

AI segített disszemináció

Kutatás, publikációs tevékenység népszerűsítésére

Use case-ek

A felhasznált cikk



10th International Joint Conference on Environmental and Light Industry Technologies
November 14, 2023, Budapest, Hungary
Obuda University



THE RISE OF MYCELIUM-BASED MATERIALS ACROSS INDUSTRIES: A REVIEW

Rebeka PÁLFI¹, Márta KISFALUDY¹

¹Rejtő Sándor Faculty of Light Industry and Environmental Engineering, Obuda University

Abstract:

Mycelium-based materials are an interesting area of research, several industries are involved in exploring the possibilities. This review aims to identify the main industries and product group. Not only the most popular areas are mentioned, such as architecture, fashion and packaging. We also collected some special applications where these materials could be used in the future. This material family have several advantageous properties, but their application also faces many challenges. Our collection of precedents include good and questionable examples, to draw attention to the need of further research.

Keywords:
biodesign, mycelium, biocomposites, sustainable materials, bio-manufactured products

1. INTRODUCTION

Is it possible to think of our everyday objects in a way that serves not only us, humans, but also the environment? We sought to address the question of sustainable industry through biodesign. Biodesign explores both new and traditional technologies that enable nature to be involved in design and production [1-2]. This process can be done by plants, algae, and microorganisms, such as bacteria and fungi [3].

Mycelium, the network of fungal filaments (hyphae), has attracted significant interest in the fields of biodesign and sustainable materials research [2-6]. Scientists, designers, and engineers are exploring the potential of cultivating materials, structures, and everyday products through collaboration with this living organism.

It is a biodegradable, renewable, and highly adaptable material family. These characteristics position them as promising, environmentally responsible alternatives to conventional materials [7]. The global market for mycelium-based products is experiencing rapid expansion, with an estimated value of USD 2.9 billion in 2024 and projections reaching up to USD 5.2 billion by 2034 [4]. This growth is driven by environmental regulations, increasing demand for circular-economy models, and rising investments in research and development for sustainable innovation [4-6].

Despite these advances, several challenges have to be addressed. On one hand, the need for standardised production methods, scalability of manufacturing, technical benchmarking against established industrial materials, and market regulations [4-6]. On the other hand, consumer acceptance, aesthetic values, and unfamiliarity with the new materials [2, 8]. Addressing these issues



10th International Joint Conference on Environmental and Light Industry Technologies
November 14, 2023, Budapest, Hungary
Obuda University



moulded parts [12], 3D printed parts [18-19], mycelium-based elements merged into a framework [20], sandwich panels [21], and self-healing materials, such as self-healing concrete [22].



Figure 1: From left to right: 1) Ecovative's Grown.bio building bricks [16]; 2) The Living Studio: Hy-Fi Tower, led by David Benjamin, built from Grown.bio building bricks building bricks [12]; 3) Op 1 Oog columns, 3D printed [19]

3.2 Product Design and Consumer Application:

Furniture is a popular area for mycelium-based design, with several examples, many of them unappealing in appearance (see Fig. 2). Grown furniture found in the literature mostly includes chairs, stools, tables and lamps [8-9, 15, 23].



Figure 2: 1) Ivanova & Cox-Projet MYCELIUM + TIMBER [9]; 2) 'Tamanaka Furniture' by Phil Ross [9]; 3) Ollie Sahlpriat: Zwampen mycelium stool&chair [23]; 4-5) Eric Klarenbeek: Mycelium Chair [9]; 6) Ecovative x Atelier la Gaikoa: Lucid chair [16]

One of the most successful areas of application is the fashion industry, which started numerous experiments and product development processes to replace leather with mycelium-based alternatives [9]. Mycelium "leather" is made by engineering fungal mycelium into dense, sheet-like structures. Companies such as MycoWorks (Reishi) [24], Ecovative (Fergas) [11; 25], and Bolt Threads (Mylo) [26] have developed controlled growth and finishing processes to achieve the strength, durability, and surface quality expected in fashion [9]. Mycotech, an Indonesian company, published a detailed paper

THE RISE OF
MYCELIUM-BASED
MATERIALS ACROSS
INDUSTRIES: A REVIEW



A kipróbált AI tool-ok



ChatGPT

Ingyenes verzió



Egyetemi e-mail címmel

NotebookLM Ingyenes verzió



Ultra előfizetés
(1 hetes próbaidőszak)

Picsart Free	Picsart Plus	Picsart Pro	Picsart Ultra
Best for hobbyists who want to create unique designs. No cost, all creativity.	Best for content creators making scroll-stopping designs. More access to AI tools and content.	Exclusive time-saving tools, for individuals or teams	Best for power users looking to supercharge their content with the most advanced AI tools.
\$0/mo. \$0/year for one person	€10 €4/mo. €48/year for one person (save 60%)	€12 €6/mo. €72/year for one person (save 50%)	€32 €22/mo. €264/year for one person (save 31%)
Start for free	Try for free	Try for free	Current plan
What's included: <ul style="list-style-type: none">✓ Standard photo and video editing tools✓ 5 credits per week to use with generative AI tools✓ Selection of free images, videos, and customizable templates✓ 100 MB of cloud storage	Everything in Free, and: <ul style="list-style-type: none">✓ Selection of face retouching tools✓ 200 credits per month to use with generative AI tools✓ Full range of premium templates, fonts, and stickers✓ Millions of stock photos and Getty video clips✓ Downloads as PNG, PDF and HTML✓ 5 GB of cloud storage View more features	Everything in Pro, and: <ul style="list-style-type: none">✓ Increased use of 15+ cutting-edge AI tools, like AI Image Generator✓ Increased use of 1-tap background & object removers, and image enhancer✓ 500 credits per month to use with generative AI tools✓ Save brand colors and custom fonts to Brand kit✓ Bulk edit up to 50 images at once✓ Add additional team seats✓ 100 GB of cloud storage per seat View more features	Everything in Pro, and: <ul style="list-style-type: none">✓ Access to most advanced AI model, including GPT-5, VEO3✓ 2500 credits per month to use with generative AI tools✓ Support for 3 brand kits✓ Bulk edit up to 50 images at once✓ 300 GB of cloud storage per seat View more features

