

DAIS ANALYTIC CORP
Form S-1
February 14, 2011
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As filed with the Securities and Exchange Commission on February 14, 2011

Registration No. 333-_____

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

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

DAIS ANALYTIC CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

New York
(State or other jurisdiction of)

3990
(Primary Standard Industrial)

14-1760865
(I.R.S. Employer)

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incorporation or organization)

Classification Code Number)

Identification Number)

11552 Prosperous Drive
Odessa, FL 33556
Telephone: (727) 375-8484
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(Address, Including Zip Code, and Telephone Number,
Including Area Code, of Principal Executive Offices)

State of New York Secretary of State,
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APPROXIMATE DATE OF PROPOSED SALE TO THE PUBLIC: From time to time after the effective date of this Registration Statement.

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, as amended (the Securities Act), 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. "

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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 post-effective amendment filed pursuant to Rule 462(d) 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer
 Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Common stock, \$0.01 par value per share (2)	\$15,000,000	\$1,741.50
Underwriter's Warrant (3)(4)		\$
Shares of Common Stock underlying Underwriter's Warrant		
Total		\$1,741.50

- (1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- (2) Includes _____ shares of our common stock that the underwriter has the option to purchase to cover over-allotments, if any.
- (3) No registration fee required pursuant to Rule 457(g) under the Securities Act of 1933.
- (4) Pursuant to Rule 416 under the Securities Act of 1933, this registration statement shall be deemed to cover the additional securities (i) to be offered or issued in connection with any provision of any securities purported to be registered hereby to be offered pursuant to terms which provide for a change in the amount of securities being offered or issued to prevent dilution resulting from stock splits, stock dividends, or similar transactions and (ii) of the same class as the securities covered by this registration statement issued or issuable prior to completion of the distribution of the securities covered by this registration statement as a result of a split of, or a stock dividend on, the registered securities.

THE COMPANY HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE COMPANY 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, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

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THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. NEITHER WE NOR THE SELLING STOCKHOLDERS MAY 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 NEITHER WE NOR THE SELLING STOCKHOLDERS ARE SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED FEBRUARY 14, 2011

PRELIMINARY PROSPECTUS

[] Shares of Common Stock

This is a firm commitment public offering of shares of our common stock.

The public offering price for the common stock offered hereby is estimated to be between \$ and \$ per share. Our common stock is quoted on the OTC Bulletin Board under the symbol DLYT.OB . On February 11, 2011, the last reported sale price for our common stock was \$0.47 per share. The aggregate price of the shares offered hereby, assuming a mid-point price of \$ per share and excluding shares that may be sold on exercise of the underwriter's over-allotment option, is \$ million.

We are applying for listing of our common stock on the NYSE AMEX Equities (AMEX , formerly known as the American Stock Exchange) under the symbol DLYT , which we expect to occur immediately prior to the date of this prospectus. No assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering and the shares of our common stock will continue to be traded on the OTC Bulletin Board.

Investing in our securities involves certain risks, including those set forth in the Risk Factors section beginning on page 9 of this prospectus as well as those set forth in any prospectus supplement that should be considered in connection with an investment in our securities.

	Per Share	Total
Public Offering Price per share	\$	\$
Underwriting discounts and commission	\$	\$
Offering Proceeds to Dais, before expenses(1)	\$	\$

(1) We estimate that the total expenses of this offering, excluding the underwriter's discount will be approximately \$. The underwriter also may purchase up to an additional (up to 15% of the shares of our common stock firmly committed in this offering) within 45 days of the date of this prospectus to cover over-allotments, if any, on the same terms set forth above. In connection with this offering, we have also agreed to issue to MDB Capital Group LLC a warrant to purchase shares of our common stock in an amount up to 10% of the shares of common stock sold in this offering. If MDB Capital Group LLC exercises this warrant, each share of common stock may be purchased at \$ per share (equal to the price of the shares of common stock sold in this offering).

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The underwriter expects to deliver our shares to purchasers in the offering on or about _____, 2011.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THE PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

MDB Capital Group LLC

The date of this prospectus is February _____, 2011.

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Unless otherwise stated or the context otherwise requires, the terms "Dais Analytic," "we," "us," "our" and the "Company" refer to Dais Analytic Corporation.	

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with additional or different information. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

No dealer, salesperson or any other person is authorized in connection with this offering to give any information or make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than those contained in this prospectus and, if given or made, the information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the securities offered by this prospectus, or an offer to sell or a solicitation of an offer to buy any securities by anyone in any circumstance in which the offer or solicitation is not authorized or is unlawful.

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CAUTIONARY STATEMENT REGARDING

FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled Prospectus Summary , Management s Discussion and Analysis of Financial Condition and Results of Operations , Description of Business , Risk Factors and other sections generally, contains certain statements that constitute forward-looking statements . These forward-looking statements include certain statements regarding intent, belief or current expectations about matters (including statements as to beliefs, expectations, anticipations, intentions or similar words). Forward-looking statements are also statements that are not statements of historical fact. Because these statements are based on factors that involve risks and uncertainties, actual results may differ materially from those expressed or implied by the forward-looking statements. These factors include, among others:

our ability to achieve and maintain profitability;

the price volatility of the Common Stock;

the historically low trading volume of the Common Stock;

our ability to manage and fund our growth;

our ability to attract and retain qualified personnel;

litigation;

our ability to compete with current and future competitors;

our ability to obtain additional financing;

general economic and business conditions;

our ability to continue as a going concern;

our ability to do business overseas;

other risks and uncertainties included in the section of this document titled Risk Factors ; and

other factors discussed in our other filings made with the Commission.

The subsequent forward-looking statements relating to the matters described in this document and attributable to us or to persons acting on our behalf are expressly qualified in their entirety by such factors. Actual events or results may differ materially from those discussed in

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forward-looking statements as a result of various factors, including, without limitation, the risks outlined under **Risk Factors** and matters described in this Prospectus generally. In light of these risks and uncertainties, there can be no assurance that the forward-looking statements contained in this Prospectus will in fact occur. We have no obligation to publicly update or revise these forward-looking statements to reflect new information, future events, or otherwise, except as required by applicable laws, and we caution you not to place undue reliance on these forward looking statements.

Third Party Data

This prospectus also contains estimates and other information concerning our industry, including market size and growth rates, which are based on industry publications, surveys and forecasts, including those generated by us. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to these estimates. Although we believe the information in these industry publications, surveys and forecasts is reliable, we have not independently verified the accuracy or completeness of the information. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in **Risk Factors** .

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PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all the information that you need to consider in making your investment decision. You should carefully read this entire prospectus, as well as the information to which we refer you, before deciding whether to invest in the common stock. You should pay special attention to the Risk Factors section of this prospectus to determine whether an investment in the common stock is appropriate for you.

This registration statement, including the exhibits and schedules thereto, contains additional relevant information about us and our capital stock. With respect to the statements contained in this prospectus regarding the contents of any agreement or any other document, in each instance, the statement is qualified in all respects by the complete text of the agreement or document, a copy of which has been filed or incorporated by reference as an exhibit to the registration statement.

We file annual, quarterly, and current reports, proxy statements, and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You can also request copies of the documents, upon payment of a duplicating fee, by writing the Public Reference Section of the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. These SEC filings are also available to the public from the SEC's web site at <http://www.sec.gov>.

About Dais Analytic Corporation

We have developed and are commercializing nano-structure polymer technology materials and products for energy conservation in heating, ventilation and air conditioning (HVAC) systems and developing technologies for replacing chemical refrigerants, removing impurities from water to produce potable water and storing energy in ultracapacitors. Our first commercial product, ConSERV, is a fixed plate energy recovery ventilator which is designed to meet commercial building indoor fresh air requirements while saving energy and lowering emissions for most forms of HVAC systems. Our nano-structure polymer technology materials and applications under development include NanoAir, a water based packaged HVAC system that we believe may be capable of replacing chemical refrigerants, and NanoClear, a water clean-up process that may prove useful in the creation of potable water from most forms of contaminated water, including salt brackish or wastewater. We believe that our nano-structure polymer technology also may be useful in developing an ultracapacitor, a device that would provide greater energy density and power than conventional capacitors or batteries.

We are a New York corporation and were established on April 8, 1993 as Dais Corporation. We subsequently changed our name to Dais Analytic Corporation on December 13, 1999. Our principal executive offices are located at 11552 Prosperous Drive, Odessa, FL 33556. Our telephone number is (727) 375-8484. Our website can be accessed at www.daisanalytic.com and www.conserv.com.

