



The Global Waste Problem

Ban on single-use plastic items approved by European Parliament [Link](#)

Canada to ban single use plastics as early as 2021 [Link](#)

Nestle is aiming at 100% recyclable or reusable packaging by 2025 [Link](#)

Tesco vows to remove one billion pieces of plastic packaging by end of 2020 [Link](#)



The Packaging Market

Size



Over Trillion US\$
Packaging industry is
on track to keep
growing (CAGR of 5%)

Need



Many packaging products require
barrier properties against oxygen,
oils, water vapor and aromas to
protect the packed products

Problem



Barrier properties are achieved
by materials that are harmful to
the environment such as plastics
and aluminum foil

The Solution - Bio-Based Materials

We use the **ONLY** natural and sustainable alternative to oil-based products

The industrial forest



HOLMEN



Two of the largest pulp & paper
companies in the world are
Melodea's shareholders



The Solution - Bio-Based Materials

Cellulose Nano Crystals (CNC) is emerging as one the most promising green solutions



Natural building block of all plants on earth



Strong, light weight and transparent material



Excellent for various bio-based applications

For more information please watch our Co-founder, Professor Oded Shoseyov TED talk [link](#)



Melodea
Bio Based Solutions



We operate in two main activities:

Innovative extraction of CNC



Melodea's CNC plant in Arad, Israel

CNC



Development of CNC based solutions

Barrier coatings for packaging

Next generation applications

- ✓ 3D Printing
- ✓ Paint Additives
- ✓ Fiber & textile
- ✓ Printed electronics
- ✓ Led lights
- ✓ Films and composites



Target Markets

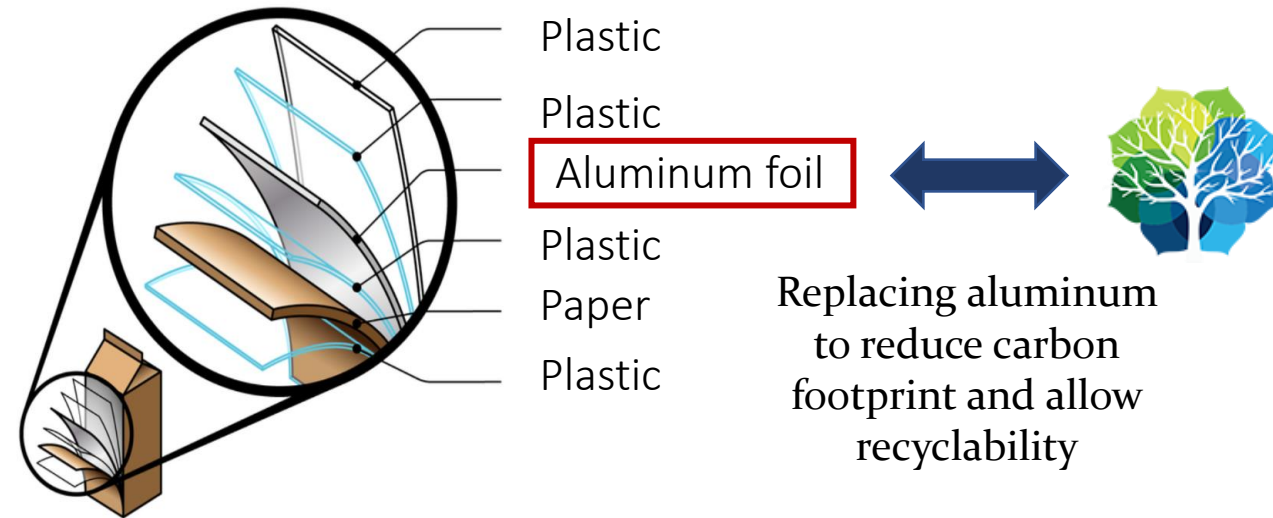
We have developed a CNC based barrier coating for:

High barrier films for flexible packaging



High Barrier
Paper Based
Packaging

Liquid packaging carton packs



Our Product - Barrier Coatings for Packaging

Sustainable
alternative



Compostable



Biodegradable



Recyclable

High performance barrier
properties in high
humidity conditions



Oxygen

<1 cc/(m²·day) @70% RH



Oil & grease

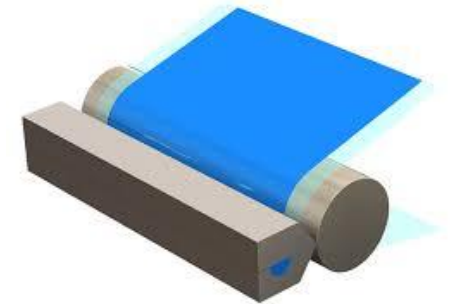
3M Kit value of 12



Water Vapor

Substrate dependent

Can be integrated into
existing coating lines and
applied on different substrates