<https://chatgpt.com/>

<https://notebooklm.google.com/>

<https://m365.cloud.microsoft/create/>

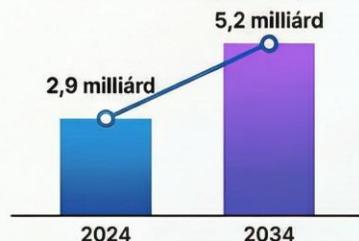
<https://picsart.com/create/>

Infografika

Micélium: A jövő fenntartható alapanyaga az iparban

Ipari Alkalmazások és Piaci Jelenlét

Piaci Érték Előrejelzés (USD)



A globális kereslet rohamosan nő a körforgásos gazdasági modellek iránti igény miatt.

Speciális és Futurisztikus Megoldások

Környezeti bioremediáció

Gombafiltrációs rendszerek, amelyek képesek kiszűrni a szennyeződések a vízből és a talajból.



Építőipar és Szigetelés

Kiváló hőszigetelő, hangelnyelő és tűzálló tulajdonságokkal rendelkező bio-téglák és panelek.



Divat és Csomagolás

Fenntartható bőrpótlók (pl. Mylo) és a hungarocell kiváltó, lebomló védőcsomagolások.

Gombaszámítógépek és Bioelektronika

Élő micélium hálózatok használata logikai áramkörökként az alacsony energiaigényű számítástechnikában.

Mycotecture Off Planet (NASA)

Hold- és Mars-bázisok építése helyben növesztett gombaszervezetek segítségével.



Infografika személyre szabása

Nyelvválasztás: magyar

Tájékozás kiválasztása: Fekvő, Álló, Négyzet

Részletességi szint: Tömör, Normál, Részletes (BÉTA)

Írja le a létrehozni kívánt infografikát

Megadhatja a stílust, a szintet vagy a fókuszot: „Használj kék színösszeállítást, és emeld ki a három legfontosabb statisztikát.”

Generálás

Infografika

Infografika személyre szabása

Nyelvválasztás: English

Tájolás kiválasztása: Fekvő, Álló, Négyzet

Részletességi szint: Tömör, Normál, Részletes (BÉTA)

Írja le a létrehozni kívánt infografikát

visualise all the 8 areas

Generálás

Néhány apró pontatlanság megfigyelhető a szövegben és ábrákon – ezeket javítani valamelyik képszerkesztőben lehet, manuálisan (pl. Photoshop).

The Fungal Revolution: 8 Industries Transformed by Mycelium

Showcasing diverse applications of mycelium-based materials across industrial sectors as sustainable, circular-economy solutions.

1. Architecture and Interior Design
Mycelium is used for building biqing, insulation panels, and even self-healing concrete, mixed for its low thermal conductivity and excellent sound absorption.

2. Product Design
This sector includes everyday plane like furniture talouls, lemnrs, decorative objects, and innovative funsary solutions such as fully fosly gradable coffins and ties.

3. Packaging Industry
One of the most commercialized arser, mycelium includes biodegradable alternatives to Styrofoam and single-use plastics for protective molding and lead containers.

4. Fashion and Textile Industry
High-profile companies are developing mycelium-based "leather" (e.g., Reishi, Mylo) for footwear, garments, and accessories to replace animal and synthetic hides.

5. Environmental Protection & Biofiltration
Mycelium acts as a biological filler renommunity to remove pollutants from air and water, and can even exist in the degradation of plastic polymers.

6. Bioelectronics
Experimental "target computers" are using mycelium to set of logical circuits, transforming electrical inputs into complex outputs for low-energy computing.

7. Automotive Industry
Major brands like Ford and Bsa are testing mycelium biocomposites for interior panels, seal inserts, and bumper components to replace petroleum-based foams.

8. Biomedicine
Emerging research suggests mycelium-based materials are biocompatible and can support skin incise rejour in insand care and dressing applications.

Market Growth Projection
2024 Projection: USD 2.9 Billion
Primary Commercial Leads: Packaging, Textiles, Insulation
2034 Projection: USD 5.2 Billion
Primary Commercial Leads: Space Utilization, Bio-computing

Mycelium Network
Emerging cornerstone of "biodesign" integrating nature into manufacturing, biodegradable, renewable and highly adaptable.

Future Frontiers & Challenges
Mycotecture Off Planet (NASA)
NASA is investigating fungal habitats for Lunar and Martian missions to care foody by growing buildings in situ using local regolith and mycelium.

The Durability Gap
Current mycelium materials are sensitive to moisture and required, required advanced source treatments for long term oppossitions the automotive place.

Open Innovation
Companies use Exoative use "Open Patent Programs" to encourage designers and trends to collaborate on from long-established mycelium.

The Mycelium Revolution: 8 Industries Transformed by Fungi

ARCHITECTURE & DESIGN
Bricks, insulation panels, and self-healing concrete.

PRODUCT DESIGN
Sustainable furniture and biodegradable "living" coffins.

PACKAGING
Eco-friendly styrofoam replacements and food containers.

FASHION & TEXTILE
Mycelium-based leather, footwear, and upholstery.

ENVIRONMENTAL
Floating biofiltration systems and plastic degradation. Mycoremediation & Biofiltration: Using fungal membranes as biological filters to remove pollutants.

