



**2023-2024**

# **MaChTazine**

**Materials Science &  
Chemical Technology**

**Issue 5**

**MaChT Trip  
20-23/3/2024  
Cocktail Night  
27/3/2024**

# Introduction

Hey! We as MaChT are totally excited about the awesome events we've been rocking lately, and guess what? We've got the pics to prove it in this Machtazine!

But hey, we're not stopping there – we're gonna keep the party going with even more epic events.

Next up? Rotterdam!

Our Master's students are hitting the road for a study trip packed with 3 awesome company visits and a ton of other activities. And when we roll back to Gent, don't worry about missing each other too much, 'cause we're throwing down at our annual cocktail party at Delta!

Make sure to follow our Instagram to stay up to date with all our upcoming events.



@MACHT.GENT

# Upcoming events



<b>MaChT trip</b>	20-23/ 3/2024	Rotterdam, we are coming :)
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<b>Cocktail Night</b>	27/3/2024	Join us for our yearly cocktail night at Delta, featuring signature cocktails and lively conversations!
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<b>Zwijnaardse Feesten</b>	18/4/2024	The annual Zwijnaardse Feesten is back! If you're new to the Zwijnaarde scene, you're in for a treat. This day is packed with all sorts of awesome activities, food and drinks!
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<b>Info moment Master Materials Science</b>	30/4/2024	Undecided on your master's choice? Join our event to explore the Sustainable Materials Master, chat with students, professors, and alumni from exciting companies, check out the courses over refreshments, and stay tuned for a surprise activity afterwards!
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<b>Company visit to Eastman</b>	29/3/2024	Join us on this company visit to see the site of Ghent Nord.
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# Next event: Cocktail Night



**COCKTAIL  
\* PARTY \***

27 MARCH  
2024

22U - ...

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**DELTA**  
STALHOF 17, 9000 GENT

# Company of the month

For newcomers to MaChT, our Company of the Month program offers a unique opportunity to win amazing **prizes**. Each featured company presents an assignment alongside their description. This assignment could be a puzzle or an alternative challenge.

To participate, complete the assignment, detach the page and submit it in one of the designated MaChT boxes in buildings 46, 70A, or 125 (indicated on the map of the previous MaChTazine). After the deadline, a random selection will determine the winner.

Best of luck!

## Contact us:

If you have any questions during the year, you can always find us at the Technology campus in Zwijnaarde or send us an email to [MaChT@UGent.be](mailto:MaChT@UGent.be).

For more information about our organisation, you can visit our website:

[www.macht.ugent.be](http://www.macht.ugent.be).

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 MaChT

 [macht.gent](https://www.instagram.com/macht.gent)

# COCKTAIL RECIPES



## Elegant French 75 cocktail

- 145 ml gin
- 22 ml freshly squeezed lemon juice
- 15 ml syrup
- Champagne or sparkling wine
- Lemon twist, for garnish

Fill the shaker with ice, gin, lemon juice, and simple syrup and shake. Top up with champagne or sparkling wine. Garnish with a twist of lemon.

## Espresso Martini

- 45 ml vodka
- 30 ml coffee liqueur
- 15 ml syrup
- 30 ml freshly brewed espresso
- Coffee beans, for garnish

Brew a shot of espresso and let it cool to room temperature. Fill a cocktail shaker with ice cubes, vodka, coffee liqueur, simple syrup, and freshly brewed espresso and shake. Garnish with a few coffee beans floating on top.



## Safe sex on the beach

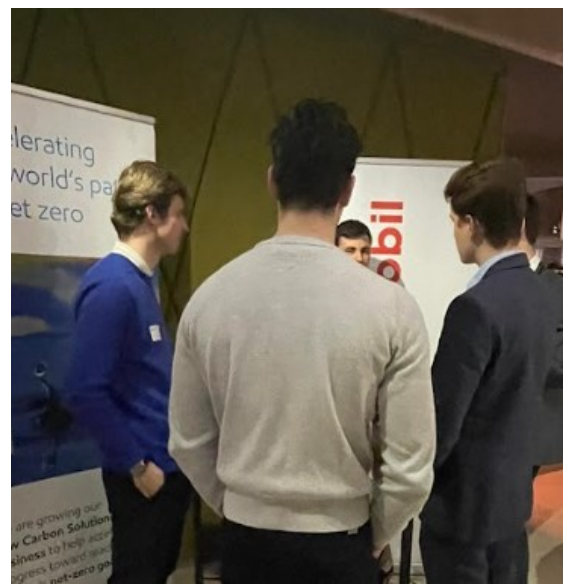
- 120 ml cranberry juice
- 120 ml orange juice
- 120 ml pineapple juice
- 60 ml peach syrup or grenadine
- Lemon-lime soda or sparkling water
- Orange slice and maraschino cherry for garnish
- Instructions:

