MPHASE TECHNOLOGIES INC
Form 10-K
May 15, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

FOR THE YEAR ENDED **JUNE 30, 2016**

COMMISSION FILE NO. **000-30202**

mPHASE TECHNOLOGIES, INC.

(Name of issuer in its charter)

NEW JERSEY	**22-2287503**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
688 New Dorp Lane	
	10306-4933
Staten Island, New York	
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **973-256-3737**

SECURITIES REGISTERED PURSUANT TO SECTION 12(G) OF THE ACT:

COMMON STOCK, $.001 PAR VALUE

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for shorter period that the registrant was required to file such report), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark if the disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendments to the Form 10-K.

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act)

Yes No

As of June 30, 2016, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $3,554,529 based upon the closing sale price as of that date. As of June 30, 2016, there were 17,772,643,845 shares of common stock, $.001 par value, outstanding.

As of May 4, 2018, there were 16,360,514,523 shares of common stock, $.001 par value, outstanding.

Documents Incorporated by Reference

None.

ANNUAL REPORT ON FORM 10-K

FOR THE YEAR ENDED JUNE 30, 2016

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PART I

FORWARD-LOOKING STATEMENTS

This report contains “forward-looking statements.” In some cases, you can identify forward-looking statements by terms such as “may,” “intend,” “might,” “will,” “should,” “could,” “would,” “expect,” “believe,” “estimate,” “predict,” “potential,” o these terms and similar expressions intended to identify forward-looking statements. These statements reflect the Company’s current views with respect to future events and are based on assumptions and subject to risks and uncertainties. The Company discusses many of these risks and uncertainties in greater detail in Part I, Item 1A of this 10-K under the heading “Risk Factors.” These risks and uncertainties may cause the Company’s actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. You should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent the Company’s estimates and assumptions as of the date of this report. The Company is under no duty to update any of the forward-looking statements after the date of this report to conform such statements to actual results or to changes in our expectations.

The following discussion should be read in conjunction with the financial statements and related notes included elsewhere in this report.

ITEM 1. BUSINESS

General Description of the Business

mPhase Technologies, Inc. ("mPhase" or the Company) is a publicly-held New Jersey corporation. The Company has approximately 23,000 shareholders and approximately 17,772,643,845 shares of common stock outstanding as of June 30, 2016. The Company was founded in 1996 and its common stock is traded on the Over the Counter Bulletin Board under the ticker symbol XDSL. The Company had offices in Clifton, New Jersey as well as Norwalk, Connecticut during fiscal year ended June 30, 2016. Beginning in July of 2017 the Company moved its office to Staten Island, New York.

The Company has faced a very challenging environment since March of 2016. Lack of available funds to pay its outside auditors and other transaction costs associated with timely filings with the Securities and Exchange Commission ("SEC") of its periodic financial statements has resulted in the Company being delinquent with respect to such filings starting with its Form 10Q for the 3-month period ended March 31, 2016. The Company is using its best efforts to secure funding required to complete all of its delinquent SEC filings and thereafter remain current with respect to such filings.

mPhase is a company specializing in the research, development and fabrication of "smart surfaces" using materials science engineering, and enabled by breakthroughs in nanotechnology science and the principles of microfluidics and microelectromechanical systems (MEMS). The Company is developing products for both commercial and military applications. To date the Company has concentrated its efforts in Smart Surface Technology on research and development of its Smart Nanobattery.

As of June 30, 2016 the Company has a patent portfolio of 16 patents (licensed, solely and jointly owned), including patent applications pending or subject to reinstatement, in the United States. The patents cover our battery products and our Smart Surfaces Technology –an innovative platform to control the flow of fluids by manipulating the ways liquids behave when in contact with a solid or porous surface.

The Company's first application, using its Smart Surface technology, is a Smart NanoBattery providing Power On Command™. The patent pending and patented battery technology, based on the phenomenon of electrowetting, offers an innovative way to store energy and manage power. Features of the Smart NanoBattery include potentially infinite shelf life prior to initial activation, environmentally friendly design, fast ramp to power, programmable control, and direct integration with microelectronic devices. The platform technology behind the Smart NanoBattery is a porous nanostructured material used to repel and precisely control the flow of liquids. The material has a *Smart Surface* that

can potentially be designed for other innovative products such as a transdermal smart drug delivery system.

mPhase completed a Phase I and Phase II Small Business Technology Transfer Program (STTR) grant, part of the Small Business Innovation Research (SBIR) program, with the U.S. Army for development of a reserve Smart NanoBattery for a critical computer memory application. Such reserve battery can be activated by an electronic pulse. The Army has also successfully tested the Smart NanoBattery as an energy source activated by g forces to provide power to a telemetry system for guidance of small munitions.

The Smart NanoBattery and *Smart Surface* technology is still in development and has not reached a commercialization stage.

In a separate effort, mPhase introduced, through mPower Technologies, Inc., a wholly-owned subsidiary, a product line of four emergency portable jumpstarters for the automotive/marine industries. The following products of mPower Technologies, Inc. generated a total of $523,116 in revenue for the Company in the 12-month period ending June 30, 2016.

In April of 2016, the Company began to wind-down and discontinue this entire product line of Jump Starters and Related Products sold through its subsidiary mPower Technologies, Inc. due to increased competition, contracting margins, and lack of funds to purchase substantial inventory, resulting in purchase volume discounts (See “Subsequent Events” describing the Company’s termination of its entire line of mPower Technologies, Inc products in order to conserve financial resources).

Description of Operations

Microfluidics, MEMS, and Nanotechnology

In February of 2004, mPhase entered the business of materials science engineering developing new products based on materials whose properties and behavior are controlled at the micrometer and nanometer scales. (For reference, a micrometer or micron is equal one millionth (10-6) of a meter and a nanometer is one billionth (10-9) of a meter – the scale of atoms and molecules. A human hair is approximately 50 microns in diameter, or 50,000 nanometers thick.)

The Company has expertise and capabilities in microfluidics, microelectromechanical systems (MEMS), and nanotechnology. Microfluidics refers to the behavior, precise control and manipulation of fluids that are geometrically constrained to a small, typically micrometer scale. MEMS is the integration of mechanical elements, sensors, actuators, and electronics on a common silicon substrate through microfabrication technology. Nanotechnology is the creation of functional materials, devices and systems through control of matter (atoms and molecules) on the nanometer length scale (1-100 nanometers), and exploitation of novel phenomena and properties (physical, chemical, biological, mechanical, electrical) at that length scale.

In its Smart NanoBattery, mPhase exploits the physical phenomenon of electrowetting by which a voltage is used to change the wetting properties of a liquid/solid interface at the nanometer scale. Through electrowetting, mPhase can change a surface from what is referred to as a hydrophobic (“liquid repelling”) state to a hydrophilic (“liquid attracting”) state. In the hydrophobic state, the liquid beads up or is repelled by the surface. In the hydrophilic state, the liquid spreads out or is absorbed by the surface. The ability to electronically control the wetting characteristics of a surface at the nanometer scale is the core of mPhase’s nanotechnology operations and intellectual property portfolio.

In the Smart NanoBattery application, mPhase uses electrowetting as a new technique to activate or literally “turn on” a battery once it is ready to be used for the first time. At the heart of the Smart NanoBattery is a porous, nanostructured superhydrophic or superlyophobic membrane designed and fabricated by mPhase. The so-called superhydrophobic membrane applies to water and the superlyophobic membrane applies to nonaqueous or organic liquids such as ethanol or mineral oil. The difference between the two membrane types lies in the nanoscale architecture at the surface. By virtue of its superhydrophobic or superlyophobic character, the membrane, although porous, can physically separate the liquid electrolyte from the solid electrodes so that the battery remains dormant or inactive, thus providing no voltage, or current until called upon.

This electrolyte-electrode separation gives the battery the feature of potentially unlimited shelf life and the benefit of being always ready when needed, which is not necessarily the case for conventional batteries. Electrowetting alters the

liquid/membrane interface so that the liquid is now able to flow over the membrane's surface and rapidly move through the pores where it can contact the solid electrode materials located on the other side of the membrane. mPhase uses MEMS, to precisely control the machining of silicon-based materials at the micrometer and nanometer scales. This ability has led to the Company's proprietary membrane design that controls the wetting and movement of liquids on a solid surface. mPhase uses microfluidics to control the flow of liquid electrolyte through the porous membrane and is also the basis for other possible applications such as drug delivery and water filtration systems.