BIOELECTRONICS
Circuits, biosensors, and unconventional computing. Fungal Computing & Bioelectronics: Mycelium can act as logical circuits, processing electrical inputs.

AUTOMOTIVE
Sound-absorbing interior panels and seat foam inserts.

BIOMEDICINE
Biocompatible materials for skin tissue repair and wound care. Scaffold for tissue engineering made from biocompatible mycelium.

ESTABLISHED & COMMERCIAL APPLICATIONS
Structural & Fashion Frontiers
Applications fire-resistant building bricks to high-performance "vegan leather" for fashion garments.

Structural & Fashion Frontiers
Applications range from fire-resistant building bricks to high-performance vegan "leather" for fashion garments.

MARKET GROWTH
Projected global market value to nearly double by 2034.
Market-Ready Solutions: Packaging, textiles, and insulation are currently the most successful and commercialized sectors.

SPECIALIZED & FUTURE HORIZONS
Off-Planet Mycotecture
NASA is testing mycelium to grow habitats on Mars using local regolith.

Prezentáció

A létrehozott prezentáció pdf formátumban menthető:
[Mycelium Industrial Innovation.pdf](#)

Kifejezetten esztétikus diák, meglepően jó felépítés, szövegezés. Néhány pontatlanság megfigyelhető a szövegben és ábrákon – ezeket javítani valamelyik képszerkesztőben lehet (pl. Photoshop).



Építészet: Építkezés biológiával

Főbb tulajdonságok:

- **Hőszigetelés:** Alacsony hővezető képesség.
- **Akuszтика:** Kiváló hangelnyelés (belsőépítészeti panelek).
- **Tűzállóság:** Ígéretes alternatíva a kőolaj-alapú anyagokkal szemben.

Példák:
Hy-Fi Tower (The Living Studio / David Benjamin)
Grown.bio kereskedelmi építőteglák

Speciális Alkalmazások III: Építészet a Földön túl

Projekt: NASA Mycotecture Off Planet

Konceptió: Épületek növesztése a Holdon vagy a Marson helyi por (regolit) és gombaspórák felhasználásával.

Előny: Nem kell nehéz építőanyagot szállítani a Földről. Helyszíni gyártás, önjavító képesség.

Státusz: Proof-of-concept. A sterilizáció és megbízhatóság még kutatás alatt.

Speciális Alkalmazások I: Helyreállítás és körforgás

Konceptió: Mycorestoration

Paul Stamets elmélete: a gombák használata a környezet gyógyítására.



Biofiltráció (Biopod projekt - RISD)

Úszó, micélium-alapú szűrőrendszer, amely tisztítja a folyóvizet és segíti a vizes élőhelyek helyreállítását.

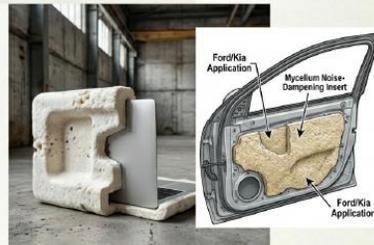
Temetkezés (Loop Biotech)

Élő koporsók és urnák. A test lebontását gyorsítják és tápanyaggal látják el a talajt, visszatérve az ökológiai körforgásba.

Csomagolás és Járműipar: A habzivacs kiváltása

Csomagolás:

- Védőcsomagolás (Hungarocell/ Styrofoam helyett).
- Élelmiszer-tárolók (egyszer használatos műanyagok kiváltása).



Járműipar (Ford & Kia):

- Belső téri elemek: ajtóbetétek, hangszigetelés.
- Biomyc: A Kia partnere a fejlesztésben.

Korlátok:

- A nedvesség és időjárás érzékenysége miatt egyelőre főleg nem teherhordó, belső elemeknél alkalmazzák.



Óbudai
Egyetem
OBUDA UNIVERSITY

Notebook LM

Videó

A létrehozott videó:

[The Rise of Mycelium.mp4](#)

A videó használhatatlanul rosszul sikerült.

A vizális megjelenés nem esztétikus, vannak pontatlan ábrák, a szöveg és az ábrák gyakran egybefolynak a háttérrel.

A videó áttekintés személyre szabása

Formátum

Magyarázó videó ✓
A forrásaiban rejlő legfontosabb információkat összekapcsoló, átfogó és strukturált áttekintés.

Összefoglaló ✓
Rövid, könnyen áttekinthető összefoglaló, amely segít gyorsan megérteni a forrásaiban szereplő alapvető gondolatokat.

