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RESEARCH FRONTIERS INC  
Form 10-K  
March 22, 2007

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

For the fiscal year ended December 31, 2006 Commission File Number 1-9399

RESEARCH FRONTIERS INCORPORATED  
(Exact name of registrant as specified in its charter)

DELAWARE  
(State or other jurisdiction of  
incorporation or organization)

11-2103466  
(I.R.S. Employer  
Identification No.)

240 CROSSWAYS PARK DRIVE  
WOODBURY, NEW YORK  
(Address of principal executive offices)

11797-2033  
(Zip Code)

Registrant's telephone number, including area code (516) 364-1902

Securities registered pursuant to Section 12(b) of the Act:

| Title of Class                   | Name of Exchange<br>on Which Registered |
|----------------------------------|---|
| Common Stock, \$0.0001 Par Value | The NASDAQ Stock Market                 |

Securities registered pursuant to Section 12(g) of the Act:  
None  
(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 [X]

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 [X]

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 such shorter period that  
the registrant was required to file such reports), and (2) has been subject to  
such filing requirements for the past 90 days. Yes [X] No [ ]

Indicate by check mark if 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  
amendment to this Form 10-K. [X]

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

Large accelerated filer[] Accelerated filer[] Non-accelerated filer[X]

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

Yes [ ] No [X]

As of March 22, 2007 there were 15,318,601 shares of Research Frontiers Incorporated common stock outstanding. The aggregate market value of the voting and non-voting common equity held by non-affiliates was \$67,624,682 computed in accordance with the rules of the SEC by reference to the closing price of the Company's common stock as of June 30, 2006 which was \$5.18. In making this computation, all shares known to be owned by directors and executive officers of the Company and all shares known to be owned by other persons holding in excess of 5% of the Company's common stock have been deemed held by "affiliates" of the Company. Nothing herein shall prejudice the right of the Company or any such person to deny that any such director, executive officer, or stockholder is an "affiliate."

### PART I

#### ITEM 1. BUSINESS

##### General

Research Frontiers Incorporated ("Research Frontiers" or the "Company") was incorporated in New York in 1965 and reincorporated in Delaware in 1989. Research Frontiers' business is to develop and license our suspended particle technology for controlling the amount of light passing through a device. Such suspended particle devices are often referred to as "SPDs," "light valves," or "SPD-Smart " products.

SPDs use microscopic light-absorbing particles that are either in a liquid suspension or a film. The microscopic particles align when an electrical voltage is applied. This permits light to pass through the device, and allows the amount of light to be controlled. The first light valve of this type was invented by Dr. Edwin Land, founder of Polaroid Corporation, in the 1930s. Since 1965, Research Frontiers has been actively working to develop and license its own technology, which it protects using patents, trade secrets and know-how. Although patent and trade secret protection is not a guarantee of commercial success, Research Frontiers currently has approximately 470 patents and pending patent applications throughout the world protecting its technology.

As a result of our efforts over the years, Research Frontiers Incorporated has become the world's leader in suspended-particle-device development and research, and licenses its light-control technology to other companies. Currently, our 34 licensees are categorized into three main areas: materials for making films (emulsions); film; and end-products. Our emulsion makers produce and combine the necessary materials (i.e. SPD particles and various liquids and special polymers) from which SPD films are made. The film makers use a thin layer of emulsion, which is coated between two sheets of plastic film coated with a transparent conductive coating, which emulsion is then partly solidified to form an SPD film that allows users to control the amount of light passing through such film. The end-product licensees then incorporate such SPD light-control film into a variety of SPD-Smart products or make electronic systems to control such SPD-Smart products.

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The past several years have been important for Research Frontiers as we moved from being a company with a technology under development to a company with products using our technology being sold by our licensees. The technology has also received some prestigious awards, including the Best of What's New Award for home technology products for 2002 from Popular Science. It was also named one of the top new technologies for 2002 by the Society of Automotive Engineers and received the 2007 North American Frost & Sullivan Award for Excellence in Technology.

SPD-Smart windows have been installed in business and commercial aircraft, as well as in architectural, automotive and appliance glass projects. SPD technology is an "enabling" technology cutting across many industries which has wide commercial applications in many types of products where variable light transmission is desired, such as:

- "smart" windows, skylights, partitions, doors, and
- sunshades for the architectural, aircraft, marine, automotive and appliance industries;
- variable light transmission sunglasses, goggles, visors and other eyewear;
- self-dimmable automotive sunroofs, sunvisors and rear-view mirrors; and
- flat panel information displays for use in billboards, scoreboards, point-of-purchase advertising displays, traffic signs, computers, televisions, telephones, PDAs and other electronic instruments.

Various licensees of Research Frontiers have developed SPD-Smart windows and other products. Several of our licensees have already sold aircraft, architectural, marine and automotive windows, skylights and doors, as well as glass doors for appliances using SPD technology. Also, prototypes of flat panel displays, eyewear, and self-dimming automotive rear-view mirrors have been developed. These prototypes demonstrate the feasibility and operation of the products they relate to, but need additional product design, engineering or testing before commercial products are introduced. Some of our licensees consider the exact stage of development, product introduction strategies and timetables, and other plans to be proprietary or secret, and as such cannot be disclosed by the Company until such licensees make their own public announcements or product launches. Since 2002, marketing campaigns and product launches by our licensees have been announced under the indicated trademarks for their SPD-Smart products:

| Licensee                       | Trademark  |
|--------------------------------|--|
| Cricursa Cristales Curvados,SA | Cri-Regulite   |
| Dainippon Ink and Chemicals    | Confoview  |
| Innovative Glass Corporation   | E-Glass  |
| Inspectech Aero Service, Inc.  | SPD-Equipped,I-Shade,<br>SPD-Shade,e-Shade                         |
| Isoclima S.p.A.                | ChromaLite   |
| Kerros Limited                 | IntelliTint  |
| SPD Control Systems Corp.      | The Systems Behind the Glass,<br>Changing the Way You View Windows |
| SPD Technologies, Inc.         | InfiniTint,New-View,<br>Smart-Shade                                |
| SPD Systems Inc.               | Health Smart SPD Window,<br>VectorLux,InstaTint,                   |

