

# MAGFORUM2024



Magnesium Minerals & Markets Conference

#### SUMMARY SLIDE DECK

## The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024



Lead Sponsor & Field Trip Host

**FLS** 

REDUÁVÈ



REF

Day 1 Reception sponsor



RHI MAGNESITA

Supporting Partners







Exhibitors

## MAGF©RUM2025 Magnesium Minerals & Markets Conference Tivoli Ecoresort Praia do Forte Bahia Salvador, 19-21 May 2025

Field Trip to RHI Magnesita, Brumado, Thursday 22 May 2025



## CALL FOR PAPERS | SPONSOR/EXHIBIT OPPORTUNITIES | EARLY BIRD RATES



Lead Sponsor: Welcome Reception & Field Trip Host









**SPONSORS** 











## Welcome Reception













#### GALLERY

#### MAGFORUM 2024 Magnesium Minerals & Markets Conference The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024

## **Tuesday Night Reception**







**RHI MAGNESITA** 

















#### ATTENDEES

MAG**F©RUM 2024** Magnesium Minerals & Markets Conference The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024

Akdeniz Mineral Kaynakiari AS Al Nawras Group AMI Trading & Distribution LLC Arciresa Arno Witgert **Atlas Materials Baymag Inc Benchmark Mineral Intelligence Big Blue Technologies** Calix Ltd Carl Spaeter GmbH Pentol-Enviro AG Cermatpro Ltd Cofermin Rohstoffe GmbH Cremer Erzkontor GmbH ECO2 Magnesia Eion **ENOWA-NEOM** Europiren B.V **Fanglin Minerals** FL Smidth **Garrison Minerals LLC** General Abrasivi srl Global Monarch F.Z.C **Grecian Magnesite** 

Hebei Meishen Technology Co. Ltd **IBAR Nordeste Ltda IMagine** IMagine (China) Industrial Minerals Company (Maaden) Inland Environmental Resources Inc Interminex Handelsgesellschaft mbH Intocast Slovakia a.s. Kaustik Europe B.V **KERAG s.r.o Kosice** Korea Materials Kümas Magnesite Lehman&Voss Lehmann&Voss Nederland B.V **MAF** Magnesite Magnesia GmbH Magnesitas Navarras S.A Magnesium Trade & Consultancy Maithan Ceramic Ltd Martin Marietta Magnesia Specialties Mathios Refractories Metals Hub GmbH MFG Materia GmbH Midegasa Millenis SAS

Minchem Impex FZCO Minchem Impex Singapore Ptd Ltd Mineral Concept GmbH Mineralmahlwerk Hamm Minerals GmbH & Co. KG Nedmag B.V **Newport Industries NICHE Fused Magnesia** Normag GmbH Omya AG **Orind Special Refractories/OSR Far East** PAK Minerals & Refractory Industry Premier Magnesia LLC **Project Blue Protea Mining Chemicals** QMAG Quimíca del Rey Redwave **Refmin China** Refratechnik Cement GmbH Refratechnik Holding GmbH **RHI** Magnesita S&P Global Commodity Insights Saint Gobain Research Paris Scheruhn Industrie-Mineralien GmbH & Co

SDZ Resources Ltd Sino Minmetals Comp. Slovmag a.s SMZ a.s Jelsava SPG Mining Pte Styromag Steir Magnesitind. **TAK Industrial Minerals** Tanisho & Co. Ltd **TECHNIMAG** Tenova Branch Office, Austria **TERNA MAG S.A** Thyme Europe Ltd Tifor B.V **TIMAB Magnesium** TOMRA Sorting GmbH Traxys **Traxys North America LLC UBE Materials Industries Ltd** UBE Shipping & Logistics Ltd Vesuvius XIHUA Group Co. Xilolite ZM Ropczyce S.A



*Thank you for a fantastic conference, very well hosted and organised.* Daniel Verwey, Technology Manager, Protea Mining Chemicals, South Africa

It was a pleasure for me to participate in MagForum in Greece. This event brought the global magnesia community together for four days of informative presentations, panel discussions with experts and excellent networking opportunities. Ibrahim Karakurt, Sales Manager, Lehmann&Voss Nederland BV, Netherlands

Outstanding venue, a really nice combination of presentations across our industry. MagForum allows me to speak to producers, distributors, and suppliers across many applications. The addition of the Roundtables has been great. David Martin, Industrial Business Director, Premier Magnesia LLC, USA