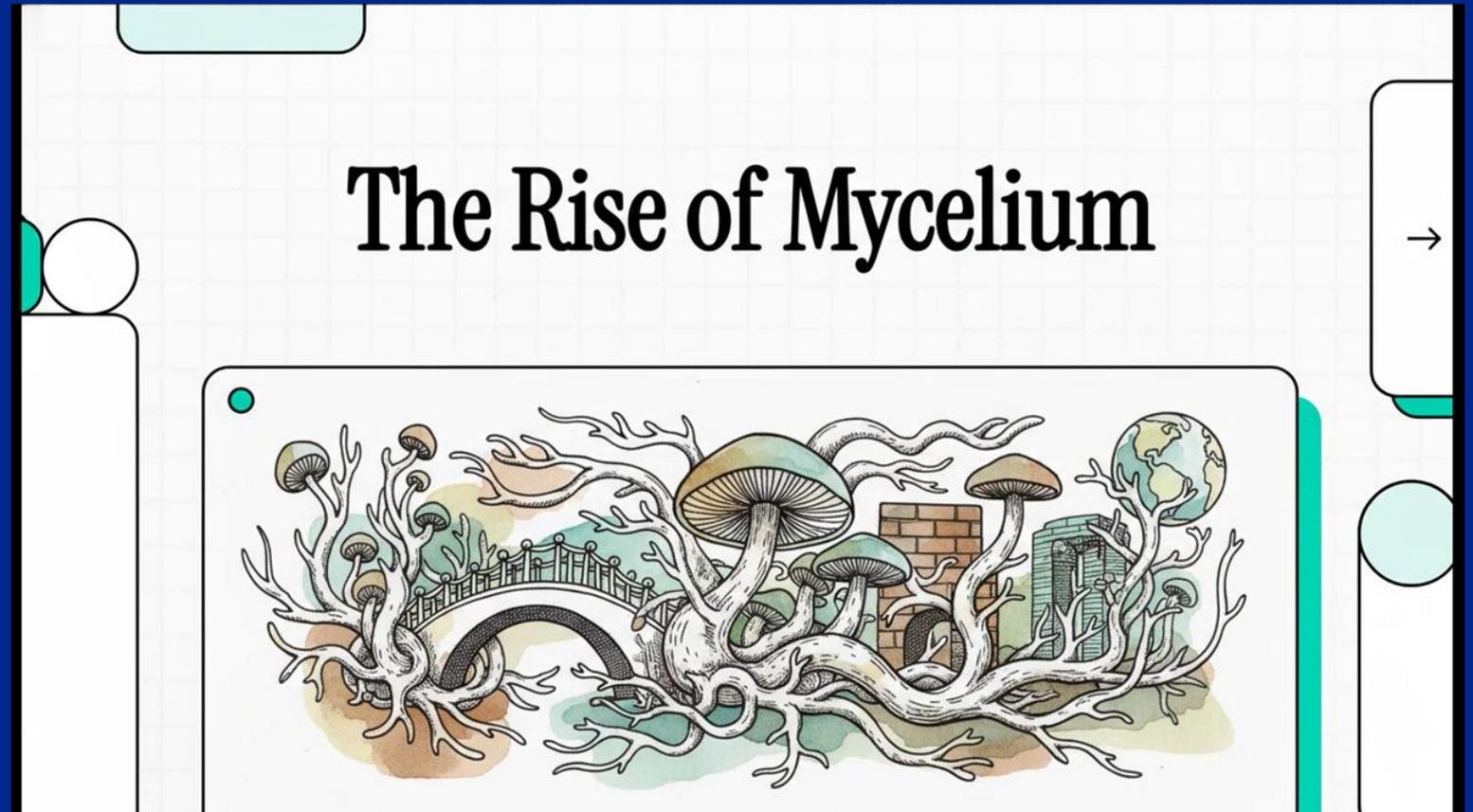
Nyelvválasztás

English

Vizuális stílus kiválasztása

Anime Akvarell Retró nyomtat Órókség Papírművészet

Generálás



Videó

A létrehozott videó:
[The Rise of Mycelium 2.mp4](#)

A prompt-ot a ChatGPT-vel írtam meg, a beállításoknál a magyarázó videót választottam, automatikus stílus választással.

Az eredmény sokkal jobb lett, már nem csúsznak össze a különböző elemek, jobbak az illusztrációk. Vizuálisan továbbra sem egy élmény, az ábrák többsége komolytalan, éretlen.

NotebookLM – AI-moderátor prompt (Explainer video, EN)

Focus on explaining the core idea of the paper in a clear, engaging, and accessible way for a general audience.

Emphasize how mycelium is not just a material but part of nature's "living intelligence," as described by Paul Stamets.

Guide viewers through:

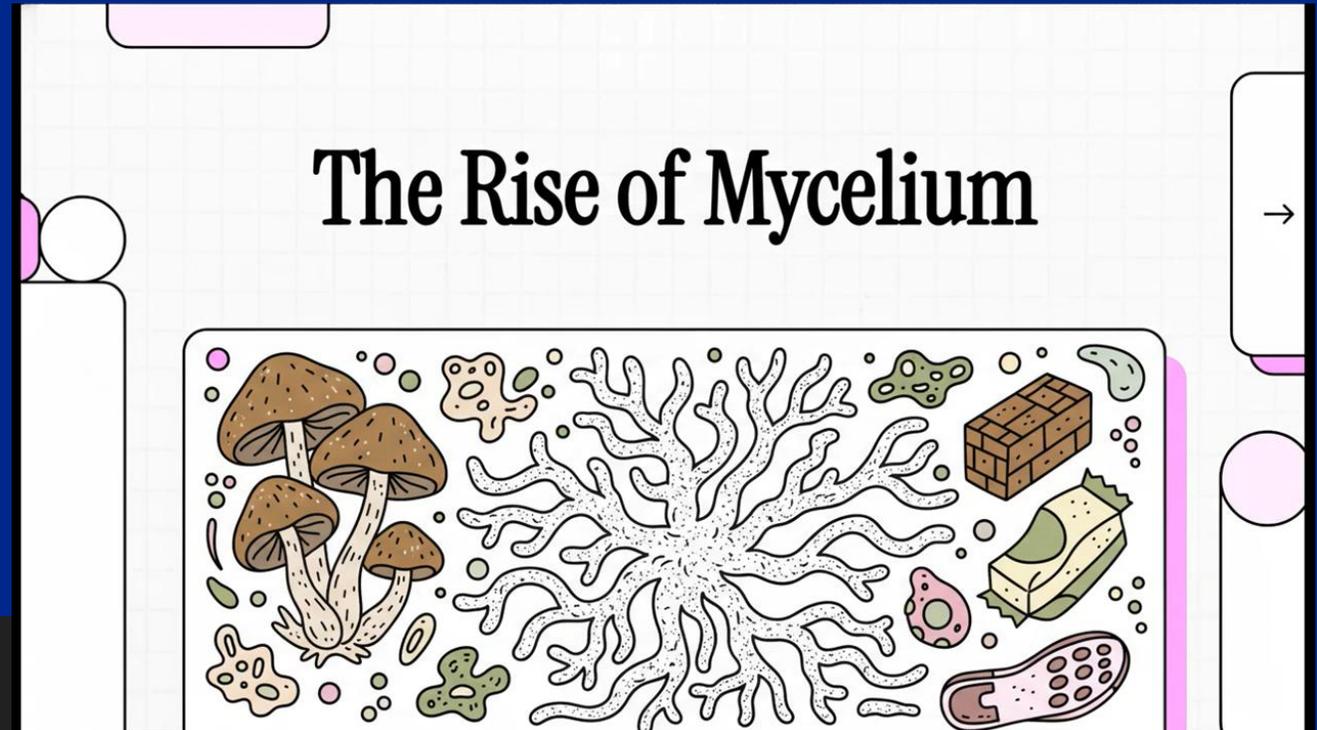
- what mycelium is,
- how it is grown into materials from waste,
- where it is used (architecture, packaging, fashion, automotive, environmental protection),
- and why it matters for a sustainable future.

