



George Palikaras, Ph.D.
President and CEO, Founder



Kenneth Rice, MBA, JD, LLM
COO & CFO

Meta Materials Inc. Q1 2022 Results

NASDAQ: MMAT
May 11, 2022

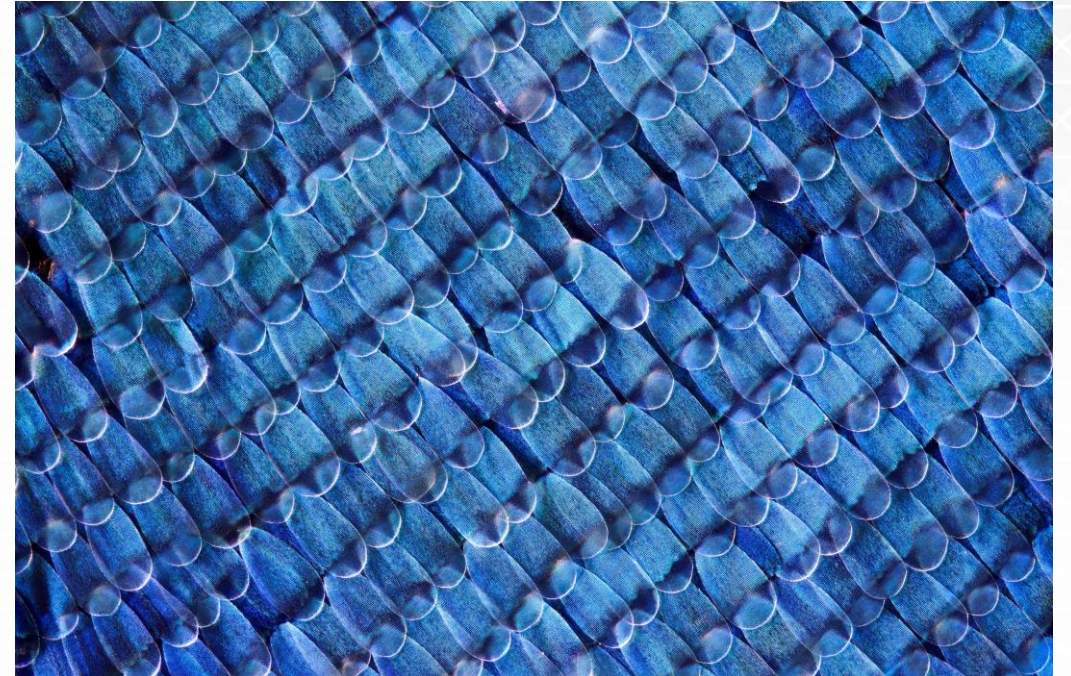


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Forward Looking Statements

This presentation 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-K filed with the SEC on March 1, 2022, with an SEC filing date of March 2, 2022, in the Company’s Form 10-Q filed with the SEC on May 10, 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. Unless otherwise stated, all references to \$ herein are to US dollars.

Selected Financial Highlights – Q1 FY:2022

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS		
	Q1:2022	Q1:2021
Total Revenue	\$ 2,974,695	\$ 596,303
Gross Profit	\$ 2,195,983	\$ 595,903
Selling & Marketing	1,035,986	396,594
General & Administrative	14,597,913	2,592,885
Research & Development	3,971,139	1,779,256
Total Operating Expenses	\$ 19,605,038	\$ 4,768,735
Total Other Income (Exp) ¹	(1,025,486)	(40,030,366)
Loss before income taxes	\$ (18,434,541)	\$ (44,203,198)
Income tax recovery	-	44,679
Net Loss	\$ (18,434,541)	\$ (44,158,519)
Net Loss per Share	\$ (0.06)	\$ (0.26)
Weighted Average Shares	285,224,469	168,864,762

¹Note: Q1:21 includes a \$40MM non-cash loss on financial instruments

BALANCE SHEET HIGHLIGHTS	
	3/31/2022
Cash and cash equivalents	30,228,670
Inventory	366,959
Assets held for sale	72,000,000
Total current assets	\$ 108,993,199
Intangible assets, net	28,306,272
Property, plant and equipment, net	29,977,784
Operating lease right-of-use assets	6,230,735
Goodwill	240,769,981
Total assets	\$ 414,277,971
Trade and other payables	9,944,822
Preferred stock dividends	72,000,000
Other current liabilities	2,722,594
Total current liabilities	\$ 84,667,416
Deferred revenue	660,297
Long-term debt, other	7,212,576
Total non-current liabilities	\$ 7,872,873
Shareholders' equity	\$ 321,737,682

This information should be read in conjunction with the complete financial statements and the associated management discussion and analysis, available on the Investors section of our website at www.metamaterial.com, as well as on the SEC EDGAR website at www.sec.gov

Series A Preferred Shares – OilCo Update

META believes it remains in compliance with all aspects of its lease obligations.