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ThermoView Industries                      PowerTint  
Alter-Lite

In addition, Research Frontiers introduced various marketing programs under the following trademarks: SPD-Smart, SPD-SmartGlass, VaryFast, SmartGlass, The View of the Future - Everywhere you Look, Powered by SPD, and Visit SmartGlass.com - to change your view of the world.

Our licensee InspecTech Aero Service Inc. reported that it has received FAA certification for, and has already installed SPD-Smart windows on, various aircraft. InspecTech reports having installed or currently engineered SPD-Smart windows for the following aircraft:

- Airbus A319, A320 and other aircraft
- Boeing 737, 747, 757, BBJ and other aircraft
- Bombardier Challenger 601, 604
- Bombardier Global Ex
- Bombardier Learjet 24, 25, 31, 35, 36, 45, 55, 60
- Cessna Citation I, II, III
- Cessna Conquest I, II
- Cessna Citations 525, 525A, 550, Excel, 5 and CX
- Dassault Falcon 10, 50
- EADS Eurocopter EC 155
- Gulfstream (all models)
- Piaggio P180 Avanti, and Pilatus PC-12
- Raytheon Beechjet
- Raytheon Hawker 700, 800
- Raytheon King Air 90, 100, 200, 350
- Sikorsky S-92 Helicopter
- Bell 430 Helicopter

Starting in 2003, the number of aircraft incorporating window shades using SPD-Smart technology increased, and the number of additional aircraft for which SPD-Smart electronic window shades have been designed and engineered also increased. In addition, several of the world's largest jet manufacturers have announced their interest to include electronic smart window shades in their aircraft. These electronic window shades may use SPD technology, or may use other technologies such as electrochromic technology or electro-mechanical window shades. Project architects and developers have begun to specify more SPD-Smart glass in their projects, and both the number and size of these projects is increasing. Also, starting in late 2003, certain automakers have begun to incorporate SPD-Smart glass in production and concept vehicles, with some of these concept vehicles being exhibited at major auto shows. There is a growing trend towards using more glass in architectural and automotive applications, including the introduction of panoramic roof systems and larger sunroofs for transportation vehicles. SPD-Smart technology can provide effective shading, glare control and heat management solutions for these larger glass areas. SPD-Smart windows have also begun to be used in yachts as well. The Company has also seen the adoption rate in terms of number of licensees, as well as the size of the organizations becoming licensees, increase. Also, products using SPD-Smart technology continue to be exhibited at trade shows, conferences, and industry events, with such products not only being exhibited by our licensees, but also by their customers and by original equipment manufacturers. While there can be no assurance that these trends will continue, to the

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extent that they do continue, they each should have a beneficial effect on future fee income for the Company. In April 2004, SPD Inc., which was at that time, the sole manufacturer of SPD-Smart light control film and a subsidiary of Hankuk Glass Industries, a former licensee of the Company, announced that it was ceasing its business activities. Therefore, sales of SPD-Smart products by licensees of the Company during most of 2004, 2005 and 2006 were curtailed as these licensees filled customer orders out of existing inventory of SPD-Smart light control film made by SPD Inc. while awaiting production of the next-generation emulsion-based SPD-Smart light control film with improved performance characteristics. On February 1, 2007, Hitachi Chemical Company jointly announced with Innovative Glass Corp. that Hitachi Chemical was shipping rolls of wide-width SPD-Smart film from its high-capacity coating lines in Ibaraki, Japan. On February 9, 2007, Raytheon Aircraft Company announced that it was offering SPD-Smart electronic window shades manufactured by Inspectech Aero Service on Raytheon's Beechcraft King Air aircraft.

The following table summarizes Research Frontiers' existing license agreements and lists the year these agreements were entered into:

| Licensee   | Products Covered  | Territory                   |
|--|---|-----------------------------|
| Air Products and Chemicals, Inc.                   | SPD emulsions and films for other licensees (2003)  | Worldwide                   |
| American Glass Products                            | Architectural and automotive windows (2002)   | Worldwide<br>(except Korea) |
| Asahi Glass Company                                | SPD-Smart automotive windows and sunroofs (2006)  | Worldwide                   |
| AGC Automotive Americas (f/k/a AP Technoglass Co.) | Sunroof glass for other licensees (2001)  | Worldwide                   |
| Avery Dennison Corp.                               | SPD displays (2001)   | Worldwide                   |
| BOS GmbH   | Variable light transmission SPD sunshades and sunvisors. (2002)                                     | Worldwide                   |
| BRG Group, Ltd.                                    | Architectural and automotive windows (2002)   | Worldwide<br>(except Korea) |
| Cricursa Cristales Curvados                        | Architectural and automotive windows (2002)   | Worldwide<br>(except Korea) |
| Custom Glass Corporation                           | Windows and sunroofs for mass transit trains/busses; SPD film lamination for other licensees (2003) | Worldwide<br>(except Korea) |
| Dainippon Ink and Chemicals Incorporated           | SPD emulsions (1999) and films (2006) for other licensees   | Worldwide                   |
| E.I. DuPont de Nemours                             | Architectural and automotive windows; SPD emulsions and films for other licensees (2004)            | Worldwide                   |
| Film Technologies Int'l                            | SPD film for other licensees and prospective licensees (2001)                                       | Worldwide                   |

