

## ASX Announcement

December 16, 2020

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### December Quarter Newsletter – Issue 37

**Sydney, Australia | December 16, 2020** – Multi-award-winning Australian technology company Calix Limited (ASX: CXL ‘Calix’ or ‘the Company’) is pleased to announce it has released a comprehensive update on activities across its business segments. The newsletter is attached overleaf.

This announcement has been authorised for release to the ASX by:-

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## About Calix

Calix is a team of dedicated people developing a unique, patented technology to provide industrial solutions that address global sustainability challenges.

The core technology is being used to develop more environmentally friendly solutions for advanced batteries, crop protection, aquaculture, wastewater and carbon reduction.

Calix develops its technology via a global network of research and development collaborations, including governments, research institutes and universities, some of world's largest companies, and a growing customer base and distributor network for its commercialised products and processes.

Because there's only one Earth – Mars is for Quitters.

**Website:** <https://www.calix.global/>  
**Twitter:** @CalixLimited  
**Youtube:** [CalixLimited](#)

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Innovating for the Earth

# Calix News

## Issue 37

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*12 tips for a more sustainable Christmas*



[CLICK HERE](#)



Because there's only one Earth – Mars is for Quitters.

## Welcome to Issue 37 of the Calix Newsletter



Phil Hodgson  
CEO

In our last Newsletter for 2020, we reflect on our significant progress during the year across several of our businesses, as well as celebrate our acceptance into the United Nations Global Compact and our commitment to the United Nations Sustainable Development Goals.

In our Agriculture business, although the roll-out of our anti-pest product was impacted by COVID, our European partner – Afepasa – pushed ahead as best as possible with a product launch and achieved several successful trials with customers across numerous crops and pests, in multiple countries. Their relative success was all the more important given the tightening EU restrictions on chemical pesticides. The banning of one of the world's most common anti-fungals – Mancozeb – was announced in October (joining a list of 44 other substances banned in the last 2 years in the EU) increasing the pressure to find new, safer alternatives such as Calix BOOSTER-Mag.

Following our Annual General Meeting in November, we also held a webinar updating our battery development program (<https://youtu.be/JULzeV9Yljc>) which outlined the significant steps taken over the last 12 months of research and development. We were very pleased to publish our early, but very encouraging, results into a new cathode material we are developing that could be cheaper, safer, and better performing than commercial materials. While there is much further testing and development to be done, the market potential is huge, as electric vehicles and base load storage systems are predicted to grow very quickly over the next decade.

We also feature two customer stories in this newsletter – both from the US. In the first, our locally-made magnesium water treatment product Amalgam-60 was successfully applied to remove heavy metals contaminants from a micro-electronics manufacturer. In the second, our Australian-made magnesium water treatment product ACTI-Mag was exported to the US and trialled in a Californian utility, achieving excellent odour control in a large and complex sewer system. Apart from being effective, both products are much safer and better for the environment than traditional chemicals such as caustic or lime – an additional article in this newsletter explains this difference.

We also feature the latest in our Low Emissions Intensity Lime and Cement (“LEILAC”) technology development. Our LEILAC-2 demonstration-scale project is well underway and our de-risking approach to the basis of design is outlined in the article.

Last but by no means least, in this newsletter we feature our new Board member Helen Fisher. With an impressive background in industrial biotechnology and finance, we welcome the considerable skills Helen brings to the Calix Board.

The team at Calix would like to take this opportunity to wish all of you a safe, healthy and enjoyable Christmas and New Year, and as always, we thank you for your support and interest in Calix.

## Calix joins the United Nations Global Compact

The United Nations Global Compact is the world's largest corporate sustainability initiative, driven by the realisation that companies play a crucial part in enforcing human rights and building a more sustainable world. The UN Global Compact's mission is to mobilise a global movement of sustainable companies and stakeholders to create the world we want.

To make this more tangible and make it happen, the UN Global Compact is focusing on four areas; human rights, labour, environment, and anti-corruption, which encompasses Ten Principles that we have agreed to adhere to.

At Calix, our mission is to Solve Global Challenges and we are driven to use our unique skills to repair, preserve and prevent future harm to our planet.

The United Nations General Assembly set 17 Sustainable Development Goals (SDG) in 2015, which are intended to be achieved by the year 2030. Calix touches all 17 SDG's through innovation, development and partnership initiatives, day-to-day operations, and social investment opportunities.

We are currently reviewing Calix's impacts on the SDG's in an internal workshop, with the aim to identify the goals where we believe we can have the most meaningful impact.

Our long-term vision is to become a leading global innovator of industrial solutions for the environment, with a focus on four overlapping pillars of sustainability:

- Climate
- Water
- Food
- Energy

*“At Calix, we are committed to make the UN Global Compact and its Ten Principles part of our strategy, company culture and day-to-day operations, and we are proud of formally signing the pledge as a natural next step on our journey towards sustainability.”*

We look forward to working and engaging with partners, communities, and industry groups to maximise positive outcomes, and will continue to deepen our understanding of sustainable development.