Disposition of the Oil & Gas Assets now planned as an **exchange** in a separate company.

OilCo will be owned by the **Series A preferred stockholders**.

Audit of the Oil & Gas operations is now **complete**.

Required SEC filings must be completed to complete the exchange.

In 2021, META incurred \$14.2MM in costs related to drilling activity to maintain leases.

Upon completion of the exchange:

Series A holders will exchange shares for OilCo common stock.

Costs associated with Oil & Gas operations will be carried by the OilCo as debt to META.

OilCo is exploring options to secure additional short-term financing.

Financing may not be completed, and repayment of debt may not occur.

Investors should refer to additional “Risk Factors” in the Company’s SEC filings.

META Outlook & Updates



Market Opportunity Driven by Several Megatrends

5G Ecosystem:

USD \$8 trillion by 2030, the infrastructure rollout requires new materials for transparent antennas and reflectors

Vehicle Electrification:

USD \$980 billion by 2028, seismic shift toward EV, ADAS (advanced driver assistance systems) and autonomous vehicles

Combined >\$3T in Other Verticals:

Advanced Materials, IoT, Medical, Energy, Aerospace and Automotive markets

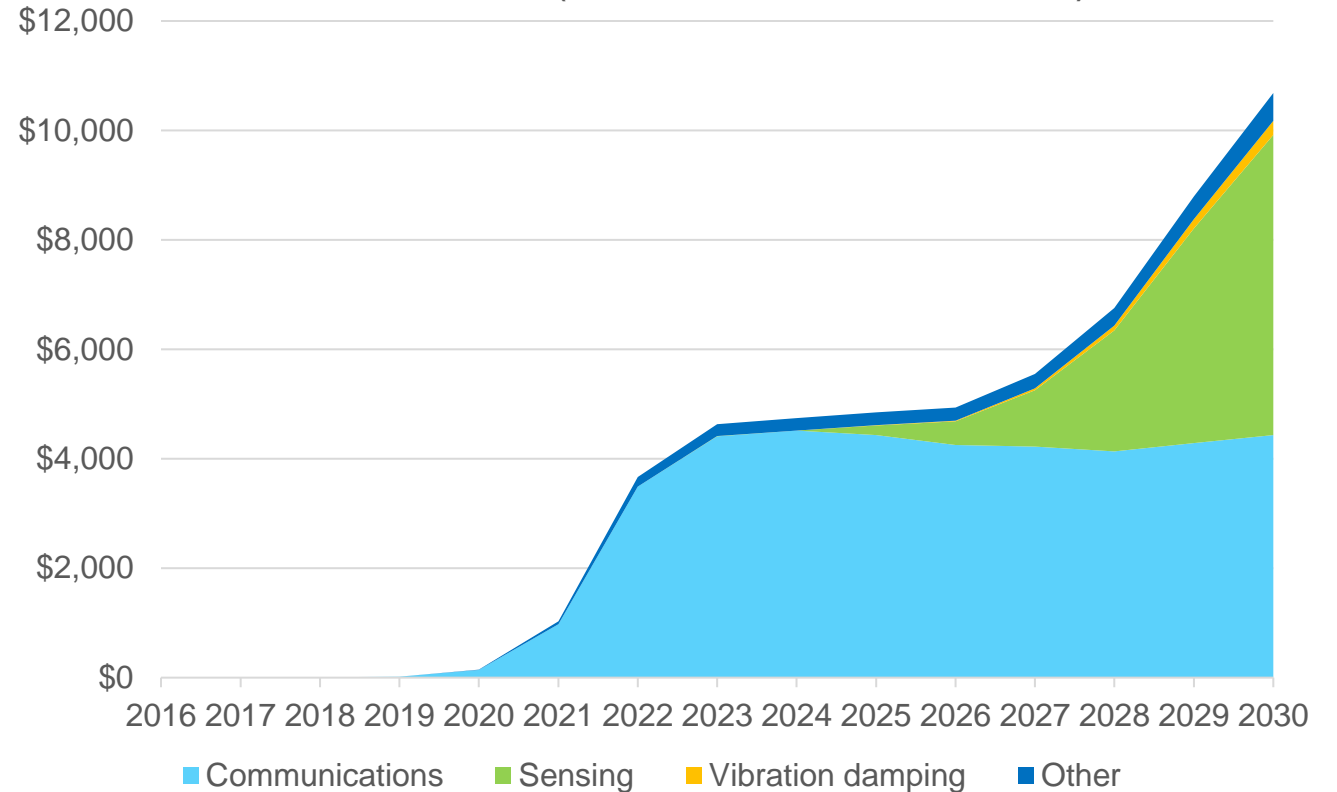
Growth Challenge:

supply of rare earths and scarce materials such as ITO (Indium Tin Oxide) highly concentrated in Asia