Our Proprietary Technologies

We own the rights to seven U.S. patents, three pending U.S. patent applications, and four Patent Cooperation Treaty (PCT) applications. National stage applications based on one of the PCT applications has been filed in the U.S., China and Europe. In addition, we co-own two PCT applications with Aegis Biosciences LLC, a biomaterials drug delivery technology company. National stage applications based on one of the co-owned PCT applications have been filed in the U.S., China and Europe, and a national stage application based on the other co-owned PCT application has been filed in the U.S. and China. These patents relate to, or are applications of, our nano-structured polymer materials that perform functions such as ion exchange and modification of surface properties. The polymers are selectively permeable to polar materials, such as water, in molecular form. Selective permeability allows these materials to function as a nano-filter in various transfer applications. These materials are made from base polymer resins available from a number of commercial firms worldwide and possess what we believe to be some unique and controllable properties, such as:

Selectivity: Based on our research, we believe that when the polymer is made there are small channels created that are 5 to 30 nanometers in diameter. There are two types of these channels: hydrophilic (water permeable), and hydrophobic (water impermeable). The channels can be chemically tuned to be selective for the ions or molecules they transfer. The selectivity of the polymer can be adjusted to efficiently transfer water molecules from one face to the other using these channels.

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High transfer rate: Based on in-house testing protocols and related results, we have found that the channels created when casting the materials into a nano-structured membrane have a transfer rate of water molecules, or flux, greater than 90% of an equivalent area of an open tube. This feature is fundamental to the material's ability to transfer moisture at the molecular level while substantially allowing or disallowing the transfer of certain other substances at a molecular level.

Unique surface characteristic: The materials offer a surface characteristic that we believe inhibits the growth of bacteria, fungus and algae and prevents adhesives from attaching.

The molecular selectivity, transfer rate and surface coating properties, coupled with our ability to produce the nano-structured materials at what we believe is an affordable price, distinguishes our technology and allows us to offer value-added products that are revolutionary or disruptive within their given markets. By incorporating our nano-structured materials into our products, we strive to address current real-world market needs by offering what we believe to be higher efficiencies and improved price performance. For example, there are other energy recovery mechanisms available for HVAC that use coated paper or desiccant technology instead of our nano-structured polymer materials.

Our Target Markets

We are currently focusing our efforts on applications of our nano-structure polymer technology materials in the following areas:

Energy Recovery Ventilators

ConsERV is a heating, ventilation and air conditioning (HVAC) energy conservation product which should, according to various third party tests, save an average of up to 30% on HVAC ventilation air operating costs and allow HVAC equipment to be up to 30% smaller, reducing peak energy usage by up to 20% while simultaneously improving indoor air quality by increasing the level of fresh air ventilation. This product makes HVAC systems operate more efficiently and results, in many cases, in energy and cost savings. ConsERV may be added to most existing HVAC systems, typically in commercial buildings, to provide ventilation within the structure. It pre-conditions the incoming air by passing through our nano-technology polymer which has been formed into a filter, known in the market as a fixed plate core. The nano-technology core uses the stale building air that must be simultaneously exhausted to transfer heat and moisture into or out of the incoming air. For summer air conditioning, the core removes some of the heat and humidity from the incoming air, transferring it to the exhaust air stream thereby, under certain conditions, saving energy. For winter heating, the core transfers a portion of the heat and humidity into the incoming air from the exhaust air stream thereby often saving energy.

We believe that there is significant demand for energy recovery ventilators in the U.S. and international markets. As reported by Frost and Sullivan in 2007, the U.S. and worldwide market for energy recovery ventilators (ERVs) was estimated to be approximately \$1.1 billion and \$4.0 billion, respectively. Projections made at that time were for 2X growth by 2012. Market drivers behind this growth include higher ventilation standards, greater end user awareness, LEED (Leadership in Energy Efficiency and Design) certification points or incentives and integration into original equipment manufacturers (OEMs).

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Our ConsERV product is the primary focus of our resources and commercialization efforts. When compared to similar competitive products and based on test results conducted by the Air-Conditioning, Heating and Refrigeration Institute (AHRI), a leading industry association in 2008, we believe ConsERV is twice as effective in managing latent and sensible heat as other fixed plate cores. This study is publicly available and was not prepared for our benefit or funded by us.

Residential and Commercial Heating, Air-Conditioning and Refrigeration

Our water-based packaged HVAC system, NanoAir, which is in the middle stage of prototype development, would dehumidify and cool air in warm weather, or humidify and heat air in cold weather. This NanoAir application may be capable of replacing a traditional refrigerant loop based heating, cooling, and refrigeration system. We have a number of prototype units showing fundamental heating, cooling, humidification, and dehumidification operations of this evolving application.

Based on our lab results to date, NanoAir may have the potential to reduce energy consumption up to 50% versus today's current technologies that use chemical refrigerants. Since heating and cooling costs account for approximately 19% of all energy consumed in the US (second only to transportation), as stated by Dr. Steven Chu, U.S. Department of Energy in 2010, we believe NanoAir may have the ability to provide significant reductions in energy usage. Further, since NanoAir uses no ozone-depleting refrigerants such as CFCs and HCFCs, the use of our nano-structured polymer technology may provide additional environmental and health benefits. We believe that there is a substantial market for HVAC systems that conserve energy without the use of conventional refrigerants. Commercial and residential HVAC + R (including outside air systems, humidifiers, dehumidifiers, refrigeration, packaged chillers, evaporative cooling towers), transportation (including refrigerated transport), and grocery and food storage market size estimates are \$79 billion in U.S. and \$189 billion worldwide according to Frost and Sullivan's 2007 report.

NanoAir is being partially funded by a \$681,322 grant from the U.S. Department of Energy's Advanced Research Projects Agency - Energy (ARPA-E) awarded to us in September of 2010, and \$254,500 grant from Pasco County, Florida in December of 2010. The grant from Pasco County requires us to pay the county 2% of the gross sales of products using a certain unique pump assembly for 5 years or for a total of \$1,000,000 whichever comes first.

Water Clean-Up

According to water quality evaluated by the Pasco County Technical Services in March 2010, and the China Academy of Environmental Science in December 2010, our NanoClear prototype system has demonstrated the ability to remove quantities of salt and other impurities from water to produce potable water that may yield water using an environmentally friendly design that is projected to be more energy efficient, may reduce capital and operating expenditures up to 50% versus current methods. We have developed a number of functional demonstration units of various sizes, which highlight the basics of how this system works using our nano-structured materials to produce potable water. This demonstration unit is being used as the basis for the prototype's next planned inflexion point: a 10m³(approximately 26,500 gallons per day) pilot plant projected to be set up at a local county waste water treatment facility. The NanoClear application is currently in the mid stage of prototype development.

We believe significant market opportunities for water cleanup include waste water (e.g. municipal, runoff, industrial, sewage), water desalination and ultra-filtration applications in industries such as pharmaceutical, beverage and semiconductor. Unlike other water desalination technologies, we believe the NanoClear process may have the ability to handle high concentrations of salt with no lasting damage to our materials. The benefit of such a technological advancement in the water desalination industry may mean higher outputs of clean water per volume of types of contaminated water, and the ability to produce zero discharge from the process. The world market for water and wastewater amounted to \$346.9 billion in 2008. According to 360 Consultancy/Acon AG, World-Wide water market profile dated May 2009, the markets are expected to expand further with high growth rates to \$374.4 billion by 2009, and \$412 billion by 2012. China, on February 3, 2011 announced a \$607 billion government mandated program citing national security to improve its water quality in the next decade.

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According to MSNBC, a report by Lux Research in 2009 estimated that the worldwide contaminated water clean-up market will triple between 2008 and 2020.

Energy Storage

Based on initial material tests conducted by General Electric's Global Research and Development Center in October 2009, and the University of Florida in October 2010, we believe that by applying a combination of our nano-materials exercising some of the material's properties, we may be able to construct an ultracapacitor, a device which stores energy similar to a battery with projected increases in energy density and lifetimes. We call this application NanoCap. We believe the key application for NanoCap would be in transportation. We signed a research agreement with the University of Florida to conduct materials testing for the time period from July 2010 through July 2011. Although very early in the development path, we believe the material may have the energy density of gasoline.

The market size for ultracapacitors, worldwide, is projected to be \$500 billion by 2015 as reported by Greentech Media in January, 2010 and includes electric vehicles, various electronics, smart grid and others.

Other

We have identified other potential products for our nano-materials and processes. Some have basic data to support the needed functionality and market differentiation of a product based on using our nano-technology inventions. These other products are based, in part, upon the known functionality of our materials and processes. Management projects many of these other applications will be developed in the future with partners already in a given sales channel or line of business with us, as we grow and are able to internally fund such activities, development, manufacturing, and sales.