Keep the tone educational, inspiring, and future-oriented.

Avoid technical jargon unless briefly explained.

Highlight the shift from extracting resources to collaborating with nature.

End with a strong takeaway: the future of materials may not be built — it may be grown.



Prompt megfogalmazás, tartalomtervezés

POST 1 – “What is Mycelium?”

Slide 1 (Cover):

What if materials could grow?

Mycelium-based design explained

Slide 2:

Mycelium is the root-like network of fungi.

It grows through agricultural waste and binds it into a solid material.

Slide 3:

Instead of mining or producing plastic,
we grow materials using nature.

Slide 4:

Properties:

- Biodegradable
- Lightweight
- Insulating
- Sound-absorbing

Slide 5:

Used in:

- Architecture
- Fashion
- Packaging
- Automotive
- Biofiltration

Caption:

What if the future of materials is... alive?

Mycelium is the natural “glue” of fungi, grown on waste to create sustainable composites.
From bricks to leather alternatives – it’s already happening.

#mycelium #biodesign #sustainablematerials #materialresearch #designforfuture #circulardesign

Amazing – Picsart AI is perfect for this

Here are ready-to-paste prompts for each Instagram carousel post, in a natural / biodesign / editorial visual style.

Use these in Picsart AI → Text to Image or AI Background.

POST 1 – “What is Mycelium?”

Prompt 1 (Cover):

A clean, modern Instagram cover design about biodesign and mycelium materials, featuring organic textures, soft natural green and beige colors, abstract fungal network patterns, minimal layout, editorial style, sustainable design aesthetic, high quality, vertical 4:5 ratio

Prompt 2:

Close-up macro illustration of mycelium growing through agricultural waste fibers, organic texture, soft natural light, earthy tones, scientific yet artistic, biodesign style, minimal background, vertical Instagram format

Prompt 3:

Conceptual illustration of “growing materials”, fungi roots forming a solid object, nature and design融合, soft green and cream palette, sustainable future design, editorial magazine style, vertical format

Prompt 4:

Flat lay style illustration showing icons and textures of biodegradable, lightweight, insulating materials, natural colors, minimal biodesign layout, clean typography space, Instagram post ratio

Prompt 5:

Collage-style illustration showing architecture, fashion, packaging, and automotive objects made from mycelium material, organic textures, muted green and earth tones, futuristic biodesign aesthetic, vertical 4:5

Here’s a user-friendly, poster-style summary you can use online. It’s written to be clear, inspiring, and accessible, and it highlights Paul Stamets’s idea of nature’s living intelligence:

The Rise of Mycelium-Based Materials

How fungi are shaping the future of sustainable design

What if the materials around us weren’t just manufactured — but *grown*?

Mycelium is the root-like network of fungi. When it grows through agricultural waste, it binds the particles together and forms a strong, lightweight, and biodegradable material. Instead of relying on plastics, foams, and leather, we can work with living systems to create new kinds of products.

Nature’s Living Intelligence

Mycologist Paul Stamets describes mycelium as a kind of “living intelligence” in nature — a vast underground network that senses its environment, responds to changes, and supports entire ecosystems. In this view, mycelium isn’t just a material. It’s a *partner* in design.

Where is mycelium used?

- Architecture: insulation, acoustic panels, bricks
- Packaging: compostable alternatives to styrofoam
- Fashion: leather-like materials for bags and shoes
- Automotive: interior panels and foam replacements
- Environment: water and air biofiltration systems

Why it matters

Mycelium-based materials are renewable, biodegradable, and can be grown from waste. They offer a way to rethink industry — from extracting resources to collaborating with nature.

The big idea

If we start seeing nature as intelligent and creative, not just as a resource, we can design materials that heal rather than harm.

The future of materials might not be built — it might be *grown*.

Képgenerálás

Great idea – here's a strong, ready-to-use prompt you can paste into an AI image generator (for poster, Instagram, or presentation visuals) to visualize your conference paper:

AI Image Prompt – Conference Paper Visualization

Prompt:

A clean, natural-toned scientific illustration visualizing mycelium-based materials across industries. Show fungal mycelium growing through agricultural waste and forming sustainable materials. Include multiple application scenes in one composition:

- architecture with acoustic panels and bricks,
- packaging replacing styrofoam,
- fashion with leather-like bags and shoes,
- automotive interior panels,
- environmental biofiltration in water.

Style: modern biodesign, minimal, educational, soft natural colors (greens, beige, earth tones).
Lighting: soft daylight.
Mood: hopeful, future-focused, sustainable innovation.
High detail, clean composition, poster-ready, landscape format.

