater credibility to any joint venture.

We will not generate substantial revenues from our life science products unless proposed products receive FDA approval and achieve substantial market penetration.

We have entered into development and license agreements with respect to RenaZorb, a potential drug candidate for humans with kidney disease, and other life science products, and expect to enter into additional licensing and/or supply agreements in the future. Most of the potential life sciences applications of our technologies are subject to regulation by the FDA and similar regulatory bodies. In general, license agreements in the life sciences area call for milestone payments as certain milestones related to the development of the products and the obtaining of regulatory approval are met; however, the receipt by the licensor of substantial recurring revenues is generally tied to the receipt of marketing approval from the FDA and the amount of revenue generated from the sale of end products. There are substantial risks associated with licensing arrangements, including the following:

- Further testing of potential life science products using our technology may indicate that such products are less effective than existing products, unsafe, have significant side effects or are otherwise not viable;

- The licensee may be unable to obtain FDA or other regulatory approval for technical, political or other reasons or, even if it obtains such approval, may not obtain such approval on a timely basis; and
- End products for which FDA approval is obtained, if any, may fail to obtain significant market share for various reasons, including questions about efficacy, need, safety and side effects or because of poor marketing by the licensee.

If any of the foregoing risks, or other risks associated with our life science products were to occur, we would not receive substantial, recurring revenue from our life science division, which would adversely affect our overall business, operations and financial condition.

As manufacturing becomes a larger part of our operations, we will become exposed to accompanying risks and liabilities.

We have not produced any pigments, nanoparticles or other products using our nanomaterials and titanium dioxide pigment technology and equipment on a sustained commercial basis. In-house or outsourced manufacturing is becoming an increasingly significant part of our business. If and as manufacturing becomes a larger part of our business, we will become increasingly subject to various risks associated with the manufacturing and supply of products, including the following:

- If we fail to supply products in accordance with contractual terms, including terms related to time of delivery and performance specifications, we may become liable for direct, special, consequential and other damages, even if manufacturing or delivery was outsourced;
- Raw materials used in the manufacturing process, labor and other key inputs may become scarce and expensive, causing our costs to exceed cost projections and associated revenues;
- Manufacturing processes typically involve large machinery, fuels and chemicals, any or all of which may lead to accidents involving bodily harm, destruction of facilities and environmental contamination and associated liabilities; and
- We may have, and may be required to, make representations as to our right to supply and/or license intellectual property and to our compliance with laws. Such representations are usually supported by indemnification provisions, requiring us to defend our customers and otherwise make them whole if we license or supply products that infringe on third-party technologies or violate government regulations.

Any failure to adequately manage risks associated with the manufacture and supply of materials and products could lead to losses (or small gross profits) from that segment of our business and/or significant liabilities, which would adversely affect our business, operations and financial condition.

We have issued a \$3,000,000 note to secure the purchase of the land and the building where our nanomaterials and titanium dioxide pigment assets are located, and if we default on the note, we will experience a significant disruption in our business.

In August 2002, we entered into a purchase and sale agreement with BHP Minerals International Inc. to purchase the land, building and fixtures in Reno, Nevada where our nanomaterials and titanium dioxide pigment assets are located. In connection with this transaction, we issued to BHP a note in the amount of \$3,000,000, at an interest rate of 7%, secured by the property we acquired. The first payment of \$600,000 of principal plus accrued interest was due and paid February 8, 2006. Additional payments of \$600,000 plus accrued interest are due annually on February 8, 2007 through 2010. If we fail to make the required payments on the note, BHP has the right to foreclose and take the property. If this should occur, we would be required to relocate our primary operating assets and offices, causing a significant disruption in our business.

We may not be able to raise sufficient capital to meet future obligations.

As of June 30, 2006, we had approximately \$14.4 million in cash, cash equivalents and short-term investments. In the last few quarters, our recurring expenses have increased significantly, and we have made significant capital commitments related to our business development plan. As we take additional steps to enhance our commercialization and marketing efforts, or respond to acquisition opportunities or potential adverse events, our use of working capital may increase significantly. In any such event, we will need to raise additional capital in order to sustain our ongoing operations, continue unfinished testing and additional development work and, if certain of our products are commercialized, construct and operate facilities for the production of those products.