Fill the shaker with ice, cranberry juice, orange juice, pineapple juice, and peach syrup or grenadine and shake. Top off with a splash of lemon-lime soda or sparkling water for some fizz. Garnish with an orange slice and a maraschino cherry for a tropical touch.



# Picture Time: MaChT Meets the Industry



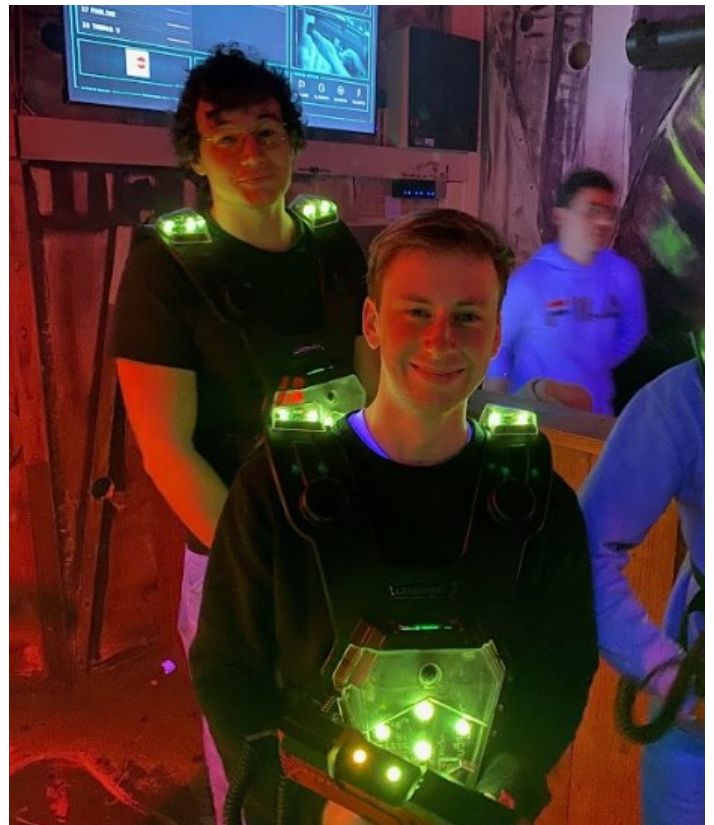


# Picture Time: Brunch 2e bach





# Picture Time: Guest lecture, Lasershooting



# ROTTERDAM



Explore Rotterdam's quirky architecture with a visit to the Cube Houses (Kubuswoningen). These innovative and colorful cube-shaped houses are a must-see attraction, offering a fascinating glimpse into avant-garde urban design

Immerse yourself in art and culture at Museum Boijmans Van Beuningen, home to an impressive collection of works spanning from the Middle Ages to contemporary art. From Rembrandt to Van Gogh, this museum offers a rich tapestry of artistic treasures.



Indulge your senses at the Markthal, a vibrant indoor food market where you can sample a diverse array of local and international cuisines. From fresh seafood to artisanal cheeses, there's something to tantalize every taste bud.

Marvel at the sleek and graceful design of the Erasmus Bridge, also known as the "Swan" due to its elegant shape. Stroll along the pedestrian walkway or catch a boat tour for an up-close look at this architectural masterpiece spanning the River Maas.



# Planning

## WEDNESDAY

### Morning

visit to Exxon Mobil raffinate  
+ lunch

### Afternoon

visit to Indaver

### Evening

free time in Rotterdam

## THURSDAY

### Morning

free time  
(sleeping out / exploring  
Rotterdam)

### Afternoon

2 groups activities  
+ dinner provided by MaChT

### Evening

free time in Rotterdam

## FRIDAY

### Morning

travel to and explore Den  
Haag

### Afternoon

visit to Airborne  
+ free time in Den Haag  
+ dinner provided by MaChT

### Evening

One last hooray so  
Rotterdam  
won't forget MaChT

## SATURDAY

### Morning

sleeping out

### Afternoon

bus back home

# MACHT IS LOOKING FOR NEW BOARD MEMBERS FOR NEXT ACADEMIC YEAR



ALWAYS DREAMED OF JOINING THE MACHT BOARD?

