

ALTAIR NANOTECHNOLOGIES INC
Form S-3/A
September 22, 2006

As Filed with the Securities and Exchange Commission on September 22, 2006
Registration No. 333-137099

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 1
ON
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Altair Nanotechnologies Inc.
(Exact name of registrant as specified in its charter)

Canada
(State or other jurisdiction of
incorporation or organization)

33-1084375
(I.R.S. employer
identification number)

Alan J. Gotcher
Chief Executive Officer
Altair Nanotechnologies Inc.
204 Edison Way
Reno, Nevada 89502
(775) 858-3750
(Name, address, including zip code, and
telephone number, including area code, of
agent for service)

Copies to:
Bryan T. Allen, Esq.
Parr Waddoups Brown Gee & Loveless
185 South State Street, Suite 1300
Salt Lake City, Utah 84111
Phone: (801) 257-7963
Facsimile: (801) 532-7750

Approximate date of commencement of the proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Edgar Filing: ALTAIR NANOTECHNOLOGIES INC - Form S-3/A

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. "

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. "

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered(1)	Proposed maximum aggregate offering price(2)	Amount of registration fee(3)
Common shares, without par value (4)		
Warrants to purchase common shares (4)		
Units of common shares and warrants to purchase common shares (4)		
Total	\$ 50,000,000	\$ 5,350

- (1) There are being registered hereunder such indeterminate number of common shares and warrants to purchase common shares, and such indeterminate number of units of warrants and common shares, as shall have an aggregate initial offering price not to exceed \$50,000,000. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. In addition, the securities being registered hereunder include such indeterminate number of common shares as may be issuable with respect to the securities being registered hereunder as a result of stock splits, stock dividends or similar transactions, in each case determined in accordance with to Rule 416 under the Securities Act.
- (2) The proposed maximum aggregate offering price per class of security will be determined from time to time by the Registrant in connection with the issuance by the Registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act.
- (3) Calculated pursuant to Rule 457(o) under the Securities Act. Previously paid.
- (4) 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 the issuer and Equity Transfer Services, Inc., as the Rights Agent.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the SEC, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS (Subject to Completion)

Dated September __, 2006

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 3.

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 _____, 2006

TABLE OF CONTENTS

	Page
Overview	1
About this Prospectus	1
Risk Factors	3
Forward-Looking Statements	10
Use of Proceeds	10
The Securities We May Offer	10
Plan of Distribution	15
Incorporation of Certain Information by Reference	17
Where You Can Find More Information	18
Legal Matters	18
Experts	18
Disclosure of Commission Position on Indemnification for Securities Act Liabilities	18

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.

1

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 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 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.

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:

4

- 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, 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.

6

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:

8

- 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 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.

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. Remediating 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 shareholders. 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 shareholders. 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.

As of August 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.

14

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 the Company's 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.

PART II. INFORMATION NOT REQUIRED IN PROSPECTUS**Item 14. Other Expenses of Issuance and Distribution.**

The registrant will bear all expenses of this offering. The estimated expenses, other than underwriting or broker-dealer fees, discounts, and commissions, in connection with the offering are as follows:

	Amount
SEC registration fee	\$ 5,350
Accounting fees and expenses*	20,000
Legal fees and expenses*	40,000
Printing expenses*	10,000
Blue sky fees and expenses*	75,000
Transfer agent fees and expenses*	1,000
Miscellaneous expenses*	8,650
Total	\$ 160,000
*Estimated	

Item 15. Indemnification of Directors and Officers.*Our Bylaws*

The Registrant's Bylaws provide that, to the maximum extent permitted by law, the Registrant shall indemnify a director or officer of the Registrant, a former director or officer of the Registrant, or another individual who acts or acted at the Registrant's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including any amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the Registrant or other entity. In addition, the Registrants Bylaws require the Registrant to advance monies to an indemnifiable officer, director or similar person in connection with threatened or pending litigation.

The Canada Business Corporations Act

Section 124 of the Canada Business Corporations Act provides as follows with respect to the indemnification of directors and officers:

(1) A corporation may indemnify a director or officer of the corporation, a former director or officer of the corporation or another individual who acts or acted at the corporation's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the corporation or other entity.

(2) A corporation may advance moneys to a director, officer or other individual for the costs, charges and expenses of a proceeding referred to in subsection (1). The individual shall repay the moneys if the individual does not fulfill the

conditions of subsection (3).

(3) A corporation may not indemnify an individual under subsection (1) unless the individual

II-1

(a) acted honestly and in good faith with a view to the best interests of the corporation, or, as the case may be, to the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the corporation's request; and

(b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that the individual's conduct was lawful.

(4) A corporation may with the approval of a court, indemnify an individual referred to in subsection (1), or advance moneys under subsection (2), in respect of an action by or on behalf of the corporation or other entity to procure a judgment in its favor, to which the individual is made a party because of the individual's association with the corporation or other entity as described in subsection (1) against all costs, charges and expenses reasonably incurred by the individual in connection with such action, if the individual fulfills the conditions set out in subsection (3).