Because there's only one Earth, Mars is for quitters.

For more info on the UN Global Compact, visit:  
<https://www.unglobalcompact.org/>



## The tightening of the use of chemicals continues, especially in Europe.

Just a couple of weeks ago, the EU announced it will be banning the fungicide Mancozeb due to off-target toxicity potential.

45 years after introduction, Mancozeb is widely used globally to manage a range of crop diseases and is a key active for the control of diseases in onion, potato, and grape. It joins a list of 44 substances already banned in the last 2 years, with another 11 still to be decided on later this year.

Calix's European bioactive magnesium oxide (MgO) partners have now completed another successful summer of field trials which have shown further compelling evidence our bio-active materials provide multi-spectrum benefits including magnesium (Mg) augmentation and disease and insect pest suppression.

Results from the Netherlands indicate that Calix's bioactive materials promoted healthier onion crop and performed well when used as a substitute for Mancozeb in grower standard treatment programmes. Accordingly, planning by our partners is underway to extend the application of Calix's materials in a wider range of crops including green-house, potato, flower bulbs and cereal crops.

Results from Italy and Spain indicate the intrinsic disease suppression efficacy of Calix's materials allowed the use of conventional pesticide actives (commonly used in viticulture for both powdery and downy mildew control) to be substantially reduced without compromising outcomes.

Calix's unique bioactive materials are derived from natural minerals and are non-toxic and non-bio accumulative. Applied as a foliar spray, they provide plants with a highly assimilable source of magnesium and strengthen the plant against abiotic and biotic stress. Calix's bioactive materials are safe, sustainable and enhance grower productivity.



Afepasa presents AFEPASA Mg (incorporating Calix's BOOSTER-Mag magnesium hydroxide) for pest control at the Fruit Attraction Conference, as a way to reduce the normal chemical dose against mildew, in an efficient, profitable, and sustainable way.



AFEPASA Mg - containing Calix's 'nano-active' MgO - has been designed to reduce the consumption of agrochemicals & the pressure of diseases & agricultural pests, in an effective, profitable & sustainable way.

## SOLVING GLOBAL CHALLENGES

Powdery mildew, caused by the fungus *Erysiphe necator*, is an important disease of grapevines in Australia and worldwide.



## A new solution for powdery and downy mildew on vines?

Protecting crops remains one of the greatest challenges faced by the wine growing sector.

Powdery and downy mildew are serious diseases of grapevines globally. If not adequately controlled, both pathogens can substantially reduce yield and grape and wine quality.

The Australian Wine Research Institute (AWRI) has now completed a study to determine whether the use of BOOSTER-Mag for vines disease has any effect on grape fermentation and wine quality. The results clearly demonstrated that BOOSTER-Mag has no negative effect. This result is consistent with an equivalent European study – this is great news for the development of BOOSTER-Mag as a sustainable alternative to protect vines from mildew.

**BOOSTER-Mag** 

For more info on BOOSTER-Mag:  
<https://www.calix.global/food/making-crop-protection-safer/>

## R&D Update

# Calix's advanced battery material development program

The rapid growth in electric vehicles and renewable energy storage solutions is creating a global need for more efficient, cheaper, better-performing, and more sustainable energy storage options. While a large part of this growth has been enabled through the performance of lithium-ion (Li-ion) batteries, issues around the cost, capacity, safety, and sustainability of current lithium-ion batteries will increasingly threaten this growth. There is thus a need for advanced materials for lithium-ion batteries that deliver superior performance and safety at lower cost while at the same time reducing environmental impact.

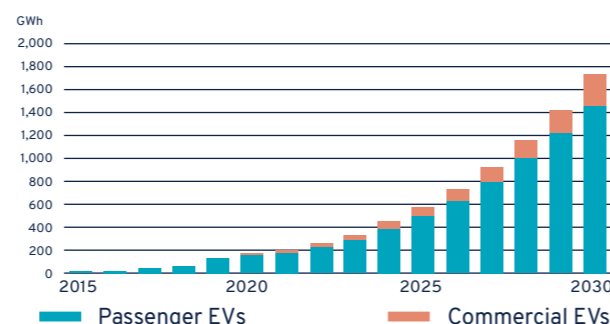
## Market opportunity

### – why are Li-ion batteries of interest?

The Li-ion battery market has grown very quickly, and is predicted to accelerate further...

While there are varying predictions as to the growth for Li-ion battery demand, there is consensus in two things:

- Growth will be driven by electric vehicles, with significant and growing contribution from stationary storage.
- Growth will be very fast over the next decade




## How do lithium ion batteries work?

### And why is the cathode so important?

During **charging**, lithium (Li) ions flow from the cathode to the anode via an electrolyte, through a separator. During the **discharge**, they flow back to the cathode, generating a flow of electrons from the anode into the external circuit (eg. your phone, or car!) and back to the cathode.

*The cathode, as the source of Li + ions, is the main determiner of the capacity and voltage of the battery.*

The cathode is also the most expensive component of a lithium ion battery.