We may not be able to obtain the amount of additional capital needed or may be forced to pay an extremely high price for capital. Factors affecting the availability and price of capital may include the following:

- market factors affecting the availability and cost of capital generally;
- the price, volatility and trading volume of our common shares;
- our financial results, particularly the amount of revenue we are generating from operations;
- the amount of our capital needs;
- the market's perception of nanotechnology and/or chemical stocks;
- the economics of projects being pursued; and
- the market's perception of our ability to execute our business plan and any specific projects identified as uses of proceeds;

If we are unable to obtain sufficient capital or are forced to pay a high price for capital, we may be unable to meet future obligations or adequately exploit existing or future opportunities.

Our past and future operations may lead to substantial environmental liability.

Virtually any prior or future use of our nanomaterials and titanium dioxide pigment technology is subject to federal, state and local environmental laws. In addition, we are in the process of reclaiming mineral property that we leased in Tennessee. Under applicable environmental laws, we may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation and/or removal of any hazardous substances discovered at any property we use. In addition, courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal or transportation of hazardous substances. If we incur any significant environmental liabilities, our ability to execute our business plan and our financial condition would be harmed.

Certain of our experts and directors reside in Canada and may be able to avoid civil liability.

We are a Canadian corporation, and three of our directors and our Canadian legal counsel are residents of Canada. As a result, investors may be unable to effect service of process upon such persons within the United States and may be unable to enforce court judgments against such persons predicated upon civil liability provisions of the U.S. securities laws. It is uncertain whether Canadian courts would (i) enforce judgments of U.S. courts obtained against us or such directors, officers or experts predicated upon the civil liability provisions of U.S. securities laws or (ii) impose liability in original actions against us or our directors, officers or experts predicated upon U.S. securities laws.

We are dependent on key personnel.

Our continued success will depend to a significant extent on the services of Dr. Alan J. Gotcher, our Chief Executive Officer and President, Edward Dickinson, our Chief Financial Officer, Dr. Bruce Sabacky, our Chief Technology Officer, Douglas Ellsworth and Roy Graham, our Senior Vice Presidents. We have key man insurance on the lives of Dr. Gotcher and Dr. Sabacky. We do not have agreements requiring any of our key personnel to remain with our company. The loss or unavailability of any or all of these individuals would harm our ability to execute our business plan, maintain important business relationships and complete certain product development initiatives, which would harm our business.

We may issue substantial amounts of additional shares without stockholder approval.

Our articles of incorporation authorize the issuance of an unlimited number of common shares that may be issued without any action or approval by our stockholders. In addition, we have various stock option plans that have potential for diluting the ownership interests of our stockholders. The issuance of any additional common shares would further dilute the percentage ownership of our company held by existing stockholders.

The market price of our common shares is highly volatile and may increase or decrease dramatically at any time.

The market price of our common shares may be highly volatile. Our stock price may change dramatically as the result of announcements of product developments, new products or innovations by us or our competitors, uncertainty regarding the viability of the nanomaterials and titanium dioxide pigment technology or any of our product initiatives, significant customer contracts, significant litigation or other factors or events that would be expected to affect our business, financial condition, results of operations and future prospects. In addition, the market price for our common shares may be affected by various factors not directly related to our business or future prospects, including the following:

- Intentional manipulation of our stock price by existing or future stockholders or a reaction by investors to trends in our stock rather than the fundamentals of our business;
- A single acquisition or disposition, or several related acquisitions or dispositions, of a large number of our shares, including by short sellers covering their position;
- The interest of the market in our business sector, without regard to our financial condition, results of operations or business prospects;
- Positive or negative statements or projections about our company or our industry, by analysts, stock gurus and other persons;
- The adoption of governmental regulations or government grant programs and similar developments in the United States or abroad that may enhance or detract from our ability to offer our products and services or affect our cost structure; and
- Economic and other external market factors, such as a general decline in market prices due to poor economic indicators or investor distrust.