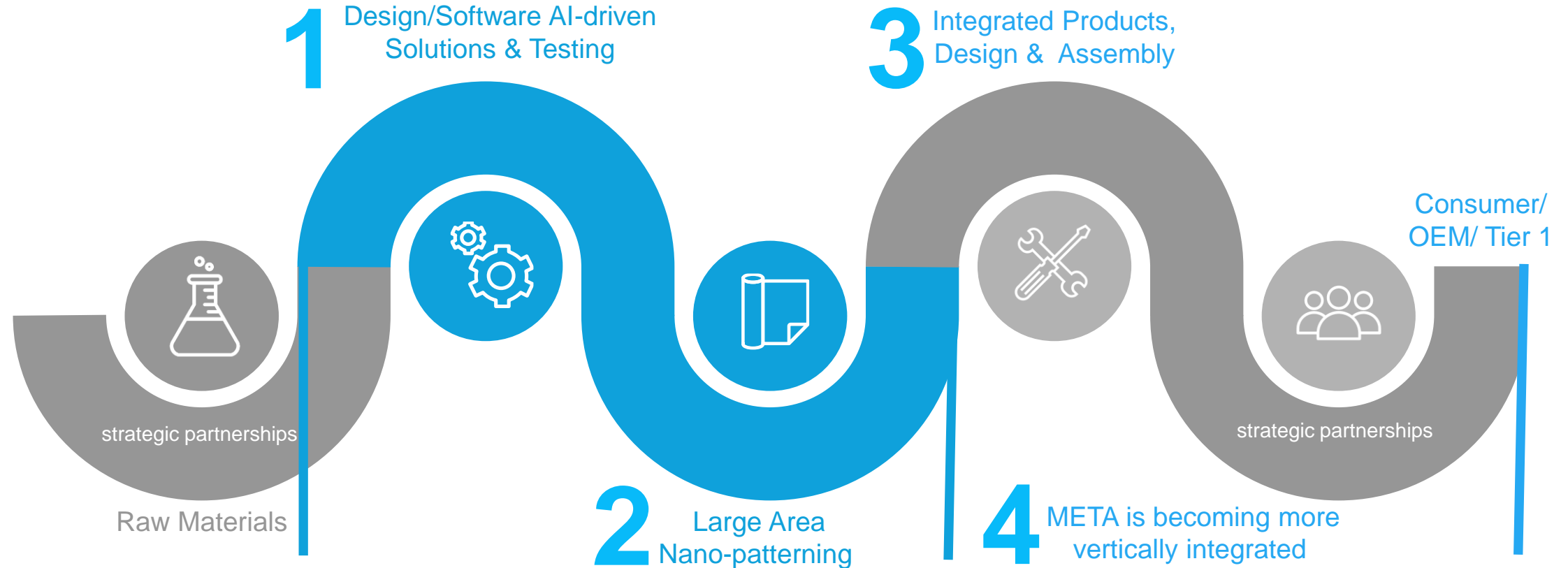
Metamaterial Devices - Doing More With Less:

Market is expected to grow to **USD \$10.7B SAM by 2030**

Metamaterials Market Forecast
US\$ Millions (Source: LUX Research)



META is a Breakthrough Solution Provider in the Value Chain

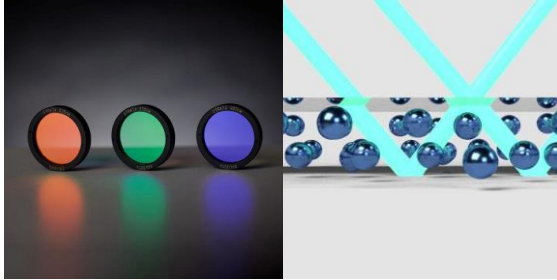


META works with raw material vendors and Original Equipment Manufacturers.

