

# FLUORINE FORUM 2020

Tuesday 13 October 2020

**ONLINE**



The premier meeting for the global fluorine minerals & markets business



Networking and knowledge for the industrial minerals business

 **imformed.com**



PROGRAMME\*

All times shown are British Summer Time (corresponding time zones below) \* All timings approximate; subject to change

BST	CET	EDT	SGT	PRESENTATIONS
12.00	13:00	07:00	19:00	<b>Welcome &amp; Introduction</b> <i>Ismene Clarke &amp; Mike O’Driscoll, Directors, INFORMED</i>
12.15	13:15	07:15	19:15	<b>Fluorspar supply &amp; demand overview</b> <i>Oliver Rhode, CEO, Xenops Chemicals GmbH &amp; Co KG, Germany</i>
12.45	13:45	07:45	19:45	<b>COVID-19 impact on steel markets for fluorspar</b> <i>Kerry Satterthwaite, Manager Industrial Minerals &amp; Chemicals, Roskill, UK</i>
13.15	14:15	08:15	20:15	<b>BREAK</b>
13.30	14:30	08:30	20:30	<b>An update on the comparison between FSA and CaF2 raw material</b> <i>Olivier Ruffiner, Business Manager Fluorine, Buss ChemTech AG, Switzerland</i>
14.00	15:00	09:00	21:00	<b>Fluorochemicals outlook</b> <i>Samantha Wietlisbach, Director Minerals Research &amp; Analysis, IHS Markit, Switzerland</i>
14.30	15:30	09:30	21:30	<b>Rise of EV battery megafactories: what should fluorspar producers prepare for?</b> <i>Caspar Rawles, Head of Price Assessments, Benchmark Mineral Intelligence, UK</i>
15.00	16:00	10:00	22:00	<b>BREAK</b>
15.15	15:45	10:15	22:15	<b>Sensor-based sorting technology for fluorite: using fluorescence effects of fluorites for highly efficient and economic sorting</b> <i>Michael Klug, Sales Manager, Binder+Co AG, Austria</i>
15.45	16:45	10:45	22:45	<b>Latest developments in recovering AHF from FSA in DUHF project</b> <i>Bob Welch, Sales Director, New Chemical Products LLC, USA</i>
16.15	17:15	11:15	23:15	<b>Lost Sheep Fluorspar Project</b> <i>James Walker, CEO, Ares Strategic Mining, Canada</i>
16.45	17:45	11:45	23:45	<b>Final Discussion &amp; Wrap-up</b>
17.00	18:00	12:00	24:00	<b>Close of Forum</b>





## HOW IT WORKS – PLEASE NOTE

- The event will be recorded, and after the event attendees will be sent a link to access the recording for playback.
- All presentations (and any other information submitted by speakers) will be available as PDF for attendees to download via a sent link after the event.
- If you get disconnected, please rejoin using your link and passcode, also check local wi-fi/device for issues
- We very much appreciate your co-operation and patience in ensuring a smooth running online event.
- As ever, we would very much appreciate your feedback after the Forum – please answer our Survey after the event.

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AGC Inc	Commerce Resources Corp	Navin Fluorine International Ltd
Alufluor AB	Derivados Del Fluor S.A	Naxi Minerals
Alufluoride Ltd	DFD Chemical Company	New Chemical Products LLC
ArcelorMittal	EuroChem	NIUIF (PhosAgro)
Ares Strategic Mining	Eurolinex GmbH	Outokumpu
Arkema	FluorOne Trading LLC	Possehl Erzkontor GmbH&Co.KG
Ashok Shinh Consulting Ltd	Fluorsid	Rio Tinto
Aumontis Holding AG	Fluorsid British Fluorspar	Roskill
Bal-C SpA	Gannon Eco	S B Chemicals
Baramin	I.H.S Markit	Sachtleben Minerals GmbH & Co.KG
Benchmark Mineral Intelligence	Itafos	Scheruhn Industires
Binder+Co AG	JSC HaloPolymer	SepFluor
Britannia Refined Metals	Koura Global	Sojitz Corporation
Buss ChemTech AG	Lincoln Electric Company	Solvay Fluor GmbH
Canada Fluorspar	Marubeni Corp	Thyme Hong Kong Co Ltd
Carl Spaeter GmbH	Masan High Tech Materials	Traxys Europe
Chemours	Minera de Orgiva	Traxys North America LLC
China National Minerals Co Ltd	MINERSA	U.S Geological Survey
Chinese Kings Resources Group Co. Ltd	Mongolian Minerals	Xenops Chemical GmbH & Co KG



***“Thank you for organising and animating the Fluorine Forum, in spite of the challenging conditions. It was Itafos' first attendance, and was very insightful on the fluorine markets, projects, and technologies.”***

Alex Benedetti, Commercial Director, Itafos, USA

***“Thank you for your wonderful job! FF2020 was beautifully organised: interesting presentations and discussions. It was very convenient and compact with no technical problems.”***