We have never declared a cash dividend and do not intend to declare a cash dividend in the foreseeable future.

We have never declared or paid cash dividends on our common shares. We currently intend to retain any future earnings, if any, for use in our business and, therefore, do not anticipate paying dividends on our common shares in

the foreseeable future.

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We are subject to various regulatory regimes, and may be adversely affected by inquiries, investigations and allegations that we have not complied with governing rules and laws.

In light of our status as a public company and our lines of business, we are subject to a variety of laws and regulatory regimes in addition to those applicable to all businesses generally. For example, we are subject to the reporting requirements applicable to Canadian and United States reporting issuers, such as the Sarbanes-Oxley Act of 2002, the rules of the Nasdaq Capital Market and certain state and provincial securities laws. We are also subject to state and federal environmental, health and safety laws, and rules governing department of defense contracts. Such laws and rules change frequently and are often complex. In connection with such laws, we are subject to periodic audits, inquiries and investigations. Any such audits, inquiries and investigations may divert considerable financial and human resources and adversely affect the execution of our business plan.

For example, on March 30, 2005, we received a letter of inquiry from the SEC requesting information relating to a press release we issued on February 10, 2005, in which we announced developments in a rechargeable battery technology that incorporates our lithium titanate battery materials. After providing the requested information, we received a follow up letter of inquiry dated August 2, 2005 requesting additional information related to our battery programs, emails of certain affiliates, certain transactions and recent earnings calls. We provided the information to the SEC in a series of letters sent during September and October 2005. We have not been contacted by the SEC since providing all requested information in October 2005 or been notified of any ongoing activity or pending proceeding. The absence of any additional letters of inquiry related to the matter for this period suggests to us that the SEC's inquiry may be completed; however, we have received no notice from the SEC with respect to the status of the inquiry and are uncertain as to its status. Based upon advice of counsel that the SEC frequently does not apprise a company whether an inquiry has been terminated or is ongoing, we expect to remain uncertain in the foreseeable future. Our response to the SEC inquiry diverted considerable financial and human resources, which harmed our ability to execute our business plan for a time, and leaves a level of uncertainty going forward. This may harm our ability to enter into business relationships, recruit qualified officers and employees and raise capital.

Through such audits, inquiries and investigations, we or a regulator may determine that we are out of compliance with one or more governing rules or laws. Remedying such non-compliance diverts additional financial and human resources. In addition, in the future, we may be subject to a formal charge or determination that we have materially violated a governing law, rule or regulation. Any charge, and particularly any determination, that we had materially violated a governing law would harm our ability to enter into business relationships, recruit qualified officers and employees and raise capital.

FORWARD-LOOKING STATEMENTS

This prospectus contains and incorporates by reference certain forward-looking statements regarding our anticipated financial condition, results of operations and businesses in the future, including management's beliefs, projections and assumptions concerning future results and events. These forward-looking statements generally are in the future tense and may, but do not necessarily, include words such as "believes," "expects," "anticipates," "intends," "plans," "estimates," "will," "should," "could," "predicts," "potential," "continue" or similar expressions. Forward-looking statements are not guarantees. They involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Our future results may differ materially from those expressed in these forward-looking statements. Some of the factors that may cause actual results to differ materially from those contemplated by such forward-looking statements include, but are not limited to, those identified under "Risk Factors" above and in the annual and quarterly reports we file with the SEC:

Given these risks and uncertainties, you are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of the document in which they are contained. We do not undertake any obligation to update any forward-looking statement or to publicly announce any revision of any forward-looking statement to reflect the occurrence of any future developments or events.

USE OF PROCEEDS

Unless the applicable prospectus supplement states otherwise, the net proceeds from the securities sold by us will be added to our general corporate funds and be used for working capital and general corporate purposes. Until the net proceeds have been used, they will be invested in short-term marketable securities in accordance with our investment policy. If we elect at the time of the issuance of the securities to make different or more specific use of proceeds other than as described in this prospectus, the change in use of proceeds will be described in the applicable prospectus supplement.