META has a growing library of proprietary solutions ready to enable & integrate with OEM and Tier 1 products

Technology Platform Capabilities

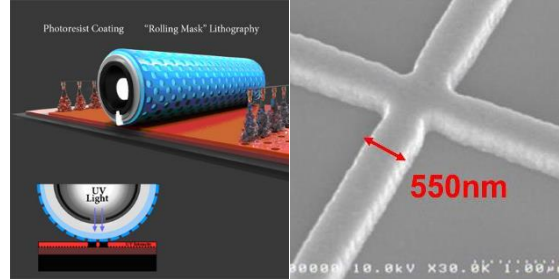
HOLOGRAPHY



Laser records into photopolymer:

- holoOPTIX® optical components
- metaAIR® laser glare protection
- HUD displays for automotive, aerospace

LITHOGRAPHY



RML® produces sub-micron metal mesh:

- NANOWEB® antennas, reflectors, EMI shielding, de-ice/de-fog

Electron Beam Lithography + Nanoimprint Lithography (NIL) + Roll-to-Roll Processing produces nano-optic security features:

- KolourOptik® anti-counterfeiting

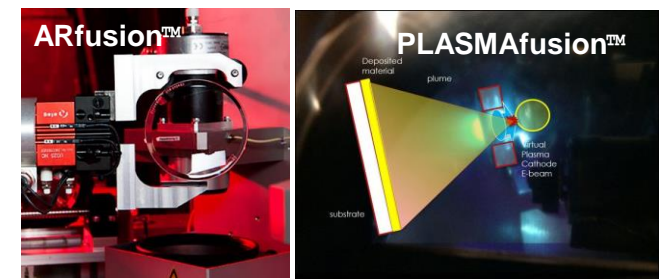
WIRELESS SENSING



Metamaterial films enhance signals/images:

- glucoWISE® non-invasive glucose monitor
- radiWISE™ MRI image enhancement

PRECISION INTEGRATION



Proprietary production platforms:

- ARfusion™ prescription AR smart glasses
- PLASMAfusion™ patented high-speed coating technology, any solid material on any substrate

Global Presence



Halifax, Nova Scotia, Canada

Global HQ
R&D and Integrated Applications
Product Dev. & Low vol. mftg.

Burnaby, BC, Canada

Product Design and R&D

Thurso, QC, Canada

Global Manufacturing HQ
High Vol. Manufacturing

Boxborough, MA, USA

USA Headquarters

Pleasanton, California, USA

NA Sales
Product Design and R&D

Tokyo, Japan

Japan/APAC Sales

London & Oxford, UK

UK/EU Sales
Research & Development

Athens, Greece

EU Sales
Product Design
Research & Development

NEW: Maryland, USA

Systems Engineering, EO I/R

ISO 9001 Quality Management System

Nano-Optic Security Products

Benefits: Proprietary nanotechnology-based design, origination, recombination, and manufacturing processes enable mass manufacturing of nanoscale materials for multiple industries.

Possible Applications: Carbon Capture, 5G & Other Antennas, Sensors, Battery & Fuel Cell Technology, Solar Cells, Brand Protection, Banknote & Government Security

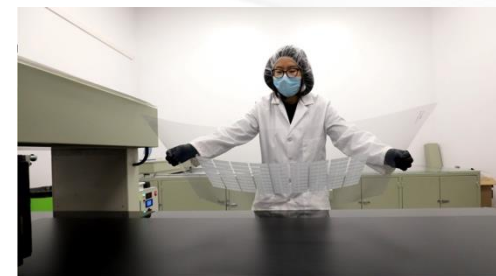
Synergies: EBL, nano-imprint lithography, UV casting, R2R vacuum coating, and decades of R2R production experience

KolourOptik® Stripe featured in [Banknote Technology Report 8](#)

Frame Agreement: Developing a unique security feature for a confidential G10 central bank, up to \$41.5MM over up to 5 years.

New Purchase Orders: \$2.2MM new orders in April, including \$1.2MM for sample product. F22 orders now total \$9.2MM.

Roadmap: Win selection for first banknote with flagship customer, expand to other denominations, follow-on business with others.