History of Nanotechnology Operations

Smart NanoBattery

mPhase Technologies, along with Bell Labs, jointly conducted research from February 2004 through April of 2007 that demonstrated control and manipulation of fluids on superhydrophobic and superlyophobic surfaces to create a new type of battery or energy storage device with power management features obtained by controlling the wetting behavior of a liquid electrolyte on a solid surface. The scientific research conducted set the ground work for continued development of the Smart NanoBattery and forms a potential path to commercialization of the technology for a broad range of market opportunities. The Company began its efforts by entering into a $1.2 million 12-month Development Agreement in February of 2004 with the Bell Labs division of Alcatel/Lucent for exploratory research of control and manipulation of fluids on superhydrophobic surfaces to create power cells (batteries) by controlling wetting behavior of an electrolyte on nanostructured electrode surfaces. The goal was to develop a major breakthrough in battery technology creating batteries with longer shelf lives as the result of no direct electrode contact (meaning no power drain prior to activation). During 2005 and 2006, the battery team tested modifications and enhancements to the internal design of the battery to optimize its power and energy density characteristics, as well as making engineering improvements that were essential in moving the battery from a zinc-based chemistry to a commercial lithium-based chemistry that can be manufactured on a large scale. The Company extended its development effort twice for an additional 2-year period ending in March of 2007 and for two additional periods thereafter through July 31, 2007. During this time, the technical focus shifted from trying to separate the liquid electrolyte from nanostructured electrodes to developing a nanostructured membrane that could physically separate the liquid electrolyte from the solid electrodes. Future development of the Smart NanoBattery is subject to the Company obtaining additional financing in the capital markets.

In addition beginning in February of 2005, mPhase contracted with Bell Labs to develop a magnetometer using the science of nanotechnology. The Company suspended development of this product in 2007 in order to conserve financial resources and focus its nanotechnology efforts primarily on development of innovative battery products.

mPhase also began working with the Rutgers University Energy Storage Research Group (ESRG) in July of 2005 to conduct contract research in advanced battery chemistries involving lithium. This work involved characterizing and testing materials that could be used in the mPhase battery. In July of 2007, the relationship shifted to a collaboration focused on developing a memory backup battery needed by the U.S. Army. The work was funded through a Phase I Small Business Technology Transfer Program (STTR) grant.

The Company decided in September of 2007 to transfer its development work out of Bell Labs (Alcatel/Lucent) in order to accelerate and broaden its nanotechnology product commercialization efforts. Bell Labs had engaged in its battery research and development for the Company for zinc-based batteries and was limited since it did not have facilities capable of handling lithium chemistry. mPhase shifted its work to Rutgers ESRG which had facilities capable of handling lithium-based batteries and also engaged in work with foundries and other companies to supply essential components, fabricate prototypes, and plan manufacturing approaches. These companies included Silex, a well-respected silicon foundry in Sweden, and Eagle Picher, a well-known battery designer and manufacturer that focuses on high-end batteries for military applications located in Joplin, Missouri.

In February of 2008, the Company announced that a prototype of its Smart NanoBattery was successfully deployed in a gun-fired test at the Aberdeen Proving Ground at Maryland. The test was conducted by the U.S. Army Armament Research and Development and Engineering Center (ARDEC) of Picatinny, New Jersey. The battery not only survived the harsh conditions of deployment at a gravitational force in excess of 45,000 g, but was also flawlessly activated in the process.

In March of 2008, mPhase announced that it had been invited to submit a proposal for a Phase II STTR grant based upon the successful work it had performed on the Phase I grant to develop a version of the Smart NanoBattery referred to as the multi-cell, micro-array reserve battery for a critical memory backup application. The Phase II grant in the gross amount of $750,000 (net $500,000) was granted to the Company in the middle of September of 2008. In March of 2008, the Company also announced the successful transfer to a commercial foundry of certain processes critical to the manufacturing of its Smart NanoBattery. This enabled fabrication of the porous membranes for the multi-cell, micro-array reserve battery mentioned above. The Company successfully manufactured nanostructured membranes at the foundry that are essential to commercial production of the battery. By achieving a series of delayed activations, the shelf-life and continuous run-time of such battery can be increased to a period of time in excess of twenty years. In April of 2008, the Company announced that it had successfully activated it first Smart NanoBattery prototype by electrowetting using a hard-wired configuration and a remotely-activated device. Remote activation plays a key role in providing power to wireless sensors systems and radio frequency identification tags.

Also, in April of 2008, the Company announced that it had successfully produced its first lithium-based reserve battery with a soft or pouch package and breakable separator (in place of the electrowettable membrane) that relies on mechanical rather than electrical activation to provide Power On Command™. The Company believed that was a significant milestone in moving from a low energy density zinc-based battery to a higher energy density lithium-based battery.

In fiscal years ended June 30, 2009 and June 30, 2010, the Company focused upon further development of its Smart NanoBattery under a Phase II STTR grant from the U.S. Army as a potential reserve battery for a back-up computer memory application. The Company has completed such Phase II Army grant. On November 12, of 2010, the Company announced that it had successfully triggered and activated its first functional multi-cell smart nanobattery. Triggering and activation of the cells of the battery were achieved by using the technique of electrowetting or programmable triggering. Triggering was accomplished by applying a pulse of electrical energy to a porous, smart surface membrane located inside each cell in the battery causing the electrolyte to come in contact with the cell's electrodes, creating the chemical reaction to produce voltage inside of the multi-cell battery. The multi-cell battery consists of a matrix of 12 individual cells populated with an electrode stack consisting of lithium and carbon monofluoride materials with each rated at 3.0 volts. Using a custom designed circuit board for testing, each of the cells in the battery were independently triggered and activated without affecting any of the non-activated cells in the multi-cell configuration. Each cell in the battery has a very long shelf-life prior to triggering.

On February 9, 2011, the Company announced that it had signed a 3-year Cooperative Research and Development Agreement (CRADA) with the U.S. Army Armament Research, Development, and Engineering Center (ARDEC) at Picatinny, New Jersey, to continue to cooperatively test and evaluate the mPhase Smart NanoBattery, including new design features functionally appropriate for DoD based systems requiring portable power sources. The army researchers are evaluating the prototypes using the Army's testing facilities at Picatinny Arsenal in New Jersey in order to determine applicability of the technology to gun fired munitions and potentially to incorporate the technologies into research and development and other programs sponsored by Picatinny. The Research Agreement is supported by the Fuze & Precision Armaments Technology Directorate.

During fiscal year ended June 30, 2011, the Company completed work on its Phase II STTR grant for the U.S. army for a nano-reserve battery for a back-up computer memory application. In addition, the Company engaged First Principals, Inc. to perform an evaluation of each of its patents in order to identify a strategic partner whose products line will need the Company's SmartNanoBattery as a compelling solution.

On March 6, 2012, the Company announced that it is exploring the printing of its Smart NanoBattery on graphene and other new advanced materials. Graphene is a very strong material that has been described as the most conductive material known, making it a vast improvement over silicon. Graphene has the potential to lead to faster, cheaper and more flexible devices including power sources. mPhase has suspended its exploration of the printing of its Smart NanoBattery on graphene.

On August 16, 2012, the Company announced that it had received a notice of allowance for a patent from the U.S. patent office for a reserve battery utility patent. The techniques described in the patent are for creating a battery system that is easily activated via a low energy mechanical force, thus allowing the reserve battery to be used in a wide variety of consumer related and non-consumer related electrical devices. The invention generally relates to a reserve battery, which includes a battery case having an electrolyte compartment at a first end and an electrode compartment at a second end, a first terminal having an external button connected to the case at the first end, and a second terminal connected to the case at the second end. A movable ampoule is movably positioned within the electrolyte compartment. A bias member is located within the case between the external button and the ampoule, and a porous cutter is positioned within the case between the electrodes and the ampoule and supported by an inverted U-shaped support structure. When an external force is applied to the external button, the bias member transfers an internal force to the ampoule to cause the ampoule to engage the cutter and allow the electrolyte to release thus activating the battery.

On August 23, 2012, the Company announced that, subject to the availability of sufficient funding, it will engage in further development of its Smart NanoBattery to make it rechargeable.