DO YOU LOVE ORGANISING EVENTS, WANT TO MAKE NEW FRIENDS AND IMPROVE YOUR SOCIAL SKILLS?

READ ABOUT THE POSSIBLE POSITIONS LISTED BELOW

## PRESIDENT

- Does all the practical arrangements
- Motivates all board members
- Organizes big events such as BBQ and MaChT Meets The Industry

Contact: Joanna Popiel



- Presidents right hand for practical arrangements
- Sustains and organizes contact with volunteers and new students
- Organizes big events such as BBQ and MaChT Meets The Industry

Contact: Thomas Schaep



## VICE PRESIDENT

# INTERNAL RELATIONS

- Communicate with students
- Announce events by mail and social media

Contact:  
Estée D'huyvetter  
Kain Rotsaert  
Roel Verhulst



- Attract new sponsors (already in July and August)
- Keep in contact with the sponsors during the whole year

Contact:  
Stan De Kersgieter  
Thomas Glorieux  
Gilles Satyn  
Mauritz De Wilde



# EXTERNAL RELATIONS

# TREASURER

- Draws up a budget for each activity
- Makes an annual financial report
- Goes to WVK meetings (once a month)

Contact: Thomas Verbrugge



# PRESS

- Design and printing of the MaChTazines: one issue per month
- Design of the event posters

Contact:  
Pauline Van Duyse  
Emma Caethoven



- Keeps the MaChT website up to date
- Handles student registration for events
- Takes notes during each board-meeting



Contact: Cédric Catry

# WEBMASTER

- Organises the MaChT trip for out master students

Contact:  
Arthur Labijn  
Ward Vanderhisballie



# TRIP

- Helps organizing events
- Is a back up when needed
- Goes to WVK meetings (once a month)

Contact: Eveline Dioos



# ALL ROUNDER



Join our team and be part of a year filled with laughter, friendship, and joy 😊

Plus, it's a great addition to your CV!



# Company of the month: TotalEnergies



TotalEnergies is a global multi-energy production and supply Company: oil and biofuels, natural gas and green gas, renewables, and electricity. It employs more than 100,000 collaborators all around the world.

## Our objectives:

To achieve carbon neutrality, the world's energy mix will have to change radically. TotalEnergies is already positioning itself to meet the energy needs of the future by diversifying its energy mix. The Company is reducing the proportion of its oil products and strengthening its position in gas, a transitional energy, and electricity, in order to continue to supply the energy the world needs today and accelerate the transition to a low-carbon energy supply.

## Our values:

TotalEnergies is centered around five core values. In our Company, the safety of everyone is the safety of all. We aim to achieve a safe environment for all our employees. The Company aims to provide a safe work environment with respect to others notably through the promotion of diversity. The pioneering spirit is the way TotalEnergies wants its collaborators to have the mindset, to build, develop, and achieve the Company into a strong actor in the energy sector. The main characteristic in our way of interacting together is the strength of solidarity between us. The taste for performance is the strong culture of performances and the high level of expertise asked to our collaborators.

Do not hesitate to consult our website [www.careers.totalenergies.com](http://www.careers.totalenergies.com), where you will find all our vacancies.





# Puzzle of the month: TotalEnergies

Complete this binary puzzle by filling in zeros and ones in each empty cell. There may not be more than two of the same digits directly next to or directly below each other. Each row and each column is unique and contains an equal amount of zeros and ones.

					0								1
								0	0		0		
1						1		0		0		1	
						1							
0			1		0				0				0
0					0						1		
								1	0				0
1	1								0			1	
				0									
1			1										
	0	0							0		1		1
		0							0				
1										0	0		
		0						0	0		0		0

Try to solve this puzzle and have a chance to win the awesome prize offered by TotalEnergies!!

**Deposit** this page with your answers in one of the **MaChT boxes** or send an **e-mail** with the answer of the puzzle to **MaChT@UGent.be** before the **19th of April**.