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|  |  |   |
|--|--|---|
| Glaverbel, S.A.  | Automotive vehicle rear-view mirrors, transportation vehicle sunvisors, and architectural and automotive windows (1996)  | Worldwide (except Korea for windows)                          |
| Global Mirror GmbH                                       | Rear-view mirrors and sunvisors (1999)   | Worldwide   |
| Hitachi Chemical Co.,Ltd                                 | SPD emulsions and films for other licensees (1999)   | Worldwide   |
| Innovative Glass Corp.                                   | Architectural windows (2003)   | US, Canada, and Mexico  |
| InspecTech Aero Service                                  | Aircraft and marine windows and cabin dividers (2001)  | Worldwide (except Korea)                                      |
| Isoclima S.p.A.  | Architectural and automotive windows; SPD emulsion and film for other licensees (2002)   | Worldwide (except Korea)                                      |
| Kerros Limited   | Automotive windows and sunroofs (2003)   | Worldwide (except Korea) for aftermarket and UK only for OEMs |
| Laminated Technologies Inc.                              | SPD film lamination for other licensees (2002)   | Worldwide   |
| Leminur Limited  | Architectural windows (2003)   | Russia and Countries of former Soviet Union                   |
| N.V. Bekaert S.A (acquired from Material Sciences Corp.) | Architectural and automotive windows, SPD film for other licensees, prospective licensees and architectural and automotive window companies (1997)   | Worldwide   |
| Nippon Sheet Glass Co., Ltd                              | SPD film for other licensee (2004)   | Worldwide   |
| Pilkington plc   | SPD film lamination for other licensee (2004)  | Worldwide   |
| Polaroid Corporation                                     | SPD emulsions and films for other licensees (2000)   | Worldwide   |
| Prelco Inc.  | Architectural windows, train and bus windows (2004)  | US, Canada, and Mexico  |
| Saint-Gobain Glass France                                | Architectural windows, automotive and other transportation vehicle windows (other than aircraft and spacecraft), kitchen and laundry home appliance windows, and automotive sunvisors and rear-view mirrors for cars, SUVs, light trucks and other transportation vehicles (other than as original equipment mirrors on heavy trucks, busses, construction vehicles, firetrucks and other vehicles in Class 5-8 or weighing over 16,000 pounds) (2003) | Worldwide (except Korea)                                      |

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|  |  |                             |
|--|--|-----------------------------|
| SmartGlass International Ltd   | Architectural windows (2007)                       | Ireland, United Kingdom     |
| SPD Control Systems Corp   | Electronics and building control systems (2005)    | Worldwide                   |
| SPD Technologies, Inc.<br>(f/k/a Razor's Edge<br>Technologies, Inc.) | Architectural windows (2002)                       | Worldwide<br>(except Korea) |
| SPD Systems, Inc.  | Architectural, appliance and marine windows (2002) | Worldwide<br>(except Korea) |
| ThermoView Industries, Inc.  | Architectural windows (2000)                       | Worldwide<br>(except Korea) |
| Traco, Inc.  | Architectural windows (2003)                       | Worldwide<br>(except Korea) |

Licensees of Research Frontiers who incorporate SPD technology into end-products will pay Research Frontiers a royalty of 5-15% of net sales of licensed products under license agreements currently in effect, and may also be required to pay Research Frontiers fees and minimum annual royalties. Licensees who sell components (such as SPD emulsion or film) to other licensees of Research Frontiers do not pay a royalty on such sale and Research Frontiers will collect such royalty from the licensee incorporating such components into their own SPD-Smart end-products. Research Frontiers' license agreements typically allow the licensee to terminate the license after some period of time, and give Research Frontiers only limited rights to terminate before the license expires. The licenses granted by the Company are non-exclusive and generally last as long as our patents remain in effect. Due to their bankruptcy filings or other termination of their general business activities or other reasons, the Company does not believe that Polaroid, Kerros, ThermoView, SmartGlass Ireland, BRG, and SPD Technologies are pursuing any business activities with respect to SPD technology. Some of the Company's other licensees are currently inactive with respect to SPD technology, but may hereafter become active again. Global Mirror's license restricts new licenses from being granted in the truck mirror original equipment market for a period of time if certain sales milestones are met with respect to commercial vehicles in Classes 5 through 8 with gross vehicle weights in excess of 16,000 pounds. To date, the Company has not generated sufficient revenue from its licensees to profitably fund its operations.

Although the Company believes based upon the status of current negotiations that additional license agreements with third parties will be entered into, there can be no assurance that any such additional license agreements will be consummated, or the extent that any current or future licensee of the Company will produce or sell commercial products using the Company's technology or generate meaningful revenue from sales of such licensed products.

The Company plans to continue to exploit its SPD light valve technology by entering into additional license and other agreements with end-product manufacturers such as manufacturers of flat glass, flat panel displays, automotive products, and with other interested companies who may wish to acquire rights to manufacture and sell the Company's proprietary emulsions and films. The Company's plans also call

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for further development of its SPD light valve technology and the provision of additional technological and marketing assistance to its licensees to develop commercially viable products using SPD technology and expand the markets for such products. The Company cannot predict when or if new license agreements will be entered into or the extent to which commercial products will result from its existing or future licensees because of the risks inherent in the developmental process and because commercialization is dependent upon the efforts of its licensees as well as on the continuing research and development efforts of the Company.