 Over ¼ of the cost!  
Due to **materials, energy & capital**

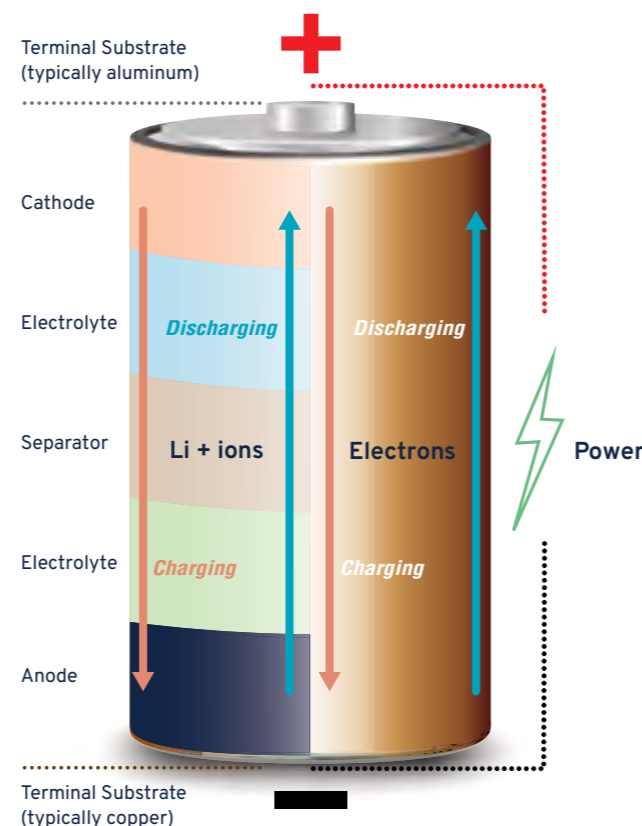
### What are the key operating properties of Li-ion batteries?

- **Energy** could be described as how much 'fuel' is in the tank
- **Power** could be described as how quickly the energy can be used, and replenished
- In addition to energy and power, many battery manufacturers and users are becoming increasingly concerned with **cost, safety** and **sustainability**.

*Safety, cost and sustainability is what motivated Tesla to move away from cobalt and toward manganese and nickel chemistry.*

At the recent "battery day" in September 2020, Tesla announced a move away from cobalt, in favour of manganese and nickel, in the interests of cost, safety and sustainability.

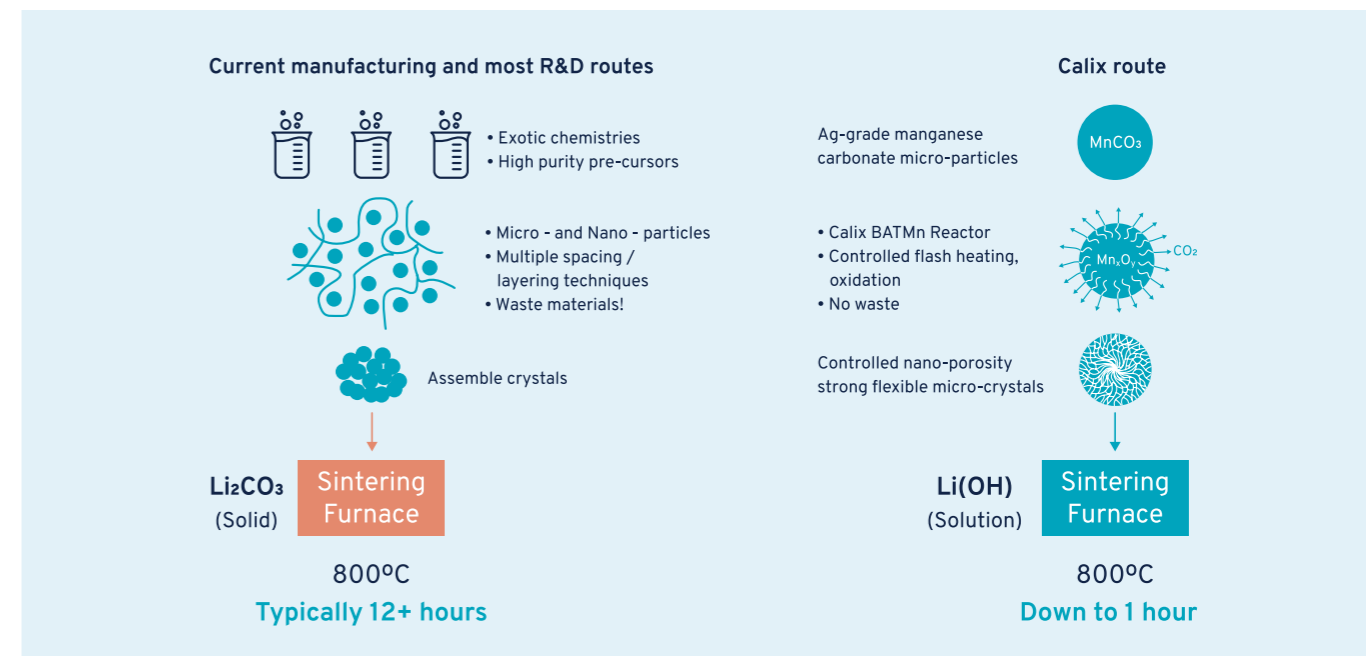
Reference: <https://www.marketwatch.com/press-release/tesla-battery-day-validates-manganese-for-use-in-ev-batteries-2020-09-23>



## Why might Calix's technology be suited to battery materials?

We make nano-porous particles, cheaply and already at scale.