We expect ConsERV to continue to be our focused commercial product through 2011 with a growing emphasis moving the development of the NanoClear and NanoAir technologies towards commercialization. However, we cannot provide assurance that any of the ongoing projects under development will ultimately be successful or commercially viable.

Recent Events

In December 2010, we issued more than 5% of our outstanding common stock in connection with the sale of equity securities to two holders of promissory notes. On December 27, 2010, a holder of a promissory note issued by us elected to apply all of the proceeds due and payable to the holder pursuant to such note in the principal amount of \$250,000, plus accrued interest, to purchase our common stock. The investor subscribed for and purchased from us 1,052,950 shares of common stock at a purchase price of \$0.26 per share, resulting in an aggregate purchase price of \$273,767 (the principal amount and related accrued interest under the note). On December 30, 2010, another holder of a promissory note issued by us elected to apply all of the proceeds due and payable to such holder pursuant to such promissory note in the principal amount of \$300,000, plus accrued interest, to purchase our common stock. The investor subscribed for and purchased from us 1,268,472 shares of common stock at a purchase price of \$0.26 per share, resulting in an aggregate purchase price of \$329,803 (the principal amount and related accrued interest under the note).

Principal Offices

Our principal office is located at 11552 Prosperous Drive, Odessa, FL 33556. Our telephone number is (727) 375-8484 and our facsimile number is (727) 375-8485. Our websites can be accessed at www.daisanalytic.com and www.conserv.com. Information found on our website is not part of this prospectus.

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Risk Factors

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described under Risk Factors beginning on page 9 of this prospectus, as well as other information included in this prospectus, including our financial statements and the notes thereto, before making an investment decision.

The Offering

The following summary contains basic information about the offering and our common stock and is not intended to be complete. It does not contain all the information that is important to you. For a more complete understanding of our common stock, please refer to the section of this prospectus entitled Description of Capital Stock.

Issuer	Dais Analytic Corporation, a New York corporation.
Common stock offered by us	shares of common stock, par value \$0.01 per share.
Over-allotment option	We have granted the underwriter an option to purchase up to an additional shares of common stock within 45 days of the date of this prospectus in order to cover over-allotments, if any.
Common stock outstanding after this offering	shares of common stock.(1)(2)
Use of Proceeds	We intend to use the net proceeds from the sale of our common stock in this offering for working capital and general corporate purposes.
Market and trading symbol for the common stock	Our common stock is listed and traded on the Over-the-Counter Bulletin Board under the symbol DYLT.OB.
Proposed listing symbol for our common stock	DYLT
Underwriter common stock purchase warrant	In connection with this offering, we have also agreed to sell to MDB Capital Group LLC a warrant to purchase up to 10% of the shares of common stock sold in this offering. If this warrant is exercised, each share may be purchased by MDB Capital Group LLC at \$ per share (equal to the price of the shares sold in this offering.)

The number of shares of our common stock to be outstanding after this offering is based on the number of shares outstanding as of February 11, 2011, and excludes:

- .. 320,089 shares of our common stock issuable upon conversion of convertible debt in the principal amount of \$50,000, plus accrued interest;
- .. 16,757,757 shares of our common stock issuable upon exercise of stock options under our stock plans at a weighted average exercise price of \$0.31 per share;

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- .. 23,815,140 shares of our common stock reserved for issuance under various outstanding warrant agreements, at a weighted average exercise price of \$0.27 per share;

 - .. 10,230,000 shares of our common stock reserved for future issuance under our stock plans, .
-
- (1) Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding options or warrants to purchase shares of our common stock were exercised.
 - (2) Unless otherwise indicated, the number of shares of common stock presented in this prospectus excludes shares issuable pursuant to the exercise of the underwriter's over-allotment option.

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In the table below we provide you with historical selected financial data for each of the years ended December 31, 2009 and 2008, derived from our audited financial statements included elsewhere in this prospectus, and for the nine months ended September 30, 2010 and 2009, derived from our unaudited interim financial statements included in our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2010, and which are included elsewhere in this prospectus.

You should read the historical selected financial information presented below in conjunction with the Management's Discussion and Analysis of Financial Condition and Results of Operations section and our financial statements and the notes to those financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected for any future period.

	For the Years Ended December 31,		For the Nine Months Ended September 30,	
	2008	2009	2009	2010
STATEMENT OF OPERATIONS:				
Revenues	1,015,433	1,531,215	1,099,721	2,369,828
Cost of goods sold	(796,217)	(1,071,098)	(690,903)	(1,626,556)
General and administrative	(2,935,552)	(3,224,592)	(1,384,318)	(2,286,013)
Loss from operations	(2,716,336)	(2,764,475)	(975,500)	(1,542,741)
Interest and other expense	(3,263,110)	(620,907)	(454,610)	(157,669)
Income before income taxes	(5,979,446)	(3,385,382)	(1,430,110)	(1,700,410)
Net loss	(5,979,446)	(3,385,382)	(1,430,110)	(1,700,410)
Net loss per common share, basic and diluted	\$ (0.57)	\$ (0.17)	\$ (0.08)	\$ (0.06)
Weighted average common shares outstanding, basic and diluted	10,522,511	19,960,150	17,040,291	29,696,897

	December 31,		September 30,
	2010	2009	2010
STATEMENT OF FINANCIAL CONDITION:			
Working capital	(3,802,009)	(2,265,370)	(3,390,029)
Total assets	468,492	1,620,746	1,719,517
Total long-term debt, less current installments	675,000	300,000	
Total shareholders' deficit	(4,697,436)	(2,678,939)	(3,428,140)

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RISK FACTORS

You should carefully consider the risks described below before making an investment decision. Our business, financial condition, results of operations or cash flows could be materially adversely affected by any of these risks. The valuation for the Company could also decline due to any of these risks, and you may lose all or part of your investment. This document also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of several factors, including the risks faced by us described below and elsewhere in this prospectus. In assessing these risks, you should also refer to the other information contained in this prospectus, including our financial statements and related notes.

Risks Related to Our Business

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern.

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern. This unqualified opinion with an explanatory paragraph could have a material adverse effect on our business, financial condition, results of operations and cash flows. See Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources and Note 2 to our financial statements for the fiscal year ended December 31, 2009, included elsewhere in this prospectus.

We have no committed sources of capital and do not know whether additional financing will be available when needed on terms that are acceptable, if at all. This going concern statement from our independent registered public accounting firm may discourage some investors from purchasing our stock or providing alternative capital financing. The failure to satisfy our capital requirements will adversely affect our business, financial condition, results of operations and prospects.

Unless we raise additional funds, either through the sale of equity securities or one or more collaborative arrangements, we will not have sufficient funds to continue operations. Even if we take these actions, they may be insufficient, particularly if our costs are higher than projected or unforeseen expenses arise.

We are in default on our convertible promissory note. If we are unable to reach an agreement with our convertible note holder, the note holder could foreclose on our assets, which ultimately would require us to curtail or cease our operations.

As of September 30, 2010, \$150,000 of principal on certain 9% convertible notes was outstanding, which were in default. On November 4, 2010, an investor elected to convert his 9% secured convertible note of \$100,000 principal and the related accrued interest \$25,077 into 625,384 shares of our common stock. This investor also received an additional five-year warrant to purchase up to 62,538 shares of our common stock, at an exercise price of \$0.75 per share in consideration for converting his 9% secured convertible note.

We have from time to time proposed and currently propose that the holder of a matured \$50,000 9% convertible secured promissory note either (i) convert the note into shares at this time in exchange for an additional warrant or (ii) extend the maturity of the convertible note and continue to accrue interest. The note holder has a security interest in our patents pending loan repayment. If we are unable to reach an agreement with this note holder and the note holder elects to obtain a judgment against us, we may be forced to curtail or cease our operations. We may find it difficult to continue our business, including financing our operations, where a default continues.

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We may be unable to repay or secure an extension on the \$1,620,000 in unsecured promissory notes outstanding as of the date hereof. If we are unable to reach an agreement with our note holders, the note holders could foreclose on our assets, which ultimately could require us to curtail or cease our operations.