On March 22, 2007 the Company had eleven full-time employees, four of whom are technical personnel, and the rest of whom perform legal, marketing, investor relations, and administrative functions. Of these employees, one has obtained a doctorate in chemistry, one has a masters in chemistry, one has extensive industrial experience in electronics and electrical engineering, and one has majored in physics. Three employees also have additional postgraduate degrees in business administration, including one doctorate in organization and management. Also the Company's suppliers and licensees have people on their teams with advanced degrees in a number of areas relevant to the commercial development of products using the Company's technology. The success of the Company is dependent on, among other things, the services of its senior management, the loss of whose services could have a material adverse effect upon the prospects of the Company.

The Company believes that its SPD light valve technology has certain performance advantages over other technologies for so-called "smart windows," windows which electrically vary the amount of light passing through them, and automatically self-dimmable automotive rear-view mirrors.

Variable light transmission technologies can be classified into two basic types: "active" technologies that can be controlled electrically by the user either automatically or manually, and "passive" technologies that can only react to ambient environmental conditions such as changes in lighting or temperature. One type of passive variable light transmission technology is photochromic technology; such devices change their level of transparency in reaction to external ultra-violet radiation. As compared to photochromic technology, the Company's technology permits the user to adjust the amount of light passing through the viewing area of the device rather than merely reacting to external radiation. In addition, the reaction time necessary to change from light to dark with SPDs can be almost instantaneous, as compared to the much slower reaction time for photochromic devices. Unlike SPD technology, photochromic technology switches very slowly and does not function well at the high and low ends of the temperature range in which smart windows and other devices are normally expected to operate.

The active, user-controllable technologies are sometimes referred to as "smart" technologies. These active technologies are far more useful because they can be controlled electrically by a user with a manual adjustment or automatically when coupled with a timer or sensing device such as a photocell, motion detector or thermostat. There are three main types of active devices which are compared below:



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- Electrochromic devices (EC)
- Liquid crystal devices (LC)
- Suspended-particle devices (SPD)

Electrochromic Technology: When compared to electrochromic windows and rear-view mirrors, which use a direct current voltage to alter the molecular structure of electrochromic materials (which can be in the form of either a liquid, gel or solid film) causing the material to darken, SPDs have numerous potential performance, manufacturing and cost advantages. In comparing the Company's SPD light valves to electrochromic technologies, SPDs are expected to have some or all of the following advantages:

- faster response time
- consistent switching speed regardless of size of viewing area
- lower estimated costs
- more reliable performance over a wider temperature range
- capability of achieving darker off-states
- default state (state requiring no power) is dark, maximizing solar heat gain benefits
- lower current drain
- higher estimated battery life in applications where batteries are used
- no "iris effect" (where light transmission changes first occur at the outer edges of a window or mirror and then work their way toward the center) when changing from clear to dark and back again
- ability to be able to "tune" intermediate light-transmission states
- SPD technology is a film-based technology that can be applied to plastic as well as glass, and which can be applied to curved as well as flat surfaces.

Many companies with substantially greater resources than Research Frontiers such as 3M, Asahi Glass, Gentex Corp., Pilkington, PPG Industries, Saint-Gobain Glass and other large corporations have pursued or are pursuing projects in the electrochromic area. Some of these companies have reportedly discontinued or substantially curtailed their work on electrochromics due to technical problems and issues relating to the expense of these technologies. At least four companies, Saint-Gobain Glass, Sage Electrochromics, Inc., Gentex Corp. and PPG Industries are currently actively working to commercialize electrochromic window products.

Liquid Crystal Technology: To date, the main types of liquid crystal smart windows have been produced by Taliq Corp. (a subsidiary of Raychem Corp. which has since discontinued its liquid crystal operations and licensed its technology to others), Asahi Glass Co., Nippon Sheet Glass, Saint-Gobain Glass, Polytronix, Inc., DMDDisplays and 3M (which has also reportedly discontinued its liquid crystal film making operations). These windows are expensive and only change from a cloudy, opaque milky-white to a clear state, are hazy when viewed at an angle and have no useful intermediate states. As compared to liquid crystal windows, SPD smart windows should:

- be less expensive to produce
- have less haze

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- operate over a wider temperature range
- use less power
- absorb and shade light, rather than simply scattering it
- permit an infinite number of intermediate states between a transparent state and a dark blue state, rather than being just "on" or "off" like LC windows.

In the flat panel display market, the Company also expects to compete against various display technologies that are currently being used commercially. In particular, the Company expects its SPD technology to compete on the basis of the performance characteristics with liquid crystal displays ("LCDs") and organic light emitting diodes ("OLEDs"). An LCD is generally similar in construction to an SPD display, but instead of a liquid or film suspension, it utilizes an organic material called a liquid crystal which, although comprised of molecules that flow like a liquid, has some of the characteristics of solid crystals. Like SPD displays, LCDs are "passive" devices which do not generate light, but merely reflect or modulate existing light. OLEDs emit light rather than transmit it, and unlike LCDs but similar to SPD displays, OLEDs promise to have wide viewing angles and low power consumption. However, several technological and manufacturing hurdles remain in the production of OLEDs including limited life expectancy, sensitivity to degradation from exposure to air and water, and cost. The market for flat panel displays was estimated by others to have been approximately \$86 billion for 2006. Because of further development work to be done in this area, the Company cannot estimate when its licensees may begin to penetrate the flat panel display market.

The Company believes that its SPD light valves and related technology have significant advantages over existing display devices and related technology. In comparison to existing twisted nematic type LCDs, the Company's SPD displays are believed to have:

- higher contrast and brightness
- a wider angle of view
- lower estimated production costs
- a less complex fabrication procedure
- the ability to function over a wider temperature range
- the ability to make displays without using sheet polarizers or alignment layers
- lower light loss and a corresponding reduction in backlighting requirements.