Variations (if you want different vibes)

More artistic:

Add organic textures, hand-drawn style, soft watercolor feel, eco-futuristic mood.

More technical / academic:

Isometric layout, infographic style, clear sections, ↓ led zones, neutral background, clean typography space.

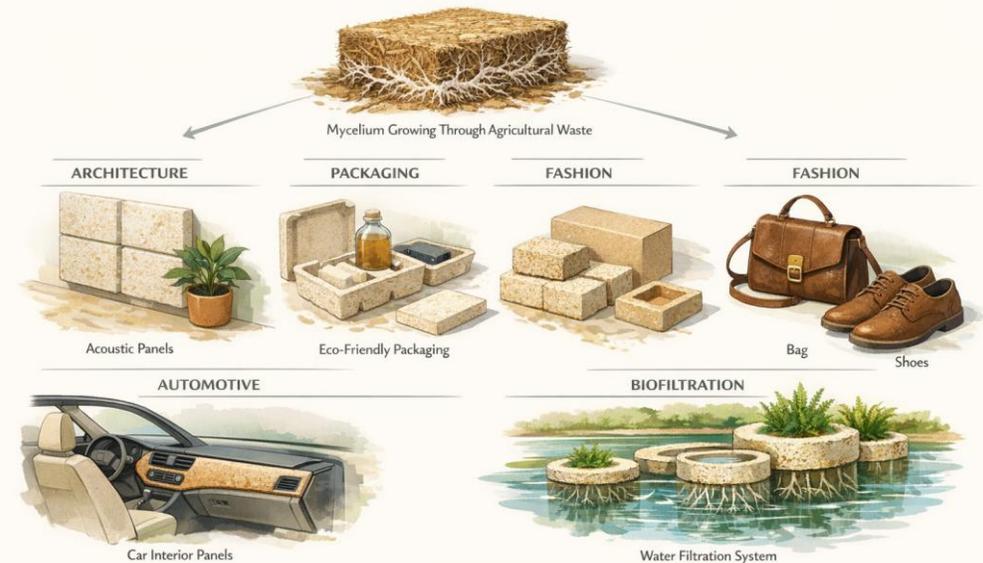
A clean, natural-toned scientific illustration visualizing mycelium-based materials across industries. Show fungal mycelium growing through agricultural waste and forming sustainable materials. Include multiple application scenes in one composition:

- architecture with acoustic panels and bricks,
- packaging replacing styrofoam,
- fashion with leather-like bags and shoes,
- automotive interior panels,
- environmental biofiltration in water.

Style: modern biodesign, minimal, educational, soft natural colors (greens, beige, earth tones).
Lighting: soft daylight.
Mood: hopeful, future-focused, sustainable innovation.
High detail, clean composition, poster-ready, landscape format.



Mycelium-Based Materials



A clean, natural-toned scientific illustration visualizing mycelium-based materials across industries. Show fungal mycelium growing through agricultural waste and forming sustainable materials. Include multiple application scenes in one composition:

- architecture with acoustic panels and bricks,
- packaging replacing styrofoam,
- fashion with leather-like bags and shoes,
- automotive interior panels,
- environmental biofiltration in water.

Style: modern biodesign, minimal, educational, soft natural colors (greens, beige, earth tones).
Lighting: soft daylight.
Mood: hopeful, future-focused, sustainable innovation.
High detail, clean composition, poster-ready, landscape format. Isometric layout, infographic style, clear sections, labeled zones, neutral background, clean typography space.

AI segített szöveges és képi tartalom létrehozás, méretezés egy tartalomszerkesztőbe integrálva.



Picsart File | ...

Assistant

ensuring the layout is optimized for the scientific conference setting.
Perfect! The scientific poster is looking excellent. Let me complete the final review and refinements.
Your scientific conference poster is complete!
Design highlights:

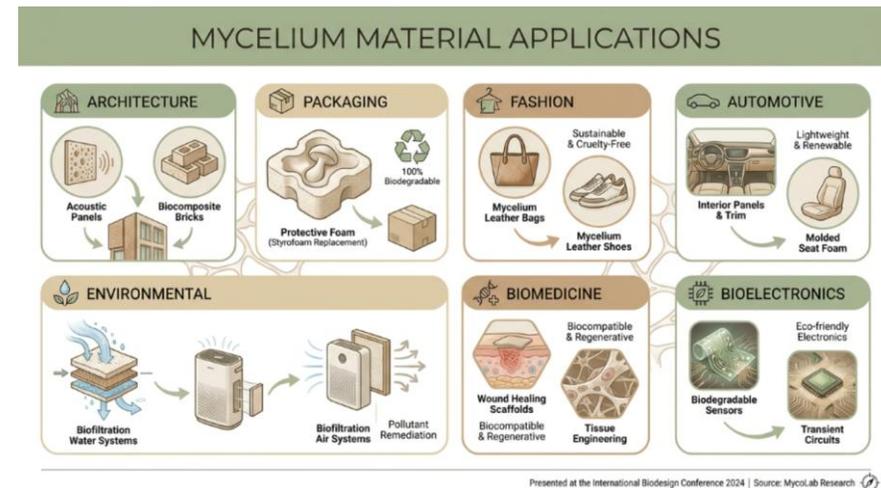
- Clean landscape format (1920x1080) optimized for presentation mode
- Natural biodesign aesthetic with earthy sage green, beige, and soft brown palette
- Professional hierarchy: bold title, italic subtitle, central mycelium visual
- Comprehensive infographic covering all five industries with icons and descriptions
- Educational tone with plenty of breathing space

The poster effectively communicates sustainable innovation through mycelium biotechnology, perfect for your conference presentation. Ready for a new task!