Melodea
Bio Based Solutions

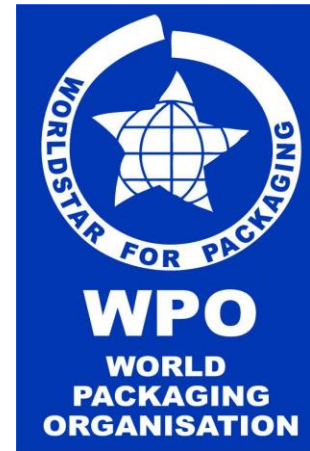
Award Winning Technology

Packaging Europe, #FachPack2019



Dr. Clarite Azerraf our CTO

#Interpack2020



**WORLDSTAR
WINNER 2020**

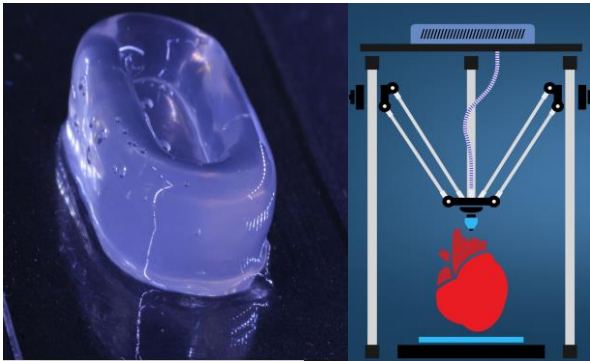




Next Generation Applications

3D Printing

Printing & Bio-printing
of CNC and CNC
containing formulations



Paint additives

Scratch & Abrasion
resistance and rheology
modifier



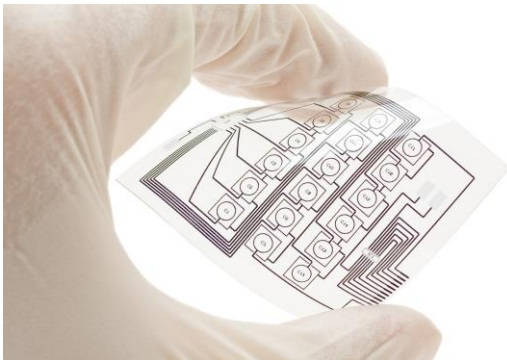
Fiber & textile

Enhancement of mechanical
properties and fixation of dyes,
pigments and active materials



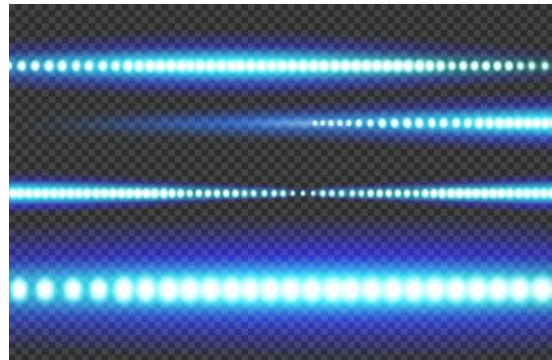
Printed electronics

CNC based conductive
components



Led lights

Protection and lifetime
expansion of led lights



Films & Composites

Bio-based flexible films and
foams



Business Plan

Revenues from



- Selling our barrier coatings to packaging and paper manufacturers
- Licensing CNC production technology to build plants globally

Partnerships



- Commercial agreements with companies across the packaging industry value chain
- Strategic partnerships for next generation applications (3D printing, printed electronics, led lights, textile, composites, etc.)

Capital Investment



- \$5.5M investment
- Use of proceeds: marketing & sales, human resources, R&D and increasing our production capacity

Management Team



Major General (res) Ilan Biran Chairman of the Board. served as the Chairman of the Board of Directors of numerous companies including Rafael – Advanced Defense Systems Ltd. and YES Cable Television and as the CEO of Bezeq – The Israel Communications Company Ltd. with more than 30 years of service in the Israel Defense Forces, including Director General of Israeli Ministry of Defense, Commanding General, Head of the Technology and Logistics Branch and Head of the Operations Division at the General Staff.



Clarite Azerraf, Ph.D, MBA. CTO. Has more than 10 years of experience in leading technological developments. Holds a PhD in Chemistry from the Hebrew University and MBA from Tel Aviv University with specialization in management of Technology. Specializes in the fields of organic synthesis, catalysis and organometallic chemistry, Nanotechnology, surface chemistry and more.



Professor Oded Shoseyov, Co-founder and Board Member. faculty member at the Hebrew University of Jerusalem. He has extensive experience in the cellulose field and has close to 160 publications and 45 patents and received many prestigious awards. Founder and Co-founder of ten companies in the field of Plant Biotechnology, Nano-materials and Cleantech that have launched successful technologies and products.



Yaniv Nevo, Ph.D, MBA. VP Business Development. Has extensive experience in R&D, business development, industrial project management, customer care and maintenance, and sales and marketing in startups and industrial companies. Successfully managed the development of new products from concept to sales. Holds a PhD in Biochemistry from Tel Aviv University and MBA from the College of Management Academic Studies.



Shaul Lapidot, Ph.D. CEO & Co-founder. Co-founded Melodea based on his academic research together with Prof. Shoseyov. has fifteen years of research and business leadership in the field of nano cellulose and bio-composites. He holds a PhD in Biotechnology from the Hebrew University of Jerusalem, Israel, in Biotechnology and Biomaterials during which he was awarded with the most prestigious innovation awards of the Hebrew University of Jerusalem.



Zvika Weiss, CFO. Holds a BA degree in Finance and Accountancy as well as MBA degree from Tel Aviv University. Held various managerial positions, including the CEO of Valentis, a company active in the field of Cellulose Nano Crystals, during which he led the business activity of the company and developed its connections across the globe.