With respect to other types of displays which emit their own light, such as light-emitting diodes (LEDs) and cathode ray tubes (CRTs), the Company's SPD light valves should have the advantages of lower power consumption and make possible larger displays that are easier to read in bright light.

LCDs and other types of displays, liquid crystal windows, as well as electrochromic self-dimmable rear-view mirrors, are already on the market, whereas products incorporating SPD technology (as well as electrochromic windows) have only begun to appear in the marketplace, so long-term durability and performance of SPD light valves have not yet been fully ascertained. The companies manufacturing LCD and other display devices, liquid crystal windows, and electrochromic self-dimmable rear-view mirrors and windows, have substantially

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greater financial resources and manufacturing experience than the Company. There is no assurance that comparable systems having the same advantages of the Company's SPD light valves could not be developed by competitors at a lower cost or that other products could not be developed which would render the Company's products difficult to market or technologically or otherwise obsolete.

In each of the last three fiscal years the Company has devoted substantially all of its time to the development of one class of products, namely SPD light control technology, and therefore revenue analysis by class is not provided herein.

The Company does not believe that future sales will be seasonal in any material respect. Due to the nature of the Company's business operations and the fact that the Company is not presently a manufacturer, there is no backlog of orders for the Company's products.

The Company believes that compliance with federal, state and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, will not have a material effect upon the capital expenditures, earnings and competitive position of the Company. The Company has no material capital expenditures for environmental control facilities planned for the remainder of its current fiscal year or its next succeeding fiscal year.

### Research and Development

As a result of the Company's research and development efforts, the Company believes that its SPD light valves are now, or with additional development will become, usable in a number of commercial products. Such products may include one or more of the following fields: "smart" windows, variable light transmission eyewear such as sunglasses and goggles, self-dimmable automotive sunroofs, sunvisors and mirrors, and instruments and other information displays that use digits, letters, graphic images, or other symbols to supply information, including scientific instruments, aviation instruments, automobile dashboard displays and, if certain improvements can be made in various features of the Company's SPD light valves, portable computer displays and flat panel television displays. The Company believes that most of its research and development efforts have applicability to products that may incorporate the Company's technology. Based upon the current SPD-Smart products being prepared for sale by various of its licensees, the Company believes that the state of development of its technology is sufficiently advanced, but that further improvements will result in accelerated market penetration. The Company intends to continue its research and development efforts for the foreseeable future to improve its SPD light valve technology and thereby assist our licensees in the product development, sales and marketing of various existing and new SPD-Smart products.

During the past year, the Company has made significant advances relating to materials to enable (1) improved stability of SPD emulsions, (2) a wide range of light transmission, and (3) improved film adhesion and cohesion.

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The Company has devoted most of the resources it has heretofore expended to research and development activities with the goal of producing commercially viable light valves and already has developed working prototypes of its SPD light valves for several different applications, with primary emphasis on smart windows for various applications.

Research Frontiers' main goals in its research and development are:

- developing wider ranges of light transmission and quicker switching speeds;
- developing different colored particles;
- reducing the voltage required to operate SPDs; and
- obtaining data and developing improved materials regarding environmental stability and longevity.

Research Frontiers incurred approximately \$1,171,000, \$1,392,000, and \$1,683,000 during the years ended December 31, 2006, 2005, and 2004, respectively, for research and development. Research Frontiers plans to engage in substantial continuing research and development activities.

### Patents and Proprietary Information

The Company has 32 United States patents in force, and six United States patent applications are pending. The Company's United States patents expire at various dates from 2008 through 2023. The Company has approximately 229 issued foreign patents and 205 foreign and international patent applications pending. The Company's foreign patents expire at various dates from 2008 through 2022. The Company believes that its SPD light valve technology is adequately protected by its patent position and by its proprietary technological know-how. However, the validity of the Company's patents has never been contested in any litigation. To a lesser extent, the Company relies on trade secrets and nondisclosure agreements to protect its technology. The Company generally requires any employee, consultant, or licensee having access to its confidential information to execute an agreement whereby such person agrees to keep such information confidential.

### Rights Plan

In February 2003, the Company's Board of Directors adopted a Stockholders' Rights Plan and declared a dividend distribution of one Right for each outstanding share of Company common stock to stockholders of record at the close of business on March 3, 2003. Subject to certain exceptions listed in the Rights Plan, if a person or group has acquired beneficial ownership of, or commences a tender or exchange offer for, 15% or more of the Company's common stock, unless redeemed by the Company's Board of Directors, each Right entitles the holder (other than the acquiring person) to purchase from the Company \$120 worth of common stock for \$60. If the Company is merged into, or 50% or more of its assets or earning power is sold to, the acquiring company, the Rights will also enable the holder (other than the acquiring person) to purchase \$120 worth of common stock of the acquiring company for \$60. The Rights will expire at the close of business on February 18, 2013, unless the Rights Plan is extended by the Company's Board of Directors or unless the Rights are earlier redeemed by the

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Company at a price of \$.0001 per Right. The Rights are not exercisable during the time when they are redeemable by the Company. The above description highlights some of the features of the Company's Rights Plan and is not a complete description of the Rights Plan. A more detailed description and a copy of the Rights Plan is available from the Company upon request.