*Excellent programme, enjoyed the wide range of topics covered, well organised as usual.* Suren Dias-Jayasinha, Head of Sales & Marketing, QMAG, Australia

Thanks for hosting an unforgettable MagForum 2024 in Greece. And thanks to Grecian Magnesite for a truly well organised field tour. Alex Medendorp, Managing Director, Magnesium Trade & Consultancy, Netherlands

Thank you very much to the whole team of IMFORMED. The conference was well prepared and organised. It was also great to see a lot of people from the Magnesia world again, to have good meetings and to make new connections. It was a great conference with many impressions and conversations. I'm looking forward to the next MagForum! Jorn Messing, Executive Manager Raw Materials, Carl Spaeter GmbH, Germany

Some interesting and informative presentations, particularly relating to efforts on carbon reduction Ryan Mackenzie, Director R&D, Baymag, Canada

As always it was a pleasure having nice discussions with the global magnesia community. Lennard Spliet, Managing Director, Lehmann&Voss Nederland BV, Netherlands



# Industrial Mineral Forums & Research

## Chairpersons



Mike O'Driscoll Director, IMFORMED



**Ted Dickson** Consultant, TAK Industrial Minerals



Alison Saxby Research Director, Project Blue

Staff present to assist



Ismene Clarke Director, IMFORMED



Sharon Thomas Assistant, IMFORMED



Evie O'Driscoll Assistant, IMFORMED



#### **TUESDAY 14 MAY**

07:30 Registration

#### **INTRODUCTION & OVERVIEWS**

08:45 **Opening Remarks & Introduction** Ismene Clarke, Director & Mike O'Driscoll, Director, IMFORMED, UK

#### 09:15 Welcome Address

Dimitris Portolos, President & CEO, Grecian Magnesite, Greece

- 09:30 **65 years in the world of magnesia: review of milestones & challenges** Pantelis Vetoulas, Commercial Manager, Grecian Magnesite, Greece
- 10:00 Magnesia supply trends and outlook Alison Saxby, Research Director, Project Blue, UK

#### 10:30 COFFEE



#### **TUESDAY 14 MAY**

#### TURKEY | ADVANCED MGO USE | KEYNOTE PANEL

Turkey a key source of world magnesia production & the role of 11:30 Kumaş in today's challenging market

Mustafa Çavaç, Marketing & Sales Manager Raw Materials, Kumaş, Turkey

12:00 Advancing the use of MgO for the co-production of magnesium metal, spinel, and calcium aluminates Aaron Palumbo, CEO, Big Blue Technologies, USA

12:30 KEYNOTE PANEL DISCUSSION – MARKET OUTLOOK

- *Moderator:* Mike O'Driscoll, Director, IMFORMED, UK
- Dr Christoph Beyer, Managing Director, QMAG, Australia
- Sven Rosemann, Managing Director IMagine by COFERMIN, Germany
- David Torres, Global Marketing Manager, Minerals, RHI Magnesita, USA
- Michael Tsoukatos, Development Manager, Grecian Magnesite, Greece

13:00 LUNCH



#### **TUESDAY 14 MAY (CONTINUED)**

#### **CARBON REDUCTION**

- 14:30 Decarbonisation developments & objectives Andreas Drescher, VP Decarbonisation, RHI Magnesita, Austria
- 15:00 **Lowering the environmental footprint of magnesia products: alternative materials & CO<sub>2</sub> capture** Dr. Haris Yiannoulakis, R&D Manager, Grecian Magnesite, Greece
- 15:30 Magnesium oxide production with sustainability and CO<sub>2</sub> reduction
  Mohamed Abdelaziz, Project Manager Magnesium Development, ENOWA-NEOM, Saudi Arabia
- 16:00 **FLSmidth: Ready to support your carbon reduction targets** Heinz Tolke, Global Manager - Technical Sales Support, FLSmidth, Germany



#### **TUESDAY 14 MAY**

#### 16:30 COFFEE & ROUNDTABLE NETWORKING BREAKOUT SESSION

Informal networking & discussion at hosted & themed roundtables

ТНЕМЕ	ROUNDTABLE HOST	<b>LOCATION:</b>
Global Supply	Alison Saxby, Research Director, Project Blue, UK	Foyer Main
Carbon Reduction & Utilisation	Andreas Drescher, VP Decarbonisation, RHI Magnesita, Austria	Hall
Refractories	Ted Dickson, Consultant, TAK Industrial Minerals, UK	
Speciality Markets	Samantha Wietlisbach, Director Minerals Research & Analysis, S&P Global Commodity Insights, Switzerland	

