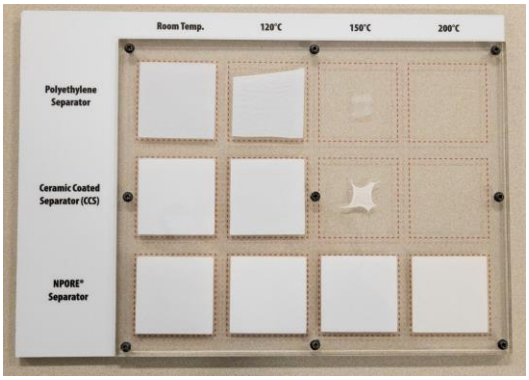
November 9, 2022

Dear Shareholders,

It has been a busy few months at META and I am excited to report our progress toward multiple large opportunities in multi-billion-dollar addressable markets. For example, in the **$5B+ battery materials market**, independent testing confirms the **superior safety of our NPORE® separators.** We are already demonstrating a **roll-to-roll PLASMAfusion® system** to make batteries lighter and safer with coated copper current collectors, which we will scale up with partners DuPont Teijin Films and Mitsubishi Electric. **NANOWEB®** samples from our first roll-to-roll line now **exceed** customer specifications. **glucoWISE® prototypes** are now ready for **pre-clinical human studies**. And we continue to **deliver KolourOptik® Stripe** nano-optic security films for **customer trials** and quality assessments in preparation for the product launch. META remains committed to environmental stewardship and sustainability with a combined portfolio of technologies and capabilities that are globally unique.

Financial Results: In Q3:22, revenue grew **329% Y/Y, to about $2.5MM, vs. $0.6MM in Q3:21** and YTD revenue was $8.8MM, up 388% vs. the first nine months of 2021. The development contract with a confidential G10 central bank accounted for most of our revenue. META is pursuing multi-year, high dollar value contracts with several OEMs across key market verticals. At 9/30/22, cash and cash equivalents totaled $32.2MM, including $0.4MM restricted cash. Please visit the Investors section of our website for our complete financial statements and MD&A.

Battery Materials Update: Electric Vehicles (EV) are the **fastest growing market** we address, with automotive EV units projected to grow at a 22% CAGR globally, from 2021 to 2030, according to IDTechEx. Consumers demand **increased range** and **faster charging**. To achieve this, battery makers need improved material **performance, stability**, and in particular, **safety**. There are **two key components**, **separators**, and **current collectors**, used in every Li-ion battery regardless of chemistry. META is developing new battery materials, manufacturing techniques and proprietary tools to address these challenges and make transportation safer. Our patented NPORE® and PLASMAfusion® technologies are different from any other solutions on the market and will make rechargeable Li-on batteries safer for many applications, from automotive to consumer to medical as well as aerospace verticals.



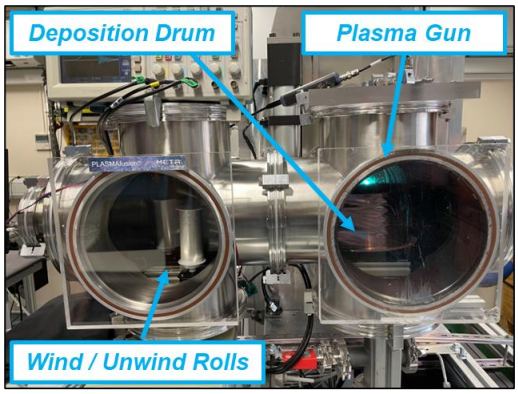
NPORE® Shows Superior Heat Stability

NPORE® Pouch Cell Survives Nail Penetration Test

NPORE® Nanoporous Ceramic Separators: NPORE® is the world's first flexible, free-standing ceramic nanoporous separator for lithium-ion batteries with no plastic inner layer. It is used between the positive and negative electrodes of lithium-ion batteries to prevent a short circuit. NPORE® has **less than 1% heat shrinkage**, even up to 200° Centigrade (picture above-left) compared to >20% shrinkage with standard separators. Independent testing by Coulometrics confirmed that NPORE® cells did not dangerously overheat during a nail penetration test, while standard cells exhibited thermal runaway to above 600 degrees Centigrade, and they were burned and destroyed. Positive results with cycling tests are ongoing. We are in discussions and evaluations with various OEMs about NPORE®. To accelerate our progress and support our growth, we are expanding space for the battery materials team at a new office and lab location in Massachusetts, and outsourced coating trials are underway with a leading global contract manufacturing partner who can produce NPORE® separators at commercial scale and volumes.