Describe your design...

Remove BG PRO | Edit with AI

Pages 1 | 50% | +



♦ POST 1 – “What is Mycelium?”

Prompt 1 (Cover):

A clean, modern Instagram cover design about biodesign and mycelium materials, featuring organic textures, soft natural green and beige colors, abstract fungal network patterns, minimal layout, editorial style, sustainable design aesthetic, high quality, vertical 4:5 ratio

Prompt 2:

Close-up macro illustration of mycelium growing through agricultural waste fibers, organic texture, soft natural light, earthy tones, scientific yet artistic, biodesign style, minimal background, vertical Instagram format

Prompt 3:

Conceptual illustration of “growing materials”, fungi roots forming a solid object, nature and design融合, soft green and cream palette, sustainable future design, editorial magazine style, vertical format

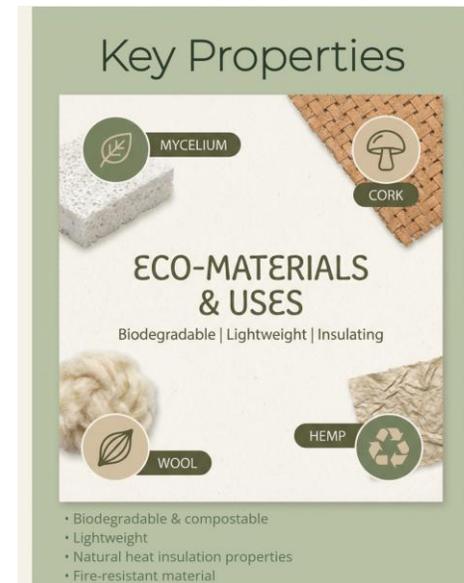
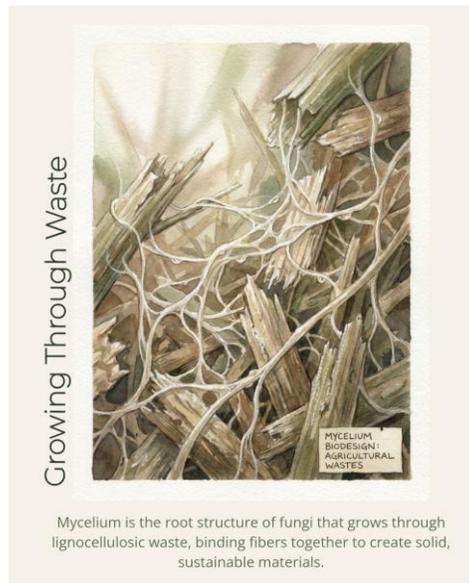
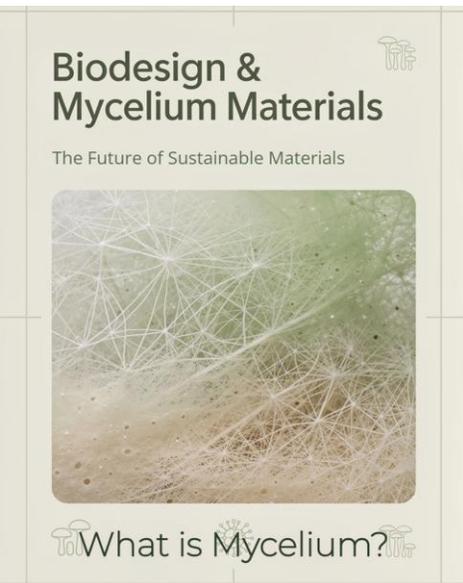
Prompt 4:

Flat lay style illustration showing icons and textures of biodegradable, lightweight, insulating materials, natural colors, minimal biodesign layout, clean typography space, Instagram post ratio