On September 13, 2012, the Company announced that it had received a notice of allowance of a new patent from the U.S. patent office for a modular device. The invention generally relates to a handheld, powered device containing at least one power module having at least one battery, wherein the power module is removable and separately connects to each of the load modules. The patent covers a modular device for providing multiple modular components that may be interchanged as desired. A system for providing a modular device for use in emergency or everyday applications and having a plurality of modular components that are interchangeable with one another depending on the particular desired use.

On October 26, 2012, the Company announced the development of a prototype of a new product “the mPower Jump” designed by Porsche Design Studio and Porsche Engineering as an automatic jump starter for a dead car battery. The device is portable, light in weight and small in size designed to fit in the glove compartment of most cars.

On January 24, 2013, the Company announced that it had received a notice of allowance from the U.S. patent office of a patent covering a device for fluid spreading and transport. The invention relates to a single porous substrate formed from a network of filaments wherein the network of filaments is comprised of a first plurality of filaments and a

second plurality of filaments is exposed to a surface modification treatment and the second plurality of filaments is covered with a conformal coating. A wetting region comprised of the first plurality of filaments extends through a first portion of the porous substrate and is permeable to fluid transport and a non-wetting region comprised of the second plurality of filaments which is operable to switch between a wetting and non-wetting state by an electrical source coupled to the second plurality of filaments. The invention protects a porous substrate with integrated wetting and non-wetting regions and is a key patent win for the Company relative to the protection of its intellectual property in the area of microfluid dynamics.

On January 30, 2013, the Company announced that it had received a patent from the U.S. patent office for a reserve battery system. The invention patented generally relates to a battery system that is easily activated via low mechanical force thus allowing a reserve battery to be used in a wide variety of consumer related and non-consumer related electrical devices.

On February 12, 2013, the Company announced that it has filed a United States Letter Patent application for a novel drug delivery system based on its Smart Surface technology. The drug delivery patent is based on mPhase's Smart Surface technology electronically or manually enabling the precise control of a fluid on a nano-structured surface. The drug delivery system generally relates to a drug delivery system for automatically dispensing a preset dosage of a drug agent or medication.

On June 18, 2013, the Company announced that it had received the Frost & Sullivan award for its Innovative nanobattery technology. Frost& Sullivan noted that the smart nanobattery is sustainable, cost-effective, easy to handle, and possesses a long shelf life, all of which clearly differentiate it from competing battery technologies. Frost & Sullivan further noted that this positions the technology to enhance the effectiveness of conventional batteries and encourage widespread use of reserve batteries.

On March 27, 2014 the Company entered into a three-year renewal of the Cooperative Research and Development Agreement (CRADA) with the United States Army Armament Research, Development and Engineering Center at Picatinny Arsenal of February of 2011. This agreement provides for further joint research and development of the Smart Nanobattery as a power source for smart munitions. The continuation of actual research and development under the CRADA is dependent upon the Company securing additional funding from either the capital markets or from various grant programs to be identified and applied for from the United States government.

On November 17, 2014 the Company announced an update on the drug delivery system patent application filed on February 12, 2013. In December of 2013 the patent office examiner indicated that a significant portion of the claim was patentable. On June 26, 2015 the USPTO issued a new Office Action rejecting the claims. A timely response was filed on September 28, 2015 making minor amendments to the claims to avoid newly cited prior art. The Company is seeking to have all of the claims patented. The drug delivery system utilizes the Company's Smart Surface Technology.

During fiscal year ended June 30, 2015, the Company, through its consumer subsidiary mPower Technologies, Inc., ("mPower"), successfully increased sales of the mPower Jump product as well as the mPower Mini Jump product. The mPower Jump is a rechargeable, compact device designed to jump start a dead battery in an automobile with engines up to 5 liters. The mPhase Jump is rechargeable in a significantly shorter period of time than lead acid jumpstarters and has a much smaller footprint, enabling it to fit in the glove compartment in most cars. The mPower Mini Jump, a smaller version of the product, about the size of a smart phone, is a multipurpose charger of batteries. It is designed to start dead batteries in recreational toys, such as all-terrain vehicles, snowmobiles, motorcycles and jet skis-even a full-size car with engines up to 2.5 liters. It is versatile enough to also charge small electronic devices including cell phones.

During fiscal year ended June 30, 2015, mPower began sales of the Jump Plus, a very powerful version of the Jump product line, powerful enough to jumpstart 12-volt vehicles with engines up to 6 liters. In addition, mPower introduced to the market and commenced sales of its mPower Truck Jump product designed to start dead batteries in most 12-volt battery systems, including trucks with engines up to 12 liters.

During the fiscal year beginning in July 2015 the Company experienced a significant decline in revenues and margins with respect of its jump starter products due to increased competition. The Company did not have purchasing power and financial strength significant enough to (a) obtain significant discounts from its main vendor of such products to lower cost, (b) carry a large volume on inventory of such products compared to its competitors or (c) maintain exclusivity of such products with its main vendor. As a result, the Company's financial position became weaker and in April of 2016 the Company closed its office in Norwalk, Connecticut that had housed both inventory storage and distribution in order to conserve financial resources.

During the fiscal year ended June 30, 2016 the Company received $12,500 for the sale of a patent, $18,000 from the sale of a vehicle to Mr. Dotoli and Debt cancellation of $19,650.

The Company has been unable to file its quarterly and annual reports with the SEC commencing in the third quarter of fiscal year ended June 30, 2016 owing to its overall lack of capital to pay its outside auditors and bear the various transaction costs associated with such filings. In the fiscal year commencing July 1, 2017 the Company has begun an effort to become current in its SEC filings. The ability of the Company to successfully complete such filings will

depend on its ability to raise sufficient funds to engage its outside auditors estimated to be $100,000 and related costs estimated to be $5,000.

DISCONTINUED BUSINESS-

Discontinuance of Internet Protocol Television (IPTV) during Fiscal Year 2010

Historically, the Company, since its inception, had focused upon developing innovative solutions for the delivery of Broadcast Television as part of a “triple play” of services that would include voice and high-speed internet for telephone service providers globally. The Company, however, was not able to derive any significant revenue from its TV+ solution and no active development of the product has occurred since fiscal year 2007. The Company determined to discontinue this line of business and all inventory has been written off. During the fourth quarter of the fiscal year ended June 30, 2010, the Company formally elected, for financial reporting purposes to treat its IPTV product line as a discontinued business.

Discontinuance of Jump Stater Products during Fiscal Year 2016

As noted above, in April of 2016 the Company began discontinuing its operations in its wholly-owned subsidiary mPower Technologies, Inc. which was focused primarily on its line of jump starters for automotive and marine batteries in addition to its line of home generating battery products and its electric illuminator product developed with Porsche Design Studio. The Company is selling off its remaining inventory of such products in order to raise additional funds for working capital purposes and its presently very limited operations. (See Commencing in April of 216, the Company began discontinuing its line of Jump Starter products owing to increased competition and declining margins. The Company continues the wind-down of its remaining inventory of such products estimated to have a value of $23,551 as of June 30, 2016 (See Note 3 caption- “discontinued operations” & Note 13-“Subsequent Events”).

Nanotechnology Products

Platform Technology

The surface is an important part of virtually every physical object and often plays an overriding role in many processes, beyond mere connectivity and structural support, but more deeply into areas involving chemical and biological interactions. In some instances, the surface provides an easy entry into the chemical or biological systems; in others it protects the internal elements of the object, surrounded by the surfaces.

mPhase's current flagship platform technology is the *Smart Surface*. By being able to control the surface properties of materials down to the nanometer scale, new and improved devices can be designed and built that may lead to compelling business opportunities. One type of smart surface of particular interest allows properties to be changed in response to an external stimulus.

Initially, mPhase's development focused on Micro Electronic Mechanic Systems (MEMS) devices by manipulating the surface of silicon materials – the same material used to make microelectronic materials and devices. Using physical and chemical processes, the surface of the silicon is modified to make solid porous structures known as membranes. This is where microfluidics comes into play. These membranes can be used to selectively control the flow of liquids through the pores or openings at the micrometer length scale.

Surfaces may be characterized as *hydrophilic* or *hydrophobic* depending on whether or not they attract or repel water (or other liquids). A hydrophilic surface can be wet and adsorbs water. A hydrophobic surface, on the other hand, cannot be wet. Hydrophilic and hydrophobic surfaces are abundant in nature and in synthetic materials, both organic and inorganic in chemical composition. A familiar example of a hydrophilic surface is a sponge that readily soaks up water. By contrast, many plant leaves and flower petals are hydrophobic, as are insect parts and bird feathers. Synthetic hydrophobic surfaces include Scotchgard™ treated fabric, Teflon® coated metal, or Rain-X® coated glass. On a hydrophobic surface, water beads up and can move around without being absorbed by the solid material that it is resting on.