We do not currently have and do not expect to attain adequate funds for repayment of these notes from its current operations. Although we intend to continue to finance our operations, including the repayment of these unsecured notes, primarily through private sales of debt and equity securities, it may not be able to secure additional financing to repay the notes on acceptable terms, if at all. Further, many of these notes contain a limitation on the amount of debt we can incur prior to repayment of the notes. Hence, unless the note holders waive the debt limit we may not be able to avail ourselves of sufficient financing should it be available. Further many of these notes provide the holders with the option of participating in any additional financing we may undertake which could substantially dilute existing shareholders. If we are unable to secure financing to repay the notes we will seek to renegotiate the notes. However, there is no guarantee that all note holders will accept any offer we may make and some or all of the note holders may request additional concessions from us for any accommodation we do secure. Any such additional consideration would likely be offered to all such note holders. Any terms we may be able to secure may not be favorable to us. Unfavorable terms would adversely impact our business, financial condition and/or results of operations. In the event we are unable to secure additional financing sufficient to pay the notes prior to the maturity date and we are not able to renegotiate the terms of the notes the note holders will have the option to either foreclose, which would have material adverse consequences on our business operations, financial condition, results of operations and cash flows and possibly result in the failure of our business.

We may lose all our patents and the majority of our patent applications if we are unable to repay or convert the principal and interest on the outstanding 9% secured convertible note or obtain an agreement for extension of the maturity date.

We may not have adequate funds to repay the \$50,000, 9% convertible note currently outstanding and do not expect to attain adequate funds for repayment from operations. The note is secured by all of our patents and the majority of our patent applications. Our success depends, to a significant extent, on the technology that is incorporated in our product and the underlying patents and patent applications securing the notes. We intend to continue to finance our operations, including the repayment of this note, primarily through private sales of debt and equity securities. We may not be able to secure additional financing to repay the note on acceptable terms, if at all. There is no guarantee that the note holder will accept any offer we will make with regard to extending or converting this note. Further, the note holder may request additional concessions from us in return for extending or converting his note. Any renegotiated terms we may be able to secure may not be favorable to us. Unfavorable terms, in either a financing transaction or debt renegotiation, would adversely impact our business, financial condition and/or results of operations. In the event (i) we are unable to secure additional financing sufficient to pay this note, (ii) this note is not converted into shares of our common stock, or (iii) we are not able to renegotiate the terms of this convertible note, the note holder will have the option to foreclose on all of our patents and those patent applications securing the notes, which would likely result in the failure of our business.

We have a history of operating losses, and we expect our operating losses to continue for the foreseeable future. If we fail to obtain additional financing we will be unable to execute our business plan.

We have incurred substantial losses since we were funded in 1993 and have not achieved profitability in any year to date. We have developed a family of nano-structured polymers and processes and are now marketing our first product application, ConsERV . We anticipate the other listed applications in this document may take at least 6 to 48 months to develop. We expect our operating losses to continue for the foreseeable future as we continue to expend substantial resources to expand the ConsERV business while working to bring the identified applications to the market including research and development, design and testing, obtaining third party validations, identifying and securing collaborative partnerships, executing to enter into strategic relationships, or selling materials or value-added components. Furthermore, even if we achieve our projection of selling a greater number of ConsERV units in 2011, we anticipate that we will continue to incur losses until we can cost-effectively produce and sell our products to a wider market. Our accumulated deficit was \$33,862,561 as of September 30, 2010. It is possible that we will never generate sufficient revenue to achieve and sustain profitability. Even if we achieve profitability, we may not be able to sustain or increase profitability.

We financed our operations since inception primarily through private sales of our common stock and preferred stock, issuance of convertible promissory notes; issuance of unsecured promissory notes, cash received in connection with exercise of warrants, license fees and the sale of certain fuel cell assets in 2002. As of September 30, 2010, we had \$1,609,288 of current assets.

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Even if we are successful in raising additional equity capital to fund our operations, we will still be required to raise an additional substantial amount of capital in the future to fund our development initiatives and to achieve profitability. Our ability to fund our future operating requirements will depend on many factors, including the following:

ability to obtain funding from third parties;

progress on research and development programs;

time and costs required to gain third party approvals;

costs of manufacturing, marketing and distributing its products;

costs of filing, prosecuting and enforcing patents, patent applications, patent claims and trademarks;

status of competing products; and

market acceptance and third-party reimbursement of its products, if successfully developed.

There are no assurances that future funding will be available on favorable terms or at all. If additional funding is not obtained, we will need to reduce, defer or cancel development programs and planned initiatives, to the extent necessary. The failure to fund our capital requirements would have a material adverse effect on our business, financial condition and results of operations.

In the event the lease on our corporate office and production space is terminated, we may not be able to acquire a lease on another suitable property, or a lease on a suitable property at a comparable cost.

The lease on our corporate office and production space may be terminated upon 30 days prior written notice by either party. If this lease is terminated, we may not be able to acquire another lease for another suitable property or a lease on a suitable property at a comparable cost in a timely manner, which could materially disrupt our operations. Even if we are able to relocate into another suitable property at a comparable cost in a timely manner, we would incur significant moving expenses.

Our future indebtedness could adversely affect our financial health.

We have and may continue to incur a significant amount of indebtedness to finance our operations and growth. Any such indebtedness could result in negative consequences to us, including:

increasing our vulnerability to general adverse economic and industry conditions;

requiring a portion of our cash flow from operations be used for the payment of interest on our debt, thereby reducing our ability to use our cash flow to fund working capital, capital expenditures and general corporate requirements;

limiting our ability to obtain additional financing to fund future working capital, capital expenditures and general corporate requirements;

limiting our flexibility in planning for, or reacting to, changes in our business;

placing us at a competitive disadvantage to competitors who have less indebtedness; and

as the majority of our assets are pledged under a significant portion of our outstanding debt, the failure to meet the terms and conditions of the debt instruments, or a failure to timely rearrange the current terms and conditions of the notes, if so required, will result in us having no access to certain portions of our own technology.

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The recent economic downturn has affected, and is likely to continue to adversely affect, our operations and financial condition potentially impacting our ability to continue as a going concern.

The recent economic downturn has resulted in a reduction in new construction and less than favorable credit markets, both of which may adversely affect us. Certain vendors from which we currently secure parts for our ConsERV product have and may continue to either reduce or eliminate payment terms. Hence, more capital is required to secure parts necessary to produce our products. In addition, our products are often incorporated in new construction which has experienced a decided down turn in project starts over the past year and such trend is expected for 2011. Although the portion of new construction most affected is home sales, which represents a minority of our sales, commercial construction has also experienced a reduction in starts with some projects being delayed and possibly eliminated. If the commercial construction market stagnates or decreases in volume or project size, our operations and financial condition could be negatively impacted. Expenditures under the United States economic stimulus plan appear to have targeted energy products. ConsERV may qualify under said program and we may potentially benefit from such program. However, when and if we will experience any increase in sales or investment due to this program is uncertain. As noted above, we intend to continue to finance operations, including the repayment of all outstanding debt, including but not limited to the convertible note and unsecured promissory notes, primarily through private sales of debt and equity securities. In light of the recent economic downturn we may not be able to secure additional financing on acceptable terms, if at all. Unfavorable terms for a financing transaction would adversely impact our business, financial condition and/or results of operations. In the event we are unable to secure additional financing our business may fail.

If we fail to successfully address the challenges, risks and uncertainties associated with operating as a public company, our business, results of operations and financial condition would be materially harmed.

We have and will continue to incur a significant increase in costs as a result of operating as a public company, and our management has and will be required to devote substantial time to new compliance initiatives. Until November of 2008 we had never operated as a public company. In preparation for and since reporting as a public company, we have and expect to continue to incur significant legal, accounting and other expenses that we did not incur as a non-reporting company. In addition, the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act), as well as new rules subsequently implemented by the Securities and Exchange Commission (the SEC) and various stock exchanges, has imposed many new requirements on public companies, including requiring changes in corporate governance practices. Our management and other personnel have and will continue to devote a substantial amount of time to these new compliance procedures.

We have and will continue to incur significant increased costs as a result of operation as a public company, and our management has and will continue to be required to devote substantial time to new compliance initiatives.

As a public company, we are now subject to the reporting requirements of the Securities and Exchange Act of 1934, as amended (the Exchange Act), the Sarbanes-Oxley Act and the rules promulgated by the SEC and the NASDAQ Global Market in response to the Sarbanes-Oxley Act. The requirements of these rules and regulations have and will continue to significantly increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may strain our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls for financial reporting. As a result, management's attention may be diverted from other business concerns, which could have a material adverse effect on our business, financial condition and results of operations.

If we or our independent registered public accounting firm identifies deficiencies in our internal controls that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by SEC or other regulatory authorities, which would entail expenditure of additional financial and management resources.

These rules and regulations could also make it more difficult for us to attract and retain qualified independent members of our Board of Directors. Additionally, we have found these rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance. We have, and may be required once again, to accept reduced policy limits and/or coverage or incur substantially higher costs to obtain the same or similar coverage.