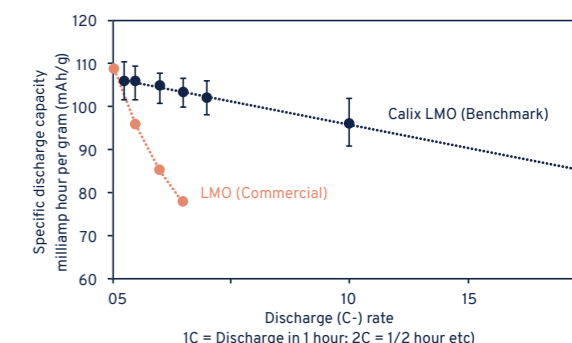
Our early test work has concentrated on cheap, agricultural, non-battery grade manganese.



## Despite lower purity

### – some encouraging performance...

As the discharge rate increases, more strain is put on the cathode material. The unique structure of Calix's materials has resulted in good stability at a higher charge rate, above commercially available LMO (lithium manganese oxide).

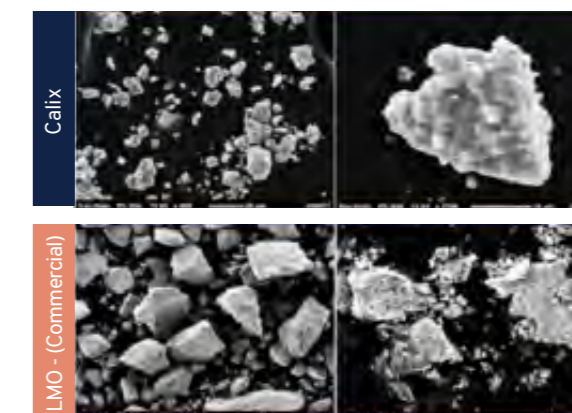


## Early days but very encouraging!

Half-cell tests of Calix's LMO's at Deakin University have outperformed commercial benchmark LMO's and LFP's (lithium iron phosphate) and is in the mix of some high performing lab LMO's reported in the open literature.

We are only one year into a multi-year, multi-program development, but very encouraged already!

"The adoption of new processes and exploitation of low-cost precursors will be essential in the effort to improve the sustainability of battery technologies." Dr Matt Boot-Handford, Head of Battery and catalyst R&D at Calix.



High magnification images clearly show our material has a different structure - less like a "pebble" and more like a "sponge"

# Technology Development

## LEILAC Project Update

### LEILAC 2 Moves ahead despite COVID restrictions

LEILAC 2 commenced in April 2020 with a virtual kick off meeting, including over 35 partner representatives, spread across Europe and Australia. Virtual cross partner working groups continue to meet weekly and partner engagement is high across the team. The consortium should be commended for such a positive start despite COVID lockdowns and continued travel restrictions.

### LEILAC 2 – a 4 x scale up

LEILAC 2 follows on from the success of LEILAC 1 – the construction and successful operation of a first-of-a-kind pilot plant at the HeidelbergCement plant in Lixhe, Belgium. LEILAC 2 will build a demonstration plant on another operational HeidelbergCement plant in Germany that represents a 4 x scale up of the LEILAC 1 pilot, separating 20% of a cement plant's process emissions – around 100 ktpa of CO<sub>2</sub>. A key advancement of the LEILAC 2 demonstrator will be its integration into the cement plant, directly feeding the calcined meal into the existing kiln line, allowing the demonstration of both energy-efficiency and integration / retrofit capabilities through modular design.

The LEILAC 2 project consortium consists of Calix, HeidelbergCement, Cimpor, Lhoist, IKN, Certh, Polimi, BGR, GSB, Engie Laborelec and Port of Rotterdam.

### Milestone 1 – Feasibility study (March 2021)

Although the partner teams have not been able to meet in person due to the global pandemic, the first stage feasibility works continue moving forward, focussed on achieving the first milestone of the project this financial year – the feasibility stage go / no-go decision.

The purpose of the feasibility (pre-FEED) phase is to develop the preliminary design for the demonstration plant, including all required ancillary systems and process flows, with the aim of reducing integration, technical and fuel-use risk. This includes the necessary experimental tests, modelling (of materials and processes) and performance studies to develop and assess the technical options.

Through detailed assessment of the available design options, shaped by the initial results of the investigations and experimental work package, a single primary design basis will be adopted and presented at the pre-FEED go / no-go decision. This will enable the project to proceed on an understood and agreed risk basis.