Evgeniy Torochkov, Head of Industrial Ecology, NIUIF (PhosAgro), Russia

***“The online conference was very good. However, I prefer the old style and I'm already looking forward to Hanoi next year!”***

Oliver Rhode, CEO, Xenops Chemicals GmbH & Co KG, Germany

***“The online conference was a very good idea”***

Cecilia Ballarini, Managing Director, Bal-Co, Italy

***“I think the platform performed perfectly. Asking questions anonymously is a nice addition.”***

Anonymous



# Fluorspar market scene-setter

## Influencing factors

- Production capacity “lost” in recent years
- China:
  - reduction in capacity
  - reduction in high quality resources
  - growing domestic demand markets
  - increased imports
- Recent new sources not fully operational
- Risks of overreliance on China as primary source
- Development of new fluorspar and alternative F sources
- 2020-21: COVID-19 impact on supply/markets
- Fluorspar classified as strategic/critical mineral
  - potential demand growth in new energy sources?
- US HFC Phase Down approaches; EC F-gas review





# Fluorspar market scene-setter

## Influencing factors

FLUORINE FORUM 2019

Alcron Hotel, Prague  
21-23 October 2019



*Live audience online poll*

**“Emerging new fluorspar supply: can the market absorb this extra capacity?”**

**12%: “No, we don’t need the extra capacity.”**

**32%: “Yes, the market needs at least two new suppliers”**

**56%: “Yes, easily; in fact we need additional new suppliers”**

- Fluorsid seeking sources | GFL expands in Morocco



# Fluorspar market scene-setter

## New deposit developments/potential

### Europe

- Tertiary Minerals, Sweden, Norway

### North America

- Commerce Resources, Canada (+ REE)
- Ares Strategic Mining, UT
- Hastie Mining, KY
- Hicks Dome, IL (+ Th, REE, Nb)
- (Tertiary Minerals, NV)

### Elsewhere

- Various, Mexico
- Ventus Minerals, Hanaq Andes, Argentina
- JSC Tin One Mining, Kazakhstan (+ Sn, REE)
- ERG, SepFluor, Sallies, South Africa
- Emor Resources, Namibia
- Mongolia (+ W), Pakistan, Sudan (+ REE), Zambia, Myanmar, Thailand
- China – R&D processing low grade ores, Guizhou



Drilling core samples at the bottom of one of the pits on the Lost Sheep Mine property, Utah; a historic fluorspar mining area, Ares Strategic Mining is looking to bring it back on stream.



# Fluorspar market scene-setter

## Alternative source developments

### Fluorosilicic acid (FSA)

- Waste stream from phosacid production
- Much debated
- Wengfu Group, China
- Nutrien-Arkema supply deal

### Depleted uranium hexafluoride (DUHF)

- JSC Electrochemical Plant, New Chemical Products, Russia
- MACS, USA

### Mine tailings

- LKAB, Sweden (+ REE, P, gypsum)
- Baotou I&S Group, China (95%  $\text{CaF}_2$  conc.)

### Bauxite

- Australian Bauxite, Australia –  $\text{AlF}_3$

Nutrien to supply Arkema with 40k tpa anhydrous HF from phosphate rock processing FSA waste



**Shape of things to come?** Nutrien's huge Aurora, NC phosphate mine (1) produced 4.3m tonnes phosrock in 2019, supplying its processing complex (2) (prod. cap. 5.4m tpa phos. concentrate, 1.2m tpa phos acid, and 0.8m tpa DAP/MAP). By 2022 a new 40,000 tpa FSA-to-AHF plant will be installed (may look like 3) to supply Arkema's Calvert City, KY plant (4), producing fluoropolymers and fluorochemicals (5), replacing an equivalent approx. 88,000 tpa acid grade fluorspar input.





# FLUORINE FORUM 2021

Pan Pacific Hanoi  
18-20 October 2021



**PLEASE NOTE: POSTPONED FROM 2020**



**MASAN**  
HIGH-TECH MATERIALS



**FIELD TRIP TO MASAN HIGH-TECH MATERIALS' NUI PHAO OPERATION**

**CALL FOR PAPERS | EARLY BIRD**



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Field Trip to Nui Phao Thursday 21 October







- **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**
  - **Oilfield Minerals**



# Conferences in 2021

## MINERAL RECYCLING **FORUM** 2021

Tuesday 9 February 2021

**ONLINE**



## **IMFORMED** **ONLINE** *Rendezvous*

13-14 April 2021

SUPPLY  PROCESSING  LOGISTICS  MARKETS

## OILFIELD MINERALS & MARKETS **FORUM** HOUSTON 2021

Hilton Houston Post Oak, Hilton, 25-27 May 2021

## CHINA REFRACTORY MINERALS **FORUM** 2021

InterContinental Dalian  
October 2021



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## REFRACTORY MINERALS **FORUM** 2021

16-17 March 2021

**ONLINE**



## **MAGFORUM** 2021

Magnesium Minerals & Markets Conference  
Grand Hotel Huis ter Duin (Noordwijk),  
Amsterdam — 28-30 June 2021

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