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Our ConsERV product is in small volume production, we have no long term experience manufacturing our products on a commercial basis and may not be able to achieve cost effective large volume production.

Our ConsERV product is built in growing volumes. Our ability to achieve commercial production of that product is subject to significant uncertainties, including: completion of necessary product automation, developing experience in manufacturing and assembly on a large commercial scale; assuring the availability of raw materials and key component parts from third party suppliers; and developing effective means of marketing and selling our product.

We are in the process of assembling our ConsERV product at our facility in Odessa, Florida with overflow being produced by outsourced firms, which limits our capital outlay. Initial production costs of this product line are high with no or a lower than desired profit margin. As a result, we believe we will need to reduce unit production costs, including the nano-structured materials themselves made to our specifications by third parties, over time in order to offer our products at a profitable basis on a commercial scale. Our ability to achieve cost reductions in all areas of nano-structured materials and value added products depends on entering into suitable manufacturing relationships with component suppliers, as well as increasing sales volumes so that we can achieve economies of scale. A failure to achieve a lower cost structure through economies of scale and improvements in engineering and manufacturing in a timely manner would have a material adverse effect on our business and financial results. There can be no assurance that we will obtain higher production levels or that the anticipated sales prices of our products will ever allow an adequate profit margin.

We may not be able to meet our product development and commercialization milestones.

We have established internal product and commercialization milestones and dates for achieving development goals related to technology and design improvements of our products. To achieve these milestones we must complete substantial additional research, development and testing of our products and technologies. Except for our ConsERV product, we anticipate that it will take at least 6 to 48 months to develop and ready for scaled production our other products. Product development and testing are subject to unanticipated and significant delays, expenses and technical or other problems. We cannot guarantee that we will successfully achieve our milestones. Our business strategy depends on acceptance by key market participants and end-users of our products.

Our plans and ability to achieve profitability depend on acceptance by key market participants, such as vendors and marketing partners, and potential end-users of our products. We continue to educate designers and manufacturers of HVAC equipment with respect to our ConsERV product. More generally, the commercialization of our products may also be adversely affected by many factors that are out of our control, including:

willingness of market participants to try a new product and the perceptions of these market participants of the safety, reliability and functionality of our products;

emergence of newer, possibly more effective technologies;

future cost and availability of the raw materials and components needed to manufacture and use our products;

cost competitiveness of our products; and

adoption of new regulatory or industry standards which may adversely affect the use or cost of our products.

Accordingly, we cannot predict with any certainty that there will be acceptance of our products on a scale sufficient to support development of mass markets for those products.

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We are dependent on third party suppliers and vendors for the supply of key components for our products.

We are dependent on third parties to manufacture the key components needed for our nano-structured based materials and value added products made with these materials. Accordingly, a supplier's failure to supply components in a timely manner, or to supply components that meet our quality, quantity and cost requirements, technical specifications, or the inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us, would create delays in production of our products or increase unit costs of production. Certain of the components contain proprietary products of our suppliers, or the processes used by our suppliers to manufacture these components are proprietary. If we are required to replace any of our suppliers, while we should be able to obtain comparable components from alternative suppliers at comparable costs, this would create a delay in production. If we experience such delays or our third party suppliers and vendors fail to supply us with components that meet our quality, quantity, or cost standards, we may lose our customers or be subject to product liability claims. Our applications require extensive commercial testing and will take long periods of time to commercialize.

Our nano-structured materials and associated applications need to undergo extensive testing before becoming commercial products. Consequently, the commercialization of our products could be delayed significantly or rendered impractical. Moreover, much of the commercial process testing will be dependent on the efforts of others. Any failure in a manufacturing step or an assembly process may render a given application or our nano-structured materials unsuitable or impractical for commercialization. Testing and required development of the manufacturing process will require the expenditure of funds and take time and effort.

We have not devoted any significant resources towards the marketing and sale of our products, we expect to face intense competition in the markets in which we do business, and expect to rely, to a significant extent, on the marketing and sales efforts of third parties that we do not control.

To date, we primarily focused on the sale of the ConsERV and, while we have sold increasing quantities of our products, even by adding staff experienced in the industry we continue to experience a learning curve in the marketing and sale of products on a commercial basis. We expect that the marketing and sale of the ConsERV product will continue to be conducted by a combination of independent manufacturers representatives, third-party strategic partners, distributors, or OEMs. Consequently, commercial success of our products will be dependent largely on the efforts of others. We intend to enter into additional strategic marketing and distribution agreements or other collaborative relationships to market and sell our nano-structured materials and value added product. However, we may not be able to identify or establish appropriate relationships in the future. Even if we enter into these types of relationships, we cannot assure you that the distributors or OEMs with which we form relationships will focus adequate resources on selling our products or will be successful in selling them. In addition, our chosen third-party distributors or OEMs may require us to provide volume price discounts and other allowances, customize our products or provide other concessions which could reduce the potential profitability of these relationships. To the extent any strategic relationships that we establish are exclusive, we may not be able to enter into other arrangements at a time when the distributor with which we form a relationship is not successful in selling our products or has reduced its commitment to marketing our products. Failure to develop sufficient distribution and marketing relationships in our target markets will adversely affect our commercialization schedule and, to the extent we enter into such relationships, the failure of our distributors and other third parties in assisting us with the marketing and distribution of our products may adversely affect our financial condition and results of operations.

We will face intense competition in the markets for our product applications for our nano-structured materials and value-added products made from these materials. We will compete directly with currently available products, some of which may be less expensive. The companies that make these other products may have established sales relationships and more name-brand recognition in the market than we do. In addition, some of those companies may have significantly greater financial, marketing, manufacturing and other resources.

Our future results could be harmed by economic, political, regulatory and other risks associated with international sales and operations.

We intend to market, distribute and service our products on an international basis and expect to derive a significant portion of our revenue in coming years from international sales. If we fail to successfully sell our products internationally, our ability to increase our future revenue and grow our business would be impaired. We have limited experience developing, and no experience manufacturing, our products to comply with the commercial, regulatory and legal requirements of international markets. Our success in those markets will depend on our ability to secure relationships with foreign resellers and our ability to manufacture products that meet foreign regulatory and commercial requirements. In addition, our planned international operations could be harmed by a variety of factors, including but not limited to:

difficulties in collecting international accounts receivable;

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increased costs associated with maintaining international marketing efforts;

compliance with potential United States Department of Commerce export controls;

increases in duty rates or other adverse changes in tax laws;

trade protection measures and import or export licensing requirements;

fluctuations in currency exchange rates;

political and economic instability in foreign countries; and

difficulties in securing and enforcing intellectual property rights, foreign (where filed and obtained) or domestic, and time and complexities of vetting and establishing relations with foreign resellers or licensees including but not limited to designing, validating and marketing a product geared specifically to a particular market segment.

We depend on our intellectual property and failure to protect it could enable competitors to market products with similar features that may reduce demand for our products.

We currently have seven United States patents, seven patent applications and co-own two patent applications, some of which apply to the composition and structure of a family of ion conducting polymers and membranes. These patents and patent applications often make reference to applications for, and in some instances, are application patents relating to materials we are developing. Our patent applications may or may not mature into issued patents.

Our success depends, to a significant extent, on the technology that is incorporated in our product. Although some of the inventions which we have obtained or applied for patent protection are no longer suitable for use with our planned products, we believe that some of the other inventions covered by the patents and patent applications are important to the success of our products. If we are unable to protect our intellectual property, competitors could use our intellectual property to market products similar to our products, which could reduce demand for our products. We may be unable to prevent unauthorized parties from attempting to copy or otherwise obtain and use our products or technology. Policing unauthorized use of our technology is difficult, and we may not be able to prevent misappropriation of our technology, particularly in foreign countries where the laws may not protect our intellectual property as fully as those in the United States. Others may circumvent trade secrets, trademarks and copyrights that we own or may own. Any such infringements, or any alleged infringements, could have a material adverse effect on our business, results of operations, and financial condition.

Any of the United States patents or foreign patents owned by us or subsequently issued to us may be invalidated, circumvented, challenged or rendered unenforceable. We may not be issued any patents as a result of our pending and future patent applications and any patents we are issued may not have the claim coverage sought by us or necessary to prevent others from introducing similar products. Any litigation surrounding our patent rights could force us to divert significant financial and other important resources away from our business operations.

Some of our intellectual property is not covered by any patent or patent application. We seek to protect this proprietary intellectual property, which includes intellectual property that may not be patented or patentable, in part by confidentiality agreements with our distributors and employees. These agreements afford only limited protection and may not provide us with adequate remedies for any breach or prevent other persons or institutions from asserting rights to intellectual property arising out of these relationships. In addition, we cannot assure you that these agreements will not be breached, that we will have adequate remedies for any such breach or that the parties to such agreements will not assert rights to intellectual property arising out of these relationships.