So-called *superhydrophobic* surfaces are also found in nature and can now be replicated in the lab. The lotus leaf and rose petal, for example, exhibit superhydrophobicity. Here water droplets form almost perfect spheres with hardly any contact with the underlying solid surface. This makes the liquid even easier to move and manipulate.

The synthesis of superhydrophobic surfaces has recently been made possible by advances in nanotechnology and mPhase is leading the way to better understand and create materials and devices incorporating these unique surface properties.

As mPhase's research and development efforts evolve, in addition to silicon materials, the ability to control the surface properties of materials can be extended to other substances such as polymers, ceramics, metals, and fibers providing opportunities for our platform technology to be used in a range of potential applications such as energy storage and power management for portable electronics and microelectronics, self-cleaning surfaces, filters for water purification or desalination systems, materials for environmental remediation that separate liquids or solvents, and other situations where the control of the interaction of a solid surface exposed to a liquid is vitally important.

Smart NanoBattery

Battery technology has changed little in its fundamentals over the past 150 years. As a result, ordinary batteries begin dissipating energy as soon as they are assembled and therefore have limited shelf life. Chemistries are fixed inside the package so the user cannot interact with the contents to program functionality. The size and form of batteries have not kept pace with the miniaturization of electrical components, microprocessors and integrated circuits. As a result, the optimal implementation of an electronic device is not always achieved. Some batteries contain chemicals that are not considered safe or environmentally friendly (“green”). This makes disposal a potential issue.

mPhase is challenging this convention by using their proprietary superhydrophobic porous silicon membrane technology as the basis to build the Smart NanoBattery providing Power On Command™.

Superhydrophobicity initially keeps the liquid electrolyte physically separated from the solid electrodes of the battery, thus preventing the chemical reactions from occurring that cause the battery to provide power. This gives the Smart NanoBattery the benefit of potentially infinite shelf life.

A conventional battery loses some capacity while sitting on the shelf in its package or stored in an electronic or electrical device, even before being used for the first time. On the other hand, the Smart NanoBattery is built so that it is inactive and remains that way indefinitely until it is turned on. No power is lost to self-discharge or leakage current prior to activation. When needed, the Smart NanoBattery can be activated on command via the phenomenon of electrowetting. The surface properties of the porous silicon membrane are selectively controlled to shift instantly from a superhydrophobic to hydrophilic state. In other words, electrowetting acts as the triggering mechanism.

mPhase has successfully fabricated and demonstrated its first 3-volt lithium-based Smart NanoBattery, based on a design allowing either manual or remote activation by the user, the feature known as Power on Command™.

By incorporating the phenomenon of electrowetting on nanostructured surfaces into a revolutionary way of storing energy, the Smart NanoBattery provides power to portable electronic and microelectronic devices exactly when and where it is needed. It is an alternative and an augmentation to conventional batteries, still converting stored chemical energy into usable electrical energy, but in a way that is potentially more reliable, more versatile, more environmentally friendly, and less expensive than the industry norm.

Applications

mPhase is exploring military and commercial applications of smart surfaces in which the properties can be accurately and precisely controlled down to the nanometer scale. Electrowetting allows the switching from a hydrophobic to hydrophilic state as a result of an electronic stimulus.

The Smart NanoBattery, mPhase's first smart surface product, has a unique architecture that enables a shelf life of decades, remote activation, programmable control, scalable manufacturing, and adaptability to multiple configurations. The value proposition to the end user is to have a source of energy or power that is literally always ready - reliable, convenient, low cost - a battery guaranteed to work at full capacity when and where you need it.

The Smart NanoBattery can conceivably supply power "*on command"* to a wide variety of portable electronic and microelectronic devices used in military, medical, industrial, and consumer applications.

mPhase has demonstrated that the battery works in lab tests as well as in a significant field test conducted for the U.S. Army as part of a guided munitions project. The relationship with the Army also included an $850,000 funded project to develop a battery for a mission critical computer memory backup application. The target was a small footprint, 3-volt lithium battery with a minimum shelf life of 20 years and uninterruptible power output during this time period. No other battery technology available today can deliver the long-term performance requirements specified by the U.S. Army for this application.

The Smart NanoBattery can potentially be designed to accommodate a variety of sophisticated portable electronic and microelectronic devices including next-generation cell phones, handheld gaming devices, wireless sensor systems, radio frequency identification tags, high-tech flashlights and beacons, health alert alarms, and non-implantable and implantable medical devices such as pacemakers.

Initial applications will address the need to supply emergency and backup power to a range of products for defense and security, with future applications in the commercial and consumer arenas.

Strategic Alliances

The Company has been in active discussions with Picatinny Arsenal, Picatinny, New Jersey to jointly obtain federal funding under SBIR grants to develop additional new products for military small munitions applications. The Company has a strong historic cooperative relationship for product development and testing. The Company continues to seek opportunities with various potential academic partners to obtain further STTR grants for new product research and development.

In 2007 the Company entered into a Cooperative Research and Development Agreement ("CRADA") with Picatinny Arsenal to test the single cell version of the Smart NanoBattery suitable for future research and development programs for projectile launched munitions. From 2007 through the first quarter of calendar year 2010, numerous internal laboratory air gun simulation tests were performed, including a live-air gun and live gun fired test at the United States Army's facility at Aberdeen Proving Grounds, Aberdeen, Maryland. A prototype of the Smart NanoBattery was the subject of a live fire test as part of a projectile fired out of an Abrams Tank. The results of the test indicated that the battery was activated by 10,000 G forces indicating that it could supply energy necessary to operate a guidance system for small munitions. In addition, the Smart NanoBattery demonstrated extreme resiliency to shock and acceleration since, it survived tests that subjected it to high acceleration of over 30,000 G forces.

On February 9, 2011, the Company announced that it had signed a 3-year CRADA with the U.S. Army Armament Research, Development, and Engineering Center (ARDEC) at Picatinny, New Jersey, to continue to cooperatively test and evaluate the mPhase Smart NanoBattery, including new design features functionally appropriate for DoD based systems requiring portable power sources. The army researchers are evaluating the prototypes using the Army's testing facilities at Picatinny Arsenal in New Jersey to determine applicability of the technology to gun fired munitions and potentially to incorporate the technologies into research and development and other programs sponsored by Picatinny. The Research Agreement is supported by the Fuze & Precision Armaments Technology Directorate. In order for significant further research and development to be performed with respect to the Smart Nano Battery the Company will have to be successful in obtaining additional congressional funding specifically designated for this type of battery. This CRADA was renewed on March 27, 2014 for an additional three-year period by the Army. The Company is currently seeking to enter a new CRADA with the U.S. Army, subject to availability of funding.

BUSINESS OF THE COMPANY

During fiscal year ended June 30, 2015, the Company announced the beginning of sales through mPower of the Jump Plus product that is able to start up to 40 vehicles on a single charge. In addition, mPower introduced its Truck Jump product designed to start dead batteries in larger vehicles and trucks. During the second quarter of fiscal year ended June 30, 2015 mPower recorded a significant increase in sales of the two jump start products.

On December 15, 2014, John Fife, the holder of a $550,000 Convertible Note issued by the Company was granted summary judgment in a Lawsuit and on January 28, 2015 a judgment was ordered against the Company in the amount of $777,769.08 plus (i) pre-judgment interest in the amount of 18% per annum compounding daily from May 31, 2012 , (ii) post-judgment interest on such amount plus the Pre-Judgment Interest at the rate provided by law from the date of the Judgment, and (iii) attorneys' fees and costs in the amount of $288,031.57.

On February 2, 2015, the Securities and Exchange Commission upheld the denial by FINRA to process a proposed reverse stock split for the Company since two officers of the Company had previously been subject to regulatory actions involving securities law violations.

On February 6, 2015 the Company entered into a Forbearance Agreement with John Fife in connection with his Judgment against the Company requiring the Company to pay on February 15, 2015 $15,000 and thereafter on or before the 15th day of each month thereafter the Company agrees to pay to Holder the following amounts (the "***Monthly Cash Payments***"): $30,000.00 per month for the first six (6) Monthly Cash Payments; $35,000.00 per month for the second six (6) Monthly Cash Payments; and $50,000.00 per month thereafter until the Forbearance Amount has been paid in full.