### A risk-focussed approach ...

The LEILAC team has made quick progress towards de-risking the technology for the demonstration plant. The plant has been divided into component/ system areas and dedicated working groups were formed to address each topic.

## SOLVING GLOBAL CHALLENGES

Component	Essential, discrete components of the LEILAC 2 baseline plant.
Technology Challenges & Programme Risks	Technology challenges and other programme risks that must be overcome to design, construct and operate the system were identified for each component.
Solution(s)	Design options and potential solution vectors to the technology challenge were identified.
Specialist Validation & Testing	De-risking parallel projects were initiated - specialists were identified and engaged for technical design; validation of modelling works are underway; lab and materials testing and test campaigns designed and implemented on the LEILAC pilot plant in Belgium and the Calix BATMn calciner in Australia.

### De-risking approach

The design programme and the development of the technical components of the demonstration plant, is founded on a de-risking approach. This focuses on identifying and effectively tracking and seeking to mitigate risks, allocating resources and funding, and identifying parallel projects and test campaigns to de-risk high priority areas. In this way the LEILAC team can avoid hard trade-offs and reduce the potential for problems due to untested technology or innovations.

Risk reduction programmes include:

- Impurity testing
- Materials testing
- Development of distribution systems
- Design of novel seals and conveying systems
- Combustion system design

The LEILAC team are on track to developing a commercially relevant solution, addressing the remaining technical and ancillary systems risks, and enabling the LEILAC 2 demonstration plant to become operational by end-2023.

### In the spotlight ...

The LEILAC technology has had increased media attention. Most recently:

- Article in World Cement
- Article in International Cement Review

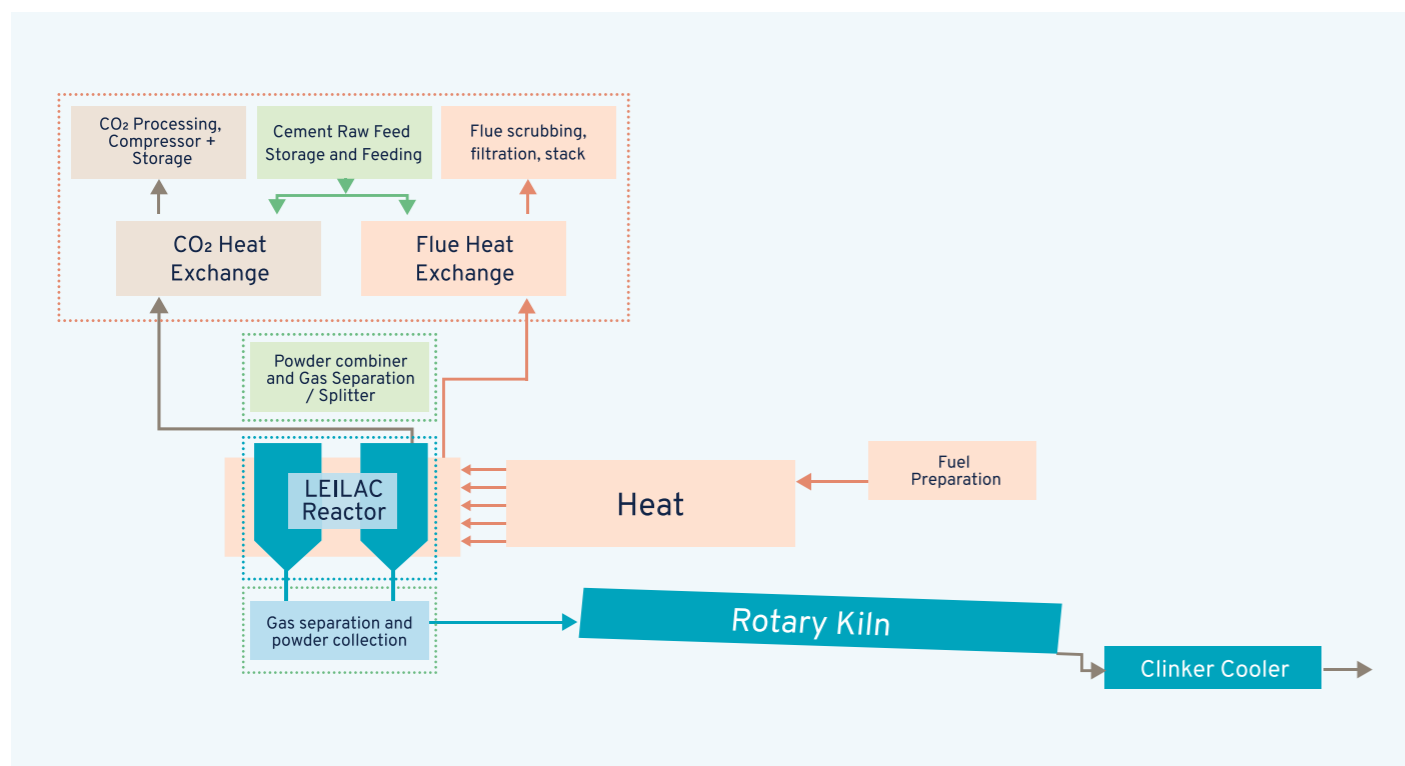
The LEILAC web site <https://www.project-leilac.eu/> is currently being updated to include LEILAC 2, with versions available in French, Dutch and a forthcoming version in German to cater for our growing audience.

