

November 15, 2021

Fellow Shareholders,

We have devoted ten years and invested millions of dollars developing and acquiring proprietary software, tools to rapidly design new metamaterial structures for a wide range of applications, as well as the technologies to reproduce them consistently over large areas, leading us to **multiple strategic partnerships** with Fortune 500 OEMs and Tier 1 companies, **supported by a large and growing IP portfolio** and global industry awards.

META® brings “intelligence” to surfaces. By printing nanostructures onto windshields for de-icing/de-fogging, optical lenses for augmented reality and transparent 5G-ready windows, we are able to make surfaces do amazing things, things that were simply not possible until now. These material science breakthroughs are ushering in a new age of performance and efficiency and we are proud to be a leader in the emerging metamaterials industry.

Financial Results: META is an early growth stage, platform company, moving toward volume production for applications in multiple end markets. In Q3:2021, total revenue grew 189%, to \$573K, compared to \$198K in Q3 2020. For the nine months YTD 2021, total revenue increased by 111%, to \$1,793K, versus \$849K in the first nine months of 2020. We expect development programs to account for most of our revenue over the next 12 months. META is currently pursuing multi-year, multi-million-dollar contracts with several OEMs.

At the end of Q3:21, cash and cash equivalents totaled **\$140.8MM**. YTD, we used \$15.6MM in operations and \$6.4MM for purchases of property, plant, and equipment and patent assets. Since quarter end, we used \$72.1MM to complete the acquisition of Nanotech Security Corp. We continue to actively explore and evaluate strategic, organic, and inorganic growth opportunities to broaden our platform, focusing on complementary technologies, expanding the customer base, adding manufacturing capacity, building supplier relationships, and opening new markets. Please visit the [Investors](#) section of our website for our complete financial statements and MD&A.

General Business Update: META is scaling metamaterials application and production capabilities across all our locations, building out roll-to-roll capabilities similar to the way newspapers are printed. In Dartmouth, Nova Scotia, we are busy completing the required renovations to our new **68,000 sq. ft. headquarters**. The facility will be a center of excellence for new application development, including a 15,000 sq. ft. customer center for training and technology transfer; as well as 11 state-of-the-art cleanrooms, and is expected to be operational in H1:2022. In Pleasanton, California, we have expanded operations by **nearly 4x, to 19,500 sq. ft.**, hosting our RML® (rolling mask lithography), NANOWEB® wafer line production, and a chemistry lab for biosensor development.

On October 5th, [we completed the acquisition of Nanotech](#), which accelerates and de-risks our commercialization and manufacturing of metamaterials. Nanotech’s team brings decades of experience in nanophotonics R&D, high-volume, roll-to-roll nanoimprint lithography (NIL), and thin-film coating production. Nanotech has in-house, state of the art electron beam lithography (EBL) capability, which is expected to significantly increase META’s capacity for new customer engagements and shorten material selection programs. META’s Thurso, Quebec production facility, situated on **11 acres of land, with a 105,000 square foot building, currently exceeds 7 million square meters capacity per year**. We plan to approximately double capacity to 15 million square meters over the next 1-2 years, and we are exploring the option to manufacture battery materials as a key application area for expansion. Once completed, these expansion plans are expected to secure new and expanded customer contracts and revenues.

In the **government and banknote market**, Nanotech has supplied security features used in 30+ banknote denominations. Nanotech recently renewed its frame agreement to continue development of a unique security feature for its confidential central bank customer. The frame agreement has a **maximum value of approximately \$42.2 million over a period of up to five years**. Under the agreement, Nanotech expects to submit annual fixed contract proposals for which the confidential customer can elect to award purchase orders. For the next 12-months ending September 30, 2022, the confidential customer **has awarded purchase orders totaling over \$7.1 million**.

Drilling of wells required to maintain compliance with lease obligations for the Torchlight oil and gas assets is underway.

On October 4th, META was chosen as one of the first-ever [Lux Innovator of the Year Award](#) winners. META’s winning submission, **A Sustainable Solution for the Promise of 5G in Dense Urban Environments**, was based on its [collaboration with Sekisui Chemical](#) to develop a transparent and flexible radio wave reflection film to improve the performance and coverage of high speed 5G and future 6G networks.

On August 19th, META announced the formation of a [Scientific Advisory Board](#) to support its innovation and investment strategy and welcomed Andrea Alu, Ph.D., Mark Brongersma, Ph.D. and Nader Engheta, Ph.D. The Board will help the Company protect and grow existing scientific innovation; support its development of new technologies; assist with outreach to the scientific community; guide and oversee META’s open innovation programs. META is sponsoring [Ideas for Innovation](#), a global innovation strategic co-development initiative, in partnership with academia, to make metamaterial innovations more commercially accessible to markets and drive new revenues.