17:30 CLOSE OF DAY 1





**RHI MAGNESITA** 









WEDNESDAY 15 MAY

#### MARKETS 1: REFRACTORIES | CHEMICALS

Speaker & title 09:00 change

## 09:00 Hybrid aluminosilicate lining of rotary kiln for production of dead burned magnesia Yannis Mathios, CEO, Mathios Refractories, Greece

#### 09:30 Magnesium chemicals: review & outlook of downstream supply & demand

Samantha Wietlisbach, Director Minerals Research and Analysis, S&P Global Commodity Insights, Switzerland

## 10:00 Magnesium hydroxide in wastewater treatment: an effective alternative to traditional alkalis

Mac McCreless, Managing Director, Garrison Minerals, USA

#### 10:30 COFFEE



#### WEDNESDAY 15 MAY

MARKETS 2: AGRICULTURE | SPECIALITY | HYDROMETALLURGY

- 11:30 Magnesium silicates use in CO<sub>2</sub> management on farms, forests, and pastures: A supply chain view from quarry to cash. Adam Wolf, Chief Innovation Officer, Eion, USA
- 12:00 Speciality applications of ultra-high surface area magnesium oxide Phil Hodgson, Managing Director & CEO, Calix Ltd, Australia
- 12:30 How & why CCM is used for cobalt hydroxide production in the Central African Copperbelt

Daniel Verwey, Technology Manager, BME Mining Chemicals, South Africa

13:00 Magnesia use in hydrometallurgy: outlook for nickel and cobalt demand

Jorge Uzcategui, Senior Analyst Cobalt & Nickel, Benchmark Mineral Intelligence, UK

#### 13.30 LUNCH & CLOSE OF CONFERENCE



## Programme

## THURSDAY 16 MAY: FIELD TRIP TO GRECIAN MAGNESITE, YERAKINI

#### **PLEASE NOTE:**

Field Trip is now full: attendees wishing to be placed on Waiting List please contact Ismene

#### **Itinerary\***

- 07:30 Meet Lobby Pomegranate Hotel
- 07:45 Bus departs from Pomegranate Hotel
- **08:30** Arrival at Grecian Magnesite, Yerakini; Welcome refreshments & presentation
- **10:00** Tour of operations
- **12:00** Departure from Yerakini
- **12:30** "Mag Art" exhibition inspired by GM's mines in Yerakini by the Association of Visual Arts Artists of Chalkidiki, at the former GM plant & dock at Yerakini Beach.
- **13:00** Lunch at Kostas Restaurant, on the sea front at Psakoudia,
- **15:00** Buses depart to Pomegranate Hotel and Thessaloniki Airport
- **15:45** Arrive Pomegranate Hotel (16:00 Arrive Thessaloniki Airport)

\* subject to change

#### PLEASE WEAR CLOTHING AND FOOTWEAR AS BEFITS A WORKING INDUSTRIAL SITE VISIT















Magnesia (Greek: Μαγνησία) Regional Unit of Greece



- derived from the tribe name Magnetes
- & son of Zeus, *Magnes*, first King of Magnesia
- homeland of the mythical heroes Jason, Peleus and his son Achilles.
- "Magnesite", derived from the Greek magnetes lithos (μαγνήτης λίθος), = "stone of Magnesia" (also "magnet", "manganese")



## Magnesia overview **Mineral source diversity**

#### **Other natural MgO minerals**

Bischofite	MgCl <sub>2</sub> .6H <sub>2</sub> O			
Carnallite	KMgCl <sub>3</sub> .6H <sub>2</sub> C			
Kieserite	MgSO <sub>4</sub> .H <sub>2</sub> O			
Dolomite	CaCO <sub>3</sub> .MgC			
Brucite	Mg(OH) <sub>2</sub>			
Huntite	$Mg_3Ca(\overline{CO}_3)_2$			
Hydromagnesite	$Mg_4(OH)_2(CC)$			
Serpentinite	(Mg,Fe)3Si <sub>2</sub> C			
	_			

 $\bar{V}_{3}$ . $\bar{O}_{3}$ . $\bar{O}_{2}$  $50_4$ .  $H_2O$ O<sub>3</sub>.MgCO<sub>3</sub>  $OH)_2$  $Ca(\overline{CO}_3)_4$  $(OH)_2(CO_3).4H_2O$ Fe)3Si<sub>2</sub>O<sub>5</sub>(OH)<sub>4</sub>