**Good luck!**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

# Company of the month: Cargill



Helping the world *thrive*

## Our purpose

We exist to nourish the world in a safe, responsible and sustainable way.

**155,000**  
employees

Working in  
**70**  
countries

### Agriculture

- Farm services
- Grain & oilseed trading, processing and supply chain
- Sugar
- Cotton
- Palm oil
- Animal nutrition



### Industrial

- Energy trading
- Ocean transportation
- Biodiesel & Bioethanol
- Metals & ores
- Industrial salt & starches
- Bioindustrials & renewables



### Financial

- Structured finance
- Risk management services



### Food

- Cacao & Chocolate
- Malt
- Sweeteners
- Texturizers & emulsifiers
- Refined oils
- Dressings & sauces
- Beef & poultry



With more than  
**155**  
years of  
experience

**\$134.4**  
billion in  
annual revenue

Cargill provides food, agriculture, financial and industrial products, and services to the world.

Cargill has locations in, among others: Ghent, Antwerp, Izegem, Sas van Gent, Bergen op Zoom... Cargill's activities in these sites include:

- Production of biodiesel & alcohol
- Production of cocoa and chocolate
- Processing of grains and oilseeds
- Production of starch, sweeteners, and texturizers
- Refining and bottling of vegetable oils and fats

Working at Cargill is an opportunity to thrive – a place to develop your career to the fullest while engaging in meaningful work that makes a positive impact around the globe. We offer a diverse, inclusive, and inspiring working environment where you will grow personally and professionally. We aim to develop top diverse university talent towards future expert and managerial roles.

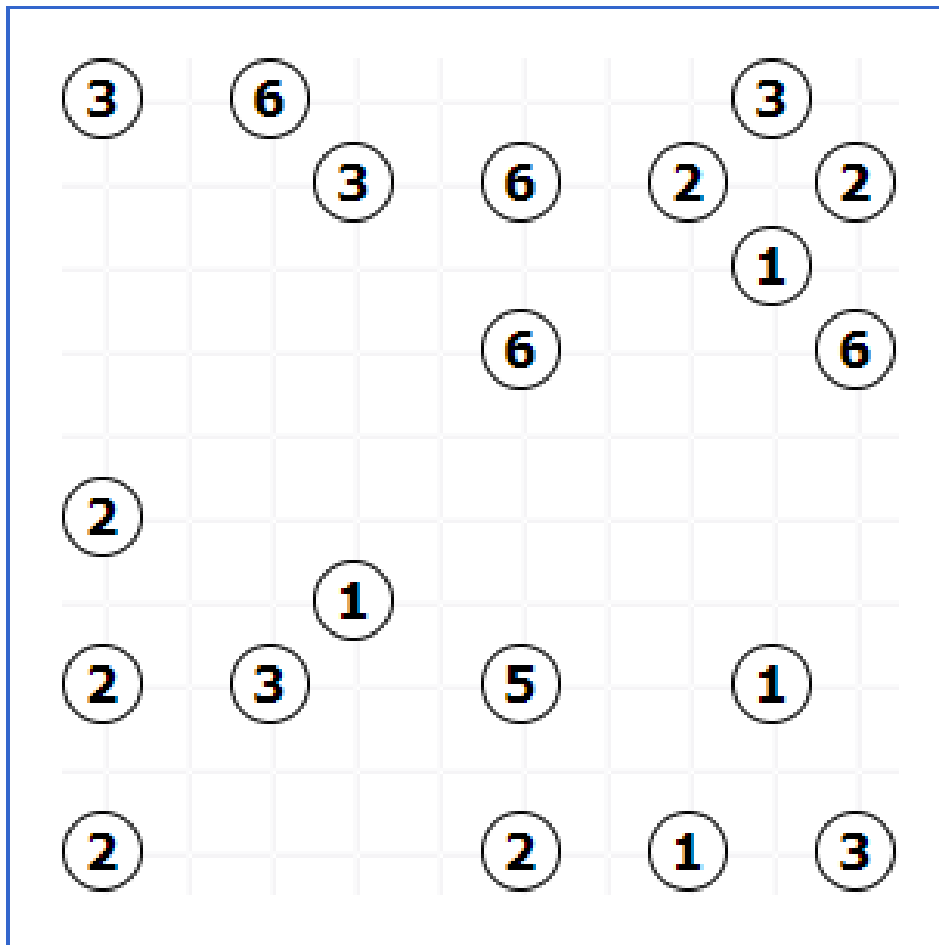
We are looking for motivated university graduates in engineering (chemical, process, mechanical, agricultural, food science) that have a strong hands-on mentality and are fluent in Dutch and English. In return for your expertise and commitment, we will provide a fast-paced stimulating international environment, which will stretch your abilities and channel your talents.