When we issue a particular series of securities, we will describe in the applicable prospectus supplement the intended use of proceeds from the sale of those securities.

THE SECURITIES WE MAY OFFER

We may use this prospectus to offer common shares, warrants to purchase common shares and units of common shares and warrants in any combination.

The following briefly summarizes the general terms and provisions of the securities that we may offer. A prospectus supplement will describe the specific types, amounts, prices and detailed terms of any of these offered securities. You should read the particular terms of the securities as described in any prospectus supplement, together with the provisions of our articles of continuance, bylaws and any relevant instrument and agreement relating to such securities. The specific terms of the securities offered may differ from the terms discussed below and you should always read the entire instruments and agreements defining the terms of the securities before you make an investment decision with respect to such securities.

Description of Common Shares

We are authorized to issue an unlimited number of common shares, which do not have par value. As of September 21, 2006, there were 59,588,061 common shares issued and outstanding and held by approximately 440 registered holders. Holders of common shares are entitled to one vote per share on all matters to be voted on by our stockholders. There is no cumulative voting with respect to the election of directors. The holders of common shares are entitled to receive dividends, if any, as may be declared from time to time by our Board of Directors in its discretion from funds legally available therefor. Upon liquidation, dissolution or winding up of the company, the holders of common shares are entitled to receive ratably any assets available for distribution to stockholders. The common shares have no preemptive or other subscription rights, and there are no conversion rights or redemption or sinking fund provisions with respect to such shares. All of the outstanding common shares are fully paid and nonassessable. Each common share includes an attached right arising under, and subject to the terms described in, the Amended and Restated Shareholder Rights Plan Agreement dated October 15, 1999 between us and Equity Transfer Services, Inc., as the Rights Agent. The terms of such rights are summarized in "Change of Control Provisions Applicable to Our Common Shares" below.

As of September 21, 2006, we issued and outstanding options to acquire 3,495,719 common shares issued pursuant to our stock incentive plans, had issued and outstanding warrants to purchase 960,222 common shares issued in various series and had 1,637,232 shares reserved for future issuance under our stock incentive plans.

Change of Control Provisions Applicable to Our Common Shares

Neither our articles of continuance nor our bylaws contain any provision that would delay, defer or prevent a change in control of the company. We have, however, adopted a Shareholders Rights Plan Agreement dated November 27, 1998, amended and restated by the Amended and Restated Shareholder Rights Plan Agreement dated October 15,

1999 with Equity Transfer Services, Inc., as the Rights Agent.

Pursuant to the Rights Agreement, on November 27, 1998, which is the record date, our Board of Directors authorized and declared a distribution of one right with respect to each common share issued and outstanding as of the record date and each common share issued thereafter prior to the expiration time (as defined below). The rights are subject to the terms and conditions of the Rights Agreement, a copy of which is attached as an Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 18, 1999. A copy of the Rights Agreement is also available upon written request to us. Because it is a summary, the following description of the rights and the Rights Agreement necessarily omits certain terms, exceptions, or qualifications to the affirmative statements made therein. The reader is advised to review the entire Rights Agreement prior to making any investment decision.

Certain Key Terms of the Rights Prior to Flip-In Date.

Prior to the date a transaction or event occurs by which a person, called an acquiring person, becomes the owner of 15% or more of the outstanding common shares and other shares entitled to vote for the election of directors, which event is a Flip-in Event, each right entitles the holder thereof to purchase one-half common share for the price of \$20 (which exercise price and number are subject to adjustment as set forth in the Rights Agreement). Notwithstanding the foregoing, no Right shall be exercisable prior to the commencement date. The commencement date is the close of business on the eighth business day after the earlier of (a) the date of a public announcement or disclosure by the company or an acquiring person of facts indicating that a person has become an acquiring person, or (b) the date of commencement of, or first public announcement of, the intent of any person to commence a bid for a number of voting shares that would give the bidder beneficial ownership of 15% or more of the issued and outstanding voting shares, referred to as a Take-over Bid.