### ITEM 1A. RISK FACTORS

In addition to the other information in this Annual Report on Form 10-K, you should carefully consider the following factors in evaluating us and our business. This Annual Report contains, in addition to historical information, forward-looking statements that involve risks and uncertainties. Our actual results could differ materially. Factors that could cause or contribute to such differences include, but are not limited to, those discussed below, as well as those discussed elsewhere in this Annual Report, including the documents incorporated by reference.

There are risks associated with investing in companies such as ours who are engaged in research and development. In addition to risks which could apply to any company or business, you should also consider the business we are in and the following:

Research Frontiers has a history of operating losses, expects to incur additional losses in the future, and consequently will need additional funds in the future to continue its operations. To date, Research Frontiers has lost money, and we expect to lose money in the foreseeable future. Because we expect that our future revenues will consist primarily of license fees (which have not been significant to date), unless our licensees produce and sell products using our technology, Research Frontiers will not be profitable. There is no guarantee that we will ever be profitable. Since Research Frontiers was started in 1965 through December 31, 2006, its total net loss was \$62,236,531. Our net loss was \$3,303,633, \$3,747,532 and \$4,262,741 in 2006, 2005, and 2004, respectively.

We have funded our operations by selling our common stock to investors. If we need additional money, there is no guarantee that it will be available when we need it, or on favorable terms. Without giving effect to the raising of additional capital in the future, the Company would have to raise additional capital no later than towards the end of 2009 if operations, including research and development and marketing, are to be maintained at current levels. Eventual success of the Company and generation of positive cash flow will be dependent upon the extent of commercialization of products using the Company's technology by the Company's licensees and payments of continuing royalties on account thereof.

Research Frontiers depends upon the activities of its licensees in order to be profitable. We do not directly manufacture or market products using SPD technology. Although a variety of products have been sold by our licensees, and since it is up to our licensees to decide when and if they will introduce products using SPD technology, we cannot predict when and if our licensees will generate substantial sales of such products. Research Frontiers' SPD technology is currently licensed to 34 companies. Other companies are also evaluating the technology for use in various products. In the past, some

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companies have evaluated our technology without proceeding further. Also, we do not intend to manufacture products using SPD technology. Instead we intend to continue to license our technology to manufacturers of end products, films and emulsion. We expect that our licensees would be primarily responsible for marketing and manufacturing, but we are also engaging in market development activities.

Products using SPD technology have only recently been introduced into the marketplace. Developing products using new technologies can be risky because problems, expenses and delays frequently occur. Research Frontiers cannot control whether or not its licensees will develop SPD products. Some of our licensees appear to be more active than others, some appear to be better capitalized than others, and some licensees appear to be inactive. There is no guarantee when or if our licensees will successfully produce any commercial product using SPD technology.

SPD technology is the only technology Research Frontiers works with, so that our success depends upon the viability of SPD technology which has yet to be proven. We have not fully ascertained the performance and long-term reliability of our technology, and therefore there is no guarantee that our technology will successfully be incorporated into all of the products which we are targeting for use of SPD technology. We expect that different product applications for SPD technology will have different performance and reliability specifications. For example, SPD eyewear requiring batteries may need to use lower voltages than SPD windows used in homes or offices, yet may not need to last as long or be exposed to as harsh an environment. We expect that our licensees will primarily be responsible for reliability testing, but that we may also continue to do reliability testing so that we can more effectively focus our research and development efforts towards constantly improving the performance characteristics and reliability of products using SPD technology.

### ITEM 2. PROPERTIES

The Company currently occupies approximately 9,500 square feet of space at an annual rental which in 2006 was approximately \$169,000 for its executive office and research facility at 240 Crossways Park Drive, Woodbury, New York 11797 under a lease expiring January 31, 2014. The Company believes that its space, including its laboratory facilities, is adequate for its present needs.

### ITEM 3. LEGAL PROCEEDINGS

There are no legal proceedings pending by or against the Company.

### ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None

## PART II

### ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCK HOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

(a) Market Information

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(1) The Company's common stock is traded on the NASDAQ Capital Market. As of March 22, 2007, there were 15,318,601 shares of common stock outstanding.

(2) The following table sets forth the range of the high and low selling prices (as provided by the National Association of Securities Dealers) of the Company's common stock for each quarterly period within the past two fiscal years:

| Quarter Ended      | Low  | High |
|--------------------|------|------|
| March 31, 2005     | 5.00 | 6.59 |
| June 30, 2005      | 2.76 | 5.75 |
| September 30, 2005 | 2.55 | 3.50 |
| December 31, 2005  | 3.18 | 7.00 |
| March 31, 2006     | 3.59 | 6.32 |
| June 30, 2006      | 3.71 | 6.49 |
| September 30, 2006 | 4.00 | 5.25 |
| December 31, 2006  | 4.05 | 6.82 |

These quotations may reflect inter-dealer prices, without retail mark-up, mark-down, or commission, and may not necessarily represent actual transactions.

### (b) Approximate Number of Security Holders

As of March 22, 2007, there were 566 holders of record of the Company's common stock. The Company estimates that there are approximately 6,000 beneficial holders of the Company's common stock.

### (c) Dividends

The Company did not pay dividends on its common stock in 2006 and does not expect to pay any cash dividends in the foreseeable future. There are no restrictions on the payment of dividends.

### (d) Issuer Purchases of Equity Securities

None.