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Members of any scientific advisory board we had in the past or may have in the future have been or may be employed by entities other than us, some of which may compete with us. While we intend to enter into non-competition agreements with our scientific advisors, if any of them were to consult with or become employed by any of our competitors, our business could be negatively affected.

We have entered into agreements with various third parties that may affect our intellectual property rights.

We have entered into agreements with various third parties in connection with the development of various applications for our technology. Those agreements generally provide for the third party to own any resulting intellectual property rights and often provide for the grant of a license to us relating to those rights. We cannot assure you that the terms of any such licenses will not limit our ability to apply such rights to specific applications in competition with the relevant third party, which may adversely affect our business.

Our products employ technology that may unknowingly infringe on the proprietary rights of others, and, as a result, we could become liable for significant damages and suffer other harm.

We cannot assure you that our technologies and products do not or will not infringe on the proprietary rights of third parties or that third parties will not assert infringement claims against us in the future. We are aware of some patents in the nano-materials field held by potential competitors and other third parties. We cannot assure you that a third party will not claim infringement by us with respect to these patents, other patents or proprietary rights, or that we would prevail in any such proceeding. Any such infringement claim, whether meritorious or not, could:

be time-consuming;

result in costly litigation or arbitration and the diversion of technical and management personnel, as well as the diversion of financial resources from business operations;

require us to develop non-infringing technology or seek to enter into royalty or licensing agreements; or

require us to cease use of any infringing technology.

We may not be successful in developing non-infringing technologies. Royalty or licensing agreements, if required, may not be available on terms acceptable to us, or at all, and could significantly harm our business and operating results. A successful claim of infringement arising from the existence of a submarine patent or another existing patent against us or our failure or inability to license the infringed or similar technology could require us to pay substantial damages and could harm our business. In addition, to the extent we agree to indemnify customers or other third parties against infringement of the intellectual property rights of others, a claim of infringement could disrupt or terminate their ability to use, market or sell our products.

We may not be able to control our warranty exposure, which could increase our expenses.

We currently offer and expect to continue to offer a warranty with respect to our ConsERV product and we expect to offer a warranty with each of our future product applications. If the cost of warranty claims exceeds any reserves we may establish for such claims, our results of operations and financial condition could be adversely affected.

We may be exposed to lawsuits and other claims if our products malfunction, which could increase our expenses, harm our reputation and prevent us from growing our business.

Any liability for damages resulting from malfunctions of our products could be substantial, increase our expenses and prevent us from growing or continuing our business. Potential customers may rely on our products for critical needs, such as backup power. A malfunction of our products could result in warranty claims or other product liability. In addition, a well-publicized actual or perceived problem could adversely affect the market's perception of our products. This could result in a decline in demand for our products, which would reduce revenue and harm our business. Further, since our products are used in devices that are manufactured by other manufacturers, we may be subject to product liability claims even if our products do not malfunction.

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Our key employees are critical to our success and the loss of any key employees could impair our ability to execute our strategy and grow our business.

Our future success depends, to a significant extent, on the continued service of our executive officers and other key technical, sales and senior management personnel and their ability to execute our growth strategy, all of whom have non-compete agreements with us which may not withstand court review if litigation were to occur. The loss of the services of any of our senior level management or other key employees could harm our business. Our future performance will depend, in part, on our ability to retain management personnel and for our executive officers to work together effectively. Our executive officers may not be successful in carrying out their duties or running our business. Any dissent among executive officers could impair our ability to make strategic decisions.

We have, when required, reduced the salaries of our employees. Such salary reductions may have an adverse effect on our ability to retain key employees.

If we fail to attract, retain and motivate qualified employees, we may be unable to execute our business strategy.

Our future success will depend in part on our ability to attract and retain highly qualified individuals, including researchers, engineers, sales and marketing personnel and management. Competition for these individuals may become intense, and it may become increasingly difficult to attract, assimilate and retain these highly qualified persons. Competitors and others may attempt to recruit our employees. Should we experience attrition or need to augment our staff, the cost of securing personnel may be significantly higher than currently experienced and thus negatively impact our financial position.

Our failure to manage our growth could harm our business.

We may grow in the number of our employees, the size of our physical facilities and the scope of our operations. In addition, we intend to focus greater resource on ConsERV margins, sales/marketing activities and channel expansion, and marketplace education. Any expansion would likely place a significant strain on our senior management team and other internal and external resources. Furthermore, we may be required to hire additional senior management personnel. Our ability to manage growth will depend in part on our ability to continue to enhance our operating, financial and management information systems. Our personnel, systems and controls may be unable to support any growth we may experience and as a result, our financial results would suffer.

Any acquisitions we make could disrupt our business and harm our financial condition.

As part of our growth strategy we may review opportunities to acquire other businesses or technologies that would complement our products, expand the breadth of our target markets or enhance our technical capabilities. Acquisitions entail a number of risks that could materially and adversely affect our business and operating results, including but not limited to:

problems integrating the acquired operations, technologies or products with our existing businesses and products;

constraints arising from increased expenses and working capital requirements;

constraints on our ability to incur debt;

dilution of our stock if we issue additional securities;

disruption of our ongoing business, diversion of capital and distraction of our management;

difficulties in retaining business relationships with suppliers and customers of acquired companies;

difficulties in coordinating and integrating overall business strategies, sales, marketing, research and development efforts;

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potential liabilities in businesses and facilities acquired;

difficulties in maintaining corporate cultures, controls, procedures and policies;

difficulties evaluating risks associated with entering markets in which we lack prior experience; and

potential loss of key employees.

Our revenue and operating results may fluctuate significantly as a result of factors outside of our control, which could cause the value of our business to decline.

Unless and until we establish a predictable sales record for our products, we expect our revenue and operating results to vary significantly from quarter to quarter. As a result, quarterly comparisons of our financial results are not necessarily meaningful and you should not rely on them as an indication, in any manner, of our future performance. In addition, due to our stage of development, we cannot predict our future revenue or results of operations accurately. As a consequence, our operating results may fall below the expectations of investors, which could cause the valuation of our company to decline.

We expect to make significant investments in all areas of our business, particularly in research and product development and in expanding in-house or outsourced manufacturing capability. Because the investments associated with these activities are relatively fixed in the short-term, we may be unable to adjust our spending quickly enough to offset any unexpected shortfall in our revenue growth. In addition, because we are in the early stages of commercializing the ConsERV application and anticipate that it will take at least an additional 6 to 48 months to develop our other products for commercial sales, we expect our order flow to be uneven from period to period.

Risks Related to Our Industry

If our products fail to meet certain technical standards, we could be subject to claims, fines or other penalties and we may be curtailed from conducting our business operations.

Our nano-structured membrane products are designed for specific applications with specific technical objectives and standards. If these membranes, or the hardware device(s) used to make the membranes work, fail to meet those technical objectives and/or standards, we could be liable for potential personal injury, loss of life and damages (including consequential damages). Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred by reason of said claims, including, but not limited to, environmental damage claims, and in certain instances, we may not be reimbursed at all. Our business is subject to numerous federal, state and local laws, regulations and policies that govern environmental protection. These laws and regulations have changed frequently in the past and may continue to do so in the future. Our operations may not comply with such changes and we may be required to make significant unanticipated capital and operating expenditures to comply with such changes. If we fail to comply with any such applicable environmental laws and regulations, governmental authorities may seek to impose fines or other penalties on us or to revoke or deny the issuance or renewal of certain permits issued to us. Accordingly, we might be subject to damage claims or penalties, and we may be curtailed from conducting our business operations.

We could be liable for environmental damages resulting from our research, development and manufacturing operations.

Our business may expose us to the potential risk of harmful substances escaping into the environment, resulting in potential personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in certain instances, we may not be reimbursed at all. Our business may be or become subject to numerous federal, state and local laws, regulations and policies that govern environmental protection. These laws and regulations have changed frequently in the past and may continue to do so in the future. Our operations may not comply with such changes and we may be required to make significant unanticipated capital and operating expenditures to comply with such changes. If we fail to comply with applicable environmental laws and regulations, governmental authorities may seek to impose fines or other penalties on us or to revoke or deny the issuance or renewal of certain permits issued to us. Accordingly, we might be subject to damage claims or penalties, and we may be curtailed from conducting our business operations.

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Future government regulation may impair our ability to market and sell our products.