Certain Key Terms of the Rights Following Flip-In Date.

Section 3.1 of the Rights Agreement includes a provision, referred to as a conversion provisions, which provides that, subject to certain exceptions, upon the occurrence of a Flip-in Event, each right shall be adjusted so as to constitute a right to purchase from us for the \$20, as adjusted, a number of common shares having an aggregate market price of four times \$20 (as adjusted). The market price is determined by averaging the closing price of the common shares on the primary exchange for the common shares for the 20 trading days preceding the date of determination. In addition, upon the occurrence of any Flip-in Event (which is not subsequently deemed not to have occurred under the Rights Agreement), any rights owned by the acquiring person, its affiliates, or certain assignees become null and void. Any rights certificate subsequently issued upon transfer, exchange, replacement, adjustment, or otherwise with respect to common shares owned by any of the foregoing persons shall bear a legend indicating the extent to which such rights are void. Rights held by us or our subsidiaries are also void.

Exceptions, Redemption and Waiver.

The definitions of Flip-in Event and certain related terms are subject to exceptions, certain of which are summarized below. Nevertheless, to understand each such exception and how they may interrelate, the reader is advised to review the Rights Agreement. Despite a person's acquisition of 15% or more of our voting shares, a Flip-in Event shall be deemed not to have occurred or shall have no effect if:

- (1) the acquiring person is the company or an entity controlled by the company;
- (2) the acquiring person is an underwriter who becomes the beneficial owner of 15% or more voting shares in connection with a distribution of securities pursuant to an underwriting agreement with us;
- (3) the transaction by which the person becomes an acquiring person is a voting share reduction, which is an acquisition or redemption of voting shares by us which, by reducing the number of outstanding common shares, has the incidental effect of increasing the acquiring person's ownership percentage;
- (4) the transaction by which the person becomes an acquiring person is an acquisition with respect to which our Board of Directors has waived the conversion provision because:
 - (a) our Board of Directors has determined prior to the commencement date that a person became an acquiring person by inadvertence and, within 10 days of such determination, such person has reduced its beneficial ownership of common shares so as not to be an acquiring person;

(b) our Board of Directors acting in good faith has determined, prior to the occurrence of a Flip-in Event, to waive application of the conversion provision, referred to as a discretionary waiver;

(c) our Board of Directors determines within a specified time period to waive application of the conversion provision to a Flip-in Event, provided that the acquiring person has reduced, or agreed to reduce, its beneficial ownership of voting shares to less than 15% of the outstanding issue of voting shares, referred to as a waiver following withdrawal.

(5) the acquisition by which the person becomes an acquiring person is an acquisition pursuant to (a) a dividend reinvestment plan or share purchase plan made available to all holders of voting shares; (b) a stock dividend, stock split or similar event pursuant to which the acquiring person receives common shares on pro rata basis with all members of the same class or series; (c) the acquisition or exercise of rights to purchase voting shares distributed to all holders of voting shares; (d) a distribution of voting shares or securities convertible into voting shares offered pursuant to a prospectus or by way of a private placement, provided the acquiring person does not thereby acquire a greater percentage of the voting shares or convertible securities offered than the person's percentage of voting shares beneficially owned immediately prior to such acquisition.

In addition, (i) when a Take-over Bid is withdrawn or otherwise terminated after the commencement date has occurred, but prior to the occurrence of a Flip-in Date, or (ii) if the Board of the Directors grants a waiver following withdrawal, our Board of Directors may elect to redeem all outstanding rights at the price of Cdn. \$.0000001 per right (as adjusted). Upon the rights being redeemed pursuant to the foregoing provision, all provisions of the Rights Agreement shall continue to apply as if the commencement date had not occurred, and we shall be deemed to have issued replacement rights to the holders of its then outstanding common shares.