In April of 2015 the Company began accruing, rather than paying, the salaries of three officers of the Company. Messrs. Durando, Dotoli and Smiley in the respective amounts of $120,000, $ 48,000 and $48,000.

On August 11, 2015 the Company and John Fife entered into an Amendment to the Forbearance Agreement Monthly Payments to provide that on or before the 15th day of each month the Company agrees to pay to Holder the following amounts (the "Monthly Cash Payments"): $30,000.00 per month on each of the following dates: March 15, 2015, April 15, 2015, May 15, 2015, June 15, 2015, and July 15, 2015; $15,000.00 per month on each of the following dates: August 15, 2015 and September 15, 2015; $20,000.00 per month on each of the following dates: October 15, 2015, November 15, 2015, and December 15, 2015; $35,000.00 per month on each of the following dates: January 15, 2016 and February 15, 2016 and March 15, 2016; and $50,000.00 per month thereafter until the Forbearance Amount has been paid in full.

During fiscal year ended June 30, 2015, the Company announced the beginning of sales through mPower of the Jump Plus product that is able to start up to 40 vehicles on a single charge. In addition, mPower introduced its Truck Jump product designed to start dead batteries in larger vehicles and trucks. During the second quarter of fiscal year ended June 30, 2015 mPower recorded a significant increase in sales of the two jump start products. The Company discontinued the business of its mPower Jump product in September of 2016 and commenced minimal operations in order to preserve capital.

In April of 2016, the Company closed its officers and inventory control center located in Norwalk, Connecticut in order to preserve capital and commenced the wind down of its Jump Starter product line sold through mPower Technologies, Inc. At such time the Company terminated all employees other than the three officers and one accounting consultant.

On May 12, 2016 the Company and John Fife entered into a second Amendment to the Forbearance Agreement to provide that on May 17, 2016 the Company shall pay $8,500.00 cash to Holder and the Company further agreed to pay to Holder $50,000.00 per month, beginning on June 15, 2016 and continuing on or before the 15th day of each month thereafter until the Forbearance Amount has been paid in full. In connection with the Forbearance Agreement, as amended, the Company has deposited 1,000,000,000 shares of its common stock with Fife as security for performance of its obligations.

On December 28, 2017 the Company entered into a non-binding letter of intent with Scepter Commodities, LLC for the proposed acquisition by Scepter of 80% of the fully-diluted shares of the Company on a reverse split basis. As of February15, 2018 the Company and Scepter amended the letter of intent extending the time period for the Company to become current in its SEC filings.

During the period beginning in April 2017 and continuing to the present the Company has maintained only a small office in Staten Island, New York and maintained minimal operations.

Products& Services

Since its inception in 1996, mPhase has been company focused on the development of intellectual property involving high technology innovative solutions and products with high-growth potential. The Company has served as an incubator for exploratory research and initial development for products that are best characterized as having a high risk/high reward profile since they involve exploratory research to achieve significant scientific breakthroughs from existing products that can have a substantial economic impact and benefit upon successful commercialization.

Smart NanoBattery

The Smart NanoBattery is an outgrowth of the science of nanotechnology that the Company began in February of 2004 with the entry into a Project Development Agreement with the Bell Labs Division of Lucent Technologies, Inc. The Company has historically outsourced its Research and Development of new products to larger companies or institutions with significant scientific resources and experience in exploratory research. mPhase Technologies along with Alcatel/Lucent/Bell Labs jointly conducted research from February 2004 through April of 2007 that demonstrated control and manipulation of fluids on superhydrophobic surfaces to create power cells by controlling wetting behavior of electrolytes on nano structured electrode surfaces. This scientific research set the ground work for continued exploration in the development of intelligent nanotechnology power cells (nano-batteries) and formed a path to commercialization of the technology for a broad range of market opportunities. During 2005 and 2006, the battery team tested modifications and enhancements to the internal design of the battery to optimize its power and energy density characteristics, as well as engineering improvements that were essential in moving the battery from a zinc based chemistry to a design using lithium based chemistry The Company established a strategic research working relationship with the Energy Storage Research Group (ESRG), a center of excellence in Rutgers University that has lab research facilities capable of handling lithium based battery development.

mPhase’s current flagship product is its Smart NanoBattery that has a significantly longer shelf life prior to initial activation than that of conventional batteries. The Smart NanoBattery has potentially significant applications for critical mission power sources that must be reliable and available upon command by the electronic device it is powering. Such applications involve emergency flashlights and beacons, back-up power sources for computers and life support products, as well as significant military applications where critical mission backup power is essential for weapons control computers and electronic warfare equipment used in combat. Other potential military applications include power sources activated by g-forces for guided munitions.

The Smart NanoBattery utilizes a proprietary technology developed over a period of 11 years. The battery design, prior to initial activation, has a membrane that separates the electrolyte and electrodes used to generate power. Conventional batteries do not provide for such separation and therefore their power begins to dissipate prior to the first time they are activated causing them to lose capacity. Conventional batteries have significant limits on how long they can be stored prior to their first activation and in providing a reliable source of power needed for critical applications requiring portable power supplies.

Competitive Business Conditions

Battery Segment

The design and functionality of the mPhase lithium Smart NanoBattery make it unique to the portable electronics battery market segment. To the best of our knowledge, there is no existing product that directly competes with the Smart NanoBattery in terms of its combination of small size and reserve design. As a reserve battery, the Smart NanoBattery remains dormant until it is activated on command. It does not self-discharge or die prior to its first activation, thereby offering extremely long shelf life prior to use as either a primary or backup battery in a device. Shelf life is projected to be in excess of twenty years.

There are numerous thin film batteries based on lithium metal, lithium ion and lithium polymer, as well as other chemistries, used in military devices, portable electronics, RFID tags and wireless sensor networks, that are similar in size to the Smart NanoBattery, often referred to as microbatteries. None of these designs is based on reserve battery architectures. Thin film batteries are manufactured by companies including Cymbet Corporation, Front Edge Technology, Infinite Power Solutions, ITN Energy Systems, Johnson Research and Development Company, KSW Microtec, Lithium Technology Corporation, MPower Solutions, Oak Ridge Micro-Energy, Power Paper, Solicore, VoltaFlex Corporation. Large companies such as Energizer, Ultralife, Varta and Proctor & Gamble are also involved with developing thin film batteries. Thin film battery markets are anticipated to grow substantially as the result of a wide expansion of portable devices in that time frame. With 3.5 billion cell phone users and 67 billion RFID tags per year anticipated during year 2012, it is expected that there will be substantial commercial demand for thin film batteries.

Traditional reserve batteries are distinct from the mPhase Smart NanoBattery in terms of size and activation mechanism. The market for reserve batteries has largely been limited to the military for supplying power to munitions and other mission-critical electronic devices. The traditional reserve battery tends to be larger and certain types are built by hand and contain mechanical parts to activate the battery. The Smart NanoBattery relies on the phenomenon of electrowetting to initiate activation or a mechanical barrier that can be broken, in the case of the breakable barrier design. Traditional reserve batteries for military applications have been supplied by companies such as EaglePicher, Yardney and Storage Battery Systems, Inc. The Company believes that it may be able to significantly reduce the cost of its Smart Nanobattery with the recent discovery of the potential of “printing” the battery on a form of graphite rather than traditional silicon surface. The Company, through its working relationship with Stevens Institute, began in fiscal year 2012 to investigate the feasibility of the use of graphite which is much stronger, flexible and inexpensive than traditional silicon.

Outsourcing

Research and Development

The Company practices an outsourcing model whereby it contracts with third party vendors to perform research and development rather than performing the bulk of these functions internally. For current development of its SmartNano battery, the Company has outsourced the majority of the work. From February of 2004 through March of 2007, the Company engaged Lucent/Bell Labs to develop, using the science of nanotechnology, micro power cell arrays creating a structure for zinc batteries that separated the chemicals or electrolytes prior to initial activation. This was done by suspending on nano grass or small spoke-like pieces of silicon a liquid electrolyte taking advantage of a superhydrophobic effect that occurs as a result of the ability to manipulate materials of a very small size or less than 1/50,000 the size of a human hair. The Company has, as a result of outsourcing, been able to have access to facilities, equipment and research capabilities that the Company would not be able to develop on its own given the financial resources and time that would be required to build or acquire such research capabilities. The Company has also been able to achieve key strategic alliances with the U.S. Army to successfully test, under military combat conditions, its SmartBattery design, leading to further validation of its path to product development under a Cooperative Research and Development Agreement (CRADA). In addition, the Company has formed a relationship with Energy Storage Research Group, a center of excellence at Rutgers University, in New Jersey, that has enabled the Company to expand its battery development from a zinc to a lithium battery capable of delivering significantly more power. During fiscal years 2009 and 2010, the Company outsourced considerable foundry work for final development of the Smart NanoBattery to Silex, a Swedish company.