## ITEM 6. SELECTED FINANCIAL DATA

The following table sets forth selected data regarding the Company's operating results and financial position. The data should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and notes thereto, all of which are contained in this Annual Report on Form 10-K.

|   | Year ended December 31, |             |             |             |             |
|---|-------------------------|-------------|-------------|-------------|-------------|
|   | 2006                    | 2005        | 2004        | 2003        | 2002        |
| <b>Statement of Operations Data:</b>                        |                         |             |             |             |             |
| Fee income  | \$ 162,639              | \$ 138,742  | \$ 201,321  | \$ 258,187  | \$ 217,519  |
| Operating expenses  | 2,383,856               | 2,624,379   | 2,633,534   | 2,537,317   | 2,631,139   |
| Research and development                                    | 1,170,503               | 1,391,657   | 1,682,624   | 1,908,753   | 1,859,030   |
| Charge for reduction in value of investment in SPD Inc. (1) | --                      | --          | 165,501     | 615,200     | --          |
|   | 3,554,359               | 4,016,036   | 4,481,659   | 5,061,270   | 4,490,169   |
| Operating loss  | 3,391,720               | (3,877,294) | (4,280,338) | (4,803,083) | (4,272,650) |
| Net investment income (2)                                   | 88,087                  | 129,762     | 17,597      | 30,775      | 321,534     |

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|                            |             |             |             |             |             |
|----------------------------|-------------|-------------|-------------|-------------|-------------|
| Net loss                   | (3,303,633) | (3,747,532) | (4,262,741) | (4,772,308) | (3,951,116) |
| Basic and diluted net loss |             |             |             |             |             |
| per common share           | (.24)       | (.27)       | (.33)       | (.38)       | (.33)       |
| Dividends per share        | --          | --          | --          | --          | --          |

|                            | As of December 31, |             |             |             |             |
|----------------------------|--------------------|-------------|-------------|-------------|-------------|
|                            | 2006               | 2005        | 2004        | 2003        | 2002        |
| Balance Sheet Data:        |                    |             |             |             |             |
| Total current asset        | \$ 3,126,381       | \$3,823,093 | \$2,716,964 | \$5,322,083 | \$5,293,629 |
| Total assets               | 3,251,637          | 3,957,205   | 2,860,673   | 5,690,270   | 6,267,051   |
| Long-term debt, including  |                    |             |             |             |             |
| accrued interest           | --                 | --          | --          | --          | --          |
| Total shareholders' equity | 2,992,621          | 3,646,254   | 2,392,303   | 5,469,427   | 5,974,466   |

- (1) Reflects a non-cash charge against income of \$615,200 recorded by the Company in the first quarter of 2003 to reflect a reduction in the value of its investment in SPD Inc. determined based upon recent financing activity of SPD Inc. The Company also recorded a further non-cash charge against income of \$209,704 during the first quarter of 2004. During the fourth quarter of 2004, the Company received a payment of \$44,203 as part of a liquidation distribution made by SPD Inc. to its shareholders, resulting in a total net non-cash charge against income of \$165,501 in 2004.
- (2) Net investment income for 2002 includes \$64,608 of interest income received from officers of the Company upon payment of notes receivable.

### ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

#### Critical Accounting Policies

The following accounting policies are important to understanding our financial condition and results of operations and should be read as an integral part of the discussion and analysis of the results of our operations and financial position. For additional accounting policies, see note 2 to our consolidated financial statements, "Summary of Significant Accounting Policies."

The Company has entered into a number of license agreements covering potential products using the Company's SPD technology. The Company receives fees and minimum annual royalties under certain license agreements and records fee income on a ratable basis each quarter. In instances when sales of licensed products by its licensees exceed minimum annual royalties, the Company recognizes fee income as the amounts have been earned. Certain of the fees are accrued by, or paid to, the Company in advance of the period in which they are earned resulting in deferred revenue.

The Company expenses costs relating to the development or acquisition of patents due to the uncertainty of the recoverability of these items.

All of our research and development costs are charged to operations as incurred. Our research and development expenses consist of costs incurred for internal and external research and development. These costs include direct and indirect overhead



expenses.

The Company has historically used the Black-Scholes option-pricing model to determine the estimated fair value of each option grant. The Black-Scholes model includes assumptions regarding dividend yields, expected volatility, expected lives, and risk-free interest rates. These assumptions reflect our best estimates, but these items involve uncertainties based on market conditions generally outside of our control. As a result, if other assumptions had been used in the current period, stock-based compensation expense could have been materially impacted. Furthermore, if management uses different assumptions in future periods, stock-based compensation expense could be materially impacted in future years.

On occasion, the Company may issue to consultants either options or warrants to purchase shares of common stock of the Company at specified share prices. These options or warrants may vest based upon specific services being performed or performance criteria being met. In accordance with Emerging Issues Task Force Issue 96-18, Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services, the Company would be required to record consulting expenses based upon the fair value of such options or warrants on the date that such options or warrants vest as determined using a Black-Scholes option pricing model. Depending upon the difference between the exercise price and the market price of the Company's common stock on the date that such options or warrants vest, the amount of non-cash expenses that could be recorded as a result of the vesting of such options or warrants can be material.

The Company applied the cost method of accounting for its minority equity interest in SPD Inc., a subsidiary of Hankuk Glass Industries, Inc. Because no public market existed for the common stock of SPD Inc., the Company reviewed the operating performance, financing and forecasts for such entity in assessing the net realizable value of this investment. During 2003, the Company recorded total non-cash accounting charges of \$615,200 against income to reflect a reduction in the value of its investment in SPD Inc. These non-cash charges were determined as follows: During the first quarter of 2003, the Company recorded a non-cash charge against income of \$255,200 to reflect a reduction in the value of its investment in SPD Inc. determined based upon recent financing activity of SPD Inc. The Company also recorded a further non-cash charge against income of \$360,000 as of the end of 2003 to reflect a reduction in the value of its investment in SPD Inc. determined based upon its review of the financial position and results of operations of SPD Inc. as of and for the year ended December 31, 2003. On April 28, 2004, SPD Inc. informed the Company that it was planning to sell its equipment and other assets and cease its business activities. As a result, the Company wrote off its entire remaining investment in SPD Inc. of \$209,704 in the first quarter of 2004. During the fourth quarter of 2004, the Company received a payment of \$44,203 as part of a liquidation distribution made by SPD Inc. to its shareholders, resulting in a total net non-cash charge against income of \$165,501 in 2004.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of

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America requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, and reported amounts of revenues and expenses during the reporting periods. Actual results could differ from these estimates. An example of a critical estimate is the full valuation allowance for deferred taxes that was recorded based on the uncertainty that such tax benefits will be realized in future periods.