### The road map ...

The LEILAC 2 demonstration plant, once operating and tested, along with the fully developed roadmap will facilitate the accelerated deployment of the LEILAC technology, enabling the cement and lime industries to take giant steps forward towards reaching the required emissions reductions by 2050.



The completed LEILAC 1 pilot alongside the HeidelbergCement plant in Lixhe, Belgium.





IMPROVING THE  
SUSTAINABILITY OF  
WATER TREATMENT

SOLVING GLOBAL CHALLENGES

## Customer success story

### AMALGAM-60

## Another interesting application using magnesium hydroxide as a replacement for caustic soda for metal ion precipitation

At a microelectronics manufacturer in the Pacific Northwest, USA

A microelectronics manufacturer in the Pacific Northwest was using a complex system of chemical additions in order to effectively remove heavy metal contaminants from their wastewater stream.

Semiconductor wastewaters are inherently difficult to treat. They are usually characterised by strong color, high chemical oxygen demand (COD), high levels of volatile organic compounds (VOC) and heavy metals, resulting in potential contamination of the environment. Conventionally, chemical coagulation and biological treatment are used to treat wastewater before discharge.

Read the full Customer Story:

<https://www.calix.global/what-we-have-done/replacing-caustic-soda-with-magnesium-hydroxide-for-metal-ion-precipitation/>

#### CHALLENGES

The wastewater operator – who was handling heavy bags of magnesium oxide (MgO) and feeding hazardous caustic soda in a complex metal-ion precipitation application – was looking for a safer, better performing, and more cost-effective solution.

#### SOLUTION

- Bench testing showed potential cost savings of approximately \$1400 per month.
- Calix's US-based business, IER, provided and installed an agitated storage tank and metering pump required for the large scale on-line test, along with the associated feed line for AMALGAM-60 product delivery into the pH adjustment tank.

#### BENEFITS

- AMALGAM-60 successfully adjusted the pH of the effluent stream to a safe level, to maintain the heavy metal concentrations well below the required permit limits.
- AMALGAM-60 also enabled more efficient waste solids settling, and thus a clearer, less cloudy treated waste water stream compared to caustic soda.
- AMALGAM-60 also eliminated the need for the operator to use dangerous sulphuric acid, which was sometimes required to correct high pH "spikes" associated with caustic soda use.
- AMALGAM-60 proved to be a safe, cost-effective and highly performing alternative to caustic soda for metal ion precipitation.



IMPROVING THE  
SUSTAINABILITY OF  
WATER TREATMENT

SOLVING GLOBAL CHALLENGES



Customer  
success story

**ACTI-Mag**<sup>TM</sup>

## Odour control using ACTI-Mag

At South Coast Water District, Orange County, USA

South Coast Water District (SCWD), located on the Pacific Coast just south of Orange County USA, provides water and wastewater services to around 35,000 residents, 1000 businesses and 2 million annual visitors. Regarding wastewater services, SCWD is responsible for managing and operating the sanitary sewer collection system comprising of 13 lift stations (LS) and around 140 miles of sewer lines. The sewer system removes around 3.2 million gallons per day (MGD) of wastewater and transports it to the wastewater treatment plant (WWTP), which is operated by the South Orange County Wastewater Authority (SOCWA).

### CHALLENGES

- SCWD was experiencing a main odour hotspot downstream of lift station Y, (around the long beachside tunnel) and a smaller odor issue downstream of lift station X.
- SCWD decided to trial magnesium hydroxide liquid, and asked Calix to supply the dosing product and equipment for the trial.
- The aim of the project was to dose magnesium hydroxide liquid to reduce the average hydrogen sulfide (H<sub>2</sub>S) levels below 10 ppm and to confirm the product dosage rate in gal/ MGD to reach this goal.

Read the full Customer Story:

<https://www.calix.global/what-we-have-done/odor-control-acti-mag-orange-county>

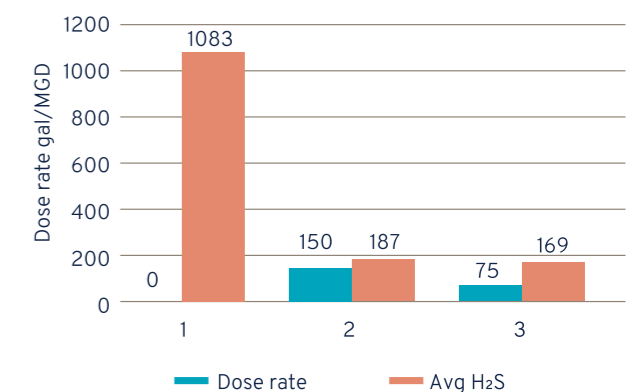
### SOLUTION

- Calix introduced ACTI-Mag, a very high surface area magnesium hydroxide, and a safe and cost-effective alternative for odour control in wastewater.
- ACTI-Mag is a highly stable slurry, that flows readily and can be easily dosed in municipal wastewater treatment systems.
- The sewer flow rate at lift station X was confirmed to be only 0.1 MGD. This being a small flow rate, the decision was taken to use a small, unstirred bulk bin for site product storage for the trial.