Olivine	
Dunite	

Nesquehonite Periclase

>90% olivine MgCO<sub>3</sub>.3H<sub>2</sub>O MgO

 $Mg_2SiO_4$ 



Sibelco's huntite-hydromagnesite mine in Kozani, Greece



## Magnesia overview Grade & market diversity

MAGNESIA MARKET APPLICATIONS SUMMARY									
Decreasing reactivity, increasing heat treatment, refractoriness, & price/tonne									
	700-1500°C CAUSTIC CALCINED MAGNESIA			1500-2300°C	2800-3	3000°C			
RAW MAGNESITE				DEAD BURNED MAGNESIA	FUSED MAGNESIA				
	Synthetic CCM	Natural CCM		Refractory grade 93,95,97% MgO	Refractory grate Electrical grate 97%+ MgO 97.0%+ MgO				
Mg metal	HP FM electrical	Feedstock	DBM, FM	Refractories	Transformer steel coatings Refractory bricks	Cable insulation Electrical elements UV sensors Hi-tech ceramics			
Glass Ceramics Rubber Insulation	grade Mg metal Mg chemicals Pharmaceuticals Ceramics UHP MgO Agriculture Environmental Ceramics Metallurgical flux Plastic filler Pesticide carrier Designer cerami Foundry sand Coatings Absorbent Dessicant Flame retardant Lubricant additive Slag conditioner Hydrometallurgy	Cement	Insulation boards Sorel cement Adhesives Concrete/ cement Paints Abrasive wheels	— bricks — gunning — mixes — castables Welding					
			Animal feed Fertiliser Water/waste FGD CCS						
		X ics /e							



MAG**F©RUM 2024** Magnesium Minerals & Markets Conference The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024

# Industrial Mineral Forums & Research

industrial milleran oranis a research



Sponsorship/Exhibit/Registration Enquiries Ismene Clarke ismene@imformed | T: +44 (0)7905 771 494

Programme/Speaker Enquiries

Mike O'Driscoll mike@imformed.com | T: +44 (0)7985 986 255



- Launched in January 2015
- Extensive experience & reputation
- Specialising in conferences & market research in:
  - Industrial Minerals Supply/Demand
  - Magnesia
  - Refractory Minerals
  - China
  - Mineral Recycling
  - Fluorine
  - India
  - Barite & Oilfield Minerals
  - Salt

## MAGF©RUM2025 Magnesium Minerals & Markets Conference Tivoli Ecoresort Praia do Forte Bahia Salvador, 19-21 May 2025

Field Trip to RHI Magnesita, Brumado, Thursday 22 May 2025



## CALL FOR PAPERS | SPONSOR/EXHIBIT OPPORTUNITIES | EARLY BIRD RATES



Pullman Cannes Mandelieu, 9-11 April 2025

## Secondary raw material sources, supply, processing, and markets

Refractories | Slags | Salts | Ash | Glass | Batteries | Mine Tailings | Water | Construction