In addition, our Board of Directors may, at any time prior to the first date of public announcement or disclosure by us or an acquiring person of facts indicating that a person has become an acquiring person, or announcement date, elect to redeem all, but not less than all, of the then outstanding rights at the \$.0000001 per share (as adjusted). Moreover, in the event a person acquires voting shares pursuant to a discretionary waiver, our Board of Directors shall be deemed to have elected to redeem the rights at \$.0000002 per share (as adjusted). Within 10 days after our Board of Directors elects, or is deemed to have elected, to redeem the rights, our Board of Directors shall give notice of redemption to the holders of the then outstanding rights and, in such notice, described the method of payment by which the redemption price will be paid. The rights of any person under the Rights Agreement or any right, except rights to receive cash or other property that have already accrued, shall terminate at the expiration time, which is the date of a discretionary redemption or a deemed redemption described in this paragraph.

Exercise of the Rights.

The rights shall not be exercisable prior to the commencement date. Until the commencement date, each right shall be evidenced by the certificate for the associated common share and will be transferable only together with, and will be transferred by the transfer of, its associated common share. New common share certificates issued after the effective date of the Rights Agreement will contain a legend incorporating the Rights Agreement by reference. Certificates issued and outstanding at the effective date of the Rights Agreement shall evidence one right for each common share evidenced thereby, notwithstanding the absence of a legend incorporating the Rights Agreement, until the earlier of the commencement date or the expiration time. Each common share issued for new value after the effective date of the Rights Agreement, but prior to the expiration time, shall automatically have one new right associated with it and shall bear the appropriate legend.

From and after the commencement date, the rights may be exercised, and the registration and transfer of the rights shall be separate from and independent of the common shares. Following the commencement date, we shall mail to each holder of common shares as of the commencement date, or such holder's nominee, a rights certificate representing the number of rights held by such holder at the commencement date and a disclosure statement describing the rights.

Rights may be exercised in whole or in part on any business day after the commencement date and prior to the expiration time by submitting to the rights certificate, an election to exercise, and payment of the sum equal to \$.0000001 per share (as adjusted) multiplied by the number of rights being exercised. Upon receipt of such materials, the Rights Agent will promptly deliver certificates representing the appropriate number of common shares to the registered holder of the relevant rights certificate and, if not all rights were exercised, issue a new rights certificate evidencing the remaining unexercised rights.

The foregoing descriptions do not purport to be complete and are qualified by reference to the definitive Rights Agreement.

Description of Warrants

We may issue warrants to purchase common shares. We may issue warrants independently or together with the common shares offered, and the warrants may be attached to or separate from these securities. We may issue warrants in such amounts or in as many distinct series as we wish. The warrants will be issued under warrant agreements to be entered into between us and a warrant agent as detailed in the prospectus supplement relating to the warrants being offered.

Specific Terms of the Warrants

The applicable prospectus supplement will describe the following terms, where applicable, of the warrants in respect of which this prospectus is being delivered:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount, and terms of the common shares purchasable upon exercise of the warrants;
- if applicable, the date on and after which the warrants and the common shares purchasable upon exercise of the warrants will be separately transferable;
- the price or prices at which the common shares purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants shall commence and the date on which the right shall expire;
- the minimum or maximum amount of the warrants which may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- in the case of warrants to purchase our common shares, any provisions for adjustment of the number or amount of shares of our common shares receivable upon exercise of the warrants or the exercise price of the warrants;
- a discussion of any federal income tax considerations; and
- any other material terms of the warrants, including terms, procedures, and limitations relating to the exchange and exercise of the warrants.

Exercise of Warrants

Each warrant will entitle the holder of the warrant to purchase the common shares at the exercise price as shall be set forth in or be determinable as set forth in, the prospectus supplement relating to the warrants. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Upon receipt of payment and the warrant certificate properly completed and duly executed at the office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities purchased upon such exercise. If less than all of the warrants represented by a warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Prior to the exercise of any warrants, holders of the warrants will not have any of the rights of holders of the securities purchasable upon exercise, including the right to vote or to receive any payments of dividends on the preferred or common shares purchasable upon exercise.