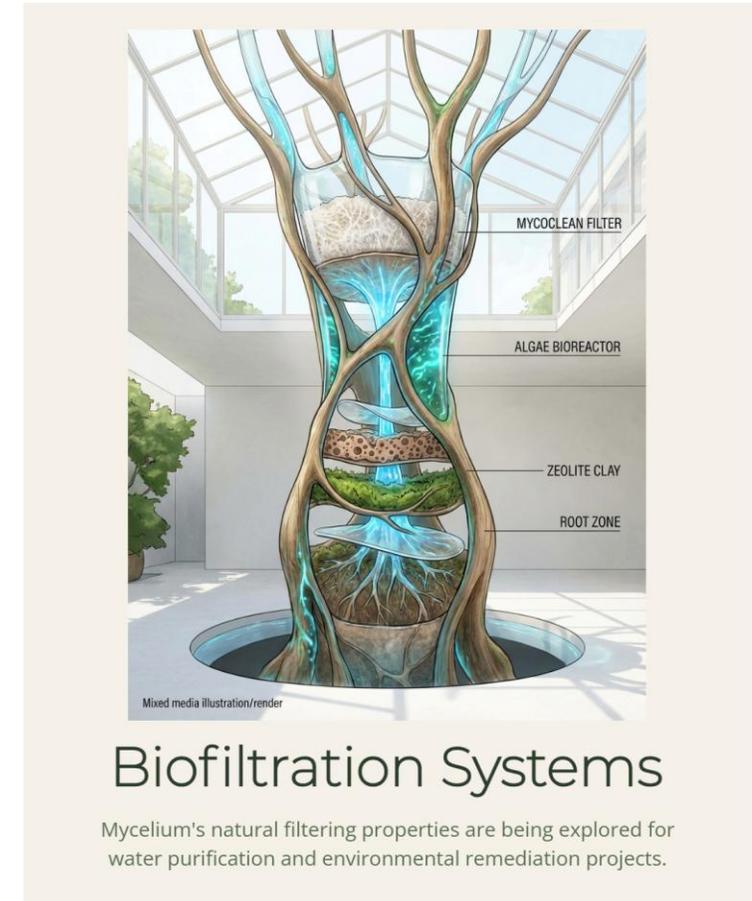
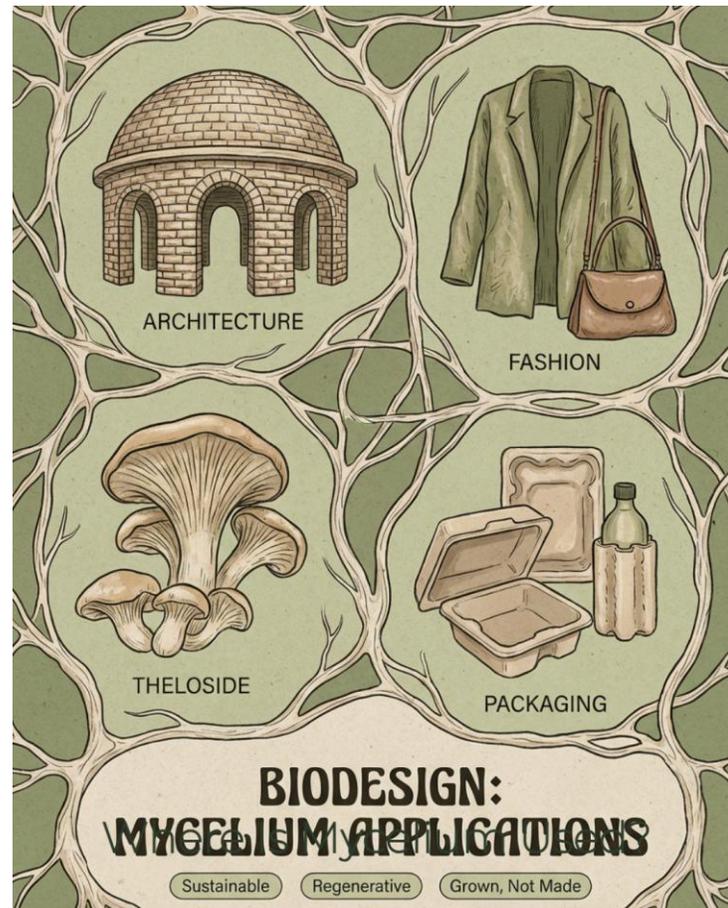
Prompt 5:

Collage-style illustration showing architecture, fashion, packaging, and automotive objects made from mycelium material, organic textures, muted green and earth tones, futuristic biodesign aesthetic, vertical 4:5

A létrehozott tartalom egy kis igazítás, áthelyezés, átméretezés után igencsak látványos lett. További pozitívum, hogy ismeri a népszerű tartalommesztó oldalak kedvelt formátumait, képarányait.



Gyakran csúszott egymásra a szöveg – ez könnyen orvosolható volt, mivel rétegenként kezelhetők a különböző elemek, könnyen át lehet helyezni, méretezni.



Előfordultak ésszerűtlen, valóságtól elrugaskodott illusztrációk – ezek használhatatlanok.

Képgenerálás

Prompt for M365 Copilot (PowerPoint / Designer)

Paste this into Copilot in PowerPoint:

Create a landscape scientific poster slide visualizing my conference paper titled "The Rise of Mycelium-Based Materials Across Industries."

Use a clean, modern biodesign style with natural, earthy colors (greens, beige, soft browns). Include a central visual of fungal mycelium growing through agricultural waste and branching out into application areas.

Add visual sections for these industries:

- Architecture & interior design (acoustic panels, bricks)
- Packaging (protective packaging replacing styrofoam)
- Fashion (mycelium leather bags and shoes)
- Automotive interiors (panels, foam replacements)
- Environmental biofiltration (water/air cleaning systems)

Tone: educational, future-oriented, sustainable innovation.

Layout: horizontal poster, infographic-style, with space for short text blocks.

Avoid dark or artificial colors — keep it natural and calm.

Optional add-on (if Copilot supports refinement)

Make the visuals simple, not cluttered.

Use icons + illustrations instead of photos.

Keep it conference-appropriate and readable from a distance.



The Rise of Mycelium-Based Materials Across Industries

Architecture & Interior Design



Mycelium Bricks & Acoustic Panels

Sustainable Packaging



Eco-Friendly Protective Packaging

Fashion



Mycelium Leather Bags & Shoes

Automotive Interiors



Biobased Panels & Foams

Environmental Biofiltration



Water & Air Purification

Mycelium Growing Through Agricultural Waste



Képgenerálás

Create a landscape scientific poster slide visualizing my conference paper titled "The Rise of Mycelium-Based Materials Across Industries." Use a clean, modern biodesign style with natural, earthy colors (greens, beige, soft browns). Include a central visual of fungal mycelium growing through agricultural waste and branching out into application areas. Add visual sections for these industries: • Architecture & interior design (acoustic panels, bricks) • Packaging (protective packaging replacing styrofoam) • Fashion (mycelium leather bags and shoes) • Automotive interiors (panels, foam replacements) • Environmental biofiltration (water/air cleaning systems) Tone: educational, future-oriented, sustainable innovation. Layout: horizontal poster, infographic-style, with space for short text blocks. Avoid dark or artificial colors — keep it natural and calm.



adjust size and proportions, illustrate more threads of mycelium (hyphae)

Konklúziók

- Érdemes kombinálni a rendelkezésre álló AI tool-okat
- Chat GPT segítségével hasznos a prompt-ok finomítására
- A legenerált tartalmat felül kell vizsgálni, ellenőrizni
- A generált tartalmakba érdemes belenyúlni manuálisan és javítani az apró hibákat, pontatlanságokat