Thurso, QC – Expanding Sustainable Production

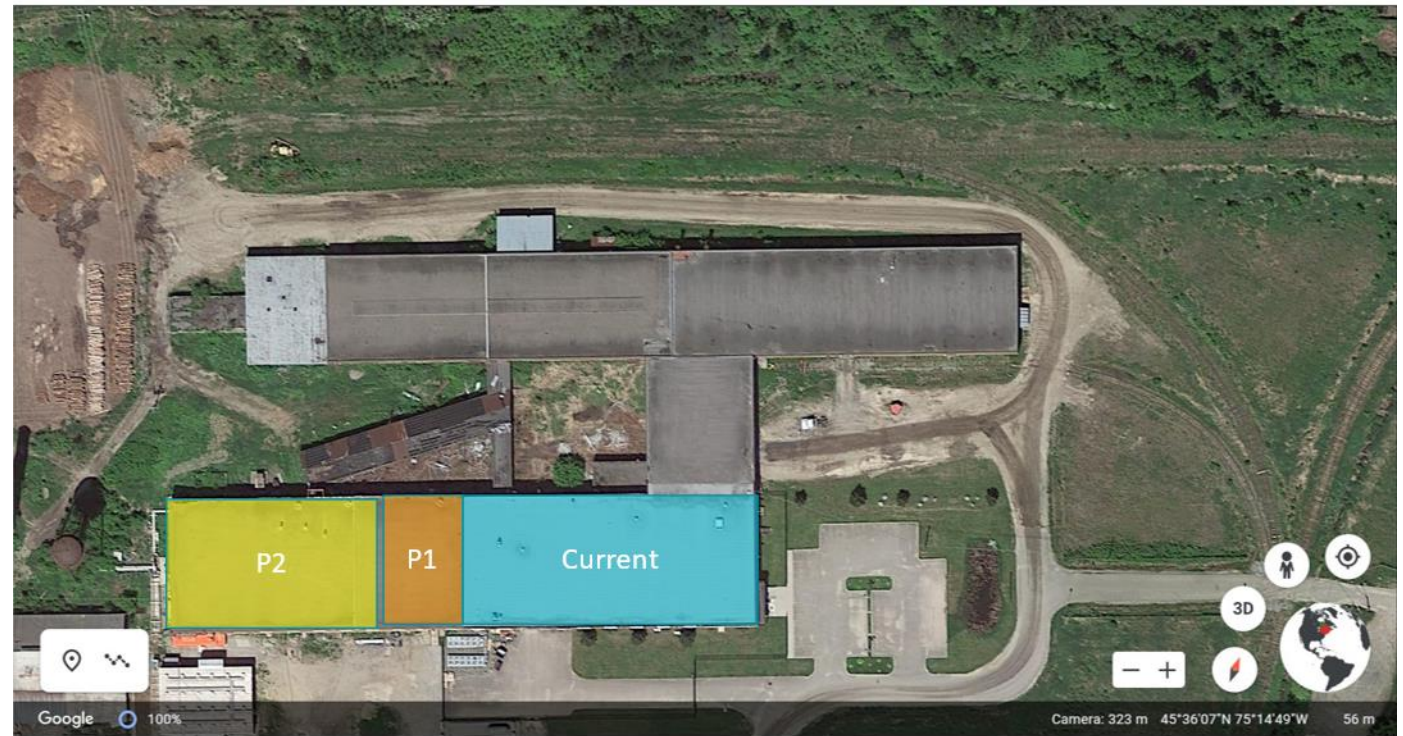
META-owned facility, 105K square feet on 11 acres of land, 35K used for production.

Expanding production space to double nano-optic capacity to **15MM m²/year**.

Space reserved for **next-generation**, **500mm wide NANOWEB[®]** roll-to-roll line.

Upgraded floor to accommodate equipment to be **completed this month**.

Strategic Location - Driving Sustainability: powering production with clean 99% renewable energy, low-cost hydropower. This means there are few or no greenhouse gas (GHG) emissions for META's current and future production.



Halifax, ARfusion™ Lens Casting Line



ARfusion™ casting line is up and running in Halifax for OSS (One-stop-shop) in partnership with COVESTRO.

Comprises hologram film recording, stack assembly, film forming, lens casting and metrology.

Second line transferred from Switzerland to HFX.

Monomer (for casting) development and supply strategic agreement in progress to secure supply chain.



META is now part of LaSAR Alliance: Collaboration to enhance AR market



NANOWEB® Scale-Up and Application Developments

First pilot-scale, 300mm, **RML**® roll-to-roll line being optimized at META's Pleasanton, CA facility.

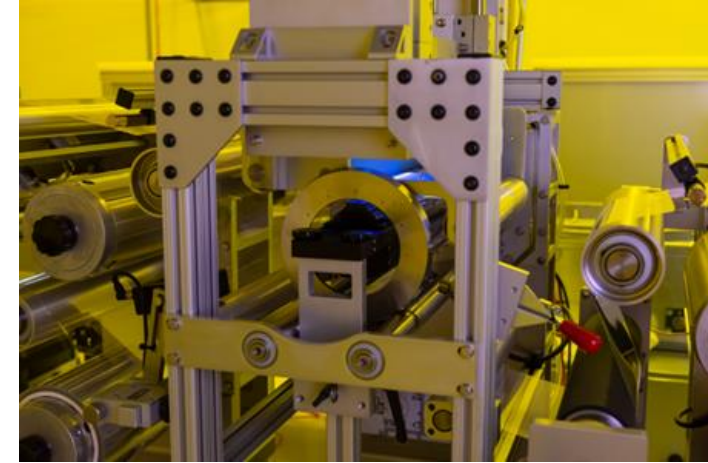
Process steps proven on META's established wafer-scale line.