Our current and planned products are potentially subject to federal, state, local and foreign laws and regulations governing, among other things, emissions to air as well as laws relating to occupational health and safety. As these products are introduced commercially, it is possible that governmental authorities will adopt new regulations that will limit or curtail our ability to market and sell such products. We may also incur substantial costs or liabilities in complying with such new governmental regulations. Our potential customers and distributors, some of which operate in highly regulated industries, may also be required to comply with new laws and regulations applicable to products such as ours, which could adversely affect their interest in our products.

Alternatives to our technology could render our systems obsolete prior to commercialization.

Our nano-structured materials and their identified uses are one of a number of products being developed today as potential answers to perceived market needs such as additional water sources, energy and emissions savings with regard to HVAC operation, alternative energy storage and clean power sources. Improvements are also being made to the existing products. Technological advances in all fields and improvements in key targeted application areas with existing or different new technology may render our nano-structured material approach obsolete before or during commercialization.

Risks Related to This Offering and an Investment in Our Securities

Our common stock has traded only sporadically and is expected to experience significant price and volume volatility in the future which substantially increases the risk of loss to persons owning our common stock.

We intend to apply for listing of our common stock on AMEX, which listing we expect to occur immediately prior to the consummation of this offering. No assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering and the shares of our common stock will continue to be traded on the OTC Bulletin Board.

Our common stock has been quoted on the Pink OTC Markets, Inc.'s Pink Sheets since November 15, 2005 and the Over the Counter Bulletin Board since November 24, 2008. The market price of our common stock has been and will likely continue to be subject to fluctuations. In addition, the stock market in general and the market for technology companies in particular, have from time to time experienced significant price and volume fluctuations that have been often unrelated or disproportionate to the operating performance of such companies. These broad market and industry factors may cause our common stock to materially decline, regardless of our operating performance. Because of the limited trading market for our common stock, and the possible price volatility, you may not be able to sell your shares of common stock when you desire to do so. The inability to sell your shares in a rapidly declining market may substantially increase your risk of loss because of such illiquidity and because the price for our common stock may suffer greater declines because of its price volatility. In the past, following periods of volatility in the stock market and the market price of a particular company's securities, securities class action litigation has often been instituted against that company. Litigation of this type could result in substantial legal fees and other costs, potential liabilities and a diversion of management's attention and resources.

We have not and do not intend to pay dividends on our common stock.

The payment of dividends upon our capital stock is solely within the discretion of our board of directors and dependent upon our financial condition, results of operations, capital requirements, restrictions contained in our future financing instruments and any other factors our board of directors may deem relevant. We have never declared or paid a dividend on our common stock and, because we have very limited resources, we do not anticipate declaring or paying any dividends on our common stock in the foreseeable future. Rather, we intend to retain any future earnings for the continued operation and expansion of our business. It is unlikely, therefore, that the holders of our common stock will have an opportunity to profit from anything other than potential appreciation in the value of our common shares held by them.

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Our executive officers and directors have significant shareholdings, which may lead to conflicts with other shareholders over corporate governance matters.

As of February 11, 2011, our directors and officers, as a group, beneficially own approximately 32.7% of our outstanding common stock, including shares of common stock issuable upon exercise of warrants and options they hold. Acting together, these shareholders would be able to significantly influence all matters that our shareholders vote upon, including the election of directors, mergers or other business combinations.

There is no guarantee that our shares will be listed on AMEX.

Following the filing of the registration statement of which this prospectus is a part we will apply to have our common stock listed on AMEX. We believe that we will satisfy the listing requirements of AMEX. Such listing, however, is not guaranteed. If the application is not approved, we will not complete this offering and the shares of our common stock will continue to be traded on the OTC Bulletin Board. Even if such listing is approved, we may not be able to meet the requirements for continued listing, and there may not be any broker interested in making a market for our stock. Therefore, it may be difficult to sell your shares of common stock if you desire or need to sell them. Our underwriter, MDB Capital Group, LLC, is not obligated to make a market in our securities, and even if it chooses to do so it can discontinue at any time without notice. It is possible that an active and liquid trading market in our securities may never develop or, if one does develop, that the market will continue.

Our securities are characterized as microcap stock, and are subject to a number of unique risks.

The term microcap stock applies to companies with low or micro capitalizations, meaning the total market value of the company's stock. Our securities are characterized as microcap stock, and are subject to a number of unique risks. Many microcap companies tend to be new and have no proven track record. Some of these companies have limited or no assets or operations. Others have products and services that are still in development or have yet to be tested in the market. Another risk that pertains to microcap stocks involves the low volumes of trades. Because microcap stocks trade in low volumes, any size of trade can have a large percentage impact on the price of the stock. While all investments involve risk, microcap stocks can be among the most risky.

Unless an active trading market develops for our securities, shareholders may have difficulty or be unable to sell their shares of common stock.

We cannot predict the extent to which an active public market for our common stock will develop or be sustained. It is a condition to the closing of this offering that we be listed on the AMEX but we cannot assure you that we will be able to meet the requirements for continued listing going forward.

Our common stock is currently quoted on the OTC:BB under the symbol DLYT. However, currently there is not an active trading market for our common stock, meaning that the number of persons interested in purchasing shares of our common stock at or near ask prices at any given time may be relatively small or non-existent, and there can be no assurance that an active trading market may ever develop or, if developed, that it will be maintained. There are a number of factors that contribute to this situation, including, without limitation, the fact that we are a small development-stage company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven, development-stage company such as ours or purchase or recommend the purchase of shares of our common stock until such time we become more seasoned and viable.

As a consequence, our stock may be characterized by a lack of liquidity, sporadic trading, larger spreads between bid and ask quotations, and other conditions that may affect shareholders' ability to re-sell our securities. Moreover, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. Unless an active trading market for our common stock is developed and maintained, shareholders may be unable to sell their common stock and any attempted sale of such shares may have the effect of lowering the market price of our common stock and a shareholder's investment could be a partial or complete loss.

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Since our common stock is thinly traded, it is more susceptible to extreme rises or declines in price and shareholders may not be able to sell their shares at or above the price paid.

Since our common stock is thinly traded, its trading price is likely to be highly volatile and could be subject to extreme fluctuations in response to various factors, many of which are beyond our control, including:

the trading volume of our shares;

the number of securities analysts, market-makers and brokers following our common stock;

new products or services introduced or announced by us or our competitors;

actual or anticipated variations in quarterly operating results;

conditions or trends in our business industries;

announcements by us of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;

additions or departures of key personnel;

sales of our common stock;

general stock market price and volume fluctuations of publicly-quoted, and particularly microcap, companies; and

material legal action.

Shareholders, including but not limited to those who hold shares as a result of the exercise or conversion of our convertible securities and warrants, may have difficulty reselling shares of our common stock, either at or above the price paid, or even at fair market value. The stock markets often experience significant price and volume changes that are not related to the operating performance of individual companies, and because our common stock is thinly traded it is particularly susceptible to such changes. These broad market changes may cause the market price of our common stock to decline regardless of how well we perform as a company. In addition, and as noted below, our shares are subject to the penny stock regulations. Price fluctuations in such shares are particularly volatile and subject to manipulation by market-makers, short-sellers and option traders.

Our common stock is subject to the penny stock regulations, which are likely to make it more difficult to sell.

Although we anticipate the offering price of our common stock in this offering will be a minimum of \$ _____ and we expect the market price of our common stock to be greater than \$ _____, it is possible that the market price could fall below this amount, and thus we would again be subject to the penny stock rules. The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. These rules generally have the result of reducing trading in such stocks, restricting the pool of potential investors for such stocks, and making it more difficult for investors to sell their shares once acquired. Prior to a transaction in a penny stock, a broker-dealer is required to:

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deliver to a prospective investor a standardized risk disclosure document that provides information about penny stocks and the nature and level of risks in the penny stock market;

provide the prospective investor with current bid and ask quotations for the penny stock;

explain to the prospective investor the compensation of the broker-dealer and its salesperson in the transaction;

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provide investors monthly account statements showing the market value of each penny stock held in their account; and

make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction.

These requirements may have the effect of reducing the level of trading activity in the secondary market for a stock that is subject to the penny stock rules. Since our common stock is subject to the penny stock rules, investors in our common stock may find it more difficult to sell their shares.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Affiliates may sell after six months subject to the Rule 144 volume, manner of sale (for equity securities), current public information and notice requirements. Of the 33,306,215 shares of our common stock outstanding as of February 11, 2011, approximately 20,584,596 shares are held by non-affiliates and are, or will be, freely tradable without restriction, and the remaining shares are held by our affiliates, as of such date. In addition, 320,089 shares of our common stock are issuable upon conversion of convertible debt in the principal amount of \$50,000, plus accrued interest, all of which if issued would be freely tradable without restriction. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price of \$ _____ per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$ _____ per share in the net tangible book value of the common stock at September 30, 2010. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

A large number of shares may be sold in the market following this offering, which may depress the market price of our common stock.