### BENEFITS

- After optimising the amount of ACTI-Mag dosed to 75 gal/MGD, H<sub>2</sub>S levels were significantly reduced, averaging 9 ppm and peaking at 169 ppm.
- Very safe and cost competitive option for hydrogen sulphide gas (H<sub>2</sub>S) control in wastewater treatment.
- Despite using an unstirred, small bulk storage container, the stability of the ACTI-Mag product enabled reliable supply throughout the trial.

DOSE RATE V/S MAX H<sub>2</sub>S



Hydrogen sulphide (H<sub>2</sub>S) levels were reduced significantly, successfully fixing the problematic odour issue, while the ACTI-Mag dosing rates were optimised.

# Safety of common alkalis for wastewater treatment

Wastewater treatment presents a multitude of hazards, such as drowning, confined spaces, and exposure to hazardous chemicals or gases.

Hazardous chemicals can pose a significant risk to health and safety if not managed correctly. Municipal and industrial plant managers have specific duties under increasingly stringent health and safety regulations to manage risks associated with using, handling and storing hazardous chemicals.

Being a plant manager at a wastewater treatment plant is an enormous responsibility with the need to answer to many higher authorities such as the Environmental Protection Agency (EPA) or Occupational Health and Safety Administration (OSHA) in the US, and WorkSafe in Australia.

**In this article, we have compared three common alkalis for wastewater treatment, and explained why magnesium hydroxide products are the safest and most cost-effective options.**

- 1  $\text{Ca(OH)}_2$  -> calcium hydroxide, lime slurry, hydrated lime
- 2  $\text{NaOH}$  -> sodium hydroxide, caustic soda
- 3  $\text{Mg(OH)}_2$  -> magnesium hydroxide, milk of magnesia

There are laws in each state or territory that set out the requirements for handling and transporting dangerous goods. Switching to safer chemical products means you are not only protecting the health and safety of your people, but you are also making cost savings for years to come.



Skin burn from dilute NaOH



## Safety of common additives used to control alkalinity and pH in wastewater

### 1 Lime slurry - $\text{Ca(OH)}_2$

Lime slurry is an odourless, low viscosity suspension of calcium hydroxide in water. It is commonly used for municipal water treatment, pH adjustment, metals precipitation and odour control.

Lime slurry is not combustible or flammable but it can react violently with acids and combustible materials.

Prolonged and repeated skin contact with lime slurry can cause irritant dermatitis or alkaline burns. If a large volume of lime dust (or slurry) is splashed into the eye, alkaline burns can cause permanent damage.

#### HAZARD(S) IDENTIFICATION

##### Classification of the substance or mixture:

- Irritant**
- Skin irritation, category 2
  - Specific target organ toxicity following single exposure, category 3
- Corrosive**
- Serious eye damage, category 1

Signal word: Danger

WHMIS  
E

NFPA/ HMIS  
NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

### 2 Caustic soda - $\text{NaOH}$

Caustic soda (sodium hydroxide) is one of the most common alkalis used to provide alkalinity in wastewater treatment.

Caustic soda is very corrosive. At high concentrations, it is extremely hazardous to handle and several precautions must be in place to safely use it in the treatment process.

It can cause irritation to the eyes, skin, and mucous membrane, allergic reactions, eye and skin burns and temporary loss of hair. Workers may be significantly harmed from exposure to sodium hydroxide.

#### HAZARD(S) IDENTIFICATION

##### Classification of the substance or mixture:

- Irritant**
- Skin corrosion, category 1B
- Corrosive**
- Serious eye damage, category 1
  - Corrosive to metals, category 1

Signal word: Danger

WHMIS  
E

NFPA/ HMIS  
NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

### 3 Magnesium hydroxide - $\text{Mg(OH)}_2$

Magnesium hydroxide is increasingly used as a substitute for caustic soda and lime. Not only is it less expensive but it is also the safest and most gentle-to-use alkaline chemical treatment available on the market for pH control applications.

Though magnesium hydroxide is much stronger for supplying OH<sup>-</sup> buffering, it is dramatically safer for operators to handle and for treating wastewater microorganisms. Magnesium hydroxide dissolves only when it encounters acidity, unlike NaOH which immediately releases OH<sup>-</sup> to burn operator's skin and eyes. As a result no extra PPE or secondary containment is needed to handle magnesium hydroxide, thus reducing operating cost.

Not only is it safe, but magnesium hydroxide is also recognised as a skin-care essential.