During the period from March of 2005 to April of 2007, the Company engaged the Bell Labs division of Lucent Technologies, Inc. to develop a magnetometer or electronic sensor also using the science of nanotechnology. Although the Company has, in order to conserve financial resources, currently suspended further development of its magnetometer product line, we believe that the intellectual property developed from the research to date could be resumed to develop viable military and industrial products depending upon future financial resources of the Company and future competitive market conditions.

Commencing in fiscal year ended June 30, 2013, the Company has not engaged in any further outsourcing for product development of its Smart NanoBattery in order to conserve resources. During fiscal year 2014 the Company began purchasing a cost reduced version of a battery jump starter products. Such purchasing increased significantly in fiscal year 2015 as a result of the roll-out of the mPower Jump products.

Patents and Licenses

We have filed and intend to file United States patents, in some cases EU patents and/or copyright applications relating to some of our proposed products and technologies, either with our collaborators, strategic partners or on our own. There can be no assurance however, that any of the patents obtained will be adequate to protect our technologies or that we will have sufficient resources to enforce our patents.

Because we may license our technology and products in foreign markets, we may also seek foreign patent protection for some specific patents. With respect to foreign patents, the patent laws of other countries may differ significantly from those of the United States as to the patentability of our products or technology. In addition, it is possible that competitors in both the United States and foreign countries, many of which have substantially greater resources and have made substantial investments in competing technologies, may have applied for, or may in the future apply for and obtain, patents, which will have an adverse impact on our ability to make and sell our products. There can also be no assurance that competitors will not infringe on our patents or will not claim that we are infringing on their patents. Defense and prosecution of patent suits, even if successful, are both costly and time consuming. An adverse outcome in the defense of a patent suit could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties or require us to cease our operations.

The Company has intellectual property as follows:

Nano Technology, Micro Electrical Mechanical Systems (MEMS) and Battery Portfolio:

Various aspects of the mPhase technology are protected by patents either owned directly by the Company or with respect to which the Company has sub-licensing rights. The Company’s current battery related patent portfolio consists of ten issued or licensed patents, of which one is jointly owned with Nokia Corporation (formerly Alcatel Lucent Technologies), and five are licensed from Nokia Corporation. These cover such aspects of the technology as the ability to use electrowetting to create a moveable liquid lens, methodology and apparatus for reducing friction between a fluid and a body, methodology for etching planar silicon substrates to develop a reserve battery device, methodology and apparatus for controlling the flow resistance of a fluid on nanostructured or microstructured surfaces, methodology for creating a structured membrane with controllable permeability, methodology for a nanostructured battery with end of life cells, and methodology for making a multi-cell battery system with multiple chemistries in each individual cell of the battery pack. Some of these patents are specific to the development of a battery device while others are more generalized. The Company has four patent applications that are subject to reinstatement, of which three, the Company intends to submit for reinstatement.

Other Patents

On July 12, 2005, mPhase announced that it had been granted a U.S. patent that covers a series of techniques for splitting different voice and data signals in DSL access networks that is used in its Broadband Loop Watch product. The Company has discontinued further development and marketing of this product owing to the lack of demand for loop diagnostics systems by telephone service providers.

The Company has obtained trademark protection for its mPower Emergency Illuminator™ and mPower on Command™.

In July of 2009, the Company filed for 3 new patents covering the unique design features of its manually-activated lithium reserve battery and emergency flashlight products.

On May 20, 2011, the Company announced that it had been granted a U.S. patent for multi-chemistry battery architecture.

On February 10, 2012 the Company filed a U.S. provisional patent with the USPTO for a Non-Pump Enabled Drug Delivery System.

On February 11, 2013 the provisional patent application was converted to a patent application entitled Drug Delivery System.

As of the date hereof, the Company has rights under the following patents:

File Number	Invention Title	Filing Date	Issue Date	Patent Number	Patent Office
ALWA-001	Battery System	3/20/2008	9/20/2011	8,021,773	United States
ALWA-004	Tunable Liquid Microlens With Lubrication Assisted Electrowetting	9/13/2001	4/8/2003	6,545,815	United States
ALWA-005	Method And Apparatus For Controlling Friction Between A Fluid And A Body	8/27/2003	1/2/2007	7,156,032	United States
ALWA-006	Electrowetting Battery Having A Nanostructured Electrode Surface	11/18/2003	6/5/2007	7,227,235	United States
ALWA-007	Method And Apparatus For Controlling The Flow Resistance Of A Fluid On Nanostructured Or Microstructured Surfaces	9/30/2003	2/28/2012	8,124,423	United States
ALWA-009	Structured Membrane With Controllable Permeability	7/28/2006	4/13/2010	7,695,550	United States
ALWA-010	End Of Life Cycle, Nanostructured Battery	3/18/2004	11/17/2009	7,618,746	United States
ALWA-011	Adjustable Barrier For Regulating Flow Of A Liquid	8/10/2007			United States
ALWA-012	Event Activated Micro Control Devices	8/10/2007			United States
ALWA-013	Combined Wetting/Non-Wetting Element For Low and High Surface Tension Liquids	1/25/2008			United States
ALWA-014	Device For Fluid Spreading And Transport	1/25/2008		8,435,397	United States
ALWA-017	Electrical Device Having A Reserve Battery Activation System	9/2/2009			United States
ALWA-019	Modular Device	9/2/2009	1/1/2013	8,344,543	United States
ALWA-022	Reserve Battery	7/8/2009			United States
ALWA-029	Portable Battery Booster	9/17/2010			United States
ALWA-034	Reserve Battery System	3/2/2010	2/12/2013	8,372,531	United States
ALWA-038	Adjustable Barrier for Regulating Flow of a Liquid	3/10/2010			
*ALWA-043	Combined Wetting/Non-Wetting Element For Low and High Surface Tension Liquids (SOUTH KOREA)	8/18/2010			SOUTH KOREA
ALWA-046	Adjustable Barrier For Regulating Flow Of A Liquid				United States
ALWA-047	Drug Delivery System	2/11/2013			United States

* Subject to Reinstatement

We also rely on unpatented proprietary technology, and we can make no assurance that others may not independently develop the same or similar technology or otherwise obtain access to our unpatented technology.

Research and Development

From March of 2005 through March of 2007, the Company had engaged Bell Labs under separate Development Agreements for the development of a new generation of ultra-magnetic sensors (magnetometers) using the science of nanotechnology with a total cost of $2.4 million. The Company did not renew such its engagement with Bell Labs upon expiration and did not incur any further costs with respect to its magnetometer since the Company has discontinued further development of the product to conserve financial resources.

Our Smart NanoBattery and power cell technology research and development was performed by the Bell Labs division of Alcatel/Lucent from February of 2004 through March of 2007 at an aggregate cost of $3.8 million. The Company paid Bell Labs $300,000 covering the period from April 27, 2007 through July 30, 2007, at which time it determined that, in order to develop a lithium battery for higher density energy than zinc, it required facilities capable of handling lithium battery research that Bell Labs does not have. The Company engaged a number of small foundries during fiscal year ended June 30, 2008 for commercialization of its Smart NanoBattery at a cost of approximately $150,000. In fiscal year ended June 30, 2009, the Company engaged Eagle Picher at a cost of $75,000 to design and engineer a prototype of its manually-activated lithium reserve battery and Porsche Design studio at a cost of $79,123 for design of its emergency flashlight product. In addition, the Company secured a Co-Branding Agreement with Porsche Design Studio for its emergency flashlight product. In fiscal year ended June 30, 2010, the Company paid $950,018 in connection with producing and bringing this product to market, and in fiscal year ended June 30, 2011, the Company incurred $33,254 of expenses in connection with this product. During the fiscal year ended June 30, 2009, the Company engaged Silex, a silicon foundry in Sweden, at a cost of $21,200 for further development of its Smart NanoBattery; payments to Silex for fiscal year ended June 30, 2010 in connection with the Smart NanoBattery amounted to $396,780, and for fiscal year ended June 30, 2011 they were $40,800.