Coated Copper Current Collectors: META's solution made with our PLASMAfusion® technology **offers an ~80% weight reduction** compared to solid copper foil, **extending vehicle range**, improving safety by retarding thermal runaway, and improving sustainability by reducing copper content. We estimate that one million EVs would require 650 million square meters of anode current collector material. We have completed a mini roll-to-roll system, making 12cm x 20-meter rolls. To further commercialization, we signed an MOU with DuPont Teijin Films and Mitsubishi Electric Group for a multi-year, multi-stage project to develop pilot and industrial scale systems and apply PLASMAfusion® to solid state batteries. DuPont Teijin Films will supply polyester substrates and Mitsubishi Electric Group will provide factory automation and interface to machine builders.

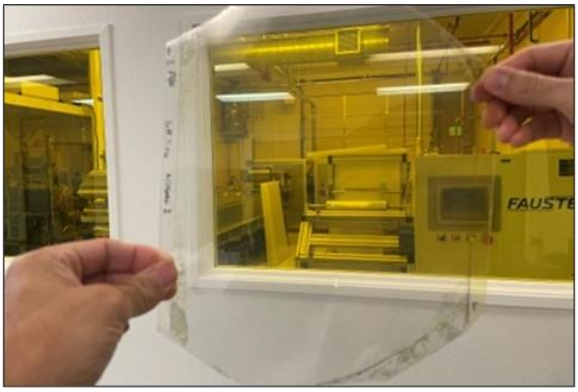
Metalized Copper Foil Sample Output



Mini R2R PLASMAfusion® System

NANOWEB® Roll-to-Roll Production Update: On the pilot-scale, 300mm web-width line at our Pleasanton, CA facility, we are **now producing 5G reflector materials** (pictured below right) that are **cosmetically uniform and exceed customer specifications**, matching or exceeding the functional performance of the wafer-based samples. As we grow capacity and the width of the web, we expect to drive down cost per square meter and address a larger number of applications such as deicing/defogging for ADAS (advanced driver assistance systems), EMI shielding for transparent microwave oven doors, transparent antennas, and electrochromic layers.

NANOWEB® Transparent Heater Demo Kit



Transparent 5G Reflector Film

NANOWEB® Ready to Test by OEMs: To efficiently service the growing number of OEMs across multiple industries who are interested in evaluating our transparent heater, antenna, and electrochromic applications, we have designed a range of standardized demo kits which use a common controller with multiple programs. Above on the left, you can see the NANOWEB® heater, powered by a battery and the controller. The infrared camera image shows the heated window function. The controller can also be connected to a USB-C power supply. Other versions feature electrochromic and antenna functions designed to be embedded in smart lenses. A NANOWEB® electrochromic layer can quickly switch a lens or surface from transparent to shaded, for applications such as AR eyewear or a vehicle sunroof.

glucoWISE® Update: Our latest non-invasive glucose monitoring system uses a combination of RF and optical signals to measure glucose through the tissue, without penetrating the skin. It is covered by 16 active patent documents, of which 5 are issued**.** Pictured on the right is Dr. Helena Cano-Garcia with our newest pre-clinical prototype. A new round of pre-clinical human studies should be completed before year end, and we plan to have this desktop version ready for market in two and a half to three years, followed by portable and wearable designs.

glucoWISE® pre-clinical prototype

KOS Trial Production Run

Nano-Optic Security Products: We continue to make progress on a new anti-counterfeiting security feature for a confidential central bank. Since September 2021, we have been working under a framework agreement, for up to $41.5MM over up to 5 years. We announced $4.3MM in purchase orders in September 2022, bringing total orders to $13.5MM under this agreement. The customer may choose to expand the scope of work with new purchase orders. We continue to develop our **KolourOptik®** technology toward launching Stripe and Thread versions. We have **already delivered 10,000 meters** of KolourOptik® Stripe (KOS) material (pictured on the left) for customer trials, with good test results for adhesion and durability.