A large number of shares may be sold in the market following this offering, which may depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. If there are more shares of common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares.

Upon completion of this offering and assuming the sale of all _____ shares of our common stock offered pursuant to this prospectus, we will have approximately _____ shares of our common stock outstanding and _____ shares of common stock equivalents (including the conversion of \$50,000 principal amount of convertible debt, plus accrued interest), and an anticipated offering price of \$ _____ per share.

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DETERMINATION OF OFFERING PRICE

Although our common stock is currently quoted on the OTC Bulletin Board, we are applying to have our common stock listed for trading on AMEX which we expect to occur immediately prior to the consummation of this offering. Trading of a security on AMEX is made a specialist. Our underwriter, MDB Capital Group LLC, however, is not obligated to make a market in our securities, and even if it chooses to make a market, can discontinue at any time without notice. Neither we nor the underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

our history and our prospects;

the industry in which we operate;

our past and present operating results;

the previous experience of our executive officers; and

the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. That price is subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

USE OF PROCEEDS

Based on an assumed offering price of \$ _____ per share, we estimate the gross proceeds from the sale of _____ shares of common stock, prior to deducting underwriting discounts and commissions and the estimated offering expenses payable by us, will be approximately \$15.0 million (approximately \$17.3 million if the over-allotment option granted to the underwriter is exercised in full).

We estimate that we will receive net proceeds of \$ _____ million, after deducting underwriting discounts and commissions and our underwriter's expense allowance and estimated expenses of approximately \$ _____ million, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares. If the underwriter exercises its right to purchase an additional _____ shares of common stock to cover over-allotments, we will receive an additional \$ _____ million, after deducting \$ _____ million for underwriting discounts and commissions.

We currently intend to use the net proceeds of this offering for working capital and general corporate purposes, and repayment of certain indebtedness with a summary of the use of proceeds shown below: (numbers in thousands)

Working capital	\$ 4,450
Debt	900
Working capital and general corporate purposes	7,750
Net Proceeds	13,100
Expense (professional and brokers fees)	1,900

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Total Gross Proceeds

\$ 15,000

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In addition, we may use a portion of any net proceeds to acquire complementary products, technologies or businesses. We will have significant discretion in the use of any net proceeds. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of our common stock. We may invest the net proceeds temporarily until we use them for their stated purpose.

DESCRIPTION OF BUSINESS

Dais Analytic Corporation is a nano-structure polymer technology materials company that has developed and is commercializing applications using its materials. The first commercial product is called ConsERV, a fixed plate energy recovery ventilator which we believe is useful in meeting building indoor fresh air requirements while saving energy and lowering emissions for most forms of Heating, Ventilation and Air Conditioning (HVAC) equipment. We are developing other nano-structure polymer technology applications including (i) NanoAir, a water based packaged heating and cooling system and (ii) NanoClear, a water clean-up process useful in the creation of potable water from sea, brackish or waste water. We further believe that our nano-structure polymer technology may be useful in developing an ultra-capacitor, a device that may be capable of greater energy density and power per pound than traditional capacitors or batteries.

Formation History

We were incorporated as a New York corporation on April 8, 1993 as Dais Corporation. We subsequently changed our name to Dais Analytic Corporation on December 13, 1999. We were formed to develop new, cost-effective polymer materials for various applications, including providing a lower cost membrane material for Polymer Electrolyte Membrane (PEM) fuel cells. We believe our research on materials science has yielded technological advances in the field of selective ion transport polymer materials.

In December 1999, we purchased the assets of Analytic Power Corporation, which was founded in 1984 to provide fuel cell and fuel processor design and consulting services, systems integration and analysis services to develop integrated fuel cell power systems, and we were re-named Dais Analytic Corporation. Analytic Power Corporation developed a portfolio of fuel cell and related fuel cell component technologies, including fuel cell stack designs, a membrane electrode assembly process, and natural gas, propane, diesel and ammonia fuel processors for use in creating integrated fuel cell systems.

In March 2002, we sold substantially all of our fuel cell assets to a large U.S. oil company for a combination of cash and the assumption by such company of certain of our obligations. After we sold a substantial portion of our fuel cell assets, we focused on expanding our nano-structured polymer platform, having already identified the Energy Recovery Ventilator (ERV) application as our first commercial product.

Technology

We use proprietary nano-technology to reformulate thermoplastic materials called polymers. Nano-technology involves studying and working with matter on an ultra-small scale. One nanometer is one-millionth of a millimeter and a single human hair is around 80,000 nanometers in width. Polymers are chemical, plastic-like compounds used in diverse products such as Dacron, Teflon, and polyurethane. A thermoplastic is a material that is plastic or deformable, melts to a liquid when heated and to a brittle, glassy state when cooled sufficiently.

These reformulated polymers have properties that allow them to be used in unique ways. We transform polymers from a hard, water impermeable substance into a material which water and similar liquids can, under certain conditions, diffuse (although there are no openings in the material) as molecules as opposed to liquid water. Water and similar liquids penetrate the thermoplastic material at the molecular level without oxygen and other atmospheric gases penetrating the material. It is believed this selectivity is dependent on the size and type of a particular molecule.

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Products

ConsERV

We currently have commercialized the ConsERV product. ConsERV is an HVAC energy conservation product which should, according to various tests, save an average of up to 30% on HVAC ventilation air operating costs, lowers CO₂ emissions and allows HVAC equipment to be up to 30% smaller, reducing peak energy usage by up to 20% while simultaneously improving indoor air quality. This product makes HVAC systems operate more efficiently and results, in many cases, in energy and cost savings. ConsERV attaches onto existing HVAC systems, typically in commercial buildings, to provide ventilation within the structure. It pre-conditions the incoming air by passing through our nano-technology polymer which has been formed into a filter of sorts. The nano-technology filter uses the stale building air that must be simultaneously exhausted to transfer heat and moisture into or out of the incoming air. For summer air conditioning, the core removes some of the heat and humidity from the incoming air, transferring it to the exhaust air stream thereby, under certain conditions, saving energy. For winter heating, the core transfers a portion of the heat and humidity into the incoming air from the exhaust air stream thereby often saving energy.

Our ConsERV product is the primary focus of our resources and commercialization efforts. When compared to similar competitive products, we believe based on test results conducted by the Air-Conditioning, Heating and Refrigeration Institute (AHRI)¹, a leading industry association, ConsERV is twice as effective in managing latent and sensible heat. We expect ConsERV to continue to be our focused commercial product through 2011 with a growing emphasis on moving components of NanoAir technologies towards commercialization.

How ConsERV Works

Most building codes mandate commercial structures to provide certain levels of ventilation determined by use and occupancy. ERVs are systems used by HVAC manufacturers to increase energy efficiencies in HVAC units by transferring heat and humidity between air flows. They do this by capturing a portion of the energy already used to heat or cool air that is being released to the outside and use such released air to condition the incoming air stream. In an air conditioning application, heat and humidity that are part of the incoming air stream are transferred to the cool, dry exhaust air, thereby pre-conditioning the incoming air before it reaches the building's air conditioning system. By pre-conditioning the incoming air, ERVs should increase the operating efficiency of the HVAC unit, thereby lowering the overall costs associated with heating and cooling buildings and potentially reducing the size and initial capital cost of the overall HVAC unit.

ConsERV has a core component made using our nano-structured material and may be described as a high-performance ERV. It is used in conjunction with a building's HVAC equipment. The ConsERV energy recovery ventilator employs nano-technology based materials to create an exchange of sensible (temperature) and latent (humidity) energy between the two air streams using HVAC equipment to provide building ventilation. The first air stream typically exits a building at the temperature and relative humidity level set by the buildings air conditioning and heating equipment. The second air stream comes from the outside environment at a different temperature and relative humidity level and is used to bring outdoor air to the occupants of the building. The ConsERV product uses the energy found in the first air stream (air already cooler or heated) to condition the second air stream (the outdoor air coming in) before the second air stream (outside air) enters the HVAC equipment. The ConsERV product may save energy, in that it often reduces the required energy and size of the HVAC equipment and thereby may lower the cost of providing ventilation. In addition, it may lower carbon dioxide emissions because the HVAC equipment may not need to be used as frequently and often times can be reduced in size to provide the same levels of comfort indoors. The process is shown in the picture below.