META’s smart materials and metamaterials are differentiated in three key areas:

1. Speed of Discovery	2. Manufacturing at Scale	3. Best in Class Performance
<p>Rapid design: Using artificial intelligence and machine learning to mine our patent library allows us to create functional prototypes much faster than traditional chemical synthesis. What used to take years for material discovery now takes hours and days with material informatics.</p>	<p>Large scale solutions: Our manufacturing facilities house proprietary production equipment that can produce nanocomposites with larger dimensions suitable for seamless use in many large-area applications such as vehicles and buildings.</p>	<p>Multi-sector applications: We are a technology platform company that designs and builds nano-products to deliver breakthrough products in consumer electronics, 5G communications, health and wellness, aerospace, automotive, clean energy, banknote security and brand protection.</p>
<p>Multi-physics modeling: Our analysis tools allow us to build rapid prototypes in software to model how changing one parameter affects the entire system before implementation in physical form.</p>	<p>High volume production: Our nanofabrication technologies allow new materials to be produced at high speed and large quantities (e.g., batch wise or roll-to-roll). This enables META to fabricate metamaterial products in high volumes.</p>	<p>Breakthrough solutions: Our advanced capabilities in both design and manufacturing of metamaterials are why some of the world’s best-known companies—Samsung, Airbus SE, Lockheed Martin, and other confidential partners—choose us to co-develop breakthrough solutions</p>
<p>Mass customization: Bringing together three core capabilities—holography, lithography, and wireless sensing into a platform allows us to create materials that perform multiple functions.</p>	<p>Quality: The very precise and demanding quality requirements of advanced nanofabrication are why META adheres to the ISO 9001 Quality Management System (“QMS”) standard.</p>	<p>Sustainability: META develops products, processes and nano-fabrication tools that use less materials, less energy and are no longer reliant on scarce and rare earth materials, earning a Global Cleantech 100 award in 2019.</p>

Application Examples:

- **EMI Shielding – NANOWEB®** transparent conductive film with sub-micron linewidths provides best in class EMI shielding (60-70dB) without sacrificing optical transparency (>90%). We are pursuing potential uses ranging from high-volume home appliances such as microwave ovens, to high-value aerospace applications protecting instruments and sensors.
- **5G Communications** – META and [Sekisui Chemical are collaborating](#) to develop a best in class transparent and flexible, passive radio wave reflective film based on NANOWEB® conductive film to improve the performance and coverage of 5G and future 6G networks. We are ramping production of test samples to meet customer demand.

- **LIDAR Protection** – Autonomous vehicles and ADAS (advanced driver assistance systems) depend on sensors to “see” their surroundings, and can be disrupted by inclement weather, as well as electromagnetic interference (EMI). META is developing NANOWEB® for best-in-class deicing/defogging and EMI shielding. We are seeing growing interest.
- **Medical Wireless Sensing** – In healthcare, we seek to enhance imaging and sensors to improve diagnosis, treatment, and management of chronic diseases. Our **radiWISE™** technology enhances the signal to noise ratio for MRI (magnetic resonance imaging) systems by up to 40x (best in class). We are pursuing partnerships to design updated prototypes and developing a plan to conduct clinical studies. META is also developing a **bio-photonic sensor** with sensitivity and performance enhanced by nanomaterial to meet rising demand for point of care/point of use testing for COVID-19 and 50 other molecules. This portable, smartphone attached biosensor under development uses Surface-Enhanced Raman Spectroscopy (SERS) with a special film material as a consumable.
- **Augmented Reality One-Stop-Shop: ARfusion™** – META offers augmented reality eyewear OEMs a one-stop-shop approach for advanced optical components integrating highly functional films, such as NANOWEB® or holographic waveguides and free space combiners using Bayfol® HX photopolymer films from [Covestro](#), into cast prescription lenses made in an automated lens casting system.

Intellectual Property: Since the start of 2021, META has far exceeded its goal of reaching 200 patents in 2021. Including the patents added with the Nanotech acquisition, META now has a total of 250 patents. META currently has **156 patents granted and 94 pending patent applications**, including 3 design applications. We have 35 issued patents and 20 pending applications in the U.S. and 121 issued and 74 pending applications in 23 other countries around the world. META’s portfolio comprises **68 patent families, of which 46 include at least one granted patent**. Since the Q2 report, our IP portfolio has expanded by 74 granted patents, 27 pending applications, and 22 patent families. Newly added Nanotech patent families cover document authentication, nanofabrication (including e-beam and nanoimprint lithography processes), scaled roll-to-roll manufacturing systems, as well as plasmonic, diffractive and photonic crystal nanostructures for solar and carbon capture applications.

We are pioneering a new world of material performance and efficiency. META is positioned for growth as a metamaterials industry leader, creating a new category of intelligent surfaces. We enable partners across a range of industries - consumer electronics, 5G communications, healthcare, aerospace, automotive, clean energy, banknote security and brand protection - to deliver breakthrough products to their customers. META seeks to design, develop, and help our customers produce products that **do more with less**, using **sustainable materials and consuming less energy**.

We very much appreciate 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 market potential of the products of the Company, the market position of the Company, 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-Q filed with the SEC on November 15, 2021, in the Company’s Form 10-K filed with the SEC on March 18, 2021, 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.