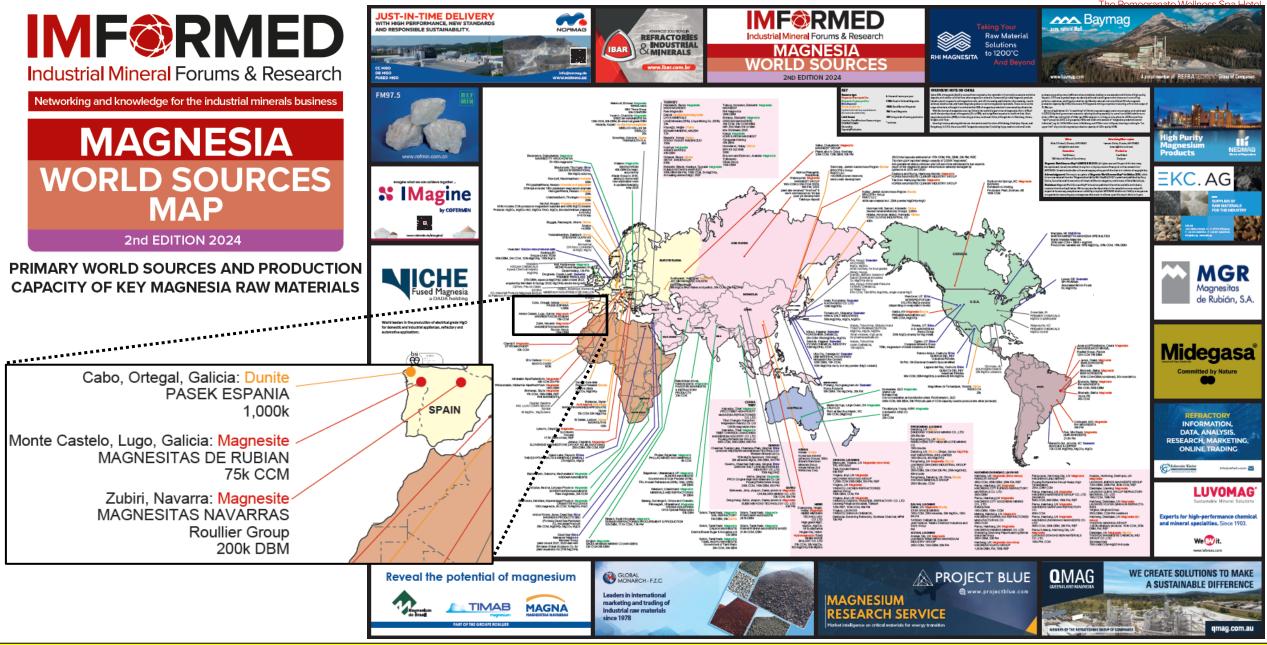


## CALL FOR PAPERS | SPONSOR/EXHIBIT OPPORTUNITIES | EARLY BIRD RATES

#### Introduction

#### MAGF®RUM2024

Magnesium Minerals & Markets Conference

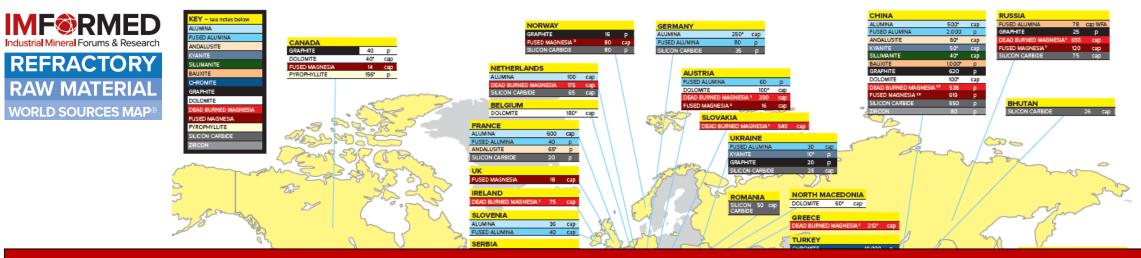


NEW EDITION HOT OFF PRESS! PICK UP YOUR COMPLIMENTARY COPY AT OUR STAND TODAY !!

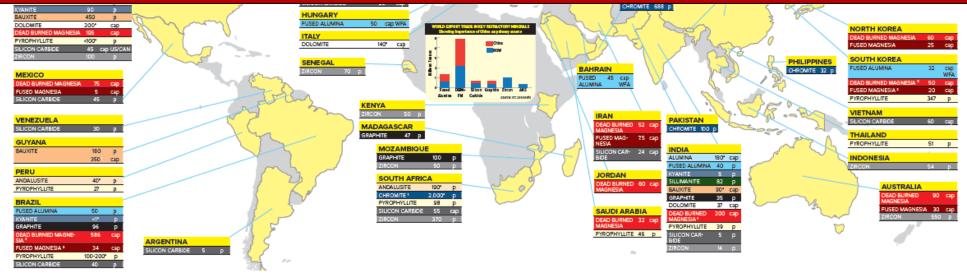
MAG**F©RUM 2024** Magnesium Minerals & Markets Conference The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024

## **Refractory minerals overview**

World distribution of primary established sources of main minerals



## Please drop by the IMFORMED stand to pick up your complimentary copy





## **IMFORMED** will be attending...



SCIENTIFIC CONFERENCE AND TRADE FAIR

17-18 Sept 2025 Aachen, Germany



Let us know if you're in town, we would be delighted to meet up and have a chat

MAGFORUM2024

Magnesium Minerals & Markets Conference The Pomegranate Wellness Spa Hotel, Halkidiki — 13-15 May 2024

> Participate Learn Enjoy