During fiscal years ended June 30, 2008, June 30, 2009 and June 30, 2010, the Company engaged in joint research with Rutgers University in connection with a $750,000 STTR Grant from the United States Army for purposes of developing an emergency reserve battery to back-up a computer memory application.

During fiscal years ended June 30, 2009, June 30, 2010 and June 30, 2011, the Company engaged MKE, an approved vendor of Porche Design Studio to manufacture prototypes as well as a series of commercialized emergency flashlights utilizing the design developed for the Company by Porsche Design Studio.

Commencing in fiscal year ended June 30, 2011, the Company engaged Porsche Design Studio to develop a jump starter for a dead battery as an additional automotive product for the Company. During fiscal year ended June 30, 2012, the Company continued the development of its Smart Nano Battery and progressed in the development of a final prototype of its jump starter product. In fiscal years ended June 30, 2013 and June 30, 2014 the Company cost-reduced its jump-starter product and began sales of its jump starter and mini jump starter products. The Company increased significantly the number of units sold of its previously developed mPower jump-starter products and rolled out two new products, the mPower Jump Plus and the mPower Truck Jump.

During fiscal years ended June 30, 2015 and June 30, 2016, the Company focused upon commercialization and sales of its since discontinued Jump Starter Products. Owing to limited resources the Company did not perform significant further research and development of its Smart Nano Battery during such period.

Employees

mPhase and its subsidiary companies presently have a total of 3 full-time employees who are the officers of the Company, and one accounting consultant.

ITEM 1A. RISK FACTORS

Risks Relating to the Company's Complete Dependence upon the Development of New Products

Our current "smart surface technology" is at an early stage of development and we may not develop products that can be commercialized.

We have derived very limited revenues from a Phase I Army Grant of approximately $100,000 and a Phase II Army Grant of approximately $750,000 with respect to our Smart NanoBattery product from inception of development in February 2004 through June 30, 2016.

We have limited manufacturing, marketing, distribution and sales capabilities which may limit our ability to generate revenues.

Due to the relatively early stage of our products, we have not yet invested in manufacturing, marketing, distribution or product sales resources. We cannot assure you that we will be able to invest or develop any of these resources successfully or as expediently as necessary. The inability to do so may inhibit or harm our ability to generate revenues or operate profitably.

We have a history of operating losses and we may not achieve future revenues or operating profits.

We have generated modest revenue to date from our operations. Historically we have had net operating losses each year since our inception. The Company has not generated significant revenue outside of STTR grants with respect to its Smart Nano Battery or other potential products related to Smart Surfaces. Additionally, even if we are able to commercialize our technologies or any products or services related to our technologies it is not certain that they will result in profitability.

The Company has never made an operating profit in its history.

If we continue to suffer losses as we have in the past, investors may not receive any return on their investment and may lose their entire investment. Our prospects must be considered speculative in light of the risks, expenses and difficulties frequently encountered by companies with new products in their early stages of development, particularly in light of the uncertainties relating to the new, competitive and rapidly evolving markets in which we anticipate we will operate. To attempt to address these risks, we must, among other things, further develop our technologies, products and services, successfully implement our research, development, marketing and commercialization strategies, respond to competitive developments and attract, retain and motivate qualified personnel. A substantial risk is involved in investing in us because, as a company we have fewer resources than an established company, our management may be more likely to make mistakes with respect to development of new products, and we may be more vulnerable operationally and financially to any mistakes that may be made, as well as to external factors beyond our control.

We have limited resources to manage development activities.

Our limited resources in conducting and managing development activities might prevent us from successfully designing or implementing new products. If we do not succeed in conducting and managing our development activities, we might not be able to commercialize our product candidates, or might be significantly delayed in doing so, which will materially harm our business.

Our ability to generate revenues from our Smart Nano Battery will depend on a number of factors, including our ability to successfully complete and implement our commercialization strategy. In addition, even if we are successful in bringing our Smart Nano Battery to market, we will be subject to the risk that the marketplace will not accept such product. We may, and anticipate that we will need to, transition from a company with a research and development focus to a company capable of supporting commercial activities and we may not succeed in such a transition.

Because of the numerous risks and uncertainties associated with our product development and commercialization efforts, we are unable to predict the extent of our future losses or when or if we will become profitable.

Our failure to successfully commercialize our Smart Nano Battery or to become and remain profitable could depress the market price of our Common Stock and impair our ability to raise capital, expand our business, diversify our product offerings and continue our operations.

Because of the numerous risks and uncertainties associated with our product development and commercialization efforts, we are unable to predict the extent of our future losses or when or if we will become profitable.

Our failure to successfully commercialize our Smart Nano Battery or to become and remain profitable could depress the market price of our Common Stock and impair our ability to raise capital, expand our business, diversify our product offerings and continue our operations.

Risks Relating to Technology

We are dependent on new and unproven technologies.

Our risks as an early stage company are compounded by our heavy dependence on emerging and sometimes unproven technologies such as our Smart Nanobattery. If these technologies do not produce satisfactory results, our business may be harmed.

We may not be able to commercially develop our technologies and proposed product lines, which, in turn, would significantly harm our ability to earn revenues and result in a loss of investment.

Our ability to commercially develop our technologies will be dictated in, large part, by forces outside our control which cannot be predicted, including, but not limited to, general economic conditions. Other such forces include the success of our research and field testing, the availability of collaborative partners to finance our work in pursuing applications of “smart surfaces” or other developments in the field which, due to efficiencies or technological breakthroughs may render one or more areas of commercialization more attractive, obsolete or competitively unattractive. It is possible that one or more areas of commercialization will not be pursued at all if a collaborative partner or entity willing to fund research and development cannot be located. Our decisions regarding the ultimate products and/or services we pursue could have a significant adverse effect on our ability to earn revenue if we misinterpret trends, underestimate development costs and/or pursue wrong products or services. Any of these factors either alone or in concert could materially harm our ability to earn revenues or could result in a loss of any investment in us.

If we are unable to keep up with rapid technological changes in our field or compete effectively, we will be unable to operate profitably.

We are engaged in activities in the nanotechnology and microfluidics field, which is characterized by extensive research efforts and rapid technological progress. If we fail to anticipate or respond adequately to technological developments, our ability to operate profitably could suffer. We cannot assure you that research and discoveries by other companies will not render our technologies or potential products or services uneconomical or result in products superior to those we develop or that any technologies, products or services we develop will be preferred to any existing or newly-developed technologies, products or services.

Risks Related to Intellectual Property

Certain aspects of our technology are not protectable by patent.

Certain parts of our know-how and technology are not patentable. To protect our proprietary position in such know-how and technology, we require all employees, consultants, advisors and collaborators with access to our technology to enter into confidentiality and invention ownership agreements with us. We cannot assure you; however, that these agreements will provide meaningful protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure. Further, in the absence of patent protection, competitors who independently develop substantially equivalent technology may harm our business.

Patent litigation presents an ongoing threat to our business with respect to both outcomes and costs.

It is possible that litigation over patent matters with one or more competitors could arise. We could incur substantial litigation or interference costs in defending ourselves against suits brought against us or in suits in which we may assert our patents against others. If the outcome of any such litigation is unfavorable, our business could be materially adversely affected. To determine the priority of inventions, we may also have to participate in interference proceedings declared by the United States Patent and Trademark Office, which could result in substantial cost to us. Without additional capital, we may not have the resources to adequately defend or pursue this litigation.

We may not be able to protect our proprietary technology, which could harm our ability to operate profitably.

Patent and trade secret protection is critical for the new technologies we utilize, nanotechnology and microfluidics, as well as the products and processes derived through them. Our success will depend, to a substantial degree, on our ability to obtain and enforce patent protection for our products, preserve any trade secrets and operate without infringing the proprietary rights of others. We cannot assure you that:

- we will succeed in obtaining any patents in a timely manner or at all, or that the breadth or degree of protection of any such patents will protect our interests,
- the use of our technology will not infringe on the proprietary rights of others,
- patent applications relating to our potential products or technologies will result in the issuance of any patents or that, if issued, such patents will afford adequate protection to us or not be challenged, invalidated or infringed, and
- patents will not issue to other parties, which may be infringed by our potential products or technologies.
- we will continue to have the financial resources necessary to prosecute our existing patent applications, pay maintenance fees on patents and patent applications, or file patent applications on new inventions.