If you are interested in joining our team, please check <https://careers.cargill.com>

# Puzzle of the month: Cargill

**Hashi:** Each puzzle is based on a rectangular arrangement of islands where the number in each island tells how many bridges are connected to it. The object is to connect all islands according to the number of bridges so:

- There are no more than two bridges in the same direction.
- Bridges can only be vertical or horizontal and are not allowed to cross islands or other bridges.
- When completed, all bridges are interconnected enabling passage from any island to another.



Try to solve this puzzle and have a chance to win the awesome prize offered by Cargill!!

**Deposit** this page with your answers in one of the **MaChT boxes** or send an **e-mail** with the answer of the puzzle to **MaChT@UGent.be** before the **19th of April**.

**Good luck!**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

# Company of the month: Ineos



INEOS is een jong en toonaangevend chemisch bedrijf met een wereldwijde omzet van 60 miljard dollar. Wereldwijd hebben we 194 sites en zijn we actief in 29 landen.

In België telt INEOS vandaag 12 productie- en R&D-sites en 3.050 werknemers.

De focus van de productie in België ligt op intermediaire producten, kunststoffen en specialiteiten. Onze producten maken een aanzienlijk verschil in het redden van levens, verbeteren van de gezondheid en het verbeteren van levensnormen voor mensen over heel de wereld.

INEOS heeft een verfrissende no-nonsense werkcultuur, die altijd openstaat voor nieuwe ideeën. We hebben een vlakke hiërarchische structuur en hierdoor ook korte beslissingslijnen.

Ingenieurs vormen het hart van ons bedrijf. We hebben mogelijkheden binnen verschillende disciplines en kunnen iedereen een boeiende carrière bieden. Of je nu een ingenieur bent die zich wil specialiseren in een bepaalde technische discipline, of die managementverantwoordelijkheid wil nemen, we horen graag van je.

## GRADUATE ENGINEERING PROGRAMME

Het graduate programma is een ondersteunend programma voor al onze ingenieurs. We bieden een job met verantwoordelijkheden vanaf dag één en we geven je de mogelijkheden om jezelf snel te ontwikkelen.

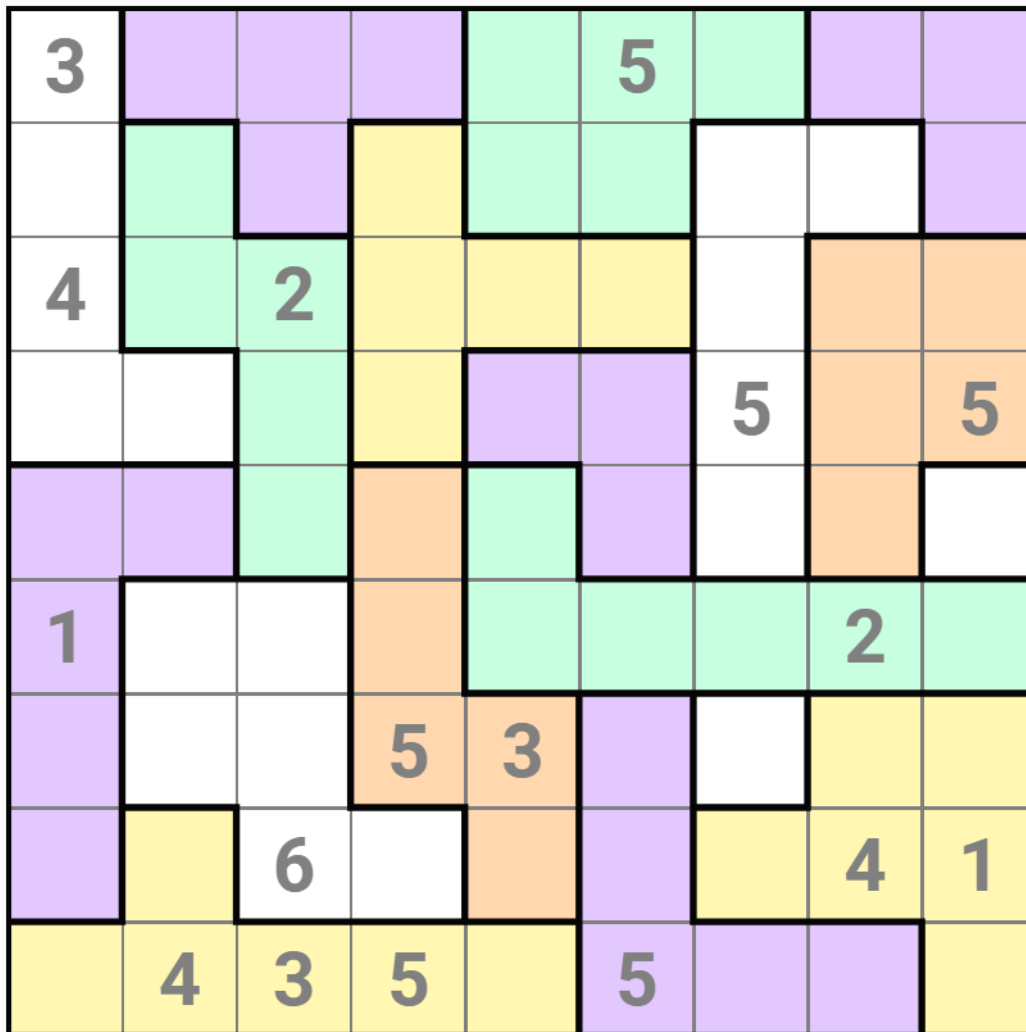
Meer informatie kan u op onze website terugvinden: <https://www.ineos.com/careers/graduates/>