First roll-to-roll sample of **5G Reflector** film demonstrated performance within 1% of wafer-based samples (which are equal to a solid metal reflector).

Sekisui Chemical [published indoor propagation measurements](#). Increased sample shipments expected in H2:2022.

Internal demonstration of transparent microwave oven door with **NANOWEB**® **EMI shielding** equal to existing products. Demonstration units to be sent to OEMs for independent testing.

Higher volume and **larger area** NANOWEB® capacity to enable other applications such as deicing/defogging for EVs.



Plasma App Ltd. Acquisition

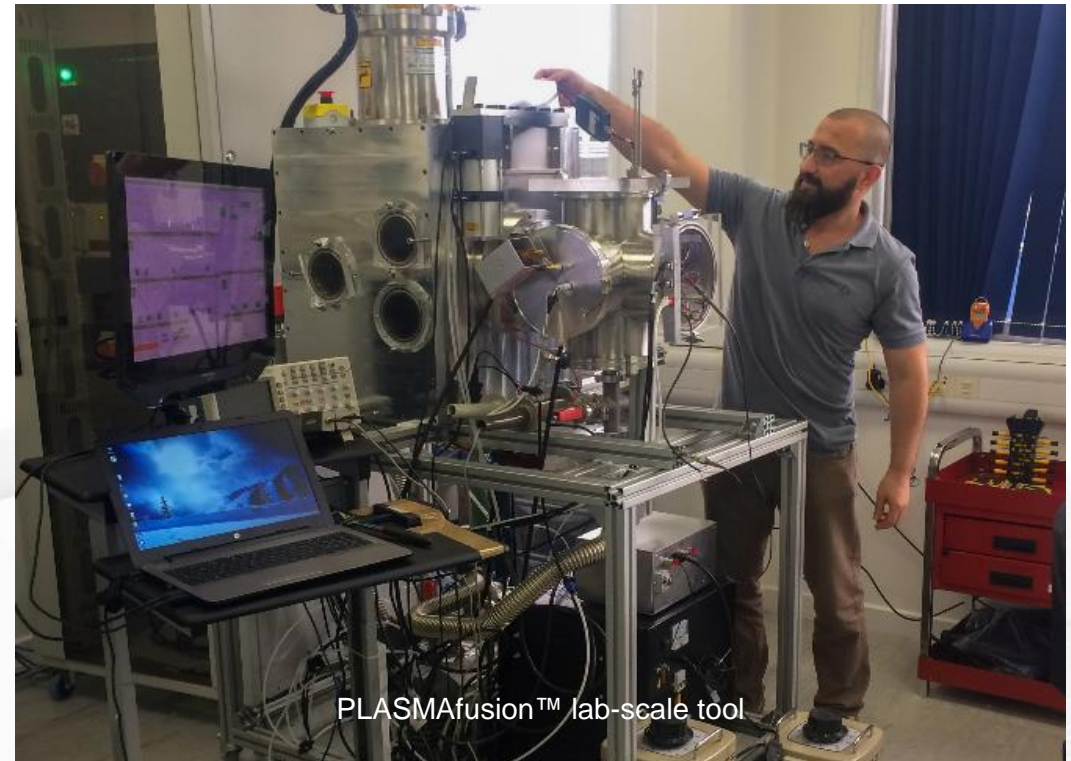
PLASMAfusion™ patented high-speed coating technology,
any solid material on any substrate

Benefits: Low temperature, no solvents or toxic chemicals,
~60x more energy efficient than Plasma Laser Deposition and
8x more efficient than Magnetron Sputtering, with higher
adhesion, deposition rate and overall coating uniformity

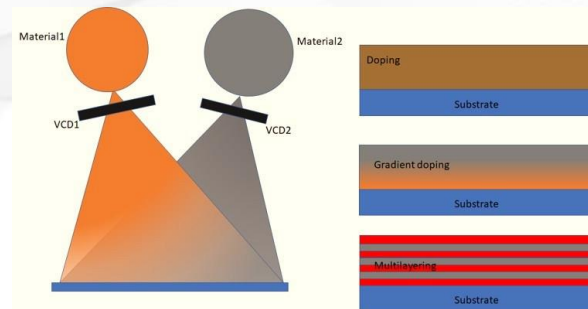
Possible Applications: Batteries, Semiconductors,
Printed circuit boards, Protective/optical coatings