#### HAZARD(S) IDENTIFICATION

##### Classification of the substance or mixture:

- Not classified under GHS.
- Non-hazardous
  - Non-corrosive

WHMIS  
E

NFPA/ HMIS  
NFPA SCALE (0-4)

Health	0
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)



**We believe our people are key to achieving our purpose.**



## Introducing Helen Fisher

Non-Executive Director

Helen Fisher is a passionate leader with a rare combination of financial expertise and a deep knowledge of global networks in the life sciences sector.

Helen is CEO and managing director of Bio Capital Impact Fund (BCIF) and a director of BARD1 Life Sciences Ltd, a cancer diagnostics company. Helen was the chair of the Audit and Risk Committee at Sienna Cancer Diagnostics before it was acquired by BARD1. She is also the chair of the Victorian branch of AusBiotech.

Prior to establishing BCIF, Helen was a partner of Deloitte and led Deloitte's life sciences practice in Australia for 5 years, having had many years' experience in the life sciences and health care sector. She also specialised in the financial services sector, servicing some of the largest global and Australian banks and funds, as well as having advised on a number of significant M&A transactions.

Helen has provided strategic tax advice to publicly listed and large multinational companies and has extensive experience with capital raisings, licensing deals, demergers, implementing offshore structures, IP and supply chain management.

Helen has Bachelor degrees in Law (with honours) and Science from the University of Melbourne, a Masters degree in Laws (specialising in International Taxation) from the University of Melbourne and a Masters degree in Commerce from the University of NSW.



*I am excited to join Calix's team, because it enables me to contribute to commercialising Calix's technology. I am confident that my skills in cross-border transactions and the global network that I've built will contribute to the growth story of Calix and aid in fulfilling its mission of solving global environmental challenges.*

# Calix in the media



## Videos



### Calix FY21 Company Update

Despite the widespread head-winds created by the COVID pandemic, Calix has continued to advance its businesses in water and wastewater, crop protection, CO<sub>2</sub> abatement and advanced batteries very successfully.

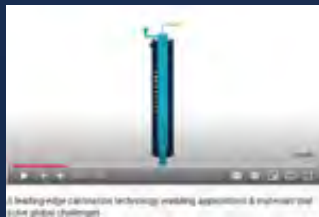
<https://youtu.be/GF9bppqa8gE>



### Calix Battery Webinar

Calix's Managing Director Phil Hodgson hosted a webinar focusing on the status of the development of our battery-related technologies, on Nov 11, 2020.

<https://youtu.be/JULzeV9Yljc>



### A leading-edge calcination technology enabling applications & materials that solve global challenges

At the core of Calix's diverse and versatile innovations is a pioneering technology that reimagines the "calcination" (or kiln) process, enabling new applications and materials that solve global challenges.

<https://www.youtube.com/watch?v=M0Y0ZPE4DEo>



### RECAST - A system to decarbonise long-distance shipping - Dr Brian Sweeney

RECAST could deliver decarbonisation of shipping with conventional engines, using lime as a sorbent and as part of the fuel on the ship. This video describes the system, and the development steps by which it will be fully demonstrated.

[https://youtu.be/BqUR\\_8z43Oc](https://youtu.be/BqUR_8z43Oc)



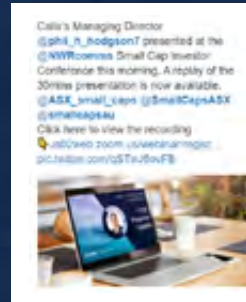
### Testimonial from a Vietnamese Shrimp Farmer using AQUA-Cal+

Calix Limited is working with the Maha group in Malaysia, Vietnam and Thailand on promoting AQUA-Cal+ for sustainable aquaculture in Asia.

<https://www.youtube.com/watch?v=aHwqTTeSg&t=34s>



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## News

Calix Australia Customer Success Story - Application of ACTI-Mag in mine water for acid neutralisation in Central NSW:

<https://www.miningmonthly.com/partners/partner-content/1396299/calix-australia-customer-success-story>

Calix was mentioned in Stockhead '2bn R&D win for biotech, resources'

<https://stockhead.com.au/health/2bn-rd-win-for-biotech-resources/>

Calix was named a finalist in the Australian Growth Company Awards (Sustainability & Cleantech)

<https://www.hamiltonlocke.com.au/2020-winners-finalists>

Project Leilac featured in Climate Leaders Series - "HeidelbergCement: Our Road to Carbon Neutrality"

<https://www.50climateleaders.com/heidelberg-cement-our-road-to-carbon-neutrality/>

WaterAid - Calix is sponsoring WaterAid's Walk for Water. To join the Calix Team - click here and follow the instructions:

<https://fundraise.wateraid.org.au/join/calix>

ACTI-Mag featured in Industry Update: Don't be so caustic! Use Magnesium Hydroxide

<https://www.industryupdate.com.au/article/don%E2%80%99t-be-so-caustic-use-magnesium-hydroxide>

To learn more about Calix technology, products, applications and services:

[www.calix.global](http://www.calix.global)

Or call 1300 0 CALIX

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