Je komt in het graduate programma door te solliciteren op een vacature voor één van onze vestigingen. Is er op dit moment geen passende vacature voor jou, dan kun je spontaan solliciteren op deze vacature en kom je in onze wervingsreserve. Je zal op de hoogte gehouden worden van opportuniteiten in jouw richting.



# Puzzle of the month: Ineos

A **tectonic puzzle** has a diagram divided into blocks of one to five squares. Numbers must then be placed in these squares. When a block consists of one square, the number 1 is placed in it. A block of two squares gets the numbers 1 and 2; in a block of three squares, the numbers 1, 2, and 3 should be placed, and so on. The goal is to fill in the diagram in such a way that squares with the same numbers do not touch each other, not even diagonally.



Try to solve this puzzle and have a chance to win the awesome prize offered by Ineos!!

**Deposit** this page with your answers in one of the **MaChT boxes** or send an **e-mail** with the answer of the puzzle to **MaChT@UGent.be** before the **19th of April**.

**Good luck!**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

# Company of the month: Syensqo



The image features the Syensqo logo on the left, which consists of a stylized sunburst icon followed by the text 'SYENSQO' and 'ADVANCING HUMANITY' below it. To the right of the logo is a photograph of two scientists in a laboratory setting. One scientist is seated at a desk with a computer monitor, while the other stands beside him, pointing at the screen. The background shows laboratory equipment and glassware.

We create breakthroughs that advance humanity.

## Syensqo: Driving breakthroughs that advance humanity

Inspired by the legacy of the **Solvay Congresses**, which brought together the greatest scientific minds to explore answers to the world's biggest challenges, we strive to break new ground: addressing the critical needs of today and creating solutions for the future. We're constantly expanding on what's seemingly impossible and pushing the limits of what can be realized.

### Our solutions:

Our knowledge, expertise and forward-thinking approach enable us to deliver on the ambition of a circular economy and explore breakthrough technologies. Our **market-leading materials and chemical science** contribute to safer, cleaner, and more sustainable products across a wide range of applications. From EV battery materials and biotech to sustainable seed care and green solvents – we drive transformation.

### Our strategy:

Discover our commitment to enabling a better future for all. As a **growth-oriented company**, we focus on innovative solutions to the defining issues shaping our societies and our planet. Building on a legacy of invention, curiosity, and a passion for science, Syensqo will continue to develop cutting-edge technologies by reinventing chemistry and boldly embracing the unknown.

### Learn more

Discover how Syensqo's **innovative and sustainable solutions** help enhance the way people live and work.