### Results of Operations

Year ended December 31, 2006 Compared to the Year ended December 31, 2005

The Company's fee income from licensing activities for 2006 was \$162,639, as compared to \$138,742 for 2005. This difference in fee income was primarily the result of the timing and amount of minimum annual royalties paid, and the date of receipt of such payment on certain license agreements, by end-product licensees. Certain license fees, which are paid to the Company in advance of the accounting period in which they are earned resulting in the recognition of deferred revenue for the current accounting period, will be recognized as fee income in future periods. Also, licensees may offset some or all of their royalty payments on sales of licensed products for a given period by applying these advance payments towards such earned royalty payments.

Operating expenses decreased by \$240,523 for 2006 to \$2,383,856 from \$2,624,379 for 2005. This decrease was primarily the result of lower insurance (lower by approximately \$71,500 primarily the result of a change in medical insurance carriers), consulting (decreased by approximately \$96,5000, patent (lower by approximately \$39,000) and depreciation expenses, and lower stock listing fees (reduced by approximately \$61,000 as a result of the movement of the Company's listing from the Nasdaq National Market to the Nasdaq Capital Market).

Research and development expenditures decreased by \$221,154 to \$1,170,503 for 2006 from \$1,391,657 for 2005. This decrease was primarily the result of decreased payroll (lower by approximately \$81,000 primarily the result of the net reduction in technical staff size by one employee), depreciation, materials (lower by approximately \$87,500), consulting (decreased by approximately \$12,000) and insurance expenses (lower by approximately \$67,500 primarily the result of a change in medical insurance carriers).

Investment income for 2006 was \$88,087 as compared to a net gain from its investing activities of \$129,762 for 2005. This difference was primarily due to lower cash balances available to invest, partially offset by higher interest rates during 2006.

As a consequence of the factors discussed above, the Company's net loss was \$3,303,633 (\$0.24 per share) for 2006 as compared to \$3,747,532 (\$0.27 per share) for 2005.

Year ended December 31, 2005 Compared to the Year ended December 31, 2004

The Company's fee income from licensing activities for 2005 was \$138,742, as compared to \$201,321 for 2004. This

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difference in fee income was primarily the result of the timing and amount of minimum annual royalties paid, and the date of receipt of such payment on certain license agreements, by end-product licensees. Certain license fees, which are paid to the Company in advance of the accounting period in which they are earned resulting in the recognition of deferred revenue for the current accounting period, will be recognized as fee income in future periods. Also, licensees may offset some or all of their royalty payments on sales of licensed products for a given period by applying these advance payments towards such earned royalty payments.

Operating expenses decreased by \$9,155 for 2005 to \$2,624,379 from \$2,633,534 for 2004. This decrease was primarily the result of lower marketing, accounting, depreciation and insurance expenses, partially offset by higher payroll, consulting, and patent expenses, and higher stock listing fees and reserves for bad debts.

Research and development expenditures decreased by \$290,967 to \$1,391,657 for 2005 from \$1,682,624 for 2004. This decrease was primarily the result of decreased payroll (reduced by approximately \$107,000 primarily the result of a reduction in salary of one employee and the net reduction in technical staff size by one employee), depreciation, and other allocated office expenses partially offset by higher materials expense (increased by approximately \$66,000).

Investment income for 2005 was \$129,762 as compared to a net gain from its investing activities of \$17,597 for 2004. This difference was primarily due to higher interest rates during 2005 and higher cash balances due to the receipt of proceeds from the sale of common stock and warrants in February 2005. Investment income for 2004 was \$30,097 prior to a write-down of \$12,500 in the Company's investment in common stock of ThermoView Industries.

During 2004, the Company recorded total non-cash accounting charges of \$165,501 against income to reflect a reduction in the value of its investment in SPD Inc.

As a consequence of the factors discussed above, the Company's net loss was \$3,747,532 (\$0.27 per share) for 2005 as compared to \$4,262,741 (\$0.33 per share) for 2004.

### Financial Condition, Liquidity and Capital Resources

During 2006, the Company's cash and cash equivalent balance decreased by \$644,164 principally as a result of cash used to fund the Company's operating activities of \$3,265,358, partially offset by \$2,650,000 of net proceeds received from the issuance of common stock. At December 31, 2006, the Company had working capital of \$2,867,365 and its shareholders' equity was \$2,992,621.

During 2005, the Company's cash and cash equivalent balance increased by \$1,042,622 principally as a result of \$5,000,000 of net proceeds received from the issuance of common stock and warrants, offset by cash used to fund the Company's operating activities of \$3,920,835. At December 31, 2005, the Company had working capital of \$3,512,142 and its shareholders' equity was \$3,646,254.

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The Company occupies premises under an operating lease agreement which expires on January 31, 2014 and requires minimum annual rent which rises over the term of the lease to approximately \$176,669, plus tenant's share of applicable taxes. These lease obligations are summarized over time as of December 31, 2006:

Payments due by period