Intellectual Property Update: META currently has **472 active utility and design patent documents**, of which **292 patents are issued.** In the U.S., we have 40 issued patents and 60 pending applications, and in 28 other countries globally, we have 252 issued patents and 120 pending applications. META's portfolio comprises **112 patent families, of which 63 include at least one granted patent**. Since the Q2 2021 report, we have added 22 active patent documents and 9 new patent families. Furthermore, an important design patent application was granted. META now has 12 design patents protecting key ornamental features in the authentication space, of which 4 are issued.

Events: META showcased EV solutions, including NANOWEB®, at the **70th annual Canadian APMA (Auto Parts Manufacturers Association) show**, which included a sneak peek of the Project Arrow concept EV. META's technology is expected to be included in the Project Arrow exhibit at CES 2023. On November 17th, we will **celebrate the Grand Opening** of our new 68,000 sq. ft. headquarters facility in Highfield Park, Dartmouth, Nova Scotia, featuring 12 clean rooms. This new Centre of Excellence will be housing ARfusion®, the platform technology for smart Augmented Reality eyewear, and will also support other product verticals across the company. Due to capacity limitations, this is an invitation only event, but we will be creating video content to share with all of you.

META has been working closely with some of the world's leading Fortune 500 companies as we continue to push the boundaries of material science and work together to solve some of the world's most pressing problems.

Thank you to all our shareholders for your continued support.

Sincerely,

George Palikaras, Ph.D.,
President & CEO / Founder

About Meta Materials Inc.

META delivers previously unachievable performance, across a range of applications, by inventing, designing, developing, and manufacturing sustainable, highly functional materials. Our extensive technology platform enables leading global brands to deliver breakthrough products to their customers in consumer electronics, 5G communications, health and wellness, aerospace, automotive, and clean energy. Our nano-optic technology provides anti-counterfeiting security features for government documents and currencies and authentication for brands. Our achievements have been widely recognized, including being named a Lux Research Innovator of the Year in 2021. Learn more at www.metamaterial.com.

Forward Looking Information

This letter includes forward-looking information or statements within the meaning of Canadian securities laws and within the meaning of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, regarding the Company, which may include, but are not limited to, statements with respect to the business strategies, product development, expansion plans and operational activities of the Company . Often but not always, forward-looking information can be identified by the use of words such as “pursuing”, “potential”, “predicts”, “projects”, “seeks”, “plans”, “expect”, “intends”, “anticipated”, “believes” or variations (including negative variations) of such words and phrases, or statements that certain actions, events or results “may”, “could”, “should”, “would” or “will” be taken, occur or be achieved. Such statements are based on the current expectations and views of future events of the management of the Company and are based on assumptions and subject to risks and uncertainties. Although the management of the Company believes that the assumptions underlying these statements are reasonable, they may prove to be incorrect. The forward-looking events and circumstances discussed in this release may not occur and could differ materially as a result of known and unknown risk factors and uncertainties affecting the Company, the capabilities of our facilities and the expansion thereof, research and development projects of the Company, the total available market and market potential of the products of the Company , the market position of the Company, the need to raise more capital and the ability to do so, the scalability of the Company’s production ability, capacity for new customer engagements, material selection programs timeframes, the ability to reduce production costs, enhance metamaterials manufacturing capabilities and extend market reach into new applications and industries, the ability to accelerate commercialization plans, the possibility of new customer contracts, the continued engagement of our employees, the technology industry, market strategic and operational activities, and management’s ability to manage and to operate the business. More details about these and other risks that may impact the Company’s businesses are described under the heading “Forward-Looking Information” and under the heading “Risk Factors” in the Company’s Form 10-K filed with the SEC on March 1, 2022, in the Company’s Form 10-Q filed with the SEC on November 9, 2022, and in subsequent filings made by Meta Materials with the SEC, which are available on SEC’s website at www.sec.gov. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Accordingly, readers should not place undue reliance on any forward-looking statements or information. No forward-looking statement can be guaranteed. Except as required by applicable securities laws, forward-looking statements speak only as of the date on which they are made and the Company does not undertake any obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, or otherwise, except to the extent required by law.