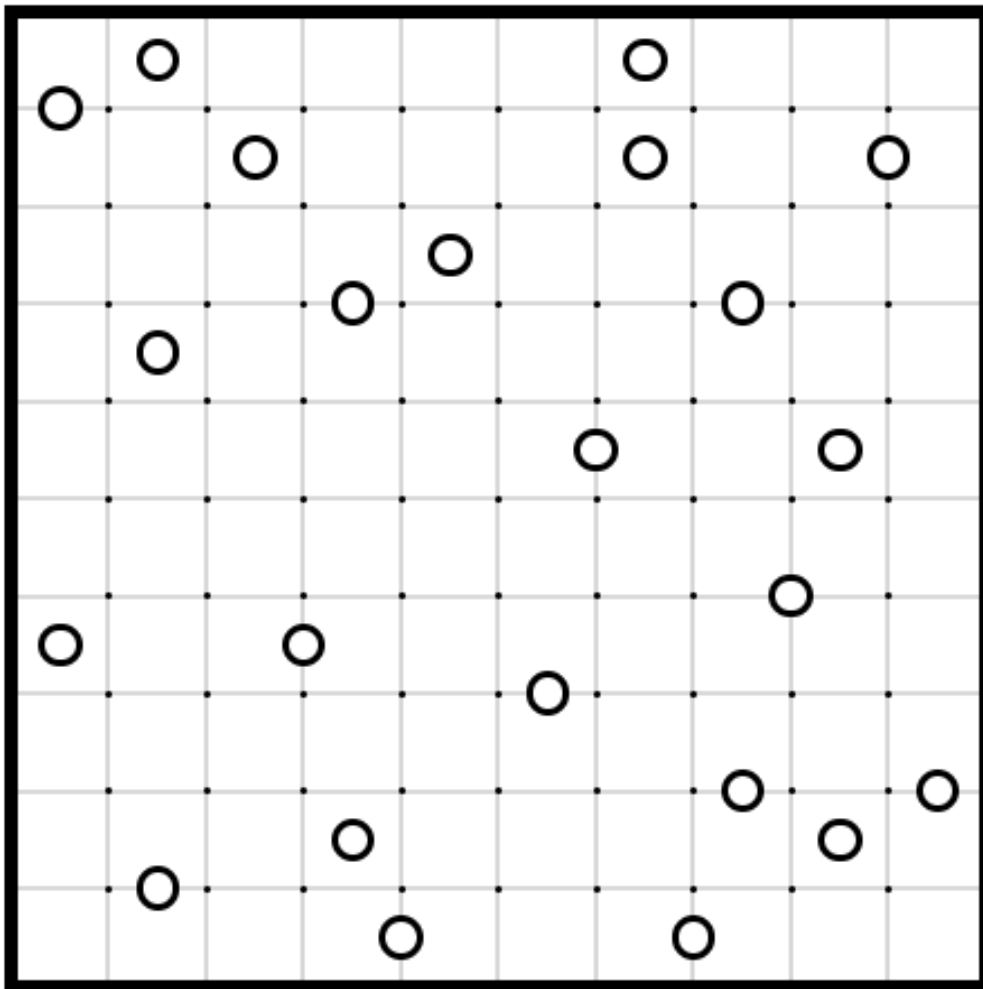
SYENSQO - Rue de la Fusée 98 - 1130 Bruxelles - Belgium

T.V.A. BE 0798.896.453 - RPM Bruxelles - BNP Paribas Fortis IBAN BE 25 0019 6216 3082 - BIC

# Puzzle of the month: Syensqo

**Galaxies:** You have to divide the grid into regions (galaxies) in such a way that:

- Each region has exactly 1 white circle in it.
- The circle is the center of its rotational symmetry. In other words: If you rotate the region around the circle at  $180^\circ$  you should get the same shape, position and orientation.
- A region cannot be a neighbour to itself



Try to solve this puzzle and have a chance to win the awesome prize offered by Syensqo!!

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**Good luck!**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

# Sponsors:



Air Liquide

**BASF**  
We create chemistry



**Cargill**<sup>®</sup>



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ADVANCING HUMANITY



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**BEXCO**  
OUR ROPE, YOUR SOLUTION



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Keep Discovering

**AD**  
Aluminium  
Duffel

**Worley**  
energy | chemicals | resources

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Leading Beyond Chemistry

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Metals for Progress