(5) Despite subsection (1), an individual referred to in that subsection is entitled to indemnity from the corporation in respect of all costs, charges and expenses reasonably incurred by the individual in connection with the defense of any civil, criminal, administrative, investigative or other proceeding to which the individual is subject because of the individual's association with the corporation or other entity as described in subsection (1), if the individual seeking indemnity

(a) was not judged by the court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done; and

(b) fulfills the conditions set out in subsection (3).

(6) A corporation may purchase and maintain insurance for the benefit of an individual referred to in subsection (1) against any liability incurred by the individual

(a) in the individual's capacity as a director or officer of the corporation; or

(b) in the individual's capacity as a director or officer, or similar capacity, of another entity, if the individual acts or acted in that capacity at the corporation's request.

(7) A corporation, an individual or an entity referred to in subsection (1) may apply to a court for an order approving an indemnity under this section and the court may so order and make any further order that it sees fit.

(8) An applicant under subsection (7) shall give the Director notice of the application and the Director is entitled to appear and be heard in person or by counsel.

(9) On an application under subsection (7) the court may order notice to be given to any interested person and the person is entitled to appear and be heard in person or by counsel.

Other Indemnification Information

Indemnification may be granted pursuant to any other agreement, bylaw, or vote of shareholders or directors. In addition to the foregoing, the Registrant maintains insurance through a commercial carrier against certain liabilities which may be incurred by its directors and officers. The foregoing description is necessarily general and does not describe all details regarding the indemnification of officers, directors or controlling persons of the Registrant.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions or otherwise, the Registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The rights of indemnification described above are not exclusive of any other rights of indemnification to which the persons indemnified may be entitled under any bylaw, agreement, vote of stockholders or directors or otherwise.

II-2

Item 16. List of Exhibits.

- 1.1 Form of underwriting agreement*
- 3.1 Articles of Continuance (1)
- 3.3 Bylaw No. 1 (1)
- 4.1 Instruments defining the rights of securities*
- 4.2 Form of Warrant*
- 4.3 Specimen Stock Certificate of the registrant(2)
Amended and Restated Shareholder Rights Plan dated October 15, 1999, between the Company and Equity
- 4.4 Transfer Services, Inc. (3)
- 4.5 Form of Unit Agreement*
- 5.1 Opinion of Goodman & Carr, LLP(4)
- 23.1 Consent of Goodman & Carr, LLP(4)
- 23.2 Consent of Perry-Smith LLP(4)
- 23.3 Consent of Deloitte & Touche LLP(4)
- 24.1 Power of attorney(4)

* To be filed by amendment or incorporated by reference prior to the offering of securities if applicable.

- (1) Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on July 18, 2002, File No. 001-12497.
- (2) Incorporated by reference to the Company's Registration Statement on Form 10-SB filed with the SEC on November 25, 1996, File No. 001-12497.
- (3) Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on November 19, 1999, File No. 061-12497.
- (4) Incorporated by reference to the Company's Registration Statement on Form S-3, file number 333-137099, filed with the SEC on September 5, 2006.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(c) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by a Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the “Securities Exchange Act”), that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

II-3

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(a) each prospectus filed by a Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of this registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(b) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of this registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of a Registrant under the Securities Act to any purchaser in the initial distribution of the securities, in a primary offering of securities of an undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(a) any preliminary prospectus or prospectus of an undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(b) any free writing prospectus relating to the offering prepared by or on behalf of a Registrant or used or referred to by an undersigned Registrant;

(c) the portion of any other free writing prospectus relating to the offering containing material information about an undersigned Registrant or its securities provided by or on behalf of an undersigned Registrant; and

(d) any other communication that is an offer in the offering made by an undersigned Registrant to the purchaser.

(6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(7) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of a Registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a Registrant for expenses the incurred or paid by a director, officer, or controlling person in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Reno, Nevada on September 22, 2006.

ALTAIR NANOTECHNOLOGIES INC.

By: /s/ Alan J. Gotcher

 Alan J. Gotcher,
 President and Chief Executive Officer

POWER OF ATTORNEY AND ADDITIONAL SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Alan J. Gotcher _____ Alan J. Gotcher	President, Chief Executive Officer and Director (Principal Executive Officer)	September 22, 2006
/s/ Edward Dickinson _____ Edward Dickinson	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	September 22, 2006
/s/ Michel Bazinet* _____ Michel Bazinet	Director	September 22, 2006
/s/ Jon N. Bengtson* _____ Jon N. Bengtson	Director	September 22, 2006
/s/ James I. Golla* _____ James I. Golla	Director	September 22, 2006
/s/ George Hartman* _____ George Hartman	Director	September 22, 2006
/s/ Christopher E. Jones*	Director	September 22, 2006

Christopher E. Jones

/s/ Pierre Lotie*

Director

September 22, 2006

Pierre Lotie

* By: /s/ Alan Gotcher
Alan Gotcher
Attorney-in Fact

II-5