The fields in which we operate have been characterized by significant efforts by competitors to establish dominant or blocking patent rights to gain a competitive advantage, and by considerable differences of opinion as to the value and legal legitimacy of competitors' purported patent rights and the technologies they actually utilize in their businesses.

Patents obtained by other persons may result in infringement claims against us that are costly to defend and which may limit our ability to use the disputed technologies and prevent us from pursuing research and development or commercialization of potential products.

If third party patents or patent applications contain claims infringed by either our technology or other technology required to make and use our potential products and such claims are ultimately determined to be valid, there can be no assurance that we would be able to obtain licenses to these patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, we may not be able to develop some products commercially. We may be required to defend ourselves in court against allegations of infringement of third party patents. Patent litigation is very expensive and could consume substantial resources and create significant uncertainties. Any adverse outcome in such a suit could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties, or require us to cease using such technology.

We may not be able to adequately defend against piracy of intellectual property in foreign jurisdictions.

Considerable research in the areas of micro fluid dynamics is being performed in countries outside of the United States, and a number of potential competitors are located in these countries. The laws protecting intellectual property in some of those countries may not provide adequate protection to prevent our competitors from misappropriating our intellectual property. Several of these potential competitors may be further along in the process of product development and also operate large, company-funded research and development programs. As a result, our competitors may develop more competitive or affordable products, or achieve earlier patent protection or product commercialization than we are able to achieve. Competitive products may render any products or product candidates that we develop obsolete.

We may incur substantial expenditures in the future in order to protect our intellectual property.

We believe that our intellectual property with respect to our Smart NanoBattery and our proprietary rights with respect to the Company's permeable membrane design consisting of both micro and nano scale silicon features that are coated with a monolayer chemistry used to repel liquids is critical to our future success. The Company's current battery related patent portfolio consists of seven issued patents, of which one is jointly owned with Rutgers University, two are jointly owned with Nokia (formerly Lucent Technologies) and four are licensed from Nokia. We also have four patent applications related to the Smart Surfaces technology that have been filed with the United States Patent Office and other foreign patent offices that are in various stages of examiner review, as well as four additional patent applications related to other Smart Surfaces technologies under review. Our pending patent applications may never be granted for various reasons, including the existence of conflicting patents or defects in our applications. Even if additional U.S. patents are ultimately granted, there are significant risks regarding enforcement of patents in international markets. There are many patents being filed as the science of nanotechnology develops and the Company has limited financial resources compared to large, well established companies to bring patent litigation based upon claims of patent infringement.

Our products may not be accepted in the marketplace.

The degree of market acceptance of those products will depend on many factors, including:

Our ability to manufacture or obtain from third party manufacturers sufficient quantities of our product candidates with acceptable quality and at an acceptable cost to meet demand, and

Marketing and distribution support for our products.

We cannot predict or guarantee that either military or commercial entities, in general, will accept or utilize any of our product candidates. Failure to achieve market acceptance would limit our ability to generate revenue and would have a material adverse effect on our business. In addition, if any of our product candidates achieve market acceptance, we may not be able to maintain that market acceptance over time if competing products or technologies are introduced that are received more favorably or are more cost-effective.

Risks Related to Third Party Reliance

We depend on third parties to assist us in the development of new products extensively, and any failure of those parties to fulfill their obligations could result in costs and delays and prevent us from successfully commercializing our product candidates on a timely basis, if at all.

We engage consultants and contract research organizations to help design, develop and manufacture our products. The consultants and contract research organizations we engage provide us critical skills, resources and finished products for sale that we do not have within our own company. As a result, we depend on these consultants and contract research and product supply organizations to deliver our existing automotive products and to perform the necessary research and development to create new products. We may face delays in developing and bringing new products to market if these parties do not perform their obligations in a timely or competent fashion or if we are forced to change service providers.

We depend on our collaborators to help us develop and test our proposed products, and our ability to develop and commercialize products may be impaired or delayed if collaborations are unsuccessful.

Our strategy for the development, testing and commercialization of our proposed products requires that we enter into collaborations with corporate partners, licensors, licensees and others. We are dependent upon the subsequent success of these other parties in performing their respective responsibilities and the continued cooperation of our partners. Under agreements with collaborators, we may rely significantly on such collaborators to, among other things:

Fund research and development activities with us;

Pay us fees upon the achievement of milestones under STIR and SBIR programs; and

Market with us any commercial products that result from our collaborations.

Our collaborators may not cooperate with us or perform their obligations under our agreements with them. We cannot control the amount and timing of our collaborators' resources that will be devoted to our research and development activities related to our collaborative agreements with them. Our collaborators may choose to pursue existing or alternative technologies in preference to those being developed in collaboration with us.

The development and commercialization of potential products will be delayed if collaborators fail to conduct these activities in a timely manner, or at all.

If various outside vendors and collaborators do not achieve milestones set forth in our agreements, or if our collaborators breach or terminate their collaborative agreements with us, our business may be materially harmed.

Our reliance on the activities of our non-employee consultants, research institutions, and scientific contractors, whose activities are not wholly within our control, may lead to delays in development of our proposed products.

We rely extensively upon and have relationships with outside consultants and companies having specialized skills to conduct research. These consultants are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. We have limited control over the activities of these consultants and, except as otherwise required by our collaboration and consulting agreements to the extent they exist, can expect only limited amounts of their time to be dedicated to our activities. These research facilities may have commitments to other commercial and non-commercial entities. We have limited control over the operations of these collaborators and can expect only limited amounts of time to be dedicated to our research and product development goals.

Risks Related to Competition

The market for energy storage products is highly competitive.

We expect that our most significant competitors will be large more established companies. These companies are developing products that compete with ours and they have significantly greater capital resources in research and development, manufacturing, testing, obtaining regulatory approvals, and marketing capabilities. Many of these potential competitors are further along in the process of product development and also operate large, company-funded research and development programs. As a result, our competitors may develop more competitive or affordable products, or achieve earlier patent recognition and filings.

Our industry is characterized by rapidly evolving technology and intense competition. Our competitors include major multinational energy-storage device and battery companies as well as nanotechnology companies that specialize in micro fluid dynamics and smart surfaces.

Many of these companies are well-established and possess technical, research and development, financial and sales and marketing resources significantly greater than ours. In addition, certain smaller nanotechnology companies have formed strategic collaborations, partnerships and other types of joint ventures with larger, well established industry competitors that afford these companies' potential research and development and commercialization advantages. Academic institutions, governmental agencies and other public and private research organizations are also conducting and financing research activities which may produce products directly competitive to those we are developing. Moreover, many of these competitors may be able to obtain patent protection, obtain regulatory approvals and begin commercial sales of their products before we do.

Our competition includes both public and private organizations and collaborations among academic institutions and large companies, most of which have significantly greater experience and financial resources than we do.

Private and public academic and research institutions also compete with us in the research and development of nanotechnology products based on micro-fluid dynamics. In the past several years, the nanotechnology industry has selectively entered into collaborations with both public and private organizations to explore the development of new products evolving out of research in micro-fluid dynamics.

RISKS RELATED TO FINANCIAL ASPECTS OF OUR BUSINESS

We may not be able to raise the required capital to conduct our operations and develop and commercialize our products. We require substantial additional capital resources in order to conduct our operations and develop and commercialize our products and run our facilities. We will need significant additional funds or collaborative partners, or both, to finance the research and development activities of our potential products. Accordingly, we are continuing to pursue additional sources of financing. Our future capital requirements will depend upon many factors, including:

The continued progress and cost of our research and development programs,

The costs in preparing, filing, prosecuting, maintaining and enforcing patent claims,

The costs of developing sales, marketing and distribution channels and our ability to sell the products if developed,

The costs involved in establishing manufacturing capabilities for commercial quantities of our proposed products,

Competing technological and market developments,

Market acceptance of our proposed products,

The costs for recruiting and retaining employees and consultants.

Additional financing through strategic collaborations, public or private equity financings or other financing sources may not be available on acceptable terms, or at all Our failure to be timely in our required periodic filings of quarterly and annual financial reports with the SEC may significantly limit our ability to raise additional capital. Additional equity financing could result in significant dilution to our shareholders. Further, if additional funds are obtained through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies, product candidates or products that we woul