Certificates for warrants to purchase securities will be exchangeable for new warrant certificates of different denominations.

Description of Units

The following description, together with the additional information we may include in any applicable prospectus supplement, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more common shares and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below;
and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Common Shares” and “Description of Warrants” will apply to each unit and to any common shares or warrants included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in such numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

Title

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

PLAN OF DISTRIBUTION

We may sell the securities offered under this prospectus:

- through underwriters;
- through dealers;
- through agents; or
- directly to purchasers.

Each prospectus supplement relating to an offering of securities will state the terms of the offering, including:

- the names of any underwriters, dealers, or agents;
- the public offering or purchase price of the offered securities and the net proceeds that we will receive from the sale;
- any underwriting discounts and commissions or other items constituting underwriters' compensation;
- any discounts, commissions, or fees allowed or paid to dealers or agents; and
- any securities exchange or market on which the offered securities may be listed.

With respect to any offering under this prospectus, the aggregate of all underwriting discounts, commissions and other compensation and any discounts, commissions or fees allowed or paid to dealers or agent shall not exceed 15% of the gross proceeds of such offering.

Distribution Through Underwriters

We may offer and sell securities from time to time to one or more underwriters who would purchase the securities as principal for resale to the public, either on a firm commitment or best efforts basis. If we sell securities to underwriters, we will execute an underwriting agreement with the underwriters at the time of the sale and will name them in the applicable prospectus supplement. In connection with these sales, the underwriters may be deemed to have received compensation from us in the form of underwriting discounts and commissions. The underwriters also may receive commissions from purchasers of securities for whom they may act as agent. Unless we specify otherwise in the applicable prospectus supplement, the underwriters will not be obligated to purchase the securities unless the conditions set forth in the underwriting agreement are satisfied, and if the underwriters purchase any of the securities, they will be required to purchase all of the offered securities. The underwriters may acquire the securities for their own account and may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or varying prices determined at the time of sale. The underwriters may

sell the offered securities to or through dealers, and those dealers may receive discounts, concessions, or commissions from the underwriters as well as from the purchasers for whom they may act as agent. Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

Distribution Through Dealers

We may offer and sell securities from time to time to one or more dealers who would purchase the securities as principal. The dealers then may resell the offered securities to the public at fixed or varying prices to be determined by those dealers at the time of resale. We will set forth the names of the dealers and the terms of the transaction in the applicable prospectus supplement.

Distribution Through Agents

We may offer and sell securities on a continuous basis through agents that become parties to an underwriting or distribution agreement. We will name any agent involved in the offer and sale and describe any commissions payable by us in the applicable prospectus supplement. Unless we specify otherwise in the applicable prospectus supplement, the agent will be acting on a best efforts basis during the appointment period.

Direct Sales

We may sell directly to, and solicit offers from, institutional investors or others who may be deemed to be underwriters, as defined in the Securities Act of 1933 for any resale of the securities. We will describe the terms of any sales of this kind in the applicable prospectus supplement.

General Information

Underwriters, dealers, or agents participating in an offering of securities may be deemed to be underwriters, and any discounts and commissions received by them and any profit realized by them on resale of the offered securities for whom they act as agent, may be deemed to be underwriting discounts and commissions under the Securities Act of 1933.

We may sell securities at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices. The distribution of the securities may be effected from time to time in one or more transactions, by means of one or more of the following transactions, which may include:

- block trades;
- at-the-market offerings;
- negotiated transactions;
- put or call option transactions relating to the securities;
- under delayed delivery contracts or other contractual commitments;
- a combination of such methods of sale; and
- any other method permitted pursuant to applicable law.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

In connection with an underwritten offering of securities, the underwriters may engage in over-allotment, stabilizing transactions, and syndicate covering transactions in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which creates a short position for the underwriters. The underwriters may enter bids for, and purchase, securities in the open market in order to stabilize the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover short positions. In addition, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions, or otherwise. These activities may cause the price of the securities to be higher than it would otherwise be. Those activities, if commenced, may be discontinued at any time.