Synergies: Large-scale metallization for NANOWEB® and
KolourOptik® films to accelerate line speed, leverage Capex,
reduce cost/square meter

- Closed on 4/1/22, stock for stock, \$20MM at \$1.86 per share
- R&D office in Rutherford Appleton Laboratories, Oxford, UK



PLASMAfusion™ lab-scale tool



Multi-layers, doping & gradients



Copper on ceramic substrate

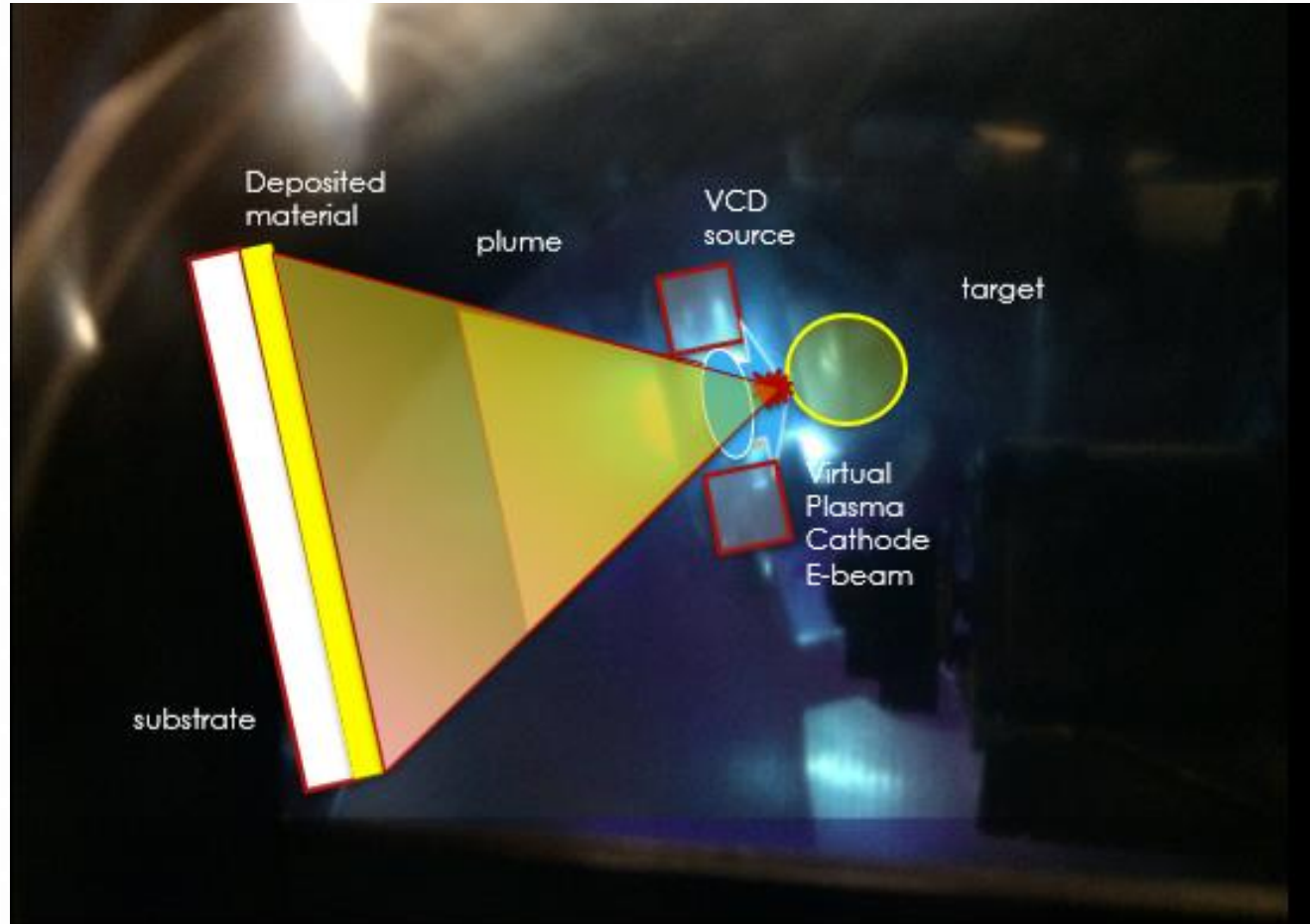
PLASMAfusion™ Demo - 10 seconds



- Deposition of Stainless Steel
- On a golf ball
- 10 seconds – 100 nm

PLASMAfusion™ 10 Second Demonstration

How it Works?