Ordinarily, each issue of securities will be a new issue, and there will be no established trading market for any security other than our common shares prior to its original issue date. We may not list any particular series of securities on a securities exchange or quotation system. Any underwriters to whom or agents through whom the offered securities are sold for offering and sale may make a market in the offered securities. However, any underwriters or agents that make a market will not be obligated to do so and may stop doing so at any time without notice. We cannot assure you that there will be a liquid trading market for the offered securities.

Under agreements entered into with us, underwriters and agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution for payments the underwriters or agents may be required to make.

Although we expect that delivery of securities generally will be made against payment on or about the third business day following the date of any contract for sale, we may specify a longer settlement cycle in the applicable prospectus supplement. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in three business days, unless the parties to a trade expressly agree otherwise. Accordingly, if we have specified a longer settlement cycle in the applicable prospectus supplement for an offering of securities, purchasers who wish to trade those securities on the date of the contract for sale, or on one or more of the next succeeding business days as we will specify in the applicable prospectus supplement, will be required, by virtue of the fact that those securities will settle in more than T+3, to specify an alternative settlement cycle at the time of the trade to prevent a failed settlement and should consult their own advisors in connection with that election.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

As permitted by SEC rules, this prospectus does not contain all of the information that prospective investors can find in the registration statement of which it is a part or the exhibits to the registration statement. The SEC permits us to incorporate by reference, into this prospectus, information filed separately with the SEC.

This prospectus incorporates by reference the documents set forth below that we previously have filed with the SEC pursuant to the Securities Exchange Act of 1934 (file no. 001-12497). These documents contain important information about us and our financial condition.

- Our Current Report on Form 8-K filed with the SEC on February 21, 2006.
- Our Current Report on Form 8-K filed with the SEC on February 24, 2006.
- Our Annual Report on Form 10-K for the year ended December 31, 2005, filed with the SEC on March 16, 2006.
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2006, filed with the SEC on May 10, 2006.
- Our Current Report on Form 8-K filed on June 7, 2006.
- Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2006 filed with the SEC on August 8, 2006.
- The description of our common shares contained in our Registration Statement on Form 10-SB, SEC File No. 1-12497 filed with the SEC pursuant to the Securities Exchange Act of 1934, including any amendment or report filed under the Securities Exchange Act of 1934 for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this registration statement, and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Upon written or oral request, we will provide without charge to each person to whom a copy of this prospectus is delivered, including any beneficial owner, a copy of the information that has been or may be incorporated by reference in this prospectus. Direct any request for copies to Ed Dickinson, Chief Financial Officer, at our corporate headquarters, located at 204 Edison Way, Reno, NV 89502 (telephone number (775) 858-3750).

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, information statements and other information with the SEC. You may read and copy any reports, statements or other information that we file at the SEC's public reference rooms at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of this information by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Washington, DC 20549 at prescribed rates. Please call the SEC at 1 (800) SEC-0330 for further information on the public reference rooms. The SEC also maintains a web site at <http://www.sec.gov>, at which reports, proxy and information statements and other information regarding our company are available.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the offered securities of us will be passed upon for us by Goodman & Carr, LLP. Additional legal matters may be passed on for us, or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements for periods ended December 31, 2005 incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2005 have been audited by Perry-Smith LLP, independent registered public accounting firm, as set forth in its report thereon, included therein, and incorporated herein by reference. Perry-Smith LLP issued an attestation report on management's assessment of internal control over financial reporting contained in our Annual Report on Form 10-K for the year ended December 31, 2005. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

The consolidated financial statements as of December 31, 2004 and for two years ended December 31, 2004 incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2005 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is therefore unenforceable.

11,994,469 Shares

and Warrants to Purchase 6,596,958 Shares

Common Shares

PROSPECTUS SUPPLEMENT

LAZARD CAPITAL MARKETS

May 22, 2009