1. Concentrates energy with electron beam $> 100 \text{ MW/cm}^2$
2. 0.001 mm^3 of the target turns into plasma
3. The plasma is thrown toward the substrate with velocity up to 47 km/s
4. The target material plasma condenses at the substrate surface as a thin film (up to 0.1 nm/pulse at 400 cm^2)
5. Repeating the pulses up to 600 Hz growing the film

Intellectual Property & Know-How

Proprietary, custom manufacturing processes and trade secrets, developed over 10 years with multi-million \$ investment

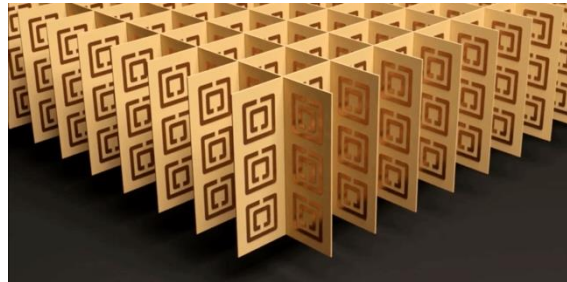
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active utility and design patent documents



38

issued patents and 30 pending applications in the U.S.

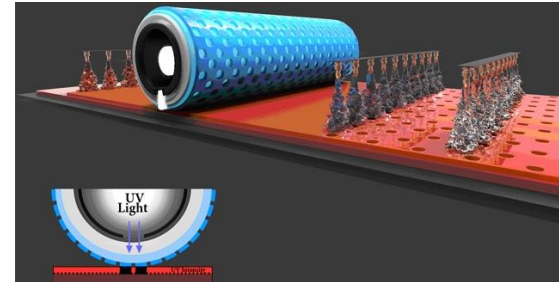


9

registered trademarks

12

design patent documents



UTILITY PATENT DOCUMENTS BY L1 TECH

- 176** Devices & Components
- 75** Scaled Manufacturing
- 39** Fabrication & Origination

174

utility patents have issued 81 patent families



137

issued patents and 97 pending applications in 24 other countries



Processes and methods were patented early, providing multi-year competitive advantage

Key Executive Additions:



George Francis
Chief Information Officer

Over 25 years of experience including manufacturing, retail, distribution, services, and SAAS.

Leading the design and implementation of META's IT architecture, systems, and cyber security.

Addressing global regulatory and compliance needs.

Providing insights into potential monetization of data generated by META's emerging products.



John "Yiannis" Antoniadis, Ph.D.
EVP, Head of Engineering and
Electro-Optical & Infrared Systems

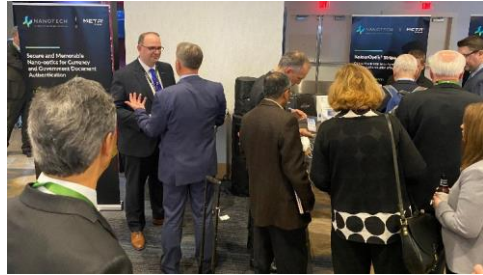
Over 35 years of experience in system, hardware and software development of advanced technology systems.

Demonstrated leadership in the academic, government and private sectors.

Building and leading a team to drive product engineering and vertical integration of META's technology portfolio.

New strategic office located in Maryland.

Marketing Update – Trade Shows



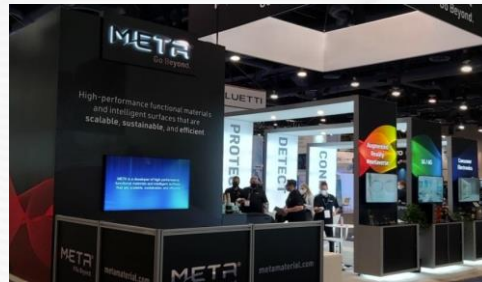
Banknote & Currency Conference



Intergraf Currency + Identity



Optical & Digital Document Security



CES Las Vegas

Marketing & Sales Team and Efforts are Expanding

- CES Las Vegas, Jan 2022
- SPIE Photonics West, California, Jan 2022
- Banknote Conference, Washington, Feb 2022
- High Security Printing March 14-16, Mexico City
- Intergraf Currency & Identity, April 6-8, France
- ODDS, April 11-13, Vienna
- IACC Conference, 21 April 27-29, Washington
- CANSEC June 1-2, Ottawa
- AWE USA June 1-2, California

META[®]

Go Beyond.

Mark Komonoski

Senior Vice President
Integrus Communications

T: 877-255-8483

E